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Tank 241-T-201, Core 192 Analytical Results for the Final Report

Jennifer L. Nuzum

Waste Management of Hanford, Inc., Richland, WA 99352

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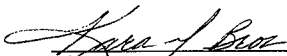
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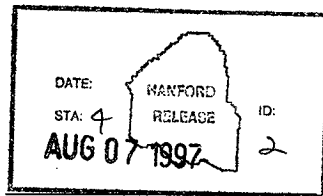
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ANALYTICAL SERVICES

**TANK 241-T-201, CORE 192
ANALYTICAL RESULTS FOR THE FINAL REPORT**

Project Coordinator: JENNIFER L. NUZUM

**Prepared for the U.S. Department of Energy
Office of Environmental Restoration
and Waste Management**

by

**222-S Laboratory
Waste Management of Hanford, Inc.
P.O. Box 700
Richland, Washington**

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NARRATIVE

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222-S ANALYTICAL SERVICES

TANK 241-T-201, CORE 192, ANALYTICAL RESULTS FOR THE FINAL REPORT

Summary

This document is the final laboratory report for Tank 241-T-201. Push mode core segments were removed from Riser 3 between April 24, 1997, and April 25, 1997. Segments were received and extruded at 222-S Laboratory. Analyses were performed in accordance with *Tank 241-T-201 Push Mode Core Sampling and Analysis Plan* (TSAP) (Hu, 1997), *Letter of Instruction for Core Sample Analysis of Tanks 241-T-201, 241-T-202, 241-T-203, and 241-T-204* (LOI) (Bell, 1997), *Additional Core Composite Sample from Drainable Liquid Samples for Tank 241-T-201* (ACC) (Hall, 1997), and *Safety Screening Data Quality Objective* (DQO) (Dukelow, et al., 1995).

None of the subsamples submitted for total alpha activity (AT) or differential scanning calorimetry (DSC) analyses exceeded the notification limits stated in DQO. The statistical results of the 95% confidence interval on the mean calculations are provided by the Tank Waste Remediation Systems Technical Basis Group, and are not considered in this report.

Appearance and Sample Handling

One core of eight segments was expected from Tank 241-T-204. One core (Core 192) of eight segments was obtained.

Attachment 1 illustrates subsamples generated in the laboratory for analysis and identifies their sources. This reference also relates tank farm identification numbers to their corresponding 222-S Laboratory sample numbers.

Core 192

Segments were removed from Tank 241-T-201, Riser 3, between April 24, 1997, and April 25, 1997. All segments were received by 222-S Laboratory between April 25, 1997, and April 29, 1997. Table 1 summarizes extrusion information.

Field Blank

A field blank was provided to 222-S Laboratory with Core 192. This sample was treated as a drainable liquid in accordance with TSAP.

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Hydrostatic Head Fluid Blank

There was no indication of the use of hydrostatic head fluid (HHF) in sampling, nor a HHF blank provided to 222-S Laboratory.

Core Composite

Two core composites were made from Core 192. A core composite was made from solid segments 6-8 of Core 192 in accordance with LOI. Segments 2-5 consisted of drainable liquid material with settled solids. A second core composite was made from the solid part of these samples in accordance with ACC. Core composite worksheets are included in this document.

Table 1. Sample Receipt and Extrusion Information for T-201, Core 188.

Customer # & #	Segment	Date Sampled	Date Received	Date Forwarded	Volume Extruded	Percent Recovered	Solid Extruded (g)	Sample Description
Field Blank	Field Blank	4/25/97	4/29/97	5/6/97	0.0	248.6	0.0	Drainable liquid was clear and colorless with no organic layer.
192-01	1	4/24/97	4/29/97	5/6/97	0.0	268.6	0.0	Drainable liquid was pale yellow and slightly cloudy. No organic layer.
192-02	2	4/24/97	4/25/97	5/6/97	0.0	248.2	0.0	Drainable liquid was black and opaque. No organic layer. Settled black solid material was present in the collection jar after sitting several hours.
192-03	3	4/24/97	4/25/97	5/6/97	0.0	280.4	0.0	Drainable liquid was black and opaque. No organic layer. Settled black solid material was present in the collection jar after sitting several hours.
192-04	4	4/24/97	4/25/97	5/6/97	0.0	252.0	0.0	Drainable liquid was black and opaque. No organic layer. Settled black solid material was present in the collection jar after sitting several hours.
192-05	5	4/25/97	4/29/97	5/6/97	0.0	272.9	0.0	Drainable liquid was black and opaque. No organic layer. Settled black solid material was present in the collection jar after sitting several hours.
192-06	6	4/25/97	4/29/97	5/8/97	19.0	0.0	198.3--Lower Half 177.9--Upper Half	Solids were black and resembled a wet sludge.
192-07	7	4/25/97	4/29/97	5/8/97	19.0	0.0	187.5--Lower Half 200.3--Upper Half	Solids were black and resembled a wet sludge.
192-08	8	4/25/97	4/29/97	5/8/97	19.0	0.0	166.9--Lower Half 208.7--Upper Half	Solids were black and resembled a wet sludge.

** Approximate Inches Extruded

Analytical Results Summary

The Data Summary Table (Table 2) included in this report compiles analytical results associated with each subsample submitted in accordance with TSAP, LOI, and DQO.

Liquid subsamples prepared for analysis by an acid adjustment of the direct subsample are indicated by a "D" in the A# column of Table 2. Solid subsamples prepared for analysis by performing a fusion digest are indicated by a "F" in the A# column of Table 2. Solid subsamples prepared for analysis by performing a water digest are indicated by a "W" in the A# column of Table 2. Solid subsamples prepared for analysis by performing an acid digest are indicated by an "A" in the A# column of Table 2.

Inorganic Analyses

Differential Scanning Calorimetry (DSC) Analysis

DSC analysis was performed on all direct subsamples. The exothermic energy based on dry weight of subsample was calculated for all subsamples. The average of the thermogravimetric analysis (TGA) results for each subsample was used in the dry weight correction for that subsample.

DSC analysis results for all subsamples submitted were 0.00 Joules/g. There were no exceptions to the quality control (QC) parameters stated in TSAP for these subsamples, nor any results exceeding the notification limits as stated in TSAP.

Thermogravimetric Analysis (TGA)

TGA was performed on all direct subsamples. TGA results were typically determined by summing weight loss steps below 200°C. Weight loss steps above this were not used to determine the result. More information may be obtained by examining the raw data. There were no exceptions to the QC parameters stated in TSAP for these subsamples.

Density

Bulk density was performed on solid lower half segments and the core composites. Results from bulk density tests ranged from 1.13 g/mL to 1.39 g/mL. There were no QC parameters stated in TSAP for bulk density analysis.

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Specific Gravity (SpG)

Specific gravity analyses were performed on direct liquid subsamples. There were no exceptions to the QC parameters stated in TSAP for these subsamples.

Ion Chromatography (IC)

IC analysis was performed on direct liquid subsamples, solid subsamples and the core composites. For all subsamples save the core composites, only the QC for Br was reviewed for this report in accordance with TSAP. There were no exceptions to the QC parameters stated in TSAP for these subsamples.

For the core composite, only the QC for requested analytes (F, Cl, NO₂, NO₃, SO₄, PO₄, and Oxalate) were reviewed for this report in accordance with LOI. Other opportunistic analyte results are included in Table 2. These analytes do not have customer defined QC parameters and are not discussed.

Core Composite Sample S97T001251 had a relative percent difference (RPD) between sample and duplicate of 34.8 for PO₄. This elevated RPD is due to sample heterogeneity. Further analysis was not requested.

The preparation blank for the core composites showed Cl and NO₃ results above the detection level. The levels of these analytes in the preparation blank are inconsequential when compared to results for the sample, and do not impact sample data quality. A matrix spike was not performed on either core composite sample. At this time, the IC instrument is out of service. If further analysis is requested, the results will be presented in a revision to this document.

Inductively Coupled Plasma Spectrophotometry (ICP)

ICP was performed on direct liquid subsamples, solid subsamples, and the core composites. For all subsamples save the core composites, only the QC for Li was reviewed for this report in accordance with TSAP. There were no exceptions to the QC parameters stated in TSAP for these subsamples.

For core composite samples, only the QC for requested analytes (Al, Ba, Bi, Ca, Cr, Fe, La, Mn, Ni, P, K, Si, S, Na, Sr, and U) were reviewed for this report in accordance with LOI. Other opportunistic analyte results are included in Table 2. These analytes do not have customer defined QC parameters and are not discussed.

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Core Composite Sample S97T001250 showed a RPD between sample and duplicate of 21.3, 21.3, 27.8, and 21.5 for analytes La, P, S, and Sr, respectively. RPD was caused by sample heterogeneity and further analysis was not requested. In addition, spike recoveries reported in Table 2 for Bi, Ca, Cr, Fe, K, La, Mn, Na, P, Si, and Sr are invalid because the spike concentration (1 ppm) is too low in comparison to the sample concentration (less than 25%). Post spikes with an analyte level of 10 ppm were performed, and the resulting spike recoveries were 97.3%, 103.2%, 100.8%, 94.1%, 100.5%, 101.5%, 102.5%, 100.6%, 99.8%, 101.5%, and 99.7%, respectively. These calculations can be found in the raw data.

Core Composite Sample S97T001256 spike recoveries reported in Table 2 for Bi, Cr, Fe, K, La, Mn, and Na are invalid because the spike concentration (1 ppm) is too low in comparison to the sample concentration (less than 25%). Post spikes with an analyte level of 10 ppm were performed, and the resulting spike recoveries were 98.6%, 99.7%, 93.3%, 99.6%, 100.0%, 100.2%, and 96.9%, respectively. These calculations can be found in the raw data.

The preparation blank for the core composites showed Ca, Na, and Si results above the detection level. The levels of these analytes in the preparation blank are inconsequential when compared to the results for the sample, and do not impact sample data quality.

Total Organic Carbon (TOC)

TOC analysis was performed on core composite subsamples. RPD between sample and duplicate was 34.6 for the subsample S97T001253. Elevated RPD is due to inhomogeneity between sample and duplicate. Further analysis was not requested.

Total Inorganic Carbon (TIC)

TIC analysis was performed on core composite subsamples. There were no exception to the QC parameters stated in LOI for these samples.

For all TIC analyses, a "Total Inorganic Carbon Analysis Report" worksheet is included as raw data. Due to programming limitations with the TIC instrument software, the sample size listed on this worksheet is incorrect. This value is not used in the final calculations (also included) and has no bearing on the results in Table 2.

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Radiochemistry Analyses

Total Alpha (AT) Analysis

AT analyses were requested for direct liquid subsamples and solid lower half segments. All results were below the total alpha activity notification limits.

Spike recovery for Drainable Liquid Segment 1 (S97T001203) was 62.3%. This low spike recovery was consistent with the original analysis, and was caused by sample matrix interference. Rerun analysis was not requested.

Two of the preparation blanks showed AT results above the detection level. The level in the preparation blank is inconsequential when considering the elevated counting error, and does not impact sample data quality.

Gamma Energy Analysis (GEA)

GEA was performed on core composite subsamples. There were no exceptions to the QC parameters stated in LOI for these subsamples.

Strontium 90 (^{90}Sr)

^{90}Sr analysis was performed on core composite subsamples. RPD between sample and duplicate was 124.0 for Sample S97T001754. Activity levels and RPD were consistent with previous analyses. The preparation blank showed ^{90}Sr results above the detection level. The level in the preparation blank is inconsequential when considering the high counting error, and does not impact sample data quality. Further rerun analysis was not requested.

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Procedures

Table 3 lists the analytical procedures used for performing sample analyses. Abbreviations for analyses are defined in the table notes.

Table 3. Analytical Procedures

Analysis	Matrix	Preparation Procedure	Analysis Procedure
DSC	Solid Liquid	N/A	LA-514-114 Rev. D-0 & D-1
TGA	Solid Liquid	N/A	LA-514-114 Rev. D-0 & D-1
Bulk Density	Solid	N/A	LO-160-103 Rev. C-0
AT	Liquid Solid	N/A +LA-549-141 Rev. F-0	LA-508-101 Rev. G-0
Sp.G	Liquid	N/A	LA-510-112 Rev. D-1
IC	Liquid Solid	N/A ++LA-504-101 Rev F-0	LA-533-105 Rev. D-1
ICP	Liquid Solid	N/A +++LA-505-163 Rev A-0 +LA-549-141 Rev F-0	LA-505-151, Rev. E-1 LA-505-161 Rev. C-1
TOC	Solid	N/A	LA-342-100 Rev. E-0

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TIC	Solid	N/A	LA-342-100 Rev. E-0
GEA	Solid	+LA-549-141 Rev. F-0	LA-548-121 Rev. F-0
90Sr	Solid	+LA-549-141 Rev. F-0	LA-220-101 Rev. E-1

Notes:

N/A	not applicable (these are direct samples)
DSC	differential scanning calorimetry
TGA	thermogravimetric analysis
AT	total alpha
Sp.G	specific gravity
IC	ion chromatography
ICP	inductively coupled plasma
TOC	total organic carbon
TIC	total inorganic carbon
GEA	gamma energy analysis
90Sr	strontium 90
+	fusion digest
++	water digest
+++	acid digest

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T-201 SAMPLE BREAKDOWN (ATTACHMENT 1)

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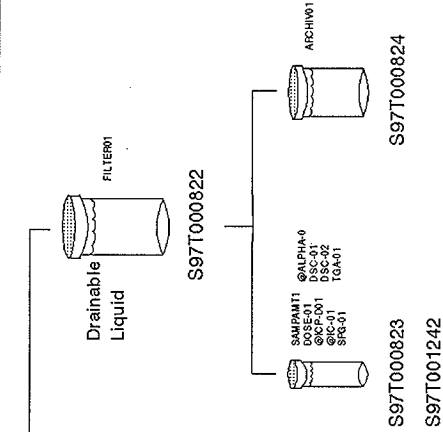
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Attachment 1



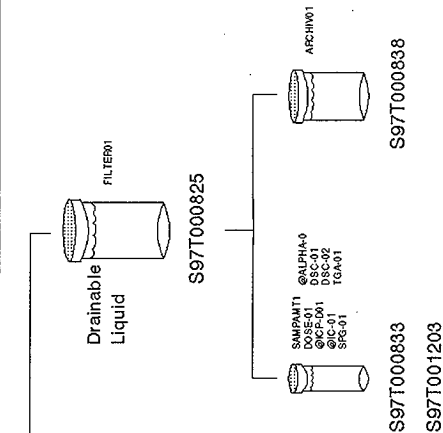
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Seg: 1 (192-01)

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Attachment 1



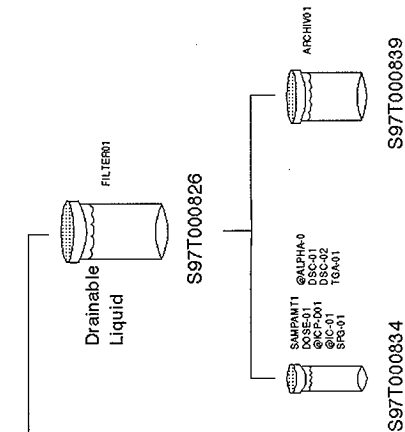
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S97T000680

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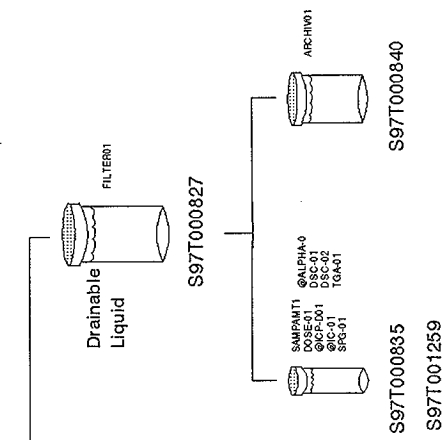
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Seg: 3 (192-03)

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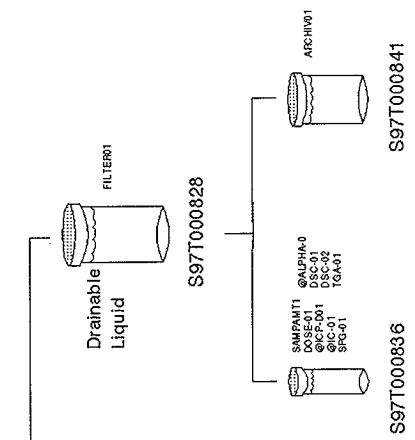
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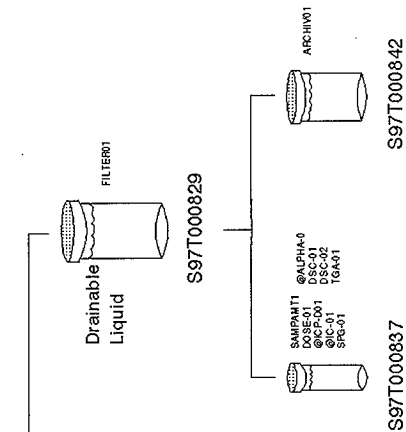
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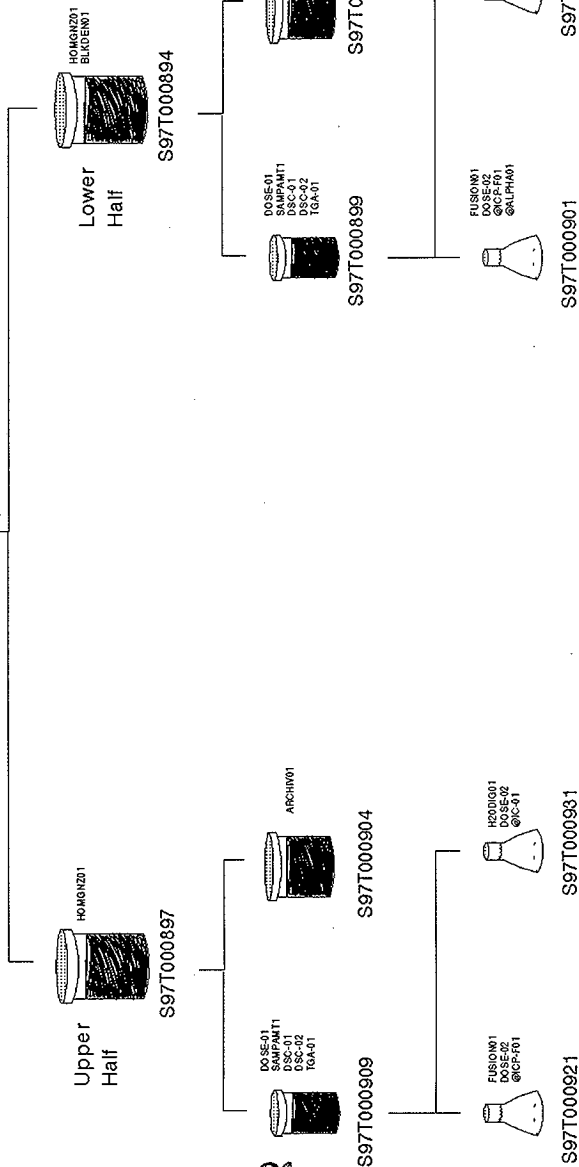
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Attachment 1



T-201
Core:192
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S97T000688

Attachment 1



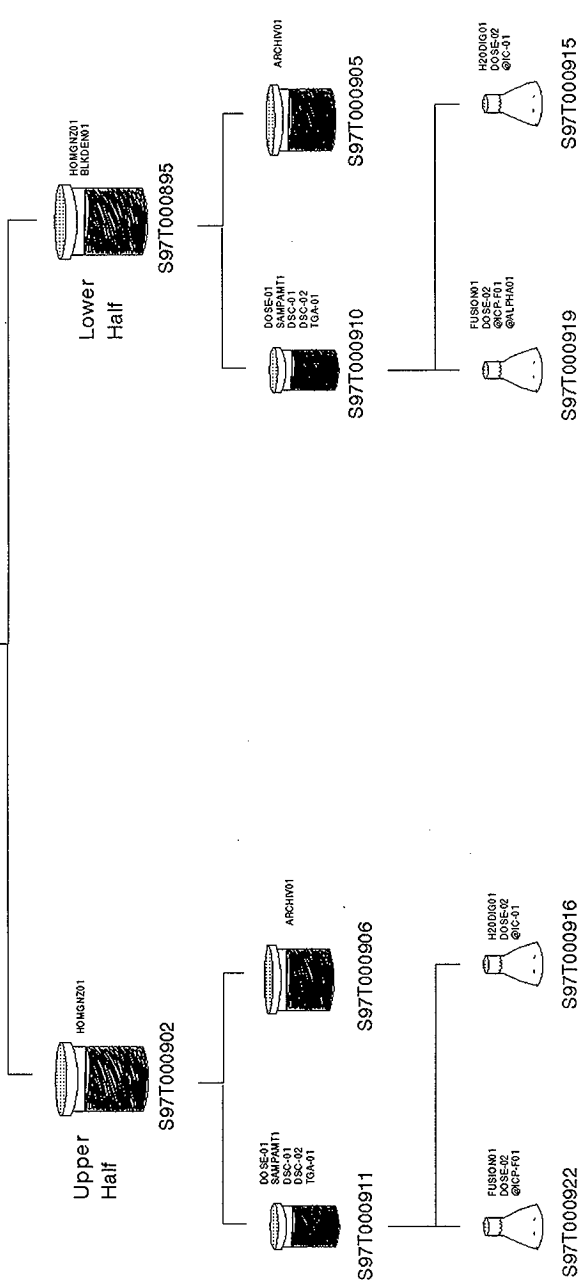
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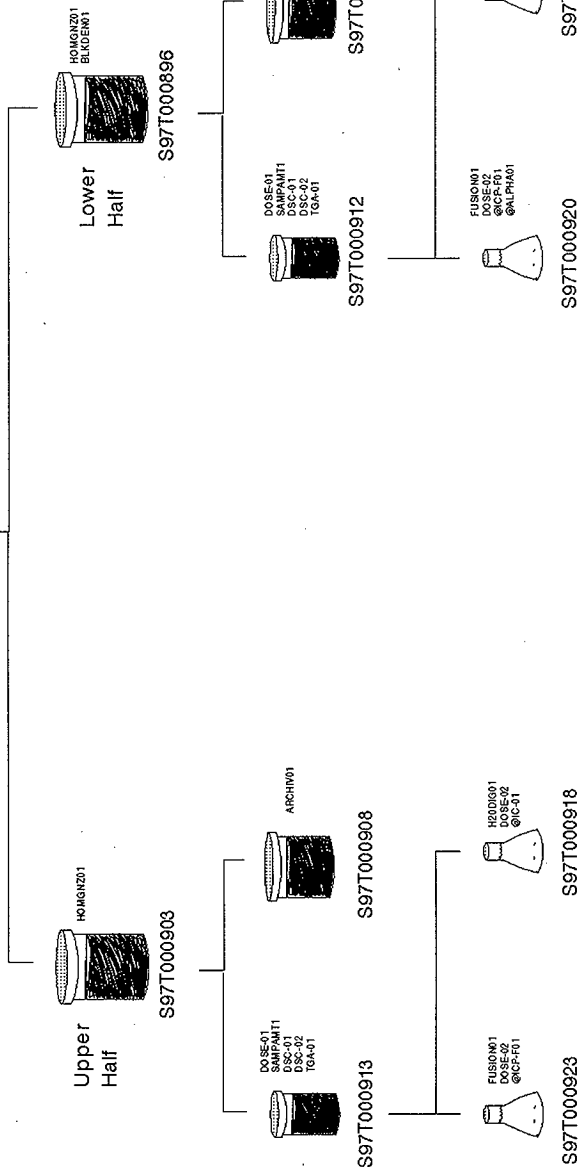
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Core:192

Seg: 8 (192-08)

S97T000689

Attachment 1



Composited:

Segment Grams

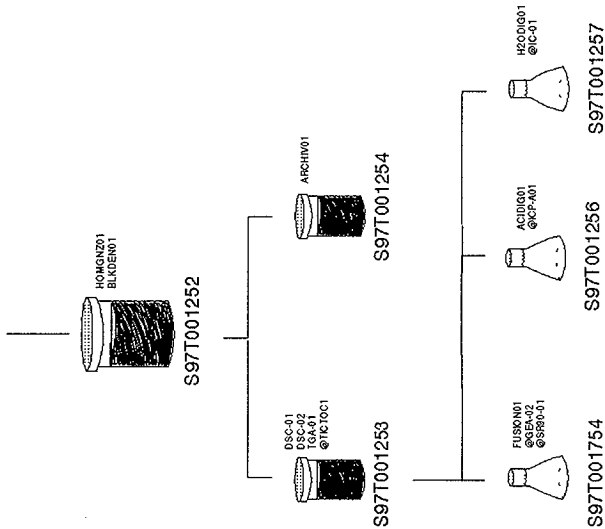
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3	DL	15.7
4	DL	17.3
5	DL	30.8

T-201

Core:192

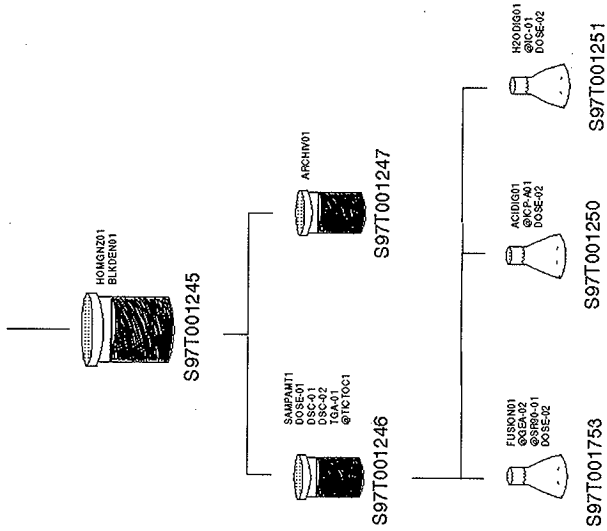
Composite:

Drainable Liquid
Segments 1-5



Attachment 1

T-201
Core:192
Composite: Solid
Segments 6-8



Composited:

Segment: Grams:

- 6 LH 15.1
- 6 UH 14.9
- 7 LH 15.3
- 7 UH 14.9
- 8 LH 15.0
- 8 UH 15.1

HNH-SD-WM-DP-254, REV. 0

SAMPLE DATA SUMMARY

HNF-SD-WM-DP-254, REV. 0

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Table 2. Data Summary Table
T-201

NION: Core Composite											
R#	Sample#	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
997001245	Bulk Density of Sample	g/mL	n/a	n/a	1.270	n/a	n/a	n/a	n/a	5.00e-01	n/a
997001246	DSC Exotherm Dry Calculated	Joules/g	99.82	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
997001246	DSC Exotherm on Perkin Elmer	Joules/g	99.82	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
997001246	4-Heater by TGA on Perkin Elmer	g/g	99.44	n/a	60.26	62.85	61.55	4.21	n/a	n/a	n/a
997001246	TIC Dry Coulometry	ug/g	90.86	4.00e-01	8.28e+02	791.0	809.5	4.57	89.00	5.000	n/a
997001246	TIC Dry Percussate Coulometry	ug/g	94.67	6.00e-02	3.03e+02	304.0	303.5	0.33	79.90	40.00	n/a
997001250	Aluminum - ICP-Acid Digest	ug/g	60.00	<1.00e-02	< 7.670	<7.64e1	100.6	8.75	58.90	7.680	n/a
997001250	Aluminum - ICP-Acid Digest	ug/g	96.60	<1.42e-01	1.05e+02	96.20	100.6	8.75	99.20	38.40	n/a
997001250	Arsenic - ICP-Acid Digest	ug/g	100.8	<1.00e-01	1.65e+02	178.0	171.5	7.58	102.8	38.40	n/a
997001250	Boron - ICP-Acid Digest	ug/g	99.20	7.26e-01	1.55e+02	< 7.670	56.35	16.9	98.40	38.40	n/a
997001250	Beryllium - ICP-Acid Digest	ug/g	100.8	<5.00e-02	61.10	51.60	100.6	8.75	104.0	76.80	n/a
997001250	Beryllium - ICP-Acid Digest	ug/g	96.80	<1.00e-01	1.23e+05	1.10e+05	1.19e+05	15.1	4.28e+03	76.80	n/a
997001250	Calcium - ICP-Acid Digest	ug/g	100.0	1.27e-01	1.36e+03	1.12e+03	1.24e+03	19.4	137.6	76.80	n/a
997001250	Calcium - ICP-Acid Digest	ug/g	95.20	<5.00e-03	< 3.840	<3.82e0	n/a	n/a	96.80	3.840	n/a
997001250	Cadmium - ICP-Acid Digest	ug/g	100.4	<1.00e-01	92.10	<7.64e1	100.6	n/a	102.8	76.80	n/a
997001250	Cadmium - ICP-Acid Digest	ug/g	99.20	<1.00e-02	< 15.30	<1.55e1	n/a	n/a	100.6	15.40	n/a
997001250	Cobalt - ICP-Acid Digest	ug/g	94.80	<1.00e-02	5.65e+03	5.05e+03	5.35e+03	11.2	292.0	7.680	n/a
997001250	Chromium - ICP-Acid Digest	ug/g	88.00	1.20e-02	< 7.670	<7.64e0	n/a	n/a	87.80	7.680	n/a
997001250	Copper - ICP-Acid Digest	ug/g	91.20	<5.00e-01	1.04e+04	9.32e+03	9.86e+03	11.0	432.0	38.40	n/a
997001250	Iron - ICP-Acid Digest	ug/g	100.0	<5.00e-01	4.01e+03	4.68e+03	4.84e+03	8.53	288.0	384.0	n/a
997001250	Lanthanum - ICP-Acid Digest	ug/g	100.8	<5.00e-02	2.75e+04	2.27e+04	2.48e+04	21.3	922.0	38.40	n/a
997001250	Lanthanum - ICP-Acid Digest	ug/g	99.60	<1.00e-02	< 7.670	<7.64e0	n/a	n/a	98.80	7.680	n/a
997001250	Lithium - ICP-Acid Digest	ug/g	94.80	<1.00e-01	3.49e+02	296.0	322.5	16.4	112.2	76.80	n/a
997001250	Magnesium - ICP-Acid Digest	ug/g	96.80	<1.00e-02	4.85e+04	4.00e+04	4.42e+04	19.2	2.24e+03	7.680	n/a
997001250	Manganese - ICP-Acid Digest	ug/g	95.80	<1.00e-01	< 38.40	<3.82e1	n/a	n/a	99.20	38.40	n/a
997001250	Molybdenum - ICP-Acid Digest	ug/g	101.4	1.02e-01	3.39e+04	3.07e+04	3.23e+04	9.91	1.40e+03	76.80	n/a
997001250	Sodium - ICP-Acid Digest	ug/g	101.4	<1.00e-01	< 76.70	<7.64e1	n/a	n/a	99.60	76.80	n/a
997001250	Nickel - ICP-Acid Digest	ug/g	99.00	<1.00e-02	6.40e+02	599.0	629.5	9.69	122.6	15.40	n/a
997001250	Nickel - ICP-Acid Digest	ug/g	93.60	<2.00e-01	5.0e+03	4.07e+03	4.56e+03	21.3	242.0	154.0	n/a
997001250	Phosphorus - ICP-Acid Digest	ug/g	95.80	<1.00e-01	1.25e+02	299.0	212.0	82.1	99.80	76.80	n/a
997001250	Lead - ICP-Acid Digest	ug/g	96.80	<1.00e-01	1.05e+02	79.40	92.20	27.8	97.00	76.80	n/a
997001250	Sulfur - ICP-Acid Digest	ug/g	94.60	<6.00e-02	< 76.70	<7.64e1	n/a	n/a	93.00	46.00	n/a
997001250	Antimony - ICP-Acid Digest	ug/g	90.40	<1.00e-01	< 76.70	<7.64e1	n/a	n/a	97.80	76.80	n/a
997001250	Selenium - ICP-Acid Digest	ug/g	94.60	<1.00e-01	< 76.70	<7.64e1	1.86e+03	12.4	192.0	38.40	n/a
997001250	Silicon - ICP-Acid Digest	ug/g	131.6	2.00e-01	1.97e+05	1.74e+05	1.86e+05	21.5	94.80	76.80	n/a
997001250	Samarium - ICP-Acid Digest	ug/g	97.20	<1.00e-02	< 76.70	<7.64e1	1.12e+03	21.5	136.6	7.680	n/a
997001250	Strontium - ICP-Acid Digest	ug/g	97.60	<1.00e-02	1.24e+03	979.0	979.0	93.00	93.40	154.0	n/a
997001250	Titanium - ICP-Acid Digest	ug/g	89.20	<1.00e-02	10.10	9.140	9.920	3.63	92.40	7.680	n/a
997001250	Titanium - ICP-Acid Digest	ug/g	91.20	<2.00e-01	<1.53e+02	<1.53e2	n/a	n/a	97.00	384.0	n/a
997001250	Uranium - ICP-Acid Digest	ug/g	95.30	<5.00e-01	<3.84e+02	<3.84e2	n/a	n/a	97.40	38.40	n/a
997001250	Vanadium - ICP-Acid Digest	ug/g	86.20	<5.00e-02	< 38.40	<3.82e1	n/a	n/a	94.45	7.680	n/a
997001250	Zinc - ICP-Acid Digest	ug/g	89.20	3.10e-02	1.05e+02	83.90	94.45	22.3	91.60	7.680	n/a
997001250	Zirconium - ICP-Acid Digest	ug/g	101.9	<1.00e-02	< 7.670	<7.64e0	n/a	n/a	102.0	7.680	n/a
997001251	Fluoride-ICP-Dioxen 4000/4500	ug/g	101.9	<1.20e-02	5.03e+03	5.12e+03	5.08e+03	1.77	n/a	26.19	n/a

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%	
S977001251	W	Chloride-IC-Dioxex 4000/4500	ug/g	101.8	1.90e-02	1.06e+03	1.09e+03	1.08e+03	2.79	n/a	37.95	n/a	
S977001251	W	Nitrite-IC-Dioxex 4000/4500	ug/g	105.4	<1.08e-01	3.09e+02	318.0	313.6	2.87	n/a	261.1	n/a	
S977001251	W	Bromide by Ion Chromatograph	ug/g	103.4	<1.29e-02	<2.77e-02	<2.77e-02	4.83e+04	4.97	n/a	279.1	n/a	
S977001251	W	Nitrate by IC-Dioxex 4000/4500	ug/g	101.3	1.41e-01	4.79e+04	4.95e+04	4.83e+04	4.97	n/a	310.3	n/a	
S977001251	W	Phosphate by IC-Dioxex 4000/4500	ug/g	98.17	<1.20e-02	5.20e-02	520.0	442.9	34.8	n/a	267.9	n/a	
S977001251	W	Sulfate by IC-Dioxex 4000/4500	ug/g	100.9	<1.38e-01	<3.08e+02	1.25e+03	n/a	n/a	n/a	308.0	n/a	
S977001251	W	Oxalate-IC-Dioxex 4000/4500	ug/g	98.31	<1.05e-01	1.15e+03	1.14e+03	1.14e+03	0.87	n/a	234.4	n/a	
S977001252	W	Bulk Density of Sample	g/mL	n/a	n/a	1.130	n/a	n/a	n/a	n/a	5.00e-01	n/a	
S977001252	W	DSC Exotherm DRY Calculated	Joules/g DRY	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	
S977001253	W	DSC Exotherm on Perkin Elmer	Joules/g	99.82	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	
S977001253	W	% Water by TGA on Perkin Elmer	%	99.44	n/a	83.94	87.28	85.61	3.90	n/a	n/a	n/a	
S977001253	W	TIC by Acid/Coulometry	ug/g	90.86	4.00e-01	1.80e+03	1.86e+03	1.83e+03	3.28	103.0	5.000	n/a	
S977001253	W	TOC by Persulfate/Coulometry	ug/g	94.67	6.100	1.56e+02	110.0	133.0	34.6	106.0	40.00	n/a	
S977001256	A	Silver -IC-Acid Digest	ug/g	60.00	<1.00e-02	2.260	2.210	2.235	2.24	56.80	1.930	n/a	
S977001256	A	Aluminum -ICP-Acid Digest	ug/g	96.60	1.42e-01	80.00	75.70	77.85	5.52	89.80	9.640	n/a	
S977001256	A	Arsenic -ICP-Acid Digest	ug/g	100.8	<1.00e-01	<19.30	<1.91e1	n/a	n/a	n/a	19.30	n/a	
S977001256	A	Boron -ICP-Acid Digest	ug/g	99.20	7.26e-01	87.20	117.0	102.1	29.2	101.8	9.640	n/a	
S977001256	A	Barium -ICP-Acid Digest	ug/g	98.00	<5.00e-02	19.60	20.30	19.95	3.51	93.00	9.640	n/a	
S977001256	A	Beryllium -ICP-Acid Digest	ug/g	100.8	<5.00e-03	<9.64e-01	<9.53e-1	n/a	n/a	96.00	9.64e-01	n/a	
S977001256	A	Bismuth -ICP-Acid Digest	ug/g	96.80	<1.00e-01	1.97e+04	2.05e+04	2.01e+04	3.98	-2.060e2	19.30	n/a	
S977001256	A	Calcium -ICP-Acid Digest	ug/g	100.0	1.27e-01	2.94e+02	304.0	299.0	3.34	90.60	19.30	n/a	
S977001256	A	Cadmium -ICP-Acid Digest	ug/g	95.20	<5.00e-03	<9.64e-01	<9.53e-1	n/a	n/a	90.60	9.64e-01	n/a	
S977001256	A	Cerium -ICP-Acid Digest	ug/g	100.4	<1.00e-01	<19.30	<3.860	20.40	19.95	4.51	94.80	19.30	n/a
S977001256	A	Cobalt -ICP-Acid Digest	ug/g	99.20	<2.00e-02	<3.860	<3.81e0	2.07e+03	3.77	68.20	1.930	n/a	
S977001256	A	Chromium -ICP-Acid Digest	ug/g	96.80	<1.00e-02	1.56e+03	1.62e+03	1.59e+03	n/a	83.60	1.930	n/a	
S977001256	A	Copper -ICP-Acid Digest	ug/g	88.00	1.20e-02	<1.930	<1.97e0	n/a	n/a	95.20	1.930	n/a	
S977001256	A	Iron -ICP-Acid Digest	ug/g	91.20	<5.00e-02	1.99e+03	2.07e+03	2.03e+03	3.94	53.80	9.640	n/a	
S977001256	A	Potassium -ICP-Acid Digest	ug/g	100.0	<5.00e-01	4.07e+03	3.92e+03	4.00e+03	3.75	69.80	9.640	n/a	
S977001256	A	Lanthanum -ICP-Acid Digest	ug/g	100.8	<5.00e-02	5.91e+03	6.09e+03	6.00e+03	3.00	4.440	9.640	n/a	
S977001256	A	Magnesium -ICP-Acid Digest	ug/g	99.60	<1.00e-02	<1.930	<1.97e0	n/a	n/a	95.20	1.930	n/a	
S977001256	A	Manganese -ICP-Acid Digest	ug/g	96.60	<1.00e-01	61.40	60.80	61.10	0.98	90.20	19.30	n/a	
S977001256	A	Molybdenum -ICP-Acid Digest	ug/g	94.80	<1.00e-02	6.96e+03	7.31e+03	7.14e+03	4.91	-3.620e2	1.930	n/a	
S977001256	A	Sodium -ICP-Acid Digest	ug/g	95.80	<5.00e-02	<9.640	<9.53e0	n/a	n/a	95.80	9.640	n/a	
S977001256	A	Selenium -ICP-Acid Digest	ug/g	101.4	1.020	2.49e+04	2.37e+04	2.43e+04	4.94	-1.980e2	19.30	n/a	
S977001256	A	Niodymium -ICP-Acid Digest	ug/g	99.00	<1.00e-01	<19.30	<1.97e1	n/a	n/a	94.00	19.30	n/a	
S977001256	A	Nickel -ICP-Acid Digest	ug/g	99.00	<2.00e-02	1.22e+02	128.0	125.0	4.80	91.40	3.860	n/a	
S977001256	A	Phosphorus -ICP-Acid Digest	ug/g	93.60	<2.00e-01	1.30e+03	1.33e+03	1.32e+03	2.28	77.40	38.60	n/a	
S977001256	A	Lead -ICP-Acid Digest	ug/g	93.80	<1.00e-01	2.88e+02	300.0	294.0	4.08	85.40	19.30	n/a	
S977001256	A	Sulfur -ICP-Acid Digest	ug/g	96.60	<1.00e-01	57.80	54.80	56.30	5.33	94.00	19.30	n/a	
S977001256	A	Antimony -ICP-Acid Digest	ug/g	94.60	<6.00e-02	<1.660	<1.14e1	n/a	n/a	94.60	11.60	n/a	
S977001256	A	Selenium -ICP-Acid Digest	ug/g	90.40	<1.00e-01	<19.30	<1.97e1	n/a	n/a	87.80	9.30	n/a	
S977001256	A	Silicon -ICP-Acid Digest	ug/g	131.6	2.010	1.44e+03	1.22e+03	1.33e+03	16.5	94.60	9.640	n/a	
S977001256	A	Samarium -ICP-Acid Digest	ug/g	97.20	<1.00e-01	<19.30	<1.97e1	n/a	n/a	92.20	19.30	n/a	
S977001256	A	Strontium -ICP-Acid Digest	ug/g	97.60	<1.00e-02	1.12e+02	115.0	113.5	2.64	91.00	1.930	n/a	
S977001256	A	Titanium -ICP-Acid Digest	ug/g	89.20	<1.00e-02	3.340	4.130	3.735	21.2	89.00	1.930	n/a	
S977001256	A	Thallium -ICP-Acid Digest	ug/g	91.20	<2.00e-01	<38.60	<3.81e1	n/a	n/a	86.20	38.60	n/a	
S977001256	A	Uranium -ICP-Acid Digest	ug/g	95.30	<5.00e-01	<96.40	<9.55e1	n/a	n/a	90.80	9.640	n/a	
S977001256	A	Vanadium -ICP-Acid Digest	ug/g	96.20	<5.00e-02	<9.640	<9.55e0	n/a	n/a	91.40	9.640	n/a	
S977001256	A	Zinc -ICP-Acid Digest	ug/g	89.20	3.10e-02	66.30	68.00	67.15	2.53	83.40	1.930	n/a	
S977001256	A	Zirconium -ICP-Acid Digest	ug/g	97.80	<1.00e-02	2.210	2.400	2.305	8.24	97.80	1.930	n/a	
S977001257	W	Fluoride-IC-Dioxex 4000/4500	ug/g	101.9	<1.20e-02	4.29e+03	4.30e+03	4.30e+03	0.23	n/a	26.09	n/a	

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T001257	W		Chloride-IC-Dionex 4000/4500	ug/g	101.8	1.20e-02	8.29e+02	850.0	859.6	2.50	n/a	36.96	n/a
S97T001257	W		Nitrite-IC - Dionex 4000/4500	ug/g	105.4	<1.08e-01	2.89e+02	302.0	295.4	4.40	n/a	234.7	n/a
S97T001257	W		Bromide by Ion Chromatograph	ug/g	103.4	<1.25e-01	<2.72e+02	<2.74e2	n/a	n/a	n/a	271.7	n/a
S97T001257	W		Nitrate by IC-Dionex 4000/4500	ug/g	101.3	1.41e-01	4.21e+04	4.24e+04	4.23e+04	0.71	n/a	302.2	n/a
S97T001257	W		Phosphate-IC-Dionex 4000/4500	ug/g	98.17	<1.20e-01	1.13e+03	1.11e+03	1.12e+03	1.79	n/a	260.9	n/a
S97T001257	W		Sulfate by IC-Dionex 4000/4500	ug/g	100.9	<1.38e-01	1.08e+03	<3.03e2	n/a	n/a	n/a	300.0	n/a
S97T001257	W		Oxalate-IC-Dionex 4000/4500	ug/g	98.31	<1.05e-01	<2.28e+02	<2.30e2	n/a	n/a	n/a	228.2	n/a
S97T001753	F		Strontium-89/90 High Level	uc1/g	100.0	<9.95e-04	1.37e-01	1.45e-01	1.41e-01	5.67	101.3	1.00e-03	4.14e+00
S97T001753	F		Cobalt-60 by GEA	uc1/g	98.74	<9.21e-03	<6.34e-03	<5.66e-3	n/a	n/a	n/a	6.00e-03	n/a
S97T001753	F		Cesium-137 by GEA	uc1/g	103.5	<1.03e-02	4.81e-02	4.33e-02	4.57e-02	10.5	n/a	n/a	18.6
S97T001753	F		Europium-154 by GEA	uc1/g	n/a	<1.70e-02	<1.81e-02	<1.86e-2	n/a	n/a	n/a	1.80e-02	n/a
S97T001753	F		Europium-155 by GEA	uc1/g	n/a	<1.44e-02	<1.46e-02	<1.39e-2	n/a	n/a	n/a	1.50e-02	n/a
S97T001754	F		Americium-241 by GEA	uc1/g	n/a	<2.71e-02	<3.46e-02	<2.95e-2	n/a	n/a	n/a	3.50e-02	n/a
S97T001754	F		Strontium-89/90 High Level	uc1/g	105.4	1.00e-03	4.95e-02	1.17e-02	3.06e-02	124	103.8	2.63e-04	2.82e+00
S97T001754	F		Cobalt-60 by GEA	uc1/g	98.74	<6.21e-03	<4.52e-03	<4.37e-3	n/a	n/a	n/a	5.00e-03	n/a
S97T001754	F		Cesium-137 by GEA	uc1/g	103.5	<1.03e-02	<8.47e-03	1.23e-02	n/a	n/a	n/a	8.00e-03	n/a
S97T001754	F		Europium-154 by GEA	uc1/g	n/a	<1.70e-02	<1.35e-02	<1.44e-2	n/a	n/a	n/a	1.40e-02	n/a
S97T001754	F		Europium-155 by GEA	uc1/g	n/a	<1.44e-02	<1.07e-02	<1.04e-2	n/a	n/a	n/a	1.10e-02	n/a
S97T001754	F		Americium-241 by GEA	uc1/g	n/a	<2.71e-02	<2.05e-02	<2.07e-2	n/a	n/a	n/a	2.10e-02	n/a

Table 2. Data Summary Table
T-201

CORE NUMBER: 192

SEGMENT #: Field Blank

SEGMENT PORTION: Field Blank

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000823	D	DSC Exotherm Dry	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000823	R	DSC Exotherm	Joules/g	96.06	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000823		Specific Gravity	Sp. G.	99.82	n/a	9.97e-01	9.98e-01	9.98e-01	0.10	n/a	1.00e-02	n/a
S97T000823	D	% Water, by TGA on Perkin Elmer	%	99.41	n/a	99.68	99.68	99.68	0.00	n/a	n/a	n/a
S97T000823	D	Silver- ICP-Acid Dil.	ug/mL	96.20	<1.00e-02	<2.00e-02	<2.00e-02	<2.00e-02	n/a	n/a	2.00e-02	n/a
S97T000823	D	Aluminum- ICP-Acid Dil.	ug/mL	101.6	<5.00e-02	<1.00e-01	<1.00e-01	<1.00e-01	n/a	n/a	1.00e-01	n/a
S97T000823	D	Arsenic- ICP-Acid Dil.	ug/mL	101.6	<1.00e-01	<2.00e-01	<2.00e-01	<2.00e-01	n/a	n/a	2.00e-01	n/a
S97T000823	D	Boron- ICP-Acid Dil.	ug/mL	99.40	<5.00e-02	1.940	1.940	1.930	1.04	n/a	1.00e-01	n/a
S97T000823	D	Barium- ICP-Acid Dil.	ug/mL	98.80	<5.00e-02	<1.00e-01	<1.00e-01	<1.00e-01	n/a	n/a	1.00e-01	n/a
S97T000823	D	Beryllium- ICP-Acid Dil.	ug/mL	100.2	<5.00e-03	<1.00e-02	<1.00e-02	<1.00e-02	n/a	n/a	1.00e-02	n/a
S97T000823	D	Bismuth- ICP-Acid Dil.	ug/mL	99.60	<1.00e-01	<2.00e-01	<2.00e-01	<2.00e-01	n/a	n/a	2.00e-01	n/a
S97T000823	D	Calcium- ICP-Acid Dil.	ug/mL	97.40	<1.00e-01	17.70	18.00	17.85	1.68	n/a	2.00e-02	n/a
S97T000823	D	Cadmium- ICP-Acid Dil.	ug/mL	99.00	<5.00e-03	<1.00e-02	<1.00e-02	<1.00e-02	n/a	n/a	1.00e-02	n/a
S97T000823	D	Cerium- ICP-Acid Dil.	ug/mL	96.00	<1.00e-01	<2.00e-01	<2.00e-01	<2.00e-01	n/a	n/a	2.00e-01	n/a
S97T000823	D	Cobalt- ICP-Acid Dil.	ug/mL	101.0	<2.00e-02	<4.00e-02	<4.00e-02	<4.00e-02	n/a	n/a	4.00e-02	n/a
S97T000823	D	Chromium- ICP-Acid Dil.	ug/mL	98.00	<1.00e-02	<2.00e-02	<2.00e-02	<2.00e-02	n/a	n/a	2.00e-02	n/a
S97T000823	D	Copper- ICP-Acid Dil.	ug/mL	106.0	<1.00e-02	<2.00e-02	<2.00e-02	<2.00e-02	n/a	n/a	2.00e-02	n/a
S97T000823	D	Iron- ICP-Acid Dil.	ug/mL	98.40	<5.00e-02	<1.00e-01	<1.00e-01	<1.00e-01	n/a	n/a	1.00e-01	n/a
S97T000823	D	Potassium- ICP-Acid Dil.	ug/mL	99.00	<5.00e-01	<1.00e-01	<1.00e-01	<1.00e-01	n/a	n/a	1.00e-01	n/a
S97T000823	D	Lanthanum- ICP-Acid Dil.	ug/mL	98.00	<5.00e-02	<1.00e-01	<1.00e-01	<1.00e-01	n/a	n/a	1.00e-01	n/a
S97T000823	D	Lithium- ICP-Acid Dil.	ug/mL	97.20	<1.00e-02	<2.00e-02	<2.00e-02	<2.00e-02	n/a	n/a	2.00e-02	n/a
S97T000823	D	Magnesium- ICP-Acid Dil.	ug/mL	94.80	<1.00e-01	3.660	3.680	3.670	0.54	n/a	2.00e-01	n/a
S97T000823	D	Manganese- ICP-Acid Dil.	ug/mL	97.20	<1.00e-02	<2.00e-02	<2.00e-02	<2.00e-02	n/a	n/a	2.00e-02	n/a
S97T000823	D	Niobium- ICP-Acid Dil.	ug/mL	100.4	<5.00e-02	<1.00e-01	<1.00e-01	<1.00e-01	n/a	n/a	1.00e-01	n/a
S97T000823	D	Sodium- ICP-Acid Dil.	ug/mL	101.2	<1.00e-01	4.300	4.310	4.305	0.23	n/a	2.00e-01	n/a
S97T000823	D	Neodymium- ICP-Acid Dil.	ug/mL	100.6	<1.00e-01	<2.00e-01	<2.00e-01	<2.00e-01	n/a	n/a	2.00e-01	n/a
S97T000823	D	Nickel- ICP-Acid Dil.	ug/mL	99.00	<2.00e-02	<4.00e-02	<4.00e-02	<4.00e-02	n/a	n/a	4.00e-02	n/a
S97T000823	D	Phosphorus- ICP-Acid Dil.	ug/mL	95.20	<2.00e-01	<4.00e-01	<4.00e-01	<4.00e-01	n/a	n/a	4.00e-01	n/a
S97T000823	D	Lead- ICP-Acid Dil.	ug/mL	95.80	<1.00e-01	<2.00e-01	<2.00e-01	<2.00e-01	n/a	n/a	2.00e-01	n/a
S97T000823	D	Sulfur- ICP-Acid Dil.	ug/mL	100.2	<1.00e-01	5.870	5.790	5.830	1.37	n/a	2.00e-01	n/a
S97T000823	D	Antimony- ICP-Acid Dil.	ug/mL	94.00	<6.00e-02	<1.20e-01	<1.20e-01	<1.20e-01	n/a	n/a	1.20e-01	n/a
S97T000823	D	Selenium- ICP-Acid Dil.	ug/mL	96.40	<1.00e-01	<2.00e-01	<2.00e-01	<2.00e-01	n/a	n/a	2.00e-01	n/a
S97T000823	D	Silicon- ICP-Acid Dil.	ug/mL	99.80	<5.00e-02	5.770	5.810	5.790	0.69	n/a	1.00e-01	n/a
S97T000823	D	Samarium- ICP-Acid Dil.	ug/mL	99.20	<1.00e-01	<2.00e-01	<2.00e-01	<2.00e-01	n/a	n/a	2.00e-01	n/a
S97T000823	D	Strontium- ICP-Acid Dil.	ug/mL	97.60	<1.00e-02	8.95e-02	9.10e-02	9.02e-02	1.66	n/a	2.00e-02	n/a
S97T000823	D	Tantalum- ICP-Acid Dil.	ug/mL	96.80	<1.00e-02	<2.00e-02	<2.00e-02	<2.00e-02	n/a	n/a	2.00e-02	n/a
S97T000823	D	Thallium- ICP-Acid Dil.	ug/mL	96.40	<2.00e-01	<4.00e-01	<4.00e-01	<4.00e-01	n/a	n/a	4.00e-01	n/a
S97T000823	D	Uranium- ICP-Acid Dil.	ug/mL	99.50	<5.00e-01	<1.00e-01	<1.00e-01	<1.00e-01	n/a	n/a	1.00e-01	n/a
S97T000823	D	Vanadium- ICP-Acid Dil.	ug/mL	100.8	<5.00e-02	<1.00e-01	<1.00e-01	<1.00e-01	n/a	n/a	1.00e-01	n/a
S97T000823	D	Zinc- ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	1.21e-01	1.22e-01	1.21e-01	0.82	n/a	2.00e-02	n/a
S97T000823	D	Zirconium- ICP-Acid Dil.	ug/mL	98.40	<1.00e-02	<2.00e-02	<2.00e-02	<2.00e-02	n/a	n/a	2.00e-02	n/a
S97T001242	F	Fluoride- IC-Bioxex 4000/4500	ug/mL	92.37	<1.20e-02	3.63e-01	3.60e-01	3.61e-01	0.53	n/a	1.32e-01	n/a
S97T001242	F	Chloride- IC-Bioxex 4000/4500	ug/mL	98.35	<1.70e-02	8.780	8.250	8.515	6.22	n/a	1.87e-01	n/a
S97T001242	F	Nitrite- IC - Dionex 4000/4500	ug/mL	101.3	<1.08e-01	<1.188	<1.19e0	<1.19e0	n/a	n/a	1.188	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T001242		Bromide by Ion Chromatograph	ug/mL	101.2	<1.25e-01	< 1.375	<1.38e0	n/a	n/a	n/a	1.375	n/a
S97T001242		Nitrate by IC-Dionex 4000/4500	ug/mL	102.0	<1.39e-01	1.953	2.320	2.136	17.3	n/a	1.529	n/a
S97T001242		Phosphate-IC-Dionex 4000/4500	ug/mL	100.9	<1.20e-01	< 1.320	<1.32e0	n/a	n/a	n/a	1.320	n/a
S97T001242		Sulfate by IC-Dionex 4000/4500	ug/mL	99.21	<1.38e-01	15.44	15.60	15.52	1.29	n/a	1.518	n/a
S97T001242		Oxalate-IC-Dionex 4000/450	ug/mL	103.5	<1.05e-01	< 1.155	<1.16e0	n/a	n/a	n/a	1.155	n/a
S97T001242		Alpha in Liquid Samples	uc1/mL	93.50	<7.11e-07	1.21e-06	<6.56E-7	n/a	n/a	n/a	1.47e-06	9.62E+01

Table 2. Data Summary Table
T-201

CORE NUMBER: 192

SEGMENT #: 1

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S97T000833		DSC Exotherm Dry, Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000833		DSC Exotherm on Perkin Elmer	Joules/g	96.06	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S97T000833		Specific Gravity	SP.G.	99.82	n/a	1.055	1.054	1.054	0.09	n/a	1.00e-02	n/a	n/a
S97T000833		% Water by TGA on Perkin Elmer	%	99.41	n/a	91.10	90.95	91.03	0.16	n/a	n/a	n/a	n/a
S97T001203	D	Silver-ICP-Acid Dil.	ug/mL	99.00	< 1.00e-02	< 10.10	< 2.01e0	D/A	n/a	43.10	2.010	n/a	n/a
S97T001203	D	Aluminum-ICP-Acid Dil.	ug/mL	96.60	< 5.00e-02	< 10.10	< 1.01e1	D/A	n/a	95.00	10.10	n/a	n/a
S97T001203	D	Arsenic-ICP-Acid Dil.	ug/mL	99.40	< 1.00e-01	< 20.10	< 2.01e1	D/A	n/a	103.0	20.10	n/a	n/a
S97T001203	D	Boron-ICP-Acid Dil.	ug/mL	100.2	< 5.00e-02	< 10.10	< 1.01e1	D/A	n/a	101.0	10.10	n/a	n/a
S97T001203	D	Barium-ICP-Acid Dil.	ug/mL	98.00	< 5.00e-02	< 10.10	< 1.01e1	D/A	n/a	98.70	10.10	n/a	n/a
S97T001203	D	Beryllium-ICP-Acid Dil.	ug/mL	100.2	< 5.00e-03	< 1.01e1	< 1.01e0	D/A	n/a	99.50	1.010	n/a	n/a
S97T001203	D	Bismuth-ICP-Acid Dil.	ug/mL	99.60	< 1.00e-01	< 20.10	< 2.01e1	D/A	n/a	102.0	20.10	n/a	n/a
S97T001203	D	Calcium-ICP-Acid Dil.	ug/mL	95.60	< 1.00e-01	< 20.10	< 2.01e1	D/A	n/a	96.00	20.10	n/a	n/a
S97T001203	D	Cadmium-ICP-Acid Dil.	ug/mL	96.80	< 5.00e-03	< 1.01e1	< 1.01e0	D/A	n/a	97.60	1.010	n/a	n/a
S97T001203	D	Cerium-ICP-Acid Dil.	ug/mL	93.60	< 1.00e-01	< 20.10	< 2.01e1	D/A	n/a	95.50	20.10	n/a	n/a
S97T001203	D	Cobalt-ICP-Acid Dil.	ug/mL	94.40	< 2.00e-02	7.040	7.160	7.100	1.69	101.0	4.020	n/a	n/a
S97T001203	D	Chromium-ICP-Acid Dil.	ug/mL	103.8	< 1.00e-02	< 6.750	6.790	6.760	0.89	95.80	2.010	n/a	n/a
S97T001203	D	Copper-ICP-Acid Dil.	ug/mL	96.60	< 5.00e-02	< 2.01e1	< 2.01e0	D/A	n/a	104.0	2.010	n/a	n/a
S97T001203	D	Iron-ICP-Acid Dil.	ug/mL	97.60	< 5.00e-01	< 10.10	< 1.01e1	D/A	n/a	93.60	10.10	n/a	n/a
S97T001203	D	Lanthanum-ICP-Acid Dil.	ug/mL	98.00	< 5.00e-02	< 10.10	< 1.01e1	D/A	n/a	99.50	10.10	n/a	n/a
S97T001203	D	Lithium-ICP-Acid Dil.	ug/mL	97.40	< 1.00e-02	< 2.01e1	< 2.01e0	D/A	n/a	95.00	2.010	n/a	n/a
S97T001203	D	Magnesium-ICP-Acid Dil.	ug/mL	92.20	< 1.00e-01	< 20.10	< 2.01e1	D/A	n/a	93.70	20.10	n/a	n/a
S97T001203	D	Manganese-ICP-Acid Dil.	ug/mL	96.40	< 1.00e-02	< 2.01e1	< 2.01e0	D/A	n/a	97.90	2.010	n/a	n/a
S97T001203	D	Molybdenum-ICP-Acid Dil.	ug/mL	97.80	< 5.00e-02	< 10.10	< 1.01e1	D/A	n/a	99.80	10.10	n/a	n/a
S97T001203	D	Sodium-ICP-Acid Dil.	ug/mL	101.6	< 1.00e-01	2.66e+04	2.64e+04	2.64e+04	1.52	-4.740e2	20.10	n/a	n/a
S97T001203	D	Neodymium-ICP-Acid Dil.	ug/mL	104.2	< 1.00e-01	< 20.10	< 2.01e1	D/A	n/a	103.0	20.10	n/a	n/a
S97T001203	D	Nickel-ICP-Acid Dil.	ug/mL	96.20	< 1.00e-02	< 4.020	4.020	4.020	n/a	97.10	4.020	n/a	n/a
S97T001203	D	Phosphorus-ICP-Acid Dil.	ug/mL	100.0	< 2.00e-01	2.44e+02	247.0	245.5	1.22	104.0	40.20	n/a	n/a
S97T001203	D	Lead-ICP-Acid Dil.	ug/mL	96.00	< 1.00e-01	< 20.10	< 2.01e1	D/A	n/a	95.20	20.10	n/a	n/a
S97T001203	D	Sulfur-ICP-Acid Dil.	ug/mL	95.20	< 1.00e-01	< 37.50	37.00	37.15	0.81	97.90	20.10	n/a	n/a
S97T001203	D	Antimony-ICP-Acid Dil.	ug/mL	93.20	8.70e-02	< 12.10	23.70	107.0	107.0	12.10	n/a	n/a	n/a
S97T001203	D	Silicon-ICP-Acid Dil.	ug/mL	97.00	< 5.00e-02	< 37.70	44.20	40.95	15.9	111.0	10.10	n/a	n/a
S97T001203	D	Samarium-ICP-Acid Dil.	ug/mL	101.6	< 1.00e-01	< 20.10	< 2.01e1	D/A	n/a	102.0	20.10	n/a	n/a
S97T001203	D	Strontium-ICP-Acid Dil.	ug/mL	97.80	< 1.00e-02	< 2.01e1	< 2.01e0	D/A	n/a	96.80	2.010	n/a	n/a
S97T001203	D	Titanium-ICP-Acid Dil.	ug/mL	95.80	< 1.00e-02	< 2.01e1	< 2.01e0	D/A	n/a	98.50	2.010	n/a	n/a
S97T001203	D	Thallium-ICP-Acid Dil.	ug/mL	99.20	< 2.00e-01	< 40.20	44.02e1	D/A	n/a	98.00	40.20	n/a	n/a
S97T001203	D	Uranium-ICP-Acid Dil.	ug/mL	98.60	< 5.00e-01	< 1.00e2	< 1.00e2	D/A	n/a	98.00	100.0	n/a	n/a
S97T001203	D	Vanadium-ICP-Acid Dil.	ug/mL	99.80	< 5.00e-02	< 10.10	< 1.01e1	D/A	n/a	101.0	10.10	n/a	n/a
S97T001203	D	Zinc-ICP-Acid Dil.	ug/mL	97.80	< 1.00e-02	< 2.01e1	< 2.01e0	D/A	n/a	102.0	2.010	n/a	n/a
S97T001203	D	Zirconium-ICP-Acid Dil.	ug/mL	92.37	< 1.20e-02	4.18e+03	4.24e+03	4.21e+03	1.43	99.30	2.010	n/a	n/a
S97T001203	D	Fluoride-IC-Bioxon 4000/4500	ug/mL	98.35	< 1.20e-02	9.41e+02	989.0	964.9	4.97	106.2	25.45	n/a	n/a
S97T001203	D	Chloride-IC-Bioxon 4000/4500	ug/mL	101.3	< 1.08e-01	3.10e+02	312.0	311.1	0.64	96.51	229.1	n/a	n/a
S97T001203	D	Nitrite-IC - Dionex 4000/4500	ug/mL	101.2	< 1.25e-01	< 2.65e+02	< 2.65e2	D/A	n/a	93.04	265.1	n/a	n/a
S97T001203		Bromide by Ion Chromatograph	ug/mL	101.2	< 1.25e-01	< 2.65e+02	< 2.65e2	D/A	n/a	93.04	265.1	n/a	n/a

Sample#	R. A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det. Limit	Count Err%
S97T001203		Nitrate by IC-Dionex 4000/4500	ug/mL	102.0	<1.39e-01	4.77e+04	4.77e+04	4.74e+04	1.27	95.29	294.8	n/a
S97T001203		Phosphate- IC-Dionex 4000/4500	ug/mL	100.9	<1.20e-01	7.58e+02	694.0	725.8	8.82	98.53	254.5	n/a
S97T001203		Sulfate by IC-Dionex 4000/4500	ug/mL	99.21	<1.38e-01	<2.93e+02	<2.93e+02	n/a	n/a	99.37	292.7	n/a
S97T001203		Oxalate- IC-Dionex 4000/450	ug/mL	103.5	<1.05e-01	<2.23e+02	<2.23e+02	n/a	n/a	104.1	222.7	n/a
S97T001203		Alpha In Liquid Samples	uc1/mL	95.50	<8.11e-07	1.05e-05	8.96e-06	9.73e-06	15.8	62.36	1.33e-06	2.29E+01

Table 2. Data Summary Table
T-201CORE NUMBER: 192
SEGMENT #: 2

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S577T000834	DSC	Exotherm Dry	Calculated	Joules/g Dry	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S577T000834	DSC	Exotherm on Perkin Elmer	Joules/g	97.52	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S577T000834		Specific Gravity	Sp. G.	99.84	n/a	1.055	1.061	1.058	0.57	n/a	1.00e-02	n/a
S577T000834	D	Water by TGA on Perkin Elmer %	%	99.60	n/a	91.16	91.05	91.10	0.12	n/a	n/a	n/a
S577T000834	D	Silver-ICP-Acid Dil.	ug/mL	96.20	<1.00e-02	<1.840	<1.840	1.840	0.12	n/a	5.10e-01	n/a
S577T000834	D	Aluminum-ICP-Acid Dil.	ug/mL	98.20	<5.00e-02	<2.550	<2.550	n/a	n/a	n/a	2.550	n/a
S577T000834	D	Arsenic-ICP-Acid Dil.	ug/mL	90.16	<1.00e-01	<5.100	<5.100	n/a	n/a	n/a	5.100	n/a
S577T000834	D	Boron-ICP-Acid Dil.	ug/mL	99.40	<5.00e-02	<2.740	<2.620	2.680	4.48	n/a	2.550	n/a
S577T000834	D	Barium-ICP-Acid Dil.	ug/mL	98.80	<5.00e-02	<2.550	<2.550	n/a	n/a	n/a	2.550	n/a
S577T000834	D	Beryllium-ICP-Acid Dil.	ug/mL	100.2	<5.00e-03	<2.550	<2.550	n/a	n/a	n/a	2.550	n/a
S577T000834	D	Bismuth-ICP-Acid Dil.	ug/mL	99.60	<1.00e-01	<5.100	<5.100	n/a	n/a	n/a	5.100	n/a
S577T000834	D	Calcium-ICP-Acid Dil.	ug/mL	97.40	<1.00e-01	<5.100	<5.100	n/a	n/a	n/a	2.550	n/a
S577T000834	D	Cadmium-ICP-Acid Dil.	ug/mL	99.00	<5.00e-03	<2.550	<2.550	n/a	n/a	n/a	5.100	n/a
S577T000834	D	Cerium-ICP-Acid Dil.	ug/mL	96.00	<1.00e-01	<5.100	<5.100	n/a	n/a	n/a	5.100	n/a
S577T000834	D	Cobalt-ICP-Acid Dil.	ug/mL	101.0	<2.00e-02	<1.020	<1.020	n/a	n/a	n/a	1.020	n/a
S577T000834	D	Chromium-ICP-Acid Dil.	ug/mL	98.00	<1.00e-02	<6.820	<6.850	6.835	0.44	n/a	5.10e-01	n/a
S577T000834	D	Copper-ICP-Acid Dil.	ug/mL	106.0	<1.00e-02	<5.10e-01	<5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S577T000834	D	Iron-ICP-Acid Dil.	ug/mL	98.40	<5.00e-02	<2.550	<2.550	n/a	n/a	n/a	25.50	n/a
S577T000834	D	Lanthanum-ICP-Acid Dil.	ug/mL	99.00	<5.00e-01	<4.09e+03	<4.14e+03	4.12e+03	1.22	n/a	25.50	n/a
S577T000834	D	Lithium-ICP-Acid Dil.	ug/mL	97.20	<1.00e-02	<5.10e-01	<5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S577T000834	D	Magnesium-ICP-Acid Dil.	ug/mL	94.80	<1.00e-01	<5.100	<5.100	n/a	n/a	n/a	5.10e-01	n/a
S577T000834	D	Manganese-ICP-Acid Dil.	ug/mL	97.20	<1.00e-02	<5.10e-01	<5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S577T000834	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.4	<5.00e-02	<2.550	<2.550	2.50e+04	0.77	n/a	5.100	n/a
S577T000834	D	Sodium-ICP-Acid Dil.	ug/mL	101.2	<1.00e-01	<5.100	<5.100	n/a	n/a	n/a	5.100	n/a
S577T000834	D	Neodymium-ICP-Acid Dil.	ug/mL	100.6	<2.00e-02	<1.020	<5.100	n/a	n/a	n/a	5.100	n/a
S577T000834	D	Nickel-ICP-Acid Dil.	ug/mL	99.00	<2.00e-02	<5.100	<5.100	n/a	n/a	n/a	1.020	n/a
S577T000834	D	Phosphorus-ICP-Acid Dil.	ug/mL	99.20	<2.00e-01	<5.100	<5.100	240.5	0.42	n/a	10.20	n/a
S577T000834	D	Lead-ICP-Acid Dil.	ug/mL	95.80	<1.00e-01	<5.100	<5.100	40.55	2.22	n/a	5.100	n/a
S577T000834	D	Sulfur-ICP-Acid Dil.	ug/mL	100.2	<1.00e-01	<41.00	<40.10	40.55	2.22	n/a	5.100	n/a
S577T000834	D	Antimony-ICP-Acid Dil.	ug/mL	94.00	<6.00e-02	<3.060	<3.060	n/a	n/a	n/a	3.060	n/a
S577T000834	D	Selenium-ICP-Acid Dil.	ug/mL	96.40	<1.00e-01	<5.90	<5.100	54.95	3.46	n/a	5.100	n/a
S577T000834	D	Silicon-ICP-Acid Dil.	ug/mL	99.80	<5.00e-02	<55.90	<54.00	54.95	3.46	n/a	2.550	n/a
S577T000834	D	Samarium-ICP-Acid Dil.	ug/mL	99.20	<1.00e-01	<5.100	<5.100	n/a	n/a	n/a	5.100	n/a
S577T000834	D	Strontium-ICP-Acid Dil.	ug/mL	97.60	<1.00e-02	<5.10e-01	<5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S577T000834	D	Titanium-ICP-Acid Dil.	ug/mL	96.80	<1.00e-02	<5.10e-01	<5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S577T000834	D	Thallium-ICP-Acid Dil.	ug/mL	96.40	<2.00e-01	<10.20	<1.02e1	n/a	n/a	n/a	10.20	n/a
S577T000834	D	Uranium-ICP-Acid Dil.	ug/mL	99.50	<5.00e-01	<25.50	<2.55e1	n/a	n/a	n/a	25.50	n/a
S577T000834	D	Vanadium-ICP-Acid Dil.	ug/mL	100.8	<5.00e-02	<2.550	<2.550	n/a	n/a	n/a	2.550	n/a
S577T000834	D	Zinc-ICP-Acid Dil.	ug/mL	101.8	<1.00e-02	<5.10e-01	<5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S577T000834	D	Zirconium-ICP-Acid Dil.	ug/mL	98.40	<1.00e-02	<5.10e-01	<5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S577T000834	Fluoride-1C	Diionex 4000/4500	ug/mL	97.29	<1.20e-02	<4.48e+03	<4.48e+03	4.43e+03	2.26	n/a	13.33	n/a
S577T000834	Chloride-1C	Diionex 4000/4500	ug/mL	97.47	<1.70e-02	<1.01e+03	<1.05e+03	1.02e+03	1.96	n/a	18.89	n/a
S577T000834	Nitrite-1C	Diionex 4000/4500	ug/mL	98.71	<1.08e-01	<2.79e+02	<232.0	230.7	1.30	n/a	120.0	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000834		Bromide by Ion Chromatograph	ug/mL	95.76	<1.25e-01	<1.39e+02	<1.39e+02	n/a	n/a	n/a	136.9	n/a
S97T000834		Nitrate by IC-Dionex 4000/4500	ug/mL	94.61	<1.39e-01	4.84e+04	4.82e+04	4.83e+04	0.41	n/a	154.4	n/a
S97T000834		Phosphate-IC-Dionex 4000/4500	ug/mL	95.78	<1.20e-01	7.36e+02	706.0	721.2	4.16	n/a	133.3	n/a
S97T000834		Sulfate by IC-Dionex 4000/4500	ug/mL	94.93	<1.38e-01	<1.53e+02	<1.53e+02	n/a	n/a	n/a	153.3	n/a
S97T000834		Oxalate-IC-Dionex 4000/450	ug/mL	99.25	<1.05e-01	<1.17e+02	135.0	n/a	n/a	n/a	116.7	n/a
S97T000834		Alpha in Liquid Samples	uCi/mL	95.50	<8.11e-07	7.96e-06	9.41e-06	8.68e-06	16.7	n/a	1.33e-06	2.55E+01

HNF-SD-WM-DP-254, REV. 0

Table 2. Data Summary Table
1-201

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S977000835		DSC Exotherm Dry Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S977000835		DSC Exotherm on Perkin Elmer	Joules/g	97.54	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S977000835		Specific Gravity	Sp.G.	99.82	n/a	1.058	1.050	1.054	0.76	n/a	1.00e-02	n/a
S977000835		% Water by TGA on Perkin Elmer	%	99.60	n/a	91.80	91.83	91.81	0.03	n/a	n/a	n/a
S977000835		S Silver-ICP-Acid DIL	ug/mL	96.20	<1.00e-02	1.670	1.700	1.685	1.78	n/a	5.10e-01	n/a
S977000835		Al Aluminum-ICP-Acid DIL	ug/mL	98.20	<5.00e-02	< 2.550	<2.550	n/a	n/a	n/a	2.550	n/a
S977000835		As Arsenic-ICP-Acid DIL	ug/mL	101.6	<1.00e-01	< 5.100	<5.100	n/a	n/a	n/a	5.100	n/a
S977000835		B Boron-ICP-Acid DIL	ug/mL	98.40	<5.00e-02	3.230	3.200	3.215	0.93	n/a	2.550	n/a
S977000835		Barium-ICP-Acid DIL	ug/mL	99.80	<5.00e-02	< 2.550	<2.550	n/a	n/a	n/a	2.550	n/a
S977000835		B Barium-ICP-Acid DIL	ug/mL	100.2	<5.00e-03	<2.55e-01	< 2.55e-01	n/a	n/a	n/a	2.55e-01	n/a
S977000835		B Bismuth-ICP-Acid DIL	ug/mL	99.60	<1.00e-01	13.60	<5.10e-01	n/a	n/a	n/a	5.100	n/a
S977000835		Ca Calcium-ICP-Acid DIL	ug/mL	97.40	<5.00e-03	< 5.100	< 5.10e-01	n/a	n/a	n/a	5.100	n/a
S977000835		C Cadmium-ICP-Acid DIL	ug/mL	99.00	<5.00e-03	<2.55e-01	< 2.55e-01	n/a	n/a	n/a	2.55e-01	n/a
S977000835		C Cerium-ICP-Acid DIL	ug/mL	96.00	<1.00e-01	< 5.100	<5.10e-01	n/a	n/a	n/a	5.100	n/a
S977000835		C Cobalt-ICP-Acid DIL	ug/mL	101.0	<2.00e-02	< 1.020	<1.020	n/a	n/a	n/a	1.020	n/a
S977000835		Chromium-ICP-Acid DIL	ug/mL	98.00	<1.00e-02	7.400	6.370	6.885	15.0	n/a	5.10e-01	n/a
S977000835		C Copper-ICP-Acid DIL	ug/mL	106.0	<1.00e-02	<5.10e-01	< 5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S977000835		Fe Iron-ICP-Acid DIL	ug/mL	98.40	<5.00e-02	< 2.550	< 2.55e-01	n/a	n/a	n/a	2.550	n/a
S977000835		P Potassium-ICP-Acid DIL	ug/mL	99.00	<5.00e-01	3.74e+03	3.77e+03	3.76e+03	0.80	n/a	25.50	n/a
S977000835		L Lanthanum-ICP-Acid DIL	ug/mL	96.00	<5.00e-02	4.210	< 2.55e-01	n/a	n/a	n/a	2.550	n/a
S977000835		L Lithium-ICP-Acid DIL	ug/mL	97.20	<1.00e-02	<5.10e-01	< 5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S977000835		M Magnesium-ICP-Acid DIL	ug/mL	94.80	<1.00e-01	< 5.100	<5.10e-01	n/a	n/a	n/a	5.100	n/a
S977000835		M Manganese-ICP-Acid DIL	ug/mL	97.80	<1.00e-02	< 3.940	< 3.94e-01	n/a	n/a	n/a	5.10e-01	n/a
S977000835		Mo Molybdenum-ICP-Acid DIL	ug/mL	100.4	<5.00e-02	< 2.550	<2.55e-01	n/a	n/a	n/a	2.550	n/a
S977000835		S Sodium-ICP-Acid DIL	ug/mL	101.2	<1.00e-01	2.32e+04	2.35e+04	2.34e+04	1.28	n/a	5.100	n/a
S977000835		N Neodymium-ICP-Acid DIL	ug/mL	100.6	<1.00e-01	< 5.100	<5.10e-01	n/a	n/a	n/a	5.100	n/a
S977000835		N Nickel-ICP-Acid DIL	ug/mL	99.00	<2.00e-02	< 1.020	<1.02e-01	n/a	n/a	n/a	1.020	n/a
S977000835		P Phosphorus-ICP-Acid DIL	ug/mL	99.20	<2.00e-01	2.02e+02	200.0	201.0	1.00	n/a	10.20	n/a
S977000835		Lead-ICP-Acid DIL	ug/mL	95.80	<1.00e-01	< 5.100	<5.10e-01	n/a	n/a	n/a	5.100	n/a
S977000835		S Silver-ICP-Acid DIL	ug/mL	100.2	<1.00e-01	36.90	36.00	36.45	2.97	n/a	5.100	n/a
S977000835		Antimony-ICP-Acid DIL	ug/mL	94.00	<6.00e-02	< 3.060	<3.06e-01	n/a	n/a	n/a	3.060	n/a
S977000835		S Selenium-ICP-Acid DIL	ug/mL	96.40	<1.00e-01	< 5.100	<5.10e-01	n/a	n/a	n/a	5.100	n/a
S977000835		S Silicon-ICP-Acid DIL	ug/mL	99.80	<5.00e-02	58.40	58.70	58.55	0.51	n/a	2.550	n/a
S977000835		S Sodium-ICP-Acid DIL	ug/mL	99.20	<1.00e-01	< 5.100	<5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S977000835		Strontium-ICP-Acid DIL	ug/mL	97.60	<1.00e-02	<5.10e-01	< 5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S977000835		T Tantalum-ICP-Acid DIL	ug/mL	96.80	<1.00e-02	<3.10e-01	< 3.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S977000835		T Thallium-ICP-Acid DIL	ug/mL	96.40	<2.00e-01	< 10.20	<1.02e-01	n/a	n/a	n/a	10.20	n/a
S977000835		U Uranium-ICP-Acid DIL	ug/mL	99.50	<5.00e-01	< 23.50	<2.55e-01	n/a	n/a	n/a	2.550	n/a
S977000835		V Vanadium-ICP-Acid DIL	ug/mL	100.8	<5.00e-02	< 2.550	<2.55e-01	n/a	n/a	n/a	2.550	n/a
S977000835		Z Zinc-ICP-Acid DIL	ug/mL	101.8	<1.00e-02	<5.29e-01	< 5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S977000835		Z Zirconium-ICP-Acid DIL	ug/mL	96.40	<1.00e-02	<5.10e-01	< 5.10e-01	n/a	n/a	n/a	5.10e-01	n/a
S977000835		Chloride-IC-Dioxin 4000/4500	ug/mL	97.29	<1.20e-02	3.92e+03	3.88e+03	3.87e+03	2.52	n/a	13.33	n/a
S977000835		Chloride-IC-Dioxin 4000/4500	ug/mL	97.47	<1.20e-02	9.10e+02	879.0	894.8	3.47	n/a	18.89	n/a
S977000835		Nitrite-IC - Dioxin 4000/4500	ug/mL	96.71	<1.08e-01	1.95e+02	206.0	200.3	5.49	n/a	120.0	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000835		Bromide by Ion Chromatograph	ug/mL	95.76	<1.25e-01	<1.39e+02	<1.39e+02	n/a	n/a	n/a	138.9	n/a
S97T000835		Nitrate by IC-Dionex 4000/4500	ug/mL	94.61	<1.39e-01	4.33e+04	4.33e+04	4.31e+04	0.93	n/a	154.4	n/a
S97T000835		Phosphate- IC-Dionex 4000/4500	ug/mL	95.78	<1.20e-01	6.17e+02	599.0	607.9	2.96	n/a	133.3	n/a
S97T000835		Sulfate by IC-Dionex 4000/4500	ug/mL	94.93	<1.38e-01	<1.53e+02	<1.53e+02	n/a	n/a	n/a	153.3	n/a
S97T000835		Oxalate- IC-Dionex 4000/450	ug/mL	99.25	<1.05e-01	<1.17e+02	<1.17e+02	n/a	n/a	n/a	116.7	n/a
S97T001259		Alpha in Liquid Samples	uc1/mL	93.50	<7.11e-07	8.49e-06	8.33e-06	8.41e-06	1.90	n/a	1.47e-06	2.41E+01

Table 2. Data Summary Table
T-201

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000836	D	PSC Exotherm DRY Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000836	D	PSC Exotherm on Perkin Elmer	Joules/g	97.68	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000836	D	Specific Gravity	Sp.G.	99.82	n/a	1.065	1.051	1.058	1.32	n/a	1.00e-02	n/a
S97T000836	D	% Water by IGA on Perkin Elmer	%	99.60	n/a	91.39	91.13	91.26	0.28	n/a	n/a	n/a
S97T000836	D	Silver-ICP-Acid Dil.	ug/mL	98.20	< 1.00e-02	1.770	1.780	1.775	0.56	n/a	5.10e-01	n/a
S97T000836	D	Aluminum-ICP-Acid Dil.	ug/mL	98.20	< 2.55e-02	2.550	< 2.55e0	n/a	n/a	n/a	2.550	n/a
S97T000836	D	Arsenic-ICP-Acid Dil.	ug/mL	101.61	< 1.00e-01	< 5.100	< 5.10e0	n/a	n/a	n/a	5.100	n/a
S97T000836	D	Boron-ICP-Acid Dil.	ug/mL	98.40	< 5.00e-02	3.810	4.220	4.015	10.2	n/a	2.550	n/a
S97T000836	D	Barium-ICP-Acid Dil.	ug/mL	98.40	< 5.00e-02	2.550	< 2.55e0	n/a	n/a	n/a	2.550	n/a
S97T000836	D	Beryllium-ICP-Acid Dil.	ug/mL	100.2	< 5.00e-03	< 2.55e-01	< 2.55e-1	n/a	n/a	n/a	2.55e-01	n/a
S97T000836	D	Bismuth-ICP-Acid Dil.	ug/mL	99.60	< 1.00e-01	8.880	< 5.10e0	n/a	n/a	n/a	5.100	n/a
S97T000836	D	Calcium-ICP-Acid Dil.	ug/mL	97.00	< 1.00e-03	< 5.100	< 5.10e-1	n/a	n/a	n/a	5.100	n/a
S97T000836	D	Cadmium-ICP-Acid Dil.	ug/mL	99.00	< 5.00e-03	< 2.55e-01	< 2.55e-1	n/a	n/a	n/a	2.55e-01	n/a
S97T000836	D	Cerium-ICP-Acid Dil.	ug/mL	96.00	< 1.00e-01	< 5.100	< 5.10e0	n/a	n/a	n/a	5.100	n/a
S97T000836	D	Cobalt-ICP-Acid Dil.	ug/mL	101.01	< 2.00e-02	< 1.020	< 1.02e0	n/a	n/a	n/a	1.020	n/a
S97T000836	D	Copper-ICP-Acid Dil.	ug/mL	96.00	< 1.00e-02	8.120	7.760	7.940	4.53	n/a	5.10e-01	n/a
S97T000836	D	Chromium-ICP-Acid Dil.	ug/mL	106.01	< 1.00e-02	< 5.10e-01	< 5.10e-1	n/a	n/a	n/a	5.10e-01	n/a
S97T000836	D	Iron-ICP-Acid Dil.	ug/mL	98.40	< 5.00e-02	< 2.550	< 2.55e0	n/a	n/a	n/a	2.550	n/a
S97T000836	D	Potassium-ICP-Acid Dil.	ug/mL	99.00	< 5.00e-01	3.92e+03	3.94e+03	3.93e+03	0.51	n/a	25.50	n/a
S97T000836	D	Lanthanum-ICP-Acid Dil.	ug/mL	96.00	< 5.00e-02	< 2.550	< 2.55e0	n/a	n/a	n/a	2.550	n/a
S97T000836	D	Lithium-ICP-Acid Dil.	ug/mL	97.20	< 1.00e-02	< 5.10e-01	< 5.10e-1	n/a	n/a	n/a	5.10e-01	n/a
S97T000836	D	Magnesium-ICP-Acid Dil.	ug/mL	97.20	< 1.00e-01	< 5.100	< 5.10e-1	n/a	n/a	n/a	5.100	n/a
S97T000836	D	Manganese-ICP-Acid Dil.	ug/mL	97.20	< 1.00e-02	2.420	1.080	1.750	76.6	n/a	5.10e-01	n/a
S97T000836	D	Molybdenum-ICP-Acid Dil.	ug/mL	100.4	< 5.00e-02	< 2.550	< 2.55e0	n/a	n/a	n/a	2.550	n/a
S97T000836	D	Sodium-ICP-Acid Dil.	ug/mL	101.2	< 1.00e-01	2.46e+04	2.46e+04	2.47e+04	0.81	n/a	5.100	n/a
S97T000836	D	Neodymium-ICP-Acid Dil.	ug/mL	100.6	< 1.00e-01	< 5.100	< 5.10e0	n/a	n/a	n/a	5.100	n/a
S97T000836	D	Nickel-ICP-Acid Dil.	ug/mL	99.00	< 2.00e-02	< 1.020	< 1.02e0	n/a	n/a	n/a	1.020	n/a
S97T000836	D	Phosphorus-ICP-Acid Dil.	ug/mL	99.20	< 2.00e-01	1.94e+02	199.0	196.5	2.54	n/a	10.20	n/a
S97T000836	D	Sulfur-ICP-Acid Dil.	ug/mL	100.2	< 1.00e-01	< 5.100	< 5.10e-1	n/a	n/a	n/a	5.100	n/a
S97T000836	D	Antimony-ICP-Acid Dil.	ug/mL	94.00	< 6.00e-02	< 3.060	< 3.06e0	38.20	6.28	n/a	3.060	n/a
S97T000836	D	Selenium-ICP-Acid Dil.	ug/mL	96.40	< 1.00e-01	< 5.100	< 5.10e0	n/a	n/a	n/a	5.100	n/a
S97T000836	D	Silicon-ICP-Acid Dil.	ug/mL	99.80	< 5.00e-02	62.50	64.00	63.25	2.37	n/a	2.550	n/a
S97T000836	D	Samarium-ICP-Acid Dil.	ug/mL	97.60	< 1.00e-01	< 5.100	< 5.10e0	n/a	n/a	n/a	5.100	n/a
S97T000836	D	Strontium-ICP-Acid Dil.	ug/mL	99.20	< 1.00e-02	< 5.10e-01	< 5.10e-1	n/a	n/a	n/a	5.10e-01	n/a
S97T000836	D	Titanium-ICP-Acid Dil.	ug/mL	96.80	< 1.00e-02	< 5.10e-1	< 5.10e-1	n/a	n/a	n/a	10.20	n/a
S97T000836	D	Thallium-ICP-Acid Dil.	ug/mL	99.50	< 5.00e-01	< 10.20	< 10.2e1	n/a	n/a	n/a	10.20	n/a
S97T000836	D	Uranium-ICP-Acid Dil.	ug/mL	100.8	< 5.00e-02	< 2.550	< 2.55e1	n/a	n/a	n/a	2.550	n/a
S97T000836	D	Vanadium-ICP-Acid Dil.	ug/mL	101.8	< 1.00e-02	< 5.10e-01	< 5.10e-1	n/a	n/a	n/a	5.10e-01	n/a
S97T000836	D	Zinc-ICP-Acid Dil.	ug/mL	98.40	< 1.00e-02	< 5.10e-01	< 5.10e-1	n/a	n/a	n/a	5.10e-01	n/a
S97T000836	D	Zirconium-ICP-Acid Dil.	ug/mL	92.37	< 1.210	4.28e+03	4.28e+03	4.28e+03	0.00	n/a	25.45	n/a
S97T000836	D	Fluoride-IC-Bioxex 4000/4500	ug/mL	95.80	< 1.1720	9.03e+02	896.0	899.6	0.78	n/a	36.06	n/a
S97T000836	D	Nitrite-IC - Bioxex 4000/4500	ug/mL	92.46	< 10.50	4.78e+02	464.0	470.8	2.97	n/a	229.1	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000836		Bromide by Ion Chromatograph	ug/mL	93.21	<12.60	<2.65e+02	<2.65e2	N/a	N/a	N/a	265.1	N/a
S97T000836		Nitrate by IC-Dionex 4000/4500	ug/mL	90.74	<14.00	4.48e+04	4.42e+04	4.45e+04	1.35	N/a	294.8	N/a
S97T000836		Phosphate-IC-Dionex 4000/4500	ug/mL	93.58	<12.10	6.51e+02	598.0	624.5	8.49	N/a	254.5	N/a
S97T000836		Sulfate by IC-Dionex 4000/4500	ug/mL	92.08	<13.90	<2.93e+02	<2.93e2	N/a	N/a	N/a	292.7	N/a
S97T000836		Oxalate-IC-Dionex 4000/450	ug/mL	91.35	<10.60	<2.23e+02	<2.23e2	N/a	N/a	N/a	222.7	N/a
S97T000836		Alpha in Liquid Samples	uCi/mL	82.50	7.69e-05	<3.46e-05	<6.26E-5	N/a	N/a	N/a	8.47e-05	5.00E+02

Table 2. Data Summary Table
T-201

SEGMENT PORTION: Drainable Liquid

Sample#	R.#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	SPK Rec %	Det Limit	Count Err%
S97T000837		DSC Exotherm DRY Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000837		DSC Exotherm on Perkin Elmer	Joules/g	97.68	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S97T000837		Specific Gravity	SP.G.	99.82	n/a	1.057	1.071	1.064	1.32	n/a	1.00e-02	n/a
S97T000837		% Water by TGA on Perkin Elmer	%	99.60	n/a	90.99	90.99	90.99	0.00	n/a	n/a	n/a
S97T000837	D	Silver- ICP-Acid Dil.	ug/mL	96.20	< 1.00e-02	1.830	1.850	1.840	1.09	51.90	5.10e-01	n/a
S97T000837	D	Aluminum- ICP-Acid Dil.	ug/mL	98.20	< 5.00e-02	< 2.550	<2.55e0	n/a	n/a	99.60	2.550	n/a
S97T000837	D	Arsenic- ICP-Acid Dil.	ug/mL	101.6	< 1.00e-01	< 5.100	<5.10e0	n/a	n/a	103.0	5.100	n/a
S97T000837	D	Boron- ICP-Acid Dil.	ug/mL	99.80	< 5.00e-02	2.690	2.690	2.795	7.51	97.60	2.550	n/a
S97T000837	D	Barium- ICP-Acid Dil.	ug/mL	98.40	< 5.00e-02	< 2.550	<2.55e0	n/a	n/a	98.60	2.550	n/a
S97T000837	D	Beryllium- ICP-Acid Dil.	ug/mL	100.2	< 5.00e-03	<2.55e-1	<2.55e-1	n/a	n/a	98.60	2.55e-01	n/a
S97T000837	D	Bismuth- ICP-Acid Dil.	ug/mL	99.60	< 1.00e-01	< 5.100	5.860	n/a	n/a	123.0	5.100	n/a
S97T000837	D	Calcium- ICP-Acid Dil.	ug/mL	97.40	< 1.00e-01	< 5.100	<5.10e0	n/a	n/a	100.0	5.100	n/a
S97T000837	D	Cadmium- ICP-Acid Dil.	ug/mL	99.00	< 5.00e-03	<2.55e-01	<2.55e-1	n/a	n/a	98.30	2.55e-01	n/a
S97T000837	D	Cerium- ICP-Acid Dil.	ug/mL	96.00	< 1.00e-01	< 5.100	<5.10e0	n/a	n/a	97.00	5.100	n/a
S97T000837	D	Cobalt- ICP-Acid Dil.	ug/mL	101.0	<2.00e-02	< 1.020	<1.02e0	n/a	n/a	100.0	1.020	n/a
S97T000837	D	Copper- ICP-Acid Dil.	ug/mL	98.00	< 1.00e-02	4.650	4.810	4.730	3.38	99.70	5.10e-01	n/a
S97T000837	D	Iron- ICP-Acid Dil.	ug/mL	106.0	< 1.00e-02	<5.10e-1	<5.10e-1	n/a	n/a	106.0	5.10e-01	n/a
S97T000837	D	Potassium- ICP-Acid Dil.	ug/mL	98.40	< 5.00e-02	< 2.550	<2.55e0	n/a	n/a	87.30	2.550	n/a
S97T000837	D	Lanthanum- ICP-Acid Dil.	ug/mL	99.00	< 5.00e-01	4.04e+03	4.04e+03	4.04e+03	0.00	87.30	2.550	n/a
S97T000837	D	Lithium- ICP-Acid Dil.	ug/mL	98.00	< 5.00e-02	< 2.550	<2.55e0	n/a	n/a	99.80	5.10e-01	n/a
S97T000837	D	Magnesium- ICP-Acid Dil.	ug/mL	97.20	< 1.00e-02	<5.10e-01	<5.10e-1	n/a	n/a	99.60	5.10e-01	n/a
S97T000837	D	Manganese- ICP-Acid Dil.	ug/mL	94.80	< 1.00e-01	< 5.100	<5.10e0	1.260	1.085	92.60	5.10e-01	n/a
S97T000837	D	Molybdenum- ICP-Acid Dil.	ug/mL	100.4	< 5.00e-02	< 2.550	<2.55e0	n/a	n/a	101.0	2.550	n/a
S97T000837	D	Sodium- ICP-Acid Dil.	ug/mL	101.2	< 1.00e-01	2.56e+04	2.56e+04	2.56e+04	0.78	1.57e-1	5.100	n/a
S97T000837	D	Sodium- ICP-Acid Dil.	ug/mL	100.6	< 1.00e-01	< 5.100	<5.10e0	n/a	n/a	102.0	5.100	n/a
S97T000837	D	Nickel- ICP-Acid Dil.	ug/mL	99.00	<2.00e-02	< 1.020	<1.02e0	n/a	n/a	98.30	1.020	n/a
S97T000837	D	Phosphorus- ICP-Acid Dil.	ug/mL	99.20	<2.00e-01	1.97e+02	191.0	191.0	0.00	103.0	5.100	n/a
S97T000837	D	Sulfur- ICP-Acid Dil.	ug/mL	95.80	< 1.00e-01	< 5.100	<5.10e0	n/a	n/a	94.90	5.100	n/a
S97T000837	D	Antimony- ICP-Acid Dil.	ug/mL	100.2	< 1.00e-01	39.00	39.00	39.15	0.77	102.0	5.100	n/a
S97T000837	D	Selenium- ICP-Acid Dil.	ug/mL	94.00	<6.00e-02	3.060	<3.06e0	n/a	n/a	95.80	3.060	n/a
S97T000837	D	Silicon- ICP-Acid Dil.	ug/mL	96.40	< 1.00e-01	< 5.100	<5.10e0	n/a	n/a	106.0	5.100	n/a
S97T000837	D	Samarium- ICP-Acid Dil.	ug/mL	99.80	< 5.00e-02	38.50	45.80	42.15	17.3	121.0	2.550	n/a
S97T000837	D	Strontium- ICP-Acid Dil.	ug/mL	99.20	< 1.00e-01	< 5.100	<5.10e0	n/a	n/a	99.60	5.100	n/a
S97T000837	D	Tantalum- ICP-Acid Dil.	ug/mL	97.60	< 1.00e-02	<5.10e-01	<5.10e-1	n/a	n/a	98.80	5.10e-01	n/a
S97T000837	D	Titanium- ICP-Acid Dil.	ug/mL	96.80	< 1.00e-02	<5.10e-01	<5.10e-1	n/a	n/a	97.80	5.10e-01	n/a
S97T000837	D	Thallium- ICP-Acid Dil.	ug/mL	96.40	<2.00e-01	< 10.20	<1.02e1	n/a	n/a	94.90	10.20	n/a
S97T000837	D	Uranium- ICP-Acid Dil.	ug/mL	99.50	< 5.00e-01	< 25.50	<2.55e1	n/a	n/a	101.5	25.50	n/a
S97T000837	D	Vanadium- ICP-Acid Dil.	ug/mL	100.8	< 5.00e-02	< 2.550	<2.55e0	n/a	n/a	101.0	2.550	n/a
S97T000837	D	Zinc- ICP-Acid Dil.	ug/mL	101.8	< 1.00e-02	<5.10e-01	<5.10e-1	n/a	n/a	103.0	5.10e-01	n/a
S97T000837	D	Zirconium- ICP-Acid Dil.	ug/mL	96.40	< 1.00e-02	<5.10e-01	<5.10e-1	n/a	n/a	99.10	5.10e-01	n/a
S97T000837		Fluoride-IC-Dioxem 4000/4500	ug/mL	92.37	<1.210	4.62e+03	4.78e+03	4.70e+03	3.40	103.7	25.45	n/a
S97T000837		Chloride-IC-Dioxem 4000/4500	ug/mL	95.80	<1.720	9.67e+02	1.07e+03	988.7	4.35	90.89	36.06	n/a
S97T000837		Nitrite-IC - Dioxem 4000/4500	ug/mL	92.46	<10.90	4.66e+02	462.0	463.8	0.86	90.87	229.1	n/a

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000837		Bromide by Ion Chromatograph	ug/mL	93.21	<12.60	<2.65e+02	<2.65e+02	n/a	n/a	91.17	265.1	n/a
S97T000837		Nitrate by IC-Bionex 4000/4500	ug/mL	90.74	<14.00	4.73e+04	4.79e+04	4.76e+04	1.26	107.7	294.8	n/a
S97T000837		Phosphate-IC-Bionex 4000/4500	ug/mL	93.58	<12.10	7.33e+02	643.0	688.1	13.1	91.74	254.5	n/a
S97T000837		Sulfate by IC-Bionex 4000/4500	ug/mL	92.08	<13.90	<2.93e+02	<2.93e+02	n/a	n/a	93.50	292.7	n/a
S97T000837		Oxalate-IC-Bionex 4000/4500	ug/mL	91.35	<10.60	<2.23e+02	<2.23e+02	n/a	n/a	93.05	222.7	n/a
S97T000837		Alpha in Liquid samples	uCi/mL	82.50	7.69e-05	<5.59e-05	<7.61E-5	n/a	n/a	n/a	8.47e-05	5.00E+02

04-aug-1997 14:16:37
A-0002-1CORE NUMBER: 192
SEGMENT #: 6

SEGMENT PORTION: U Upper: Half of Segment

Table 2. Data Summary Table
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Sample#	R#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk. Rec %	Det. Limit	Count Err%
S977000909	F	DSC Exotherm Dry	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S977000909	F	DSC Exotherm on Perkin Elmer	Joules/g	94.90	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S977000909	F	% Water by TGA on Perkin Elmer	%	98.79	n/a	69.98	69.43	69.71	0.79	n/a	n/a	n/a
S977000921	F	Silver - ICP-Fusion	ug/g	96.20	<1.00e-02	<2.22e+02	<2.19e2	n/a	n/a	n/a	222.0	n/a
S977000921	F	Aluminum - ICP-Fusion	ug/g	95.60	<5.00e-02	<1.11e+03	1.17e+03	n/a	n/a	n/a	1.11e+03	n/a
S977000921	F	Arsenic - ICP-Fusion	ug/g	102.4	<1.00e-01	<2.22e+03	<2.19e3	n/a	n/a	n/a	2.22e+03	n/a
S977000921	F	Boron - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.11e+03	<1.09e3	n/a	n/a	n/a	1.11e+03	n/a
S977000921	F	Barium - ICP-Fusion	ug/g	96.00	<5.00e-02	<1.11e+03	<1.09e3	n/a	n/a	n/a	1.11e+03	n/a
S977000921	F	Beryllium - ICP-Fusion	ug/g	100.8	<5.00e-03	<1.11e+02	<1.09e2	n/a	n/a	n/a	111.0	n/a
S977000921	F	Bismuth - ICP-Fusion	ug/g	99.40	<1.00e-01	9.18e+04	9.03e+04	9.10e+04	1.65	n/a	2.22e+03	n/a
S977000921	F	Cadmium - ICP-Fusion	ug/g	100.0	<1.00e-01	<2.22e+03	<2.19e3	n/a	n/a	n/a	2.22e+03	n/a
S977000921	F	Cerium - ICP-Fusion	ug/g	98.80	<5.00e-03	<1.11e+02	<1.09e2	n/a	n/a	n/a	111.0	n/a
S977000921	F	Cesium - ICP-Fusion	ug/g	95.60	<1.00e-01	<2.22e+03	<2.19e3	n/a	n/a	n/a	2.22e+03	n/a
S977000921	F	Cobalt - ICP-Fusion	ug/g	100.6	<2.00e-02	<4.44e+02	<4.38e2	n/a	n/a	n/a	443.0	n/a
S977000921	F	Chromium - ICP-Fusion	ug/g	98.20	<1.00e-02	<4.03e+03	<4.08e+03	4.06e+03	1.23	n/a	222.0	n/a
S977000921	F	Copper - ICP-Fusion	ug/g	97.00	<5.00e-02	<2.22e+02	<2.19e2	n/a	n/a	n/a	222.0	n/a
S977000921	F	Lanthanum - ICP-Fusion	ug/g	92.20	<5.00e-02	8.66e+03	8.60e+03	8.63e+03	0.70	n/a	1.11e+03	n/a
S977000921	F	Lithium - ICP-Fusion	ug/g	97.00	<5.00e-02	1.53e+04	1.48e+04	1.50e+04	3.32	n/a	1.11e+03	n/a
S977000921	F	Magnesium - ICP-Fusion	ug/g	95.20	<1.00e-01	<2.22e+02	<2.19e2	n/a	n/a	n/a	222.0	n/a
S977000921	F	Manganese - ICP-Fusion	ug/g	98.60	<1.00e-01	<2.22e+03	<2.19e3	n/a	n/a	n/a	2.22e+03	n/a
S977000921	F	Molybdenum - ICP-Fusion	ug/g	96.80	<1.00e-02	2.54e+04	2.45e+04	2.50e+04	3.61	n/a	222.0	n/a
S977000921	F	Sodium - ICP-Fusion	ug/g	99.80	<5.00e-02	<1.11e+03	<1.09e3	n/a	n/a	n/a	1.11e+03	n/a
S977000921	F	Neodymium - ICP-Fusion	ug/g	100.0	1.65e-01	2.81e+04	<2.22e+03	<2.19e3	n/a	n/a	2.22e+03	n/a
S977000921	F	Niobium - ICP-Fusion	ug/g	96.80	<1.00e-01	<4.44e+03	<4.38e3	n/a	n/a	n/a	4.43e+03	n/a
S977000921	F	Phosphorus - ICP-Fusion	ug/g	100.3	<2.00e-01	<2.22e+03	<2.19e3	n/a	n/a	n/a	2.22e+03	n/a
S977000921	F	Lead - ICP-Fusion	ug/g	96.80	<1.00e-01	<2.22e+03	<2.19e3	n/a	n/a	n/a	2.22e+03	n/a
S977000921	F	Sulfur - ICP-Fusion	ug/g	96.80	<1.00e-01	<2.22e+03	<2.19e3	n/a	n/a	n/a	2.22e+03	n/a
S977000921	F	Antimony - ICP-Fusion	ug/g	94.80	<6.00e-02	<1.33e+03	<1.31e3	n/a	n/a	n/a	1.33e+03	n/a
S977000921	F	Selenium - ICP-Fusion	ug/g	95.40	<1.00e-01	<2.22e+03	<2.19e3	n/a	n/a	n/a	2.22e+03	n/a
S977000921	F	Silicon - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.11e+03	<1.09e3	n/a	n/a	n/a	1.11e+03	n/a
S977000921	F	Samarium - ICP-Fusion	ug/g	95.20	<1.00e-01	<2.22e+03	<2.19e3	n/a	n/a	n/a	2.22e+03	n/a
S977000921	F	Strontium - ICP-Fusion	ug/g	96.20	<1.00e-02	8.84e+02	832.0	858.0	6.06	n/a	2.22e+03	n/a
S977000921	F	Titanium - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.22e+02	<2.19e2	n/a	n/a	n/a	222.0	n/a
S977000921	F	Thallium - ICP-Fusion	ug/g	94.00	<2.00e-01	<4.44e+03	<4.38e3	n/a	n/a	n/a	4.43e+03	n/a
S977000921	F	Uranium - ICP-Fusion	ug/g	95.70	<5.00e-01	<1.11e+04	<1.09e4	n/a	n/a	n/a	1.11e+04	n/a
S977000921	F	Vanadium - ICP-Fusion	ug/g	99.80	<5.00e-02	<2.22e+02	<2.19e2	n/a	n/a	n/a	2.22e+03	n/a
S977000921	F	Zinc - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.22e+02	<2.19e2	n/a	n/a	n/a	222.0	n/a
S977000921	F	Zirconium - ICP-Fusion	ug/g	96.80	<1.00e-02	4.64e+03	4.71e+03	4.67e+03	1.50	n/a	222.0	n/a
S977000931	U	Fluoride-IC-Dioxex 4000/4500	ug/g	92.20	<1.00e-02	9.76e+02	983.0	979.6	0.71	n/a	28.95	n/a
S977000931	U	Chloride-IC-Dioxex 4000/4500	ug/g	96.83	<1.00e-02	3.17e+02	317.0	316.9	0.00	n/a	4.01	n/a
S977000931	U	Nitrite-IC - Dioxex 4000/4500	ug/g	96.14	<1.00e-01	<3.02e+02	<2.99e2	n/a	n/a	n/a	260.5	n/a
S977000931	U	Bromide by Ion Chromatograph	ug/g	96.44	<1.25e-01	<3.02e+02	<2.99e2	n/a	n/a	n/a	301.5	n/a
S977000931	U	Nitrate by Ion Chromatograph	ug/g	97.84	<1.59e-01	4.56e+04	4.62e+04	4.62e+04	2.60	n/a	335.3	n/a
S977000931	U	Phosphate-IC-Dioxex 4000/4500	ug/g	95.96	<1.20e-01	1.22e+03	1.16e+03	1.19e+03	5.04	n/a	289.5	n/a

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk %	Det. Limit	Count Err%
S977000931	W	Sulfate by IC-Bioxex 4000/4500	ug/g	97.31	<1.38e-01	9.65e+02	<3.31e2	n/a	n/a	n/a	332.9	n/a
S977000931	W	Oxalate-IC-Bioxex 4000/4500	ug/g	98.68	<1.05e-01	1.02e+03	1.12e+03	1.07e+03	9.35	n/a	253.3	n/a

Lower Half of Segment: L Lower Half of Segment												
Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk %	Det. Limit	Count Err%
S977000894		Bulk Density of Sample	g/mL	n/a	n/a	1.390	n/a	n/a	n/a	n/a	5.00e-01	n/a
S977000899		DSC Exotherm DRY, Calculated	Joules/g DRY	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S977000899		DSC Exotherm on Perkin Elmer	Joules/g	94.90	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S977000899		% Water by TGA on Perkin Elmer	%	98.79	n/a	66.31	64.76	65.53	2.37	n/a	n/a	n/a
S977000900	W	Fluoride-IC-Bioxex 4000/4500	ug/g	92.20	<1.20e-02	4.77e+03	4.40e+03	4.59e+03	8.07	n/a	26.66	n/a
S977000900	W	Chloride-IC-Bioxex 4000/4500	ug/g	96.83	<1.70e-02	1.00e+03	940.0	972.0	6.19	n/a	37.77	n/a
S977000900	W	Nitrite-IC - Bioex 4000/4500	ug/g	96.14	<1.08e-01	3.17e+02	298.0	307.4	6.18	n/a	240.0	n/a
S977000900	W	Bromide by Ion Chromatograph	ug/g	96.44	<1.25e-01	4.27e+02	82.0e2	n/a	n/a	n/a	277.8	n/a
S977000900	W	Nitrate by IC-Bioxex 4000/4500	ug/g	97.64	<1.39e-01	4.43e+04	4.36e+04	4.40e+04	1.59	n/a	308.9	n/a
S977000900	W	Phosphate-IC-Bioxex 4000/4500	ug/g	95.96	<1.20e-01	5.54e+02	680.0	617.1	20.4	n/a	266.6	n/a
S977000900	W	Sulfate by IC-Bioxex 4000/4500	ug/g	97.31	<1.38e-01	3.07e+02	392.0	n/a	n/a	n/a	306.7	n/a
S977000900	W	Oxalate-IC-Bioxex 4000/4500	ug/g	98.68	<1.05e-01	1.08e+03	984.0	1.03e+03	9.30	n/a	233.3	n/a
S977000901	F	Silver - ICP-Fusion	ug/g	96.20	<1.00e-02	<2.04e+02	<1.99e2	n/a	n/a	n/a	204.0	n/a
S977000901	F	Aluminum - ICP-Fusion	ug/g	95.00	<5.00e-02	<1.02e+03	<9.96e2	n/a	n/a	n/a	1.02e+03	n/a
S977000901	F	Arsenic - ICP-Fusion	ug/g	102.4	<1.00e-01	<2.04e+03	<1.99e3	n/a	n/a	n/a	2.04e+03	n/a
S977000901	F	Boron - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.02e+03	<9.96e2	n/a	n/a	n/a	1.02e+03	n/a
S977000901	F	Barium - ICP-Fusion	ug/g	96.00	<5.00e-02	<1.02e+03	<9.96e2	n/a	n/a	n/a	1.02e+03	n/a
S977000901	F	Beryllium - ICP-Fusion	ug/g	100.8	<5.00e-03	<1.02e+02	<9.96e1	n/a	n/a	n/a	102.0	n/a
S977000901	F	Bismuth - ICP-Fusion	ug/g	99.40	<1.00e-01	1.11e+05	1.12e+05	0.90	n/a	n/a	2.04e+03	n/a
S977000901	F	Calcium - ICP-Fusion	ug/g	100.0	<1.00e-01	<2.04e+03	<1.99e3	n/a	n/a	n/a	2.04e+03	n/a
S977000901	F	Cadmium - ICP-Fusion	ug/g	98.80	<5.00e-03	<1.02e+02	<9.96e1	n/a	n/a	n/a	102.0	n/a
S977000901	F	Cerium - ICP-Fusion	ug/g	95.60	<1.00e-01	<2.04e+03	<1.99e3	n/a	n/a	n/a	2.04e+03	n/a
S977000901	F	Cobalt - ICP-Fusion	ug/g	100.6	<2.00e-02	<4.08e+02	<3.98e2	n/a	n/a	n/a	408.0	n/a
S977000901	F	Chromium - ICP-Fusion	ug/g	98.20	<1.00e-02	5.36e+03	5.39e+03	5.38e+03	0.56	n/a	204.0	n/a
S977000901	F	Copper - ICP-Fusion	ug/g	96.60	<1.00e-02	<2.04e+02	<1.99e2	n/a	n/a	n/a	204.0	n/a
S977000901	F	Iron - ICP-Fusion	ug/g	92.20	<5.00e-02	9.34e+03	9.30e+03	9.32e+03	0.43	n/a	1.02e+03	n/a
S977000901	F	Lanthanum - ICP-Fusion	ug/g	97.00	<5.00e-02	1.59e+04	1.75e+04	1.67e+04	9.58	n/a	1.02e+03	n/a
S977000901	F	Lithium - ICP-Fusion	ug/g	95.20	<1.00e-02	<2.04e+02	<1.99e2	n/a	n/a	n/a	204.0	n/a
S977000901	F	Magnesium - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.04e+03	<1.99e3	n/a	n/a	n/a	2.04e+03	n/a
S977000901	F	Manganese - ICP-Fusion	ug/g	99.60	<5.00e-02	2.95e+04	2.99e+04	2.97e+04	1.35	n/a	204.0	n/a
S977000901	F	Molybdenum - ICP-Fusion	ug/g	99.60	<5.00e-02	<1.02e+02	<9.96e2	n/a	n/a	n/a	1.02e+03	n/a
S977000901	F	Nickel - ICP-Fusion	ug/g	100.0	1.65e-01	2.70e+04	<9.96e2	2.70e+04	0.00	n/a	2.04e+03	n/a
S977000901	F	Neodymium - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.04e+03	<1.99e3	n/a	n/a	n/a	2.04e+03	n/a
S977000901	F	Sodium - ICP-Fusion	ug/g	100.8	<2.00e-01	<4.08e+03	<3.98e3	n/a	n/a	n/a	4.08e+03	n/a
S977000901	F	Phosphorus - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.04e+03	<1.99e3	n/a	n/a	n/a	2.04e+03	n/a
S977000901	F	Lead - ICP-Fusion	ug/g	94.80	<6.00e-02	<1.22e+03	<1.20e3	n/a	n/a	n/a	1.22e+03	n/a
S977000901	F	Antimony - ICP-Fusion	ug/g	99.40	<1.00e-01	<2.04e+03	<1.99e3	n/a	n/a	n/a	2.04e+03	n/a
S977000901	F	Selenium - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.02e+03	1.1e+03	n/a	n/a	n/a	1.02e+03	n/a
S977000901	F	Silicon - ICP-Fusion	ug/g	99.20	<1.00e-01	<2.04e+03	<1.99e3	n/a	n/a	n/a	2.04e+03	n/a
S977000901	F	Samarium - ICP-Fusion	ug/g	96.20	<1.00e-02	<1.77e+03	1.21e+03	1.19e+03	3.36	n/a	204.0	n/a
S977000901	F	Strontium - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.04e+02	<1.99e2	n/a	n/a	n/a	4.08e+03	n/a
S977000901	F	Titanium - ICP-Fusion	ug/g	94.00	<2.00e-01	<4.08e+03	<3.98e3	n/a	n/a	n/a	1.02e+04	n/a
S977000901	F	Thallium - ICP-Fusion	ug/g	95.70	<5.00e-01	<1.02e+04	<9.96e3	n/a	n/a	n/a	1.02e+04	n/a
S977000901	F	Uranium - ICP-Fusion	ug/g	99.80	<5.00e-02	<1.02e+03	<9.96e2	n/a	n/a	n/a	1.02e+03	n/a

Sample#	R. A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec. %	Det Limit	Count Err%
S97T000901	F	Zinc - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.04e+02	<1.99e2	N/a	N/a	N/a	204.0	N/a
S97T000901	F	Zirconium - ICP-Fusion	ug/g	96.80	<1.00e-02	<2.04e+02	<1.99e2	N/a	N/a	N/a	204.0	N/a
S97T000901	F	Alpha of Digested Solid	uCi/g	101.0	<4.64e-03	6.32e-01	6.28e-01	6.30e-01	0.63	N/a	8.00e-03	6.21E+00

Table 2. Data Summary Table
1-201CORE NUMBER: 192
SEGMENT #: 7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R. #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det. Limit	Count	Err%
S977000911		DSC Exotherm Dry, Calculated	Joules/g Dry	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S977000911		DSC Exotherm on Perkin Elmer	Joules/g	91.32	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S977000911		% Water by TGA on Perkin Elmer	%	98.72	n/a	65.64	65.64	63.05	8.22	n/a	n/a	n/a	n/a
S977000916	W	Fluoride-IC-Bioxex 4000/4500	ug/g	94.92	<1.20e-02	4.82e+03	4.92e+03	4.87e+03	2.05	n/a	25.87	n/a	n/a
S977000916	W	Chloride-IC-Bioxex 4000/4500	ug/g	93.80	<4.20e-02	9.02e+02	9.23e+02	912.3	2.30	n/a	36.66	n/a	n/a
S977000916	W	Nitrite-IC - Bioxex 4000/4500	ug/g	93.38	<1.08e-01	4.64e+02	4.85e+02	474.5	4.43	n/a	235.9	n/a	n/a
S977000916	W	Bromide by Ion Chromatograph	ug/g	94.23	<1.25e-01	2.77e+02	2.77e+02	474.5	4.43	n/a	265.9	n/a	n/a
S977000916	W	Nitrate by IC-Bioxex 4000/4500	ug/g	97.64	<2.01e-01	4.39e+04	4.10e+04	4.06e+04	1.72	n/a	295.8	n/a	n/a
S977000916	W	Phosphate by IC-Bioxex 4000/4500	ug/g	97.98	<1.20e-01	3.79e+02	618.0	498.4	47.9	n/a	258.7	n/a	n/a
S977000916	W	Sulfate by IC-Bioxex 4000/4500	ug/g	98.42	<1.38e-01	6.44e+02	527.0	495.5	12.7	n/a	276.6	n/a	n/a
S977000916	W	Oxalate by IC-Bioxex 4000/4500	ug/g	94.17	<1.05e-01	6.44e+02	721.0	682.4	11.3	n/a	226.4	n/a	n/a
S977000922	F	Silver - ICP-Fusion	ug/g	96.20	<1.00e-02	<1.00e+02	<1.02e2	n/a	n/a	n/a	201.0	n/a	n/a
S977000922	F	Aluminum - ICP-Fusion	ug/g	95.60	<5.00e-02	<1.00e+03	<1.07e3	n/a	n/a	n/a	1.00e+03	n/a	n/a
S977000922	F	Arsenic - ICP-Fusion	ug/g	102.4	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a	n/a
S977000922	F	Boron - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.00e+03	<1.07e3	n/a	n/a	n/a	1.00e+03	n/a	n/a
S977000922	F	Barium - ICP-Fusion	ug/g	96.00	<5.00e-02	<1.00e+03	<1.07e3	n/a	n/a	n/a	1.00e+03	n/a	n/a
S977000922	F	Beryllium - ICP-Fusion	ug/g	100.8	<5.00e-03	<1.00e+02	<1.07e2	n/a	n/a	n/a	100.0	n/a	n/a
S977000922	F	Bismuth - ICP-Fusion	ug/g	99.40	<1.00e-01	1.03e+05	6.07e+04	8.16e+04	52.6	n/a	2.01e+03	n/a	n/a
S977000922	F	Calcium - ICP-Fusion	ug/g	100.0	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a	n/a
S977000922	F	Cadmium - ICP-Fusion	ug/g	98.80	<5.00e-03	<1.00e+02	<1.07e2	n/a	n/a	n/a	100.0	n/a	n/a
S977000922	F	Cerium - ICP-Fusion	ug/g	95.60	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a	n/a
S977000922	F	Cobalt - ICP-Fusion	ug/g	100.6	<2.00e-02	4.02e+02	44.00e2	n/a	n/a	n/a	402.0	n/a	n/a
S977000922	F	Chromium - ICP-Fusion	ug/g	98.20	<1.00e-02	4.97e+03	5.10e+03	5.04e+03	2.58	n/a	201.0	n/a	n/a
S977000922	F	Copper - ICP-Fusion	ug/g	96.60	<1.00e-02	<2.01e+02	<2.02e2	n/a	n/a	n/a	201.0	n/a	n/a
S977000922	F	Iron - ICP-Fusion	ug/g	92.20	<5.00e-02	7.92e+03	4.78e+03	6.35e+03	49.4	n/a	1.00e+03	n/a	n/a
S977000922	F	Lanthanum - ICP-Fusion	ug/g	97.00	<5.00e-02	2.10e+04	1.96e+04	2.03e+04	6.90	n/a	1.00e+03	n/a	n/a
S977000922	F	Lithium - ICP-Fusion	ug/g	95.20	<1.00e-02	<2.01e+02	<2.02e2	n/a	n/a	n/a	201.0	n/a	n/a
S977000922	F	Magnesium - ICP-Fusion	ug/g	98.60	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a	n/a
S977000922	F	Manganese - ICP-Fusion	ug/g	96.80	<1.00e-02	1.56e+04	6.76e+03	1.12e+04	79.1	n/a	201.0	n/a	n/a
S977000922	F	Molybdenum - ICP-Fusion	ug/g	99.80	<5.00e-02	<1.00e+03	<1.07e3	n/a	n/a	n/a	1.00e+03	n/a	n/a
S977000922	F	Sodium - ICP-Fusion	ug/g	100.0	<1.65e-01	2.58e+04	2.83e+04	2.70e+04	9.24	n/a	2.01e+03	n/a	n/a
S977000922	F	Nickelium - ICP-Fusion	ug/g	96.80	<2.00e-01	<4.02e+03	<2.02e3	n/a	n/a	n/a	4.02e+03	n/a	n/a
S977000922	F	Phosphorus - ICP-Fusion	ug/g	100.8	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a	n/a
S977000922	F	Lead - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a	n/a
S977000922	F	Sulfur - ICP-Fusion	ug/g	94.80	<6.00e-02	<1.21e+03	<1.21e3	n/a	n/a	n/a	1.21e+03	n/a	n/a
S977000922	F	Antimony - ICP-Fusion	ug/g	95.20	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a	n/a
S977000922	F	Selenium - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.05e+03	3.80e+03	2.42e+03	113	n/a	1.00e+03	n/a	n/a
S977000922	F	Silicon - ICP-Fusion	ug/g	95.20	<1.00e-01	<2.01e+03	<2.02e3	n/a	n/a	n/a	2.01e+03	n/a	n/a
S977000922	F	Samarium - ICP-Fusion	ug/g	96.20	<1.00e-02	9.13e+02	950.0	931.5	3.97	n/a	201.0	n/a	n/a
S977000922	F	Strontium - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.01e+02	<2.02e2	n/a	n/a	n/a	4.02e+03	n/a	n/a
S977000922	F	Thallium - ICP-Fusion	ug/g	94.00	<2.00e-01	<4.02e+03	<4.00e3	n/a	n/a	n/a	1.00e+04	n/a	n/a
S977000922	F	Uranium - ICP-Fusion	ug/g	95.70	<5.00e-01	<1.00e+04	<1.07e4	n/a	n/a	n/a	1.00e+03	n/a	n/a
S977000922	F	Vanadium - ICP-Fusion	ug/g	99.80	<5.00e-02	<1.00e+03	<1.07e3	n/a	n/a	n/a	1.00e+03	n/a	n/a

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A-0002-1

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000922	F	Zinc - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.01e-02	<2.02e2	N/A	N/A	N/A	201.0	N/A
S97T000922	F	Zirconium - ICP-Fusion	ug/g	96.80	<1.00e-02	<2.01e-02	<2.02e2	N/A	N/A	N/A	201.0	N/A

L Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000925		Bulk Density of Sample	g/mL	N/A	N/A	1.280	N/A	N/A	N/A	N/A	5.00e-01	N/A
S97T000910		DSC Exotherm Dry Calculated	Joules/g Dry	N/A	N/A	0.00e+00	0.00e+00	0.00e+00	0.00	N/A	N/A	N/A
S97T000910		DSC Exotherm on Perkin Elmer	Joules/g	91.32	N/A	0.00e+00	0.00e+00	0.00e+00	0.00	N/A	N/A	N/A
S97T000910		% Water by TGA on Perkin Elmer	%	98.72	N/A	63.52	66.25	64.89	4.21	N/A	N/A	N/A
S97T000915	W	Fluoride-IC-Dioxin 4000/4500	ug/g	96.80	<1.20e-02	4.56e+03	4.56e+03	4.56e+03	0.00	N/A	26.25	N/A
S97T000915	W	Chloride-IC-Dioxin 4000/4500	ug/g	96.83	<1.70e-02	9.54e+02	1.01e+03	982.1	5.70	N/A	37.18	N/A
S97T000915	W	Nitrite-IC - Dioxin 4000/4500	ug/g	96.14	<1.08e-01	3.02e+02	296.0	299.0	2.01	N/A	236.2	N/A
S97T000915	W	Bromide by Ion Chromatograph	ug/g	96.44	<1.25e-01	<2.73e+02	<2.65e2	N/A	N/A	N/A	273.4	N/A
S97T000915	W	Nitrate by Ion Chromatograph	ug/g	97.64	<1.30e-01	4.33e+04	4.35e+04	4.34e+04	0.46	N/A	303.9	N/A
S97T000915	W	Phosphate-IC-Dioxin 4000/4500	ug/g	95.96	<1.20e-01	5.77e+02	417.0	496.9	32.2	N/A	263.5	N/A
S97T000915	W	Sulfate by IC-Dioxin 4000/4500	ug/g	97.31	<1.38e-01	<3.02e+02	981.0	N/A	N/A	N/A	301.6	N/A
S97T000915	W	Oxalate-IC-Dioxin 4000/4500	ug/g	96.68	<1.05e-01	1.03e+03	988.0	1.01e+03	4.16	N/A	229.8	N/A
S97T000919	F	Silver - ICP-Fusion	ug/g	96.20	<1.00e-02	<2.08e+02	<2.04e2	N/A	N/A	N/A	208.0	N/A
S97T000919	F	Aluminum - ICP-Fusion	ug/g	95.60	<5.00e-02	<1.04e+03	<1.02e3	N/A	N/A	N/A	1.04e+03	N/A
S97T000919	F	Arsenic - ICP-Fusion	ug/g	102.4	<1.00e-01	<2.08e+03	<2.04e3	N/A	N/A	N/A	2.08e+03	N/A
S97T000919	F	Boron - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.04e+03	<1.02e3	N/A	N/A	N/A	1.04e+03	N/A
S97T000919	F	Barium - ICP-Fusion	ug/g	96.00	<5.00e-02	<1.04e+03	<1.02e3	N/A	N/A	N/A	1.04e+03	N/A
S97T000919	F	Beryllium - ICP-Fusion	ug/g	100.8	<5.00e-02	<1.04e+03	<1.02e3	N/A	N/A	N/A	104.0	N/A
S97T000919	F	Bismuth - ICP-Fusion	ug/g	99.40	<1.00e-01	9.29e+04	9.73e+04	9.51e+04	4.63	N/A	2.08e+03	N/A
S97T000919	F	Calcium - ICP-Fusion	ug/g	100.0	<1.00e-01	<2.08e+03	<2.04e3	N/A	N/A	N/A	104.0	N/A
S97T000919	F	Cadmium - ICP-Fusion	ug/g	98.80	<5.00e-03	<1.04e+03	<1.02e3	N/A	N/A	N/A	2.08e+03	N/A
S97T000919	F	Cerium - ICP-Fusion	ug/g	95.60	<1.00e-01	<2.08e+03	<2.04e3	N/A	N/A	N/A	2.08e+03	N/A
S97T000919	F	Cobalt - ICP-Fusion	ug/g	100.6	<2.00e-02	4.16e+02	44.07e2	N/A	N/A	N/A	414.0	N/A
S97T000919	F	Chromium - ICP-Fusion	ug/g	98.20	<1.00e-02	5.11e+03	5.02e+03	5.06e+03	1.78	N/A	208.0	N/A
S97T000919	F	Copper - ICP-Fusion	ug/g	96.60	<1.00e-02	<2.08e+03	<2.04e2	N/A	N/A	N/A	208.0	N/A
S97T000919	F	Iron - ICP-Fusion	ug/g	92.20	<5.00e-02	8.96e+03	8.88e+03	8.92e+03	0.90	N/A	1.04e+03	N/A
S97T000919	F	Lanthanum - ICP-Fusion	ug/g	97.00	<5.00e-02	2.12e+04	2.23e+04	2.18e+04	5.06	N/A	1.04e+03	N/A
S97T000919	F	Lithium - ICP-Fusion	ug/g	95.20	<1.00e-02	<2.08e+03	<2.04e2	N/A	N/A	N/A	208.0	N/A
S97T000919	F	Magnesium - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.08e+03	<2.04e3	N/A	N/A	N/A	2.08e+03	N/A
S97T000919	F	Manganese - ICP-Fusion	ug/g	99.60	<5.00e-02	3.30e+03	3.32e+04	3.31e+04	0.60	N/A	208.0	N/A
S97T000919	F	Molybdenum - ICP-Fusion	ug/g	99.60	<5.00e-02	<1.04e+03	<1.02e3	N/A	N/A	N/A	1.04e+03	N/A
S97T000919	F	Sodium - ICP-Fusion	ug/g	100.0	<1.65e-01	2.76e+04	2.76e+04	2.76e+04	0.36	N/A	2.08e+03	N/A
S97T000919	F	Nickelium - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.08e+03	<2.04e3	N/A	N/A	N/A	2.08e+03	N/A
S97T000919	F	Phosphorus - ICP-Fusion	ug/g	100.8	<2.00e-01	<2.08e+03	<4.07e3	N/A	N/A	N/A	4.14e+03	N/A
S97T000919	F	Lead - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.08e+03	<2.04e3	N/A	N/A	N/A	2.08e+03	N/A
S97T000919	F	Antimony - ICP-Fusion	ug/g	94.40	<6.00e-02	<1.25e+03	<1.22e3	N/A	N/A	N/A	1.25e+03	N/A
S97T000919	F	Selenium - ICP-Fusion	ug/g	95.20	<1.00e-02	1.76e+03	<2.04e3	1.36e+03	30.0	N/A	2.08e+03	N/A
S97T000919	F	Silver - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.68e+03	<2.04e3	N/A	N/A	N/A	2.08e+03	N/A
S97T000919	F	Samarium - ICP-Fusion	ug/g	95.20	<1.00e-02	8.16e+02	800.0	808.0	1.98	N/A	208.0	N/A
S97T000919	F	Strontium - ICP-Fusion	ug/g	96.20	<1.00e-02	<2.08e+02	<2.04e2	N/A	N/A	N/A	208.0	N/A
S97T000919	F	Tantalum - ICP-Fusion	ug/g	95.80	<1.00e-02	<4.16e+03	<4.07e3	N/A	N/A	N/A	4.14e+03	N/A
S97T000919	F	Thallium - ICP-Fusion	ug/g	94.00	<5.00e-01	<1.04e+04	<1.02e4	N/A	N/A	N/A	1.04e+03	N/A
S97T000919	F	Uranium - ICP-Fusion	ug/g	93.70	<5.00e-01	<1.04e+04	<1.02e4	N/A	N/A	N/A	1.04e+03	N/A
S97T000919	F	Vanadium - ICP-Fusion	ug/g	99.80	<5.00e-02	<1.04e+03	<1.02e3	N/A	N/A	N/A	1.04e+03	N/A

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
IS97T000919	F	Zinc - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.08e-02	<2.04e2	n/a	n/a	n/a	208.0	n/a
IS97T000919	F	Zirconium - ICP-Fusion	ug/g	96.80	<1.00e-02	<2.08e-02	<2.04e2	n/a	n/a	n/a	208.0	n/a
IS97T000919	F	Alpha of Digested Solid	uCi/g	101.0	<4.64e-03	5.98e-01	5.65e-01	5.81e-01	5.67	n/a	8.00e-03	6.42E+00

Table 2. Data Summary Table
T-201CORE NUMBER: 192
SEGMENT #: 8

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000923		DSC Exotherm DRY, Calculated	Joules/g Dry			0.00e+00		0.00e+00	0.00		n/a	n/a
S97T000923		DSC Exotherm on Perkin Elmer	Joules/g	97.50	n/a	0.00e+00	0.00e+00	0.00e+00	0.00		n/a	n/a
S97T000923		% Water by TGA on Perkin Elmer	Joules/g	100.9	n/a	70.72	69.89	70.31	1.18		n/a	n/a
S97T000923	W	Fluoride-IC-Dioxin 4000/4500	ug/g	94.92	<1.20e-02	5.22e+03	5.17e+03	5.20e+03	0.96	n/a	25.91	n/a
S97T000923	W	Chloride-IC-Dioxin 4000/4500	ug/g	93.80	4.20e-02	1.03e+03	1.00e+03	1.01e+03	2.96	n/a	36.70	n/a
S97T000923	W	Nitrite-IC - Dioxin 4000/4500	ug/g	93.38	<1.08e-01	5.13e+02	516.0	514.4	0.58	n/a	233.1	n/a
S97T000923	W	Bromide by Ion Chromatograph	ug/g	94.23	<1.25e-01	2.77e+03	2.79e+03	2.79e+03	1.43	n/a	203.0	n/a
S97T000923	W	Nitrate by IC-Dioxin 4000/4500	ug/g	97.64	1.20e-01	4.37e+04	4.38e+04	4.37e+04	0.23	n/a	269.8	n/a
S97T000923	W	Phosphate-IC-Dioxin 4000/4500	ug/g	97.98	<1.01e-01	3.68e+02	3.68e+02	3.68e+02	5.59	n/a	300.1	n/a
S97T000923	W	Sulfate by IC-Dioxin 4000/4500	ug/g	98.42	<1.38e-01	7.27e+02	596.0	661.4	19.8	n/a	297.9	n/a
S97T000923	W	Oxalate-IC-Dioxin 4000/4500	ug/g	94.17	<1.05e-01	7.69e+02	742.0	755.3	3.57	n/a	226.6	n/a
S97T000923	F	Silver - ICP-Fusion	ug/g	96.20	<1.00e-02	<2.03e+02	<2.09e2	n/a	n/a	n/a	203.0	n/a
S97T000923	F	Aluminum - ICP-Fusion	ug/g	95.60	<5.00e-02	<1.02e+03	<1.04e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000923	F	Arsenic - ICP-Fusion	ug/g	102.4	<1.00e-01	<2.03e+03	<2.09e3	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Boron - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.02e+03	<1.04e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000923	F	Barium - ICP-Fusion	ug/g	96.00	<5.00e-02	<1.02e+03	<1.04e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000923	F	Beryllium - ICP-Fusion	ug/g	100.8	<5.00e-03	<1.02e+02	<1.04e2	n/a	n/a	n/a	102.0	n/a
S97T000923	F	Bismuth - ICP-Fusion	ug/g	99.40	<1.00e-01	9.03e+04	8.79e+04	8.91e+04	2.69	n/a	2.03e+03	n/a
S97T000923	F	Calcium - ICP-Fusion	ug/g	100.0	<1.00e-01	<2.03e+03	<2.09e3	n/a	n/a	n/a	102.0	n/a
S97T000923	F	Cadmium - ICP-Fusion	ug/g	98.80	<5.00e-03	<1.02e+02	<1.04e2	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Cerium - ICP-Fusion	ug/g	95.60	<1.00e-01	<2.03e+03	<2.09e3	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Cobalt - ICP-Fusion	ug/g	100.6	<2.00e-02	4.47e+02	44.17e2	n/a	n/a	n/a	407.0	n/a
S97T000923	F	Chromium - ICP-Fusion	ug/g	98.20	<1.00e-02	2.77e+03	2.81e+03	2.79e+03	1.43	n/a	203.0	n/a
S97T000923	F	Copper - ICP-Fusion	ug/g	96.60	<1.00e-02	3.91e+03	5.02e+03	4.46e+03	24.9	n/a	1.02e+03	n/a
S97T000923	F	Iron - ICP-Fusion	ug/g	92.00	<5.00e-02	1.49e+04	1.48e+04	1.48e+04	0.67	n/a	1.02e+03	n/a
S97T000923	F	Lanthanum - ICP-Fusion	ug/g	97.20	<1.00e-02	<2.03e+02	<2.09e2	n/a	n/a	n/a	203.0	n/a
S97T000923	F	Lithium - ICP-Fusion	ug/g	95.00	<1.00e-01	<2.03e+03	<2.09e3	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Magnesium - ICP-Fusion	ug/g	96.60	<1.00e-02	5.32e+03	9.70e+03	7.51e+03	58.3	n/a	203.0	n/a
S97T000923	F	Manganese - ICP-Fusion	ug/g	99.60	<5.00e-02	<1.02e+02	<1.04e2	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Molybdenum - ICP-Fusion	ug/g	100.0	1.65e-01	2.81e+04	2.79e+04	2.80e+04	0.71	n/a	2.03e+03	n/a
S97T000923	F	Niobium - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.03e+03	<2.09e3	n/a	n/a	n/a	4.07e+03	n/a
S97T000923	F	Niodymium - ICP-Fusion	ug/g	100.8	<2.00e-01	4.47e+03	44.17e3	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Phosphorus - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.03e+03	<2.09e3	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Lead - ICP-Fusion	ug/g	94.80	<6.00e-02	<1.22e+03	<1.25e3	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Antimony - ICP-Fusion	ug/g	93.40	<1.00e-02	2.54e+03	<2.09e3	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Selenium - ICP-Fusion	ug/g	99.00	<5.00e-02	2.54e+03	<2.09e3	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Silicon - ICP-Fusion	ug/g	95.20	<1.00e-01	<2.03e+03	<2.09e3	n/a	n/a	n/a	2.03e+03	n/a
S97T000923	F	Samarium - ICP-Fusion	ug/g	96.20	<1.00e-02	7.32e+02	719.0	725.5	1.79	n/a	203.0	n/a
S97T000923	F	Strontium - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.03e+02	<2.09e2	n/a	n/a	n/a	4.07e+03	n/a
S97T000923	F	Titanium - ICP-Fusion	ug/g	94.00	<2.00e-01	4.47e+03	44.17e3	n/a	n/a	n/a	1.02e+04	n/a
S97T000923	F	Thallium - ICP-Fusion	ug/g	93.70	<5.00e-01	<1.02e+04	<1.04e3	n/a	n/a	n/a	1.02e+04	n/a
S97T000923	F	Uranium - ICP-Fusion	ug/g	99.80	<5.00e-02	<1.02e+03	<1.04e3	n/a	n/a	n/a	1.02e+03	n/a
S97T000923	F	Vanadium - ICP-Fusion	ug/g									

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000923	F	Zinc - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.03e-02	<2.09e2	N/A	N/A	N/A	203.0	N/A
S97T000923	F	Zirconium - ICP-Fusion	ug/g	96.80	<1.00e-02	<2.03e-02	<2.09e2	N/A	N/A	N/A	203.0	N/A

L Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000896		Bulk Density of Sample	g/mL	N/A	N/A	1.270	N/A	N/A	N/A	N/A	5.00e-01	N/A
S97T000912		DSC Exotherm DRY, Calculated	Joules/g Dry	N/A	N/A	0.00e+00	0.00e+00	0.00e+00	0.00	N/A	N/A	N/A
S97T000912		DSC Exotherm on Perkin Elmer	Joules/g	97.50	N/A	0.00e+00	0.00e+00	0.00e+00	0.00	N/A	N/A	N/A
S97T000912		% Water by TGA on Perkin Elmer		100.9	N/A	72.09	71.34	71.72	1.05	N/A	N/A	N/A
S97T000917		H Fluoride-ICP-ionex 4000/4500	ug/g	94.92	<1.20e-02	5.42e+03	5.01e+03	5.21e+03	7.86	108.3	26.50	N/A
S97T000917		H Chloride-ICP-ionex 4000/4500	ug/g	93.80	4.20e-02	1.02e+03	951.0	983.0	7.00	97.70	37.54	N/A
S97T000917		H Nitrite-IC - IONEX 4000/4500	ug/g	93.38	<1.08e-01	5.00e+02	484.0	491.9	3.25	88.60	238.5	N/A
S97T000917		H Bromide by Ion Chromatograph	ug/g	94.23	<1.25e-01	<2.76e+02	<2.72e2	N/A	N/A	91.17	276.1	N/A
S97T000917		H Nitrate by IC-IONEX 4000/4500	ug/g	97.64	<1.20e-01	4.54e+04	4.25e+04	4.39e+04	6.60	107.9	307.0	N/A
S97T000917		H Phosphate by IC-IONEX 4000/4500	ug/g	97.98	<1.20e-01	4.78e+02	4.78e+02	4.78e+02	40.8	95.23	265.0	N/A
S97T000917		H Sulfate by IC-IONEX 4000/4500	ug/g	98.42	<1.38e-01	3.97e+02	559.0	477.9	35.9	92.87	304.8	N/A
S97T000917		H Oxalate-IC-IONEX 4000/4500	ug/g	94.17	<1.05e-01	8.09e+02	722.0	765.6	11.4	N/A	231.9	N/A
S97T000920	F	Silver - ICP-Fusion	ug/g	96.20	<1.00e-02	<2.06e+02	<2.03e2	N/A	N/A	90.40	206.0	N/A
S97T000920	F	Aluminum - ICP-Fusion	ug/g	95.60	<5.00e-02	<1.03e+03	<1.01e3	N/A	N/A	96.30	1.03e+03	N/A
S97T000920	F	Arsenic - ICP-Fusion	ug/g	102.4	<1.00e-01	<2.06e+03	<2.03e3	N/A	N/A	107.0	2.06e+03	N/A
S97T000920	F	Boron - ICP-Fusion	ug/g	99.00	<5.00e-02	<1.03e+03	<1.01e3	N/A	N/A	98.00	1.03e+03	N/A
S97T000920	F	Barium - ICP-Fusion	ug/g	96.00	<5.00e-02	<1.03e+03	<1.01e3	N/A	N/A	96.50	1.03e+03	N/A
S97T000920	F	Beryllium - ICP-Fusion	ug/g	100.8	<5.00e-03	<1.03e+02	<1.01e2	N/A	N/A	99.90	103.0	N/A
S97T000920	F	Bismuth - ICP-Fusion	ug/g	99.40	<1.00e-01	7.97e+04	7.57e+04	7.74e+04	4.39	103.0	2.06e+03	N/A
S97T000920	F	Calcium - ICP-Fusion	ug/g	100.0	<1.00e-01	<2.06e+03	<2.03e3	N/A	N/A	105.0	2.06e+03	N/A
S97T000920	F	Cadmium - ICP-Fusion	ug/g	98.80	<5.00e-03	<1.03e+02	<1.01e2	N/A	N/A	99.80	103.0	N/A
S97T000920	F	Cerium - ICP-Fusion	ug/g	95.60	<1.00e-01	<2.06e+03	<2.03e3	N/A	N/A	95.50	2.06e+03	N/A
S97T000920	F	Cobalt - ICP-Fusion	ug/g	100.6	<2.00e-02	4.12e+02	4.06e2	N/A	N/A	101.0	410.0	N/A
S97T000920	F	Chromium - ICP-Fusion	ug/g	96.60	<1.00e-02	2.90e+02	2.88e+03	2.89e+03	0.69	99.40	206.0	N/A
S97T000920	F	Copper - ICP-Fusion	ug/g	96.60	<1.00e-02	4.28e+03	<2.03e2	N/A	N/A	97.10	206.0	N/A
S97T000920	F	Iron - ICP-Fusion	ug/g	92.20	<5.00e-02	2.07e+04	3.96e+03	4.12e+03	7.77	95.30	1.03e+03	N/A
S97T000920	F	Lanthanum - ICP-Fusion	ug/g	95.20	<5.00e-02	2.07e+04	1.94e+04	1.98e+04	3.54	99.10	1.03e+03	N/A
S97T000920	F	Lithium - ICP-Fusion	ug/g	95.20	<1.00e-02	<2.06e+03	<2.03e2	N/A	N/A	98.20	206.0	N/A
S97T000920	F	Magnesium - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.06e+03	<2.03e3	N/A	N/A	98.20	2.06e+03	N/A
S97T000920	F	Manganese - ICP-Fusion	ug/g	96.60	<1.00e-02	2.17e+04	2.16e+04	2.44e+04	2.87	104.0	206.0	N/A
S97T000920	F	Molybdenum - ICP-Fusion	ug/g	99.60	<5.00e-02	<1.03e+03	<1.01e3	N/A	N/A	101.0	1.03e+03	N/A
S97T000920	F	Niobium - ICP-Fusion	ug/g	99.60	<5.00e-02	<2.06e+03	<2.03e3	N/A	N/A	101.0	2.06e+03	N/A
S97T000920	F	Neodymium - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.06e+03	<2.03e3	N/A	N/A	97.20	2.06e+03	N/A
S97T000920	F	Phosphorus - ICP-Fusion	ug/g	100.0	<1.55e-01	2.87e+04	2.76e+04	2.82e+04	3.91	101.0	1.03e+03	N/A
S97T000920	F	Lead - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.06e+03	<2.03e3	N/A	N/A	97.00	2.06e+03	N/A
S97T000920	F	Sulfur - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.06e+03	<2.03e3	N/A	N/A	97.20	2.06e+03	N/A
S97T000920	F	Antimony - ICP-Fusion	ug/g	94.80	<6.00e-02	<1.23e+03	<2.03e3	N/A	N/A	98.30	2.06e+03	N/A
S97T000920	F	Selenium - ICP-Fusion	ug/g	93.40	<1.00e-01	<2.06e+03	<2.03e3	N/A	N/A	99.00	2.06e+03	N/A
S97T000920	F	Silicon - ICP-Fusion	ug/g	99.00	<1.00e-02	<1.23e+03	<2.03e3	N/A	N/A	99.00	2.06e+03	N/A
S97T000920	F	Samarium - ICP-Fusion	ug/g	96.60	<1.00e-01	<2.06e+03	<2.03e3	N/A	N/A	96.60	2.06e+03	N/A
S97T000920	F	Strontium - ICP-Fusion	ug/g	95.20	<5.00e-02	1.23e+03	<2.03e3	N/A	N/A	99.10	2.06e+03	N/A
S97T000920	F	Tantalum - ICP-Fusion	ug/g	95.20	<1.00e-01	<2.06e+03	<2.03e3	N/A	N/A	102.0	2.06e+03	N/A
S97T000920	F	Titanium - ICP-Fusion	ug/g	96.60	<1.00e-02	7.97e+02	770.0	780.5	2.69	96.90	206.0	N/A
S97T000920	F	Thallium - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.06e+02	<2.03e2	N/A	N/A	97.20	2.06e+03	N/A
S97T000920	F	Uranium - ICP-Fusion	ug/g	95.70	<5.00e-01	<1.12e+04	<4.06e3	N/A	N/A	90.50	4.10e+04	N/A
S97T000920	F	Vanadium - ICP-Fusion	ug/g	99.80	<5.00e-02	<1.03e+03	<1.01e3	N/A	N/A	101.0	1.03e+03	N/A

Sample#	R A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S97T000920	F	Zinc - ICP-Fusion	ug/g	95.80	<1.00e-02	<2.06e+02	<2.03e2	n/a	n/a	97.70	206.0	n/a
S97T000920	F	Zinc - ICP-Fusion	ug/g	96.80	<1.00e-02	<2.06e+02	<2.03e2	n/a	n/a	97.80	206.0	n/a
S97T000920	F	Alpha of Digested Solid	uc1/g	94.00	3.00e-03	1.150	9.66e-01	1.058	17.4	80.61	7.00e-03	4.60E+00

HNF-SD-WM-DP-254, REV. 0

CHAIN OF CUSTODY FORMS

HNF-SD-WM-DP-254, REV. 0

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CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipper 2000-08-17 (2) Sample Number Field Blank (3) Supervisor M. C. Jare (4) Tank T-201 (5) Riser 3 (6) Segment Blank (7) Core 193 (8) Cask Serial Number 27-G

Radiation Survey Data:		(9) FIELD		(10) Shipment Description	
Over Top Dose Rate	<u>LS</u>	<u>LS</u>		A. Work Package Number	<u>45-96-00300</u>
Side Dose Rate	<u>LS</u>	<u>LS</u>		B. Cask Seal Number	<u>12469</u>
Bottom Dose Rate	<u>LS</u>	<u>LS</u>		C. Sampler Serial Number	<u>96-435</u>
Measurable Contamination	<u>2.33 Bq</u>	<u>2.33 Bq</u>		D. Date and Time Sampler Unsealed	<u>4-25-97/10230</u>
	(Alpha)	(Alpha)		E. Expected Liquid Content	<u>100%</u>
	<u>216.7 Bq</u>	<u>216.7 Bq</u>		F. Expected Solid Content	<u>0%</u>
	(Beta-Gamma)	(Beta-Gamma)		G. Dose Rate Through Drill String	<u>LS 5 mR/hr</u>
RCT* (HPT)	<u>Muller</u>	RCT (HPT)		H. Expected Sample Length	<u>19"</u>
	(Signature)				

(11) INFORMATION (include statement of laboratory tests to be performed.)

HNF-SD-WM DP-254, REV. 0

(12) Field Comments		(34) Laboratory Comments	
H2O. Field Blank			
(13) Point of Origin	(14) Destination	(15) Shipper Name (Sign and PRINT)	(16) Date/Time
T-201	222-S	James Sickett	4-25-97
(17) Relinquished By (Sign and PRINT)	(18) Received By (Sign and PRINT)	(19) Shipper Name (Sign and PRINT)	(20) Date/Time
James Sickett	James Sickett	James Sickett	4-25-97
(21) Relinquished By (Sign and PRINT)	(22) Received By (Sign and PRINT)	(23) Shipper Name (Sign and PRINT)	(24) Date/Time
James Sickett	James Sickett	James Sickett	4-25-97
(25) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Shipper Name (Sign and PRINT)	(28) Date/Time
James Sickett	James Sickett	James Sickett	4-25-97
(29) Seal Intact Upon Release?		(30) Seal Data Consistent with this Record?	
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	
DISTRIBUTION: White - Office of Sample Management		Yellow - Recipient of Sample	
Black - Core Sampling, S&B		Gold - Tank Farm Operations, S&B	
Sample No. ☐ Yes ☒ No		Sample No. ☐ Yes ☒ No	

COPY
gross - 08 - 7F

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipper gross - 08 - 7F (2) Sample Number 192-01 (3) Supervisor M. C. Jones (4) Tank 3 (5) Riser 1 (6) Segment 1 (7) Core 192 (8) Gask Seal Number SN-69

Radiation Survey Data:		(9) FIELD		(10) LABORATORY		(11) Shipment Description	
Over Top Dose Rate	<u>25.5uSv</u>					A. Work Package Number	<u>W3-96-00300</u>
Side Dose Rate	<u>25.5uSv</u>					B. Gask Seal Number	<u>12465</u>
Bottom Dose Rate	<u>25.5uSv</u>					C. Sampler Serial Number	<u>96-434 434</u>
Smearable Contamination	<u>2.33 Bq</u>					D. Date and Time Sampler Unsealed	<u>4-24-97 1753</u>
	<u>2.33 Bq</u>					E. Expected Liquid Content	<u>80%</u>
	<u>2.16-7 Bq</u>					F. Expected Solid Content	<u>20%</u>
						G. Dose Rate Through Drill String	<u>1.5 me/hr</u>
						H. Expected Sample Length	<u>12.5"</u>

ACT* (HPT) MALLOREY (Signature)
ACT* (HPT) OPR. MALLOREY (Signature)
ACT* (HPT) OPR. MALLOREY (Signature)

(11) INFORMATION (include statement of laboratory tests to be performed.)
5
5
HNF-SD-WM-DP-254, REV. 0

(12) Field Comments		(13) Laboratory Comments		
(13) Point of Origin <u>1-201</u>	(14) Destination <u>232-S</u>	(15) Bomber Name (Sign and PRINT) <u>James Sickels</u>	(16) Dugout <u>4-20-97</u>	(17) Sender Comments
(19) Requisitioned By (Sign and PRINT) <u>James Sickels</u>	(20) Received By (Sign and PRINT) <u>James Sickels</u>	(21) Requisitioned By (Sign and PRINT) <u>James Sickels</u>	(22) Received By (Sign and PRINT) <u>James Sickels</u>	(23) Receiver Comments
(25) Requisitioned By (Sign and PRINT) <u>James Sickels</u>	(26) Received By (Sign and PRINT) <u>James Sickels</u>	(27) Requisitioned By (Sign and PRINT) <u>James Sickels</u>	(28) Received By (Sign and PRINT) <u>James Sickels</u>	(29) Receiver Comments
(31) Seal Intact Upon Receipt? ☒ Yes ☐ No	(32) Seal Intact Upon Receipt? ☒ Yes ☐ No	(33) Seal Data Consistent with this Record? ☒ Yes ☐ No	(34) Seal Data Consistent with this Record? ☒ Yes ☐ No	(35) Receiver Comments

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY 200-08-77
201

(1) Sample Number 192-03 (3) Supervisor M.C. Jones (8) Cask Serial Number 1004-C
(4) Riser 3 (6) Segment 3 (7) Core 192

(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Over Top Dose Rate	<u>2.5 mR/hr</u>			A. Work Package Number	<u>WB-96-00300</u>
Side Dose Rate	<u>2.5 mR/hr</u>			B. Cask Seal Number	<u>12457</u>
Bottom Dose Rate	<u>2.5 mR/hr</u>			C. Sampler Serial Number	<u>96-437</u>
Seizable Contaminations	<u>2.0 dpm/cm²</u>			D. Date and Time Samples Unsorted	<u>4-24-97 1922</u>
	(Alpha)			E. Expected Liquid Content	<u>90%</u>
	<u>2.0 dpm/cm²</u>			F. Expected Solid Content	<u>20%</u>
	(Beta-Gamma)			G. Dose Rate Through Drill String	<u>2.5 mR/hr</u>
RCT* (HPT)	<u>Miller</u>	RCT* (HPT)	<u>Miller</u>	H. Expected Sample Length	<u>19"</u>
(Signature)		(Signature)			

(11) INFORMATION (Include statement of laboratory tests to be performed)

HNH-SD-WM-DP-254, REV. 0

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(12) Field Comments		(34) Laboratory Comments	
(13) Point of Origin <u>7201</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>James Wallace - James Sicks</u>	(16) Date/Time <u>4-25-97</u>
(19) Requisitioned By (Sign and PRINT) <u>James Wallace - James Sicks</u>	(20) Received By (Sign and PRINT) <u>James Wallace - James Sicks</u>	(21) Date/Time <u>4-25-97</u>	(17) Sender Comments
(23) Requisitioned By (Sign and PRINT) <u>James Wallace - James Sicks</u>	(24) Received By (Sign and PRINT) <u>James Wallace - James Sicks</u>	(25) Date/Time <u>4-25-97</u>	(22) Receiver Comments
(27) Requisitioned By (Sign and PRINT) <u>James Wallace - James Sicks</u>	(28) Received By (Sign and PRINT) <u>James Wallace - James Sicks</u>	(29) Date/Time <u>4-25-97</u>	(26) Receiver Comments
		(30) Receiver Comments	(30) Receiver Comments
(18) Seal Intact Upon Release? ☒ Yes ☐ No		(32) Seal Data Consistent with this Record? ☒ Yes ☐ No	
(31) Seal Intact Upon Receipt? ☒ Yes ☐ No		Shipment No. ☒ Yes ☐ No	
DISTRIBUTION: White - Office of Sample Management		Yellow - Receipt of Sample	
Gold - Core Sampling, SB-85		Gold - Tank Farm Operations, SB-45	
Sample No. ☒ Yes ☐ No		Sample No. ☒ Yes ☐ No	

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPIED
19201
19201

(1) Shipment Number 192-04 (2) Sample Number 192-04 (3) Supervisor M.C. JONES (4) Tonk 3 (5) Rise 4 (6) Segment 4 (7) Core 192 (8) Cask Serial Number C-1036

Radiation Survey Data:

(3) FIELD

Over Top Dose Rate 4.5 mR/hr

Side Dose Rate 2.5 mR/hr

Bottom Dose Rate 2.5 mR/hr

Smearable Contamination: 220 dpm/100cm² (Alpha) 21 K dpm/100cm² (Beta-Gamma)

Signature: [Signature] RCT* (HPT)

Signature: [Signature] RCT* (HPT)

(33) LABORATORY

A. Work Package Number WS-96-00300

B. Cask Seal Number 12458

C. Sampler Serial Number 96-438

D. Date and Time Sampler Unseated 4-24-97/2010

E. Expected Liquid Content 8000

F. Expected Solid Content 2000

G. Dose Rate Through Drill String 4.5 mR/hr

H. Expected Sample Length 19"

(10) Shipment Description

HNF-SD-WM-DP-254, REV. 0

(11) INFORMATION (Include statement of laboratory tests to be performed):

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(12) Field Comments

(34) Laboratory Comments

(13) Point of Origin <u>T220</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>James Sicks</u>	(16) Date/Time <u>4-25-97</u>	(17) Sender Comments
(19) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(20) Received By (Sign and PRINT) <u>James Wallace</u>	(21) Date/Time <u>4-25-97</u>	(22) Receiver Comments	
(23) Relinquished By (Sign and PRINT) <u>James Wallace</u>	(24) Received By (Sign and PRINT) <u>James Wallace</u>	(25) Date/Time <u>4-25-97</u>	(26) Receiver Comments	
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release? ☒ Yes ☐ No

(31) Seal Intact Upon Receipt? ☒ Yes ☐ No

(32) Seal Data Consistent with this Record? ☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No

Cask Seal No. ☒ Yes ☐ No

Sample No. ☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-95 Goldenrod - Tank Farm Operations, S4-43

BC-6000-309 (02/94)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number 2000-08-77 (2) Sample Number 192-05 (3) Supervisor M.C. Jones (8) Cask Serial Number 22-G
 (4) Riser 3 (6) Sigmant 5 (7) Core 192

(9) FIELD		(33) LABORATORY		(10) SHIPMENT DESCRIPTION	
Top Dose Rate	<u>< 5 μSv</u>		<u>< 0.005 mSv</u>	A. Work Package Number	<u>W/S 96-00390</u>
Dose Rate	<u>< 5 μSv</u>		<u>< 0.005 mSv</u>	B. Cask Seal Number	<u>12467</u>
Variable Contamination	<u>< 5 μSv</u>		<u>< 0.005 mSv</u>	C. Sampler Serial Number	<u>4-499-12467 96-320</u>
	<u>< 33 Bq</u>		<u>1.33 Bq</u>	D. Date and Time Sampler Unsealed	<u>4-25-97 10050</u>
	<u>< 16.7 Bq</u>		<u>2.167 Bq</u>	E. Expected Liquid Content	<u>80%</u>
	<u>100%</u>		<u>100%</u>	F. Expected Solid Content	<u>20%</u>
	<u>100%</u>		<u>100%</u>	G. Dose Rate Through Drill String	<u>< 5 mR/hr</u>
	<u>100%</u>		<u>100%</u>	H. Expected Sample Length	<u>19"</u>

FORMATION (include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-254, REV. 0

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(34) Laboratory Comments		(32) Seal Data Consistent with this Record?	
(15) Sender Name (Sign and PRINT)	<u>James Sackels</u>	(16) Date/Time	<u>4-29-97</u>
(17) Receiver Name (Sign and PRINT)	<u>James Sackels</u>	(21) Date/Time	<u>4-29-97</u>
(18) Receiver By (Sign and PRINT)	<u>James Sackels</u>	(22) Receiver Comments	
(19) Receiver By (Sign and PRINT)	<u>James Sackels</u>	(23) Receiver Comments	
(20) Receiver By (Sign and PRINT)	<u>James Sackels</u>	(24) Receiver Comments	
(21) Receiver By (Sign and PRINT)	<u>James Sackels</u>	(25) Receiver Comments	
(22) Receiver By (Sign and PRINT)	<u>James Sackels</u>	(26) Receiver Comments	
(23) Receiver By (Sign and PRINT)	<u>James Sackels</u>	(27) Receiver Comments	
(24) Receiver By (Sign and PRINT)	<u>James Sackels</u>	(28) Receiver Comments	
(25) Receiver By (Sign and PRINT)	<u>James Sackels</u>	(29) Receiver Comments	
(26) Receiver By (Sign and PRINT)	<u>James Sackels</u>	(30) Receiver Comments	
(31) Seal Intact Upon Receipt?	☒ Yes ☐ No	(32) Seal Data Consistent with this Record?	☒ Yes ☐ No
(33) Seal Intact Upon Receipt?	☒ Yes ☐ No	(34) Seal Data Consistent with this Record?	☒ Yes ☐ No

UTION: White - Outline of Sample Measurement Yellow - Recipient of Sample Pink - Core Sampling Record Colored - Tank Form Description 5.4.4

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number 192-06 (2) Sample Number 192-06 (3) Supervisor M.C. Jones (4) Core Serial Number C-1020

Tank T-201 (5) Rise 3 (6) Segment 6 (7) Core 192

(9) FIELD		(33) LABORATORY		(10) Shipment Description	
Field Survey Date:	<u>15 JUL 97</u>	Work Package Number	<u>WS-96-00300</u>		
Over Top Dose Rate	<u>15 JUL 97</u>	Cask Seal Number	<u>12468</u>		
Wide Dose Rate	<u>15 JUL 97</u>	Sampler Serial Number	<u>96-323</u>		
Bottom Dose Rate	<u>15 JUL 97</u>	Date and Time Sampler Unsealed	<u>4-24-97 14:43-47</u>		
Measurable Contamination	<u>15 JUL 97</u>	Expected Liquid Content	<u>80%</u>		
	<u>15 JUL 97</u>	Expected Solid Content	<u>20%</u>		
	<u>15 JUL 97</u>	Dose Rate Through Drill String	<u>1.5 MR/HR</u>		
	<u>15 JUL 97</u>	Expected Sample Length	<u>19"</u>		

INFORMATION (Include statement of laboratory tests to be performed.)

HNF-SD-WM-DP-254, REV. 0

Field Comments		(34) Laboratory Comments	
(11) Point of Origin	(12) Destination	(13) Sender Name (Sign and PRINT)	(14) Date/Time
<u>2201</u>	<u>220-S</u>	<u>John Sicket</u>	<u>4-29-97</u>
(15) Relinquished By (Sign and PRINT)	(16) Received By (Sign and PRINT)	(17) Sender Comments	(18) Receiver Comments
<u>John Sicket</u>	<u>John Sicket</u>		
(19) Relinquished By (Sign and PRINT)	(20) Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments
<u>John Sicket</u>	<u>John Sicket</u>	<u>4-29-97</u>	
(23) Relinquished By (Sign and PRINT)	(24) Received By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments
<u>John Sicket</u>	<u>John Sicket</u>	<u>4-29-97</u>	
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments
<u>John Sicket</u>	<u>John Sicket</u>	<u>4-29-97</u>	

(31) Seal Intact Upon Receipt? ☒ Yes ☐ No

(32) Seal Data Consistent with this Record? ☒ Yes ☐ No

Shipment No. ☒ Yes ☐ No

Sample No. ☒ Yes ☐ No

DISTRIBUTION: White - Office of Sample Management Yellow - Receipt of Sample Pink - Core Sampling, S6-86 Goldensred - Tank Farm Operations, S4-13 BC-8000-305 (02/94)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 2001-08-72
 (4) Tank T-201 (5) Riser 3

(2) Sample Number 192-07 (3) Supervisor M.C. Jones
 (6) Segment 7 (7) Core 192

Reduction Survey Data:		(8) Cask Serial Number <u>C-1032</u>
Over Top Dose Rate	(3) FIELD	(10) Shipment Description
Side Dose Rate	(33) LABORATORY	A. Work Package Number <u>W5-96-00900</u>
Bottom Dose Rate	<u>5.005 mSV</u>	B. Cask Seal Number <u>12471</u>
Smearable Contamination	<u>5.005 mSV</u>	C. Sampler Serial Number <u>96-436</u>
	<u>5.005 mSV</u>	D. Date and Time Sampler Unseated <u>4-25-97 0238</u>
	<u>133 Bq</u>	E. Expected Liquid Content <u>80%</u>
	(Alpha)	F. Expected Solid Content <u>20%</u>
	<u>16.7 Bq</u>	G. Dose Rate Through Drill String <u>4.5 mR/hr</u>
	(Beta-Gamma)	H. Expected Sample Length <u>19"</u>
ACT* (HPT)	MAALTON	
RCI* (HPT)	(Signature)	

(11) INFORMATION (Include statement of laboratory tests to be performed.)

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HNF-SD-WM-DP-254, REV. 0

(12) Field Comments		(34) Laboratory Comments	
(13) Point of Origin		(14) Destination	
<u>T-201</u>		<u>222-S</u>	
(15) Shipper Name (Sign and PRINT)		(16) Date/Time	
<u>James Dickel James Dickel</u>		<u>4-29-97</u>	
(17) Relinquished By (Sign and PRINT)		(18) Receiver Comments	
<u>James Dickel James Dickel</u>		<u>4-29-97</u>	
(19) Relinquished By (Sign and PRINT)		(20) Receiver Comments	
<u>James Dickel James Dickel</u>		<u>4-29-97</u>	
(21) Relinquished By (Sign and PRINT)		(22) Receiver Comments	
<u>James Dickel James Dickel</u>		<u>4-29-97</u>	
(23) Relinquished By (Sign and PRINT)		(24) Receiver Comments	
<u>James Dickel James Dickel</u>		<u>4-29-97</u>	
(25) Relinquished By (Sign and PRINT)		(26) Receiver Comments	
<u>James Dickel James Dickel</u>		<u>4-29-97</u>	
(27) Relinquished By (Sign and PRINT)		(28) Receiver Comments	
<u>James Dickel James Dickel</u>		<u>4-29-97</u>	
(29) Relinquished By (Sign and PRINT)		(30) Receiver Comments	
<u>James Dickel James Dickel</u>		<u>4-29-97</u>	
(31) Seal Intact Upon Receipt?		(32) Seal Data Consistent with this Record?	
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	
(18) Seal Intact Upon Release?		(19) Seal Data Consistent with this Record?	
☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	

TRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-95 Goldenrod - Tank Farm Operations, S4-43

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number 200W-08-77 (2) Sample Number 192-08 (3) Supervisor M. C. Jones (4) Core Serial Number 84157
 Tank T-201 (5) Riser 3 (6) Segment 8 (7) Core 192

Shipment Survey Data:

(8) FIELD

(9) LABORATORY

(10) Shipment Description

A. Work Package Number W-5-96-00300

B. Cask Seal Number 12470

C. Sampler Serial Number 96-433

D. Date and Time Sampler Unopened 4-25-97 0400

E. Expected Liquid Content 80%

F. Expected Solid Content 20%

G. Dose Rate Through Drill String <1.5 mR/hr

H. Expected Sample Length 19"

INFORMATION (Include statement of laboratory tests to be performed.)

62

HF-SD-WM-DP-254, REV. 0

(34) Laboratory Comments

Field Comments

(11) Sender Name (Sign and PRINT) <u>James Seikel</u>	(16) Date/Time <u>4-22-97</u>	(17) Sender Comments
(12) Receiver By (Sign and PRINT) <u>James Seikel</u>	(21) Date/Time <u>4-24-97</u>	(22) Receiver Comments
(13) Receiver By (Sign and PRINT) <u>James Seikel</u>	(26) Date/Time <u>4-25-97</u>	(26) Receiver Comments
(14) Receiver By (Sign and PRINT) <u>James Seikel</u>	(29) Date/Time <u>4-25-97</u>	(30) Receiver Comments

(31) Seal Intact Upon Receipt? ☒ Yes ☐ No

(32) Seal Data Consistent with this Record? ☒ Yes ☐ No

(33) Seal Intact Upon Release? ☒ Yes ☐ No

Shipment No. 84157 Cask Seal No. 12470

Yellow - Recipient of Sample Pink - Core Sampling, S6-95 Goldenrod - Tank Farm Operations, S4-43

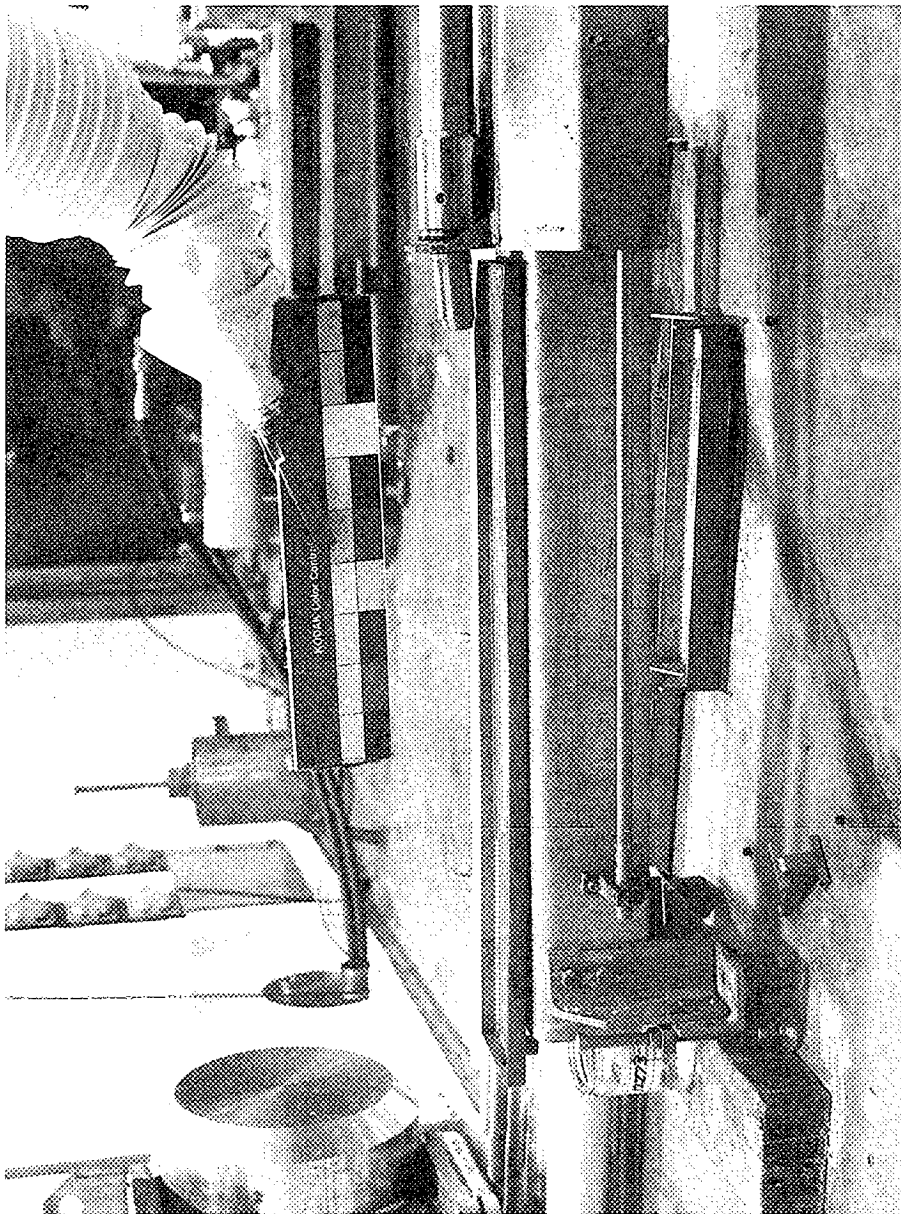
EC-6000-309 (02/94)

PHOTOGRAPHS

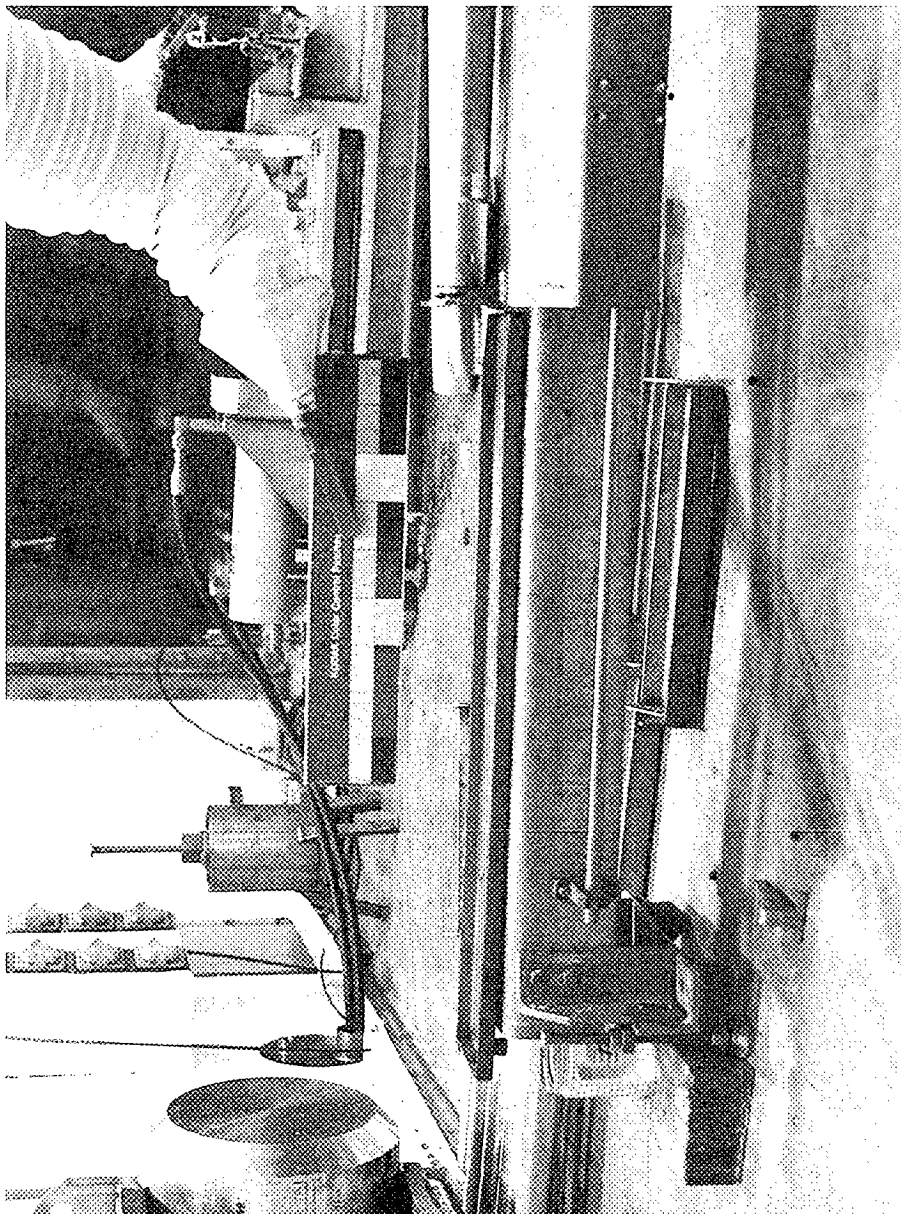
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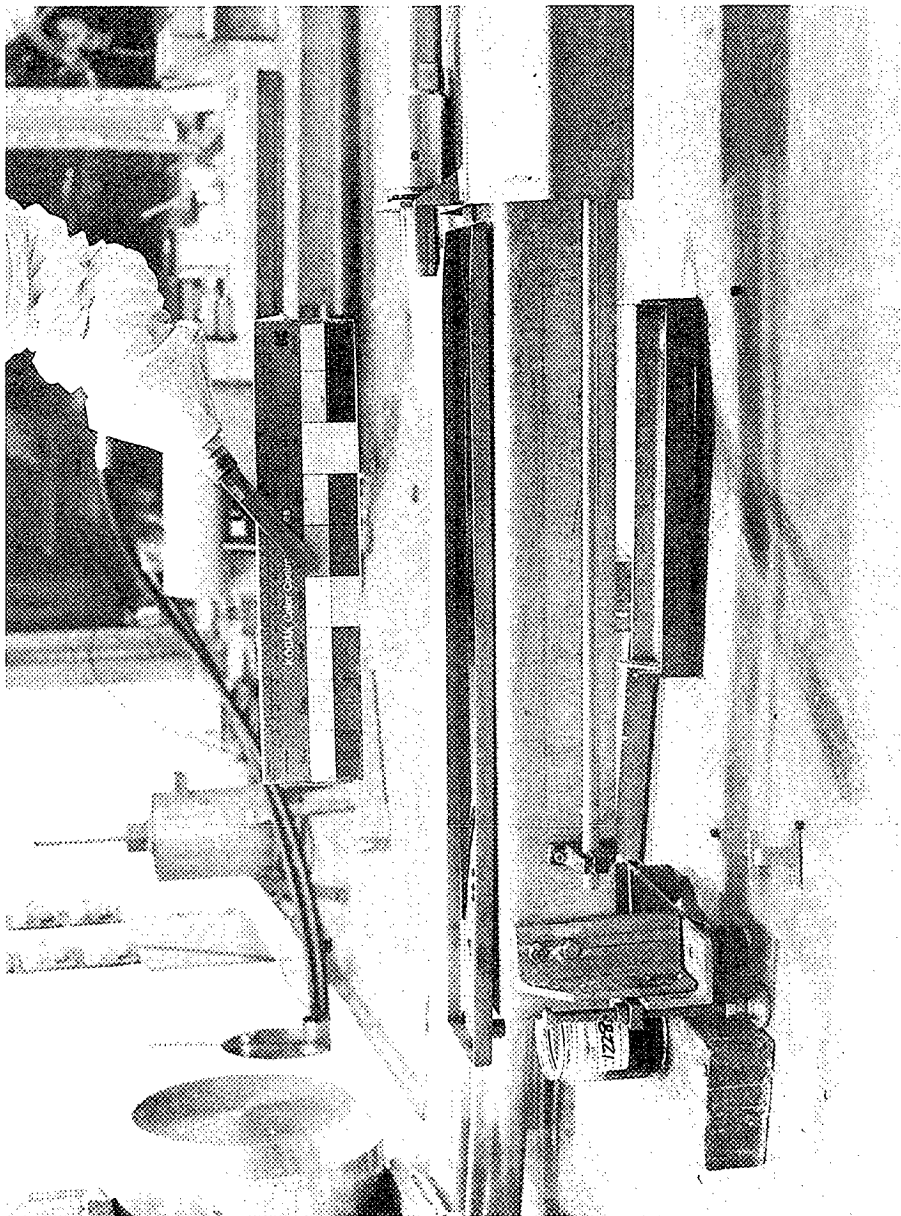
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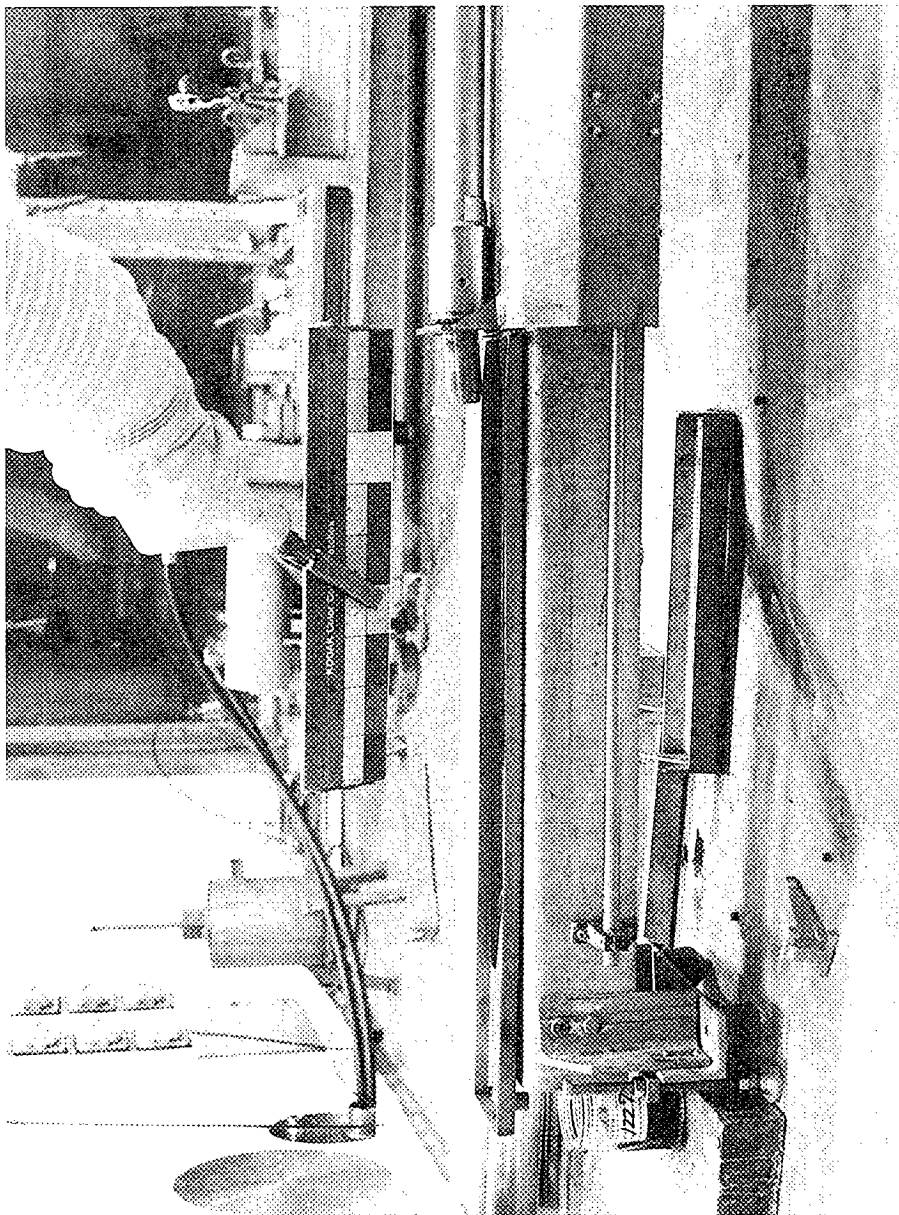
T-201 C192 Seg1



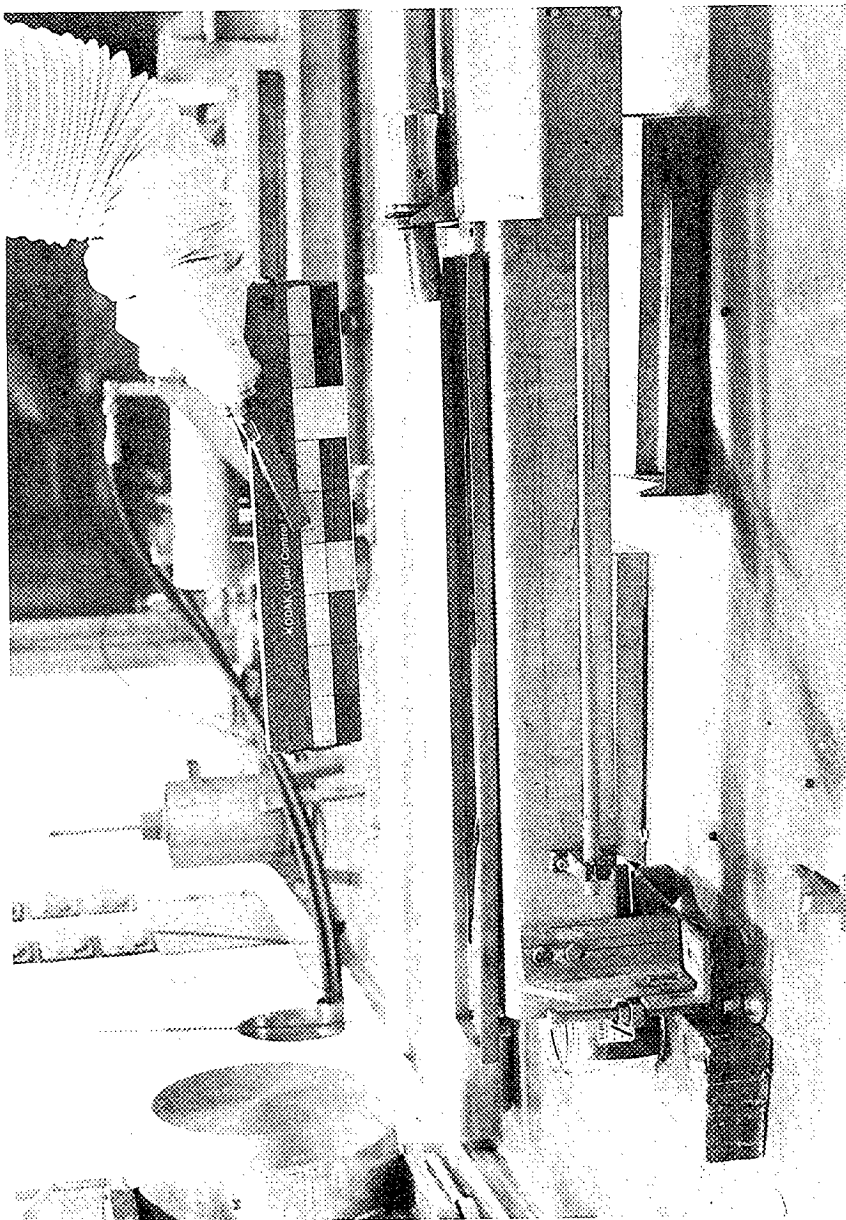
T-201 C192 Seg 2



7-201 C192 Seg 3

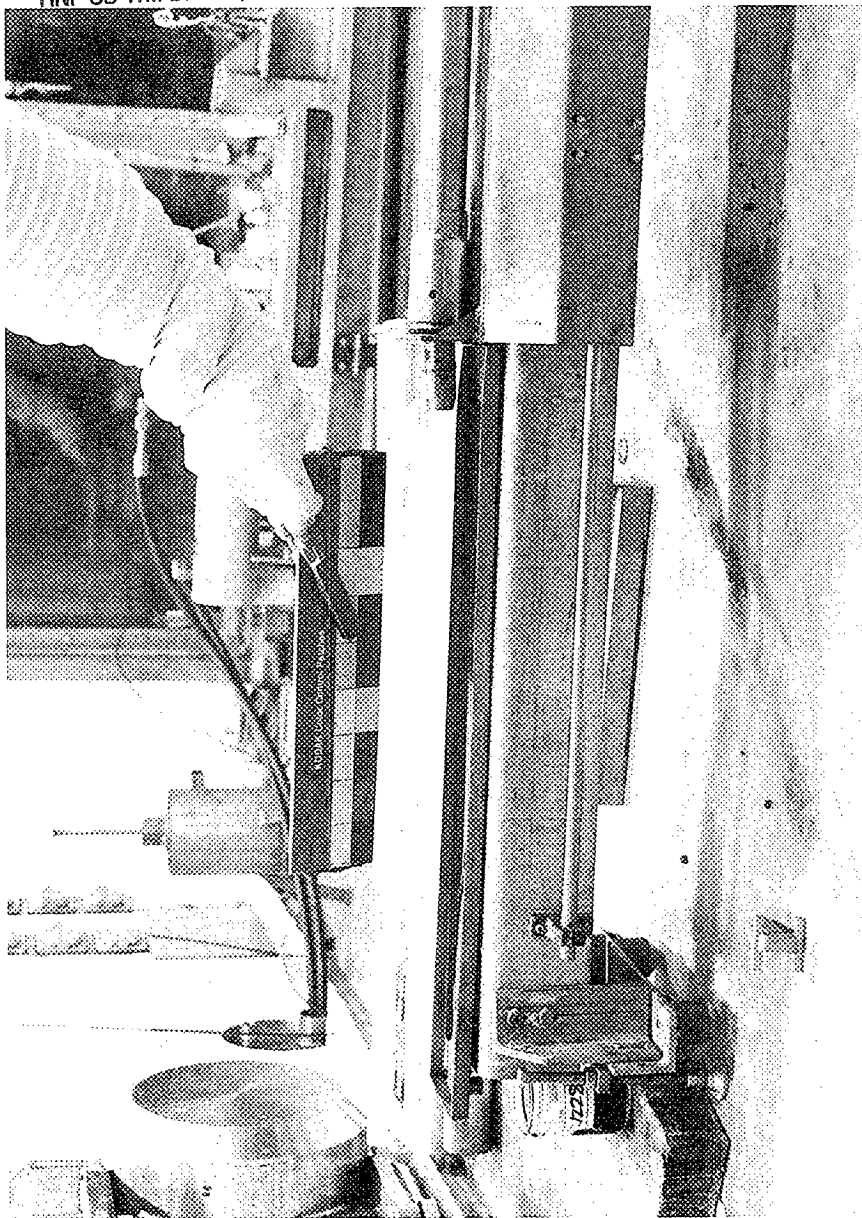


T-201 C192 Seg 4

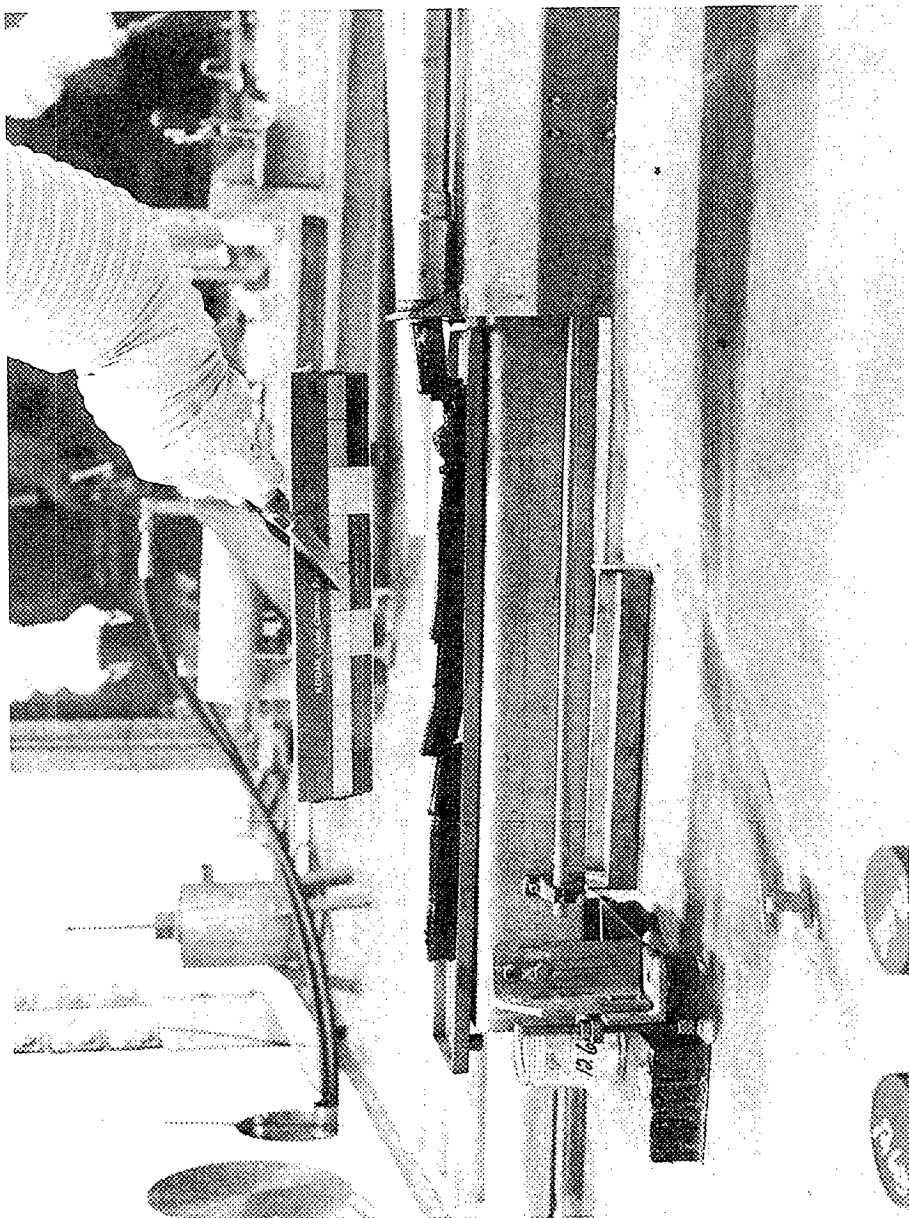


HNF-SD-WM-DP-254, REV. 0

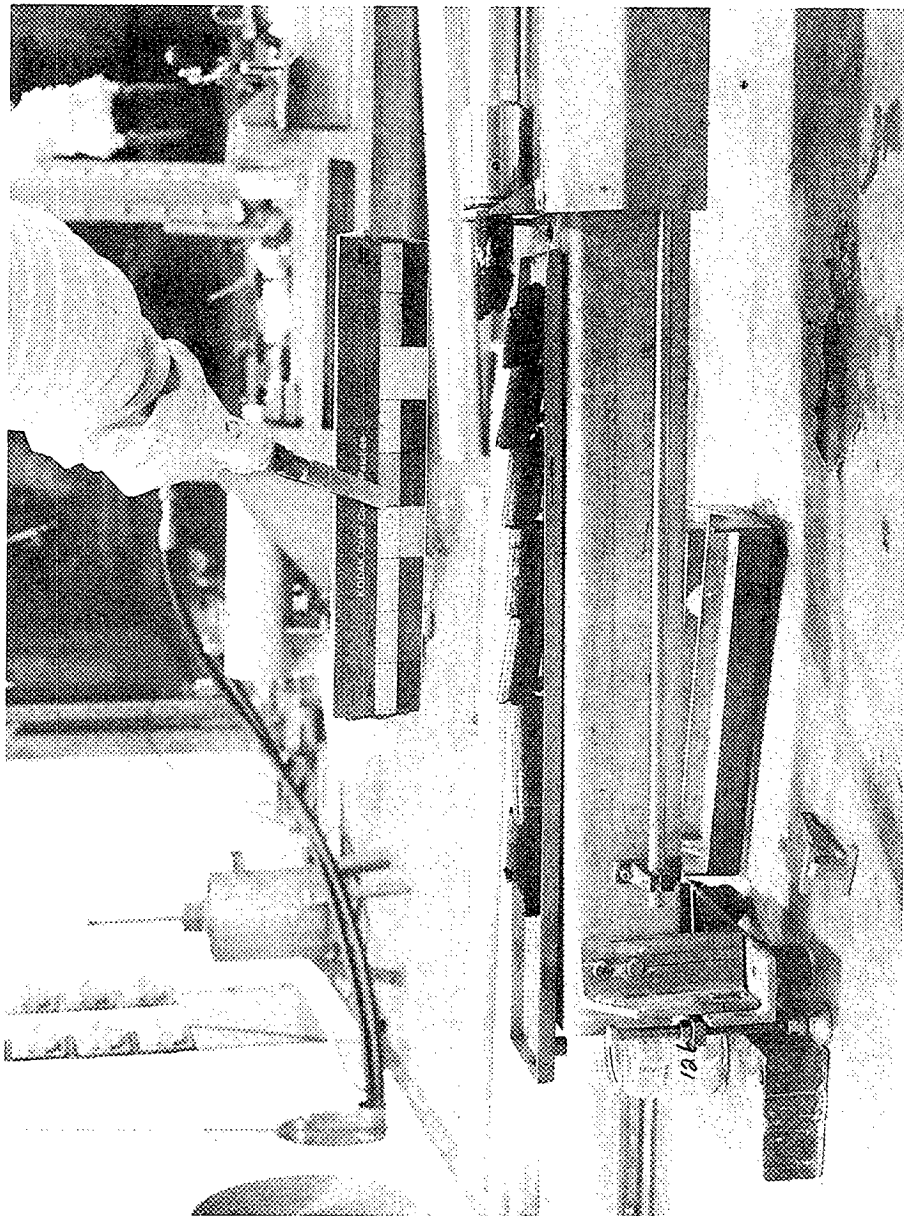
7-201 C192 50g5



T-201 C192 Sey6

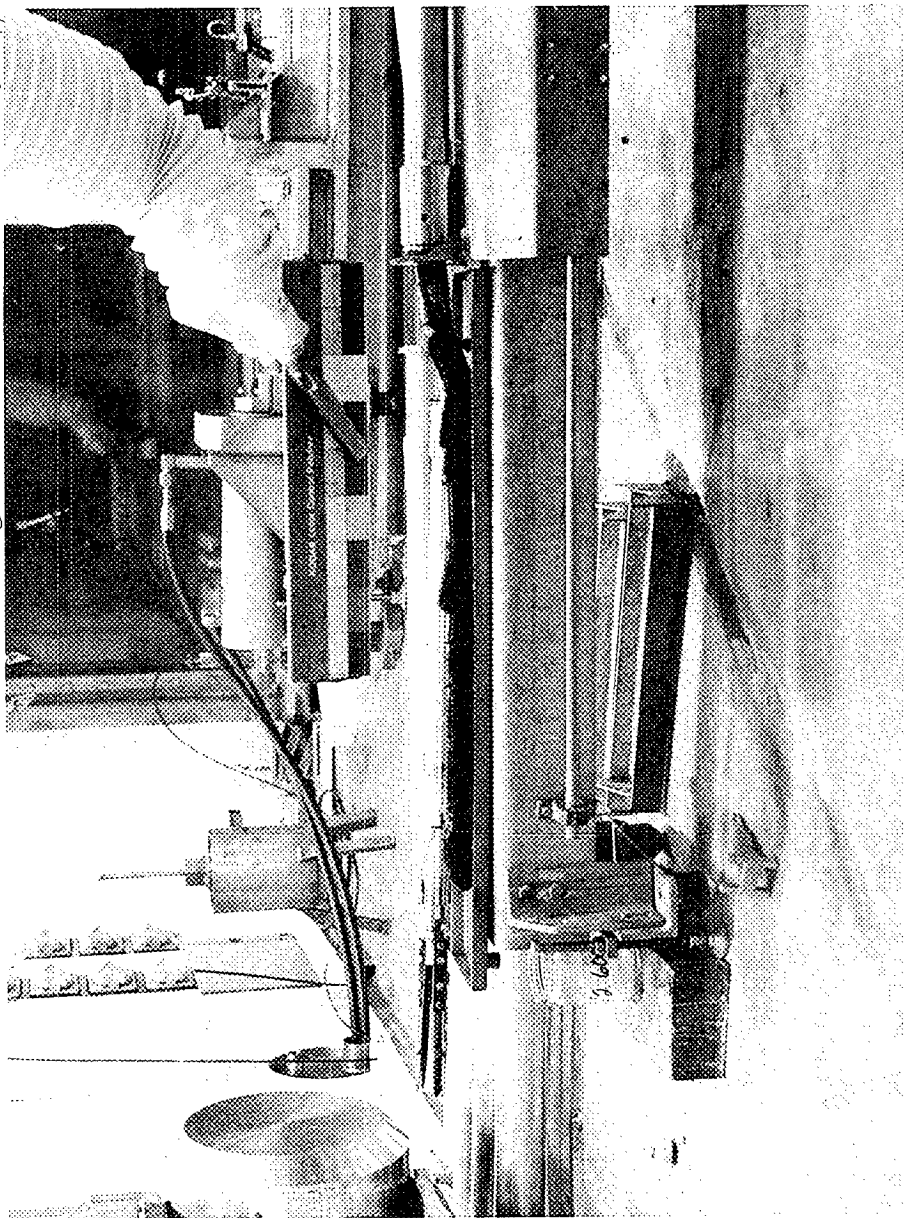


T-201 C192 Seg 7



T-201 Core 192 Segment 8

5-2-97



HNF-SD-WM-DP-254, REV. 0

COMPOSITE WORKSHEETS

HNH-SD-WM-DP-254, REV. 0

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Composite Worksheet

Date: 6/2/97

Tank: T201

Sample Parent: Deposited
 ID: S97T000895
 Auger/ 20g
 Core: 192
 Segment: 1 DL
 Jar#: 12278

Jar/Vial Size: 250 mL
 Initial Weight: 377.4 g
 Final Weight: 377.4 g
 Net Weight: 0 g

(No Solids)

Sample Parent: Deposited
 ID: S97T000826
 Auger/ 20g
 Core: 192
 Segment: 2 DL
 Jar#: 12281

Jar/Vial Size: 250 mL
 Initial Weight: 393.7 g
 Final Weight: 210.0 g
 Net Weight: 183.7 g

Sample Parent: Deposited
 ID: S97T000827
 Auger/ 20g
 Core: 192
 Segment: 3 DL
 Jar#: 12279

Jar/Vial Size: 250 mL
 Initial Weight: 409.2 g
 Final Weight: 211.7 g
 Net Weight: 197.3 g

P.C. Nuzum
 Phone# 373-31
 Sample Parent: Deposited
 ID: S97T0008
 Auger/ 20g
 Core: 192
 Segment: 4 DL
 Jar#: 12614

Jar/Vial Size: 250 mL
 Initial Weight: 383.5 g
 Final Weight: 214.6 g
 Net Weight: 168.9 g

HNF-SD-WM-DP-254, REV. 0

Start Time: 9:30
 End Time: 9:37

Tests:

Jar/Vial Size: 225 mL
 Final Weight: 192.3 g
 Initial Weight: 120.1 g
 Net Weight: 72.2 g

Homogenization Time (Min.): 5 min

(after final subsample added)

Special Instructions:

Composite using weights listed above. Solids need to be separated from the drainable liquid subsamples. If there is less than 20 g, take the maximum amount possible.

Composite Worksheet

Date: 6/3/97

Tank: T201

Sample
ID: 5977000229
Auger/
Core: 192
Segment: 50L

Jar/
Jar/Vial Size: 12280 mL
Initial Weight: 250 g
Final Weight: 421.6 g
Net Weight: 171.5 g

Sample
ID: _____
Auger/
Core: _____
Segment: _____

Jar/
Jar/Vial Size: _____ mL
Initial Weight: _____ g
Final Weight: _____ g
Net Weight: _____ g

Sample
ID: _____
Auger/
Core: _____
Segment: _____

Jar/
Jar/Vial Size: _____ mL
Initial Weight: _____ g
Final Weight: _____ g
Net Weight: _____ g

See Parent
Jar# 11834
on Page #1

Special Instructions:

P.C. Nuzom
Phone# 373-3199

HNF-SD-WM-DP-254, REV. 0

HNF-SD-WM-DP-254, REV. 0

Final Composite Calculation SheetDate: 6/24/97 Technician: A. HursonTotal number of jars used to build the composite: 5Composite Jar number: 11834 Jar size: 125

- 1) Sample from segment jar 12278 to composite jar = 0 grams
- 2) Sample from segment jar 12281 to composite jar = 8.4 grams
- 3) Sample from segment jar 12279 to composite jar = 15.7 grams
- 4) Sample from segment jar 12614 to composite jar = 17.3 grams
- 5) Sample from segment jar 12240 to composite jar = 30.8 grams
- 6) Sample from segment jar _____ to composite jar = _____ grams
- 7) Sample from segment jar _____ to composite jar = _____ grams
- 8) Sample from segment jar _____ to composite jar = _____ grams
- 9) Sample from segment jar _____ to composite jar = _____ grams
- 10) Sample from segment jar _____ to composite jar = _____ grams
- 11) Sample from segment jar _____ to composite jar = _____ grams
- 12) Sample from segment jar _____ to composite jar = _____ grms
- 13) Sample from segment jar _____ to composite jar = _____ grams
- 14) Sample from segment jar _____ to composite jar = _____ grms

Total grams collected in composite jar # 11834 = 72.2 grams

Composite Worksheet

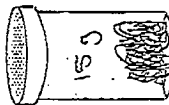
Date: 6/2/97

Tank: T201

P.C. N0200M

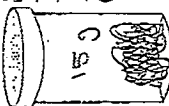
Phone# 373-3199

Sample PARENT
ID: S97T000894
Auger/ 153
Core: 192
Segment: 6 L4



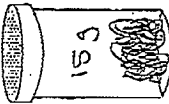
Jar#: 12603
Jar/Vial Size: 250 mL
Initial Weight: 242.1 g
Final Weight: 263.4 g
Net Weight: 14.7 g

Sample PARENT
ID: S97T000897
Auger/ 153
Core: 192
Segment: 6 U4



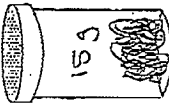
Jar#: 12605
Jar/Vial Size: 250 mL
Initial Weight: 204.4 g
Final Weight: 255.5 g
Net Weight: 14.9 g

Sample PARENT
ID: S97T000895
Auger/ 153
Core: 192
Segment: 7 L4



Jar#: 12608
Jar/Vial Size: 250 mL
Initial Weight: 246.4 g
Final Weight: 274.6 g
Net Weight: 17.6 g

Sample PARENT
ID: S97T000902
Auger/ 153
Core: 192
Segment: 7 U4



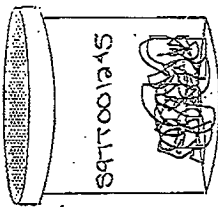
Start Time: 13:00

End Time: 15:00

Tests:

COMPOSITE
HOMOGENIZATION
BLK DENON

Homogenization Time (Min.): 5



Jar#: 12665
Jar/Vial Size: 125 mL
Final Weight: 209.5 g
Initial Weight: 119.2 g
Net Weight: 90.3 g

(after final subsample added)

Instructions:

Composite using weights listed above

BEST AVAILABLE COPY

Composite Worksheet

Date: 6/3/97

Tank: T201

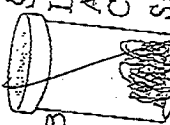
Sample Parent
ID: SA11000896
Auger/
Core: 192
Segment: 8LN
Jar#: 12601

Jar/Vial Size: 250 mL
Initial Weight: 251.9 g
Final Weight: 233.9 g
Net Weight: 18.5 g



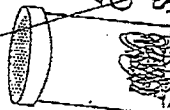
Sample Parent
ID: SA11000903
Auger/
Core: 192
Segment: 8UH
Jar#: 12606

Jar/Vial Size: 250 mL
Initial Weight: 306.8 g
Final Weight: 297.8 g
Net Weight: 19.0 g



Sample
ID: _____
Auger/
Core: _____
Segment: _____
Jar#: _____

Jar/Vial Size: _____ mL
Initial Weight: _____ g
Final Weight: _____ g
Net Weight: _____ g



Sample
ID: _____
Auger/
Core: _____
Segment: _____
Jar#: _____

Jar/Vial Size: _____ mL
Initial Weight: _____ g
Final Weight: _____ g
Net Weight: _____ g

P.C. Nuzum
Phone# 373-3

HNF-SD-WM-DP-254, REV. 0

See Parent
Jar# 12665
on Page #1

Instructions:

HOT CELL 11A

HNF-SD-WM-DP-254, REV. 0

Final Composite Calculation SheetDate: 6/20/97 Technician: A. HensonTotal number of jars used to build the composite: 6Composite Jar number: 12665 Jar size: 125

- 1) Sample from segment jar 12603 to composite jar = 15.1 grams
 - 2) Sample from segment jar 12605 to composite jar = 14.9 grams
 - 3) Sample from segment jar 12615 to composite jar = 15.3 grams
 - 4) Sample from segment jar 12608 to composite jar = 14.9 grams
 - 5) Sample from segment jar 12601 to composite jar = 15.0 grams
 - 6) Sample from segment jar 12606 to composite jar = 15.1 grams
 - 7) Sample from segment jar _____ to composite jar = _____ grams
 - 8) Sample from segment jar _____ to composite jar = _____ grams
 - 9) Sample from segment jar _____ to composite jar = _____ grams
 - 10) Sample from segment jar _____ to composite jar = _____ grams
 - 11) Sample from segment jar 12604 to composite jar = _____ grams
 - 12) Sample from segment jar _____ to composite jar = _____ grams
 - 13) Sample from segment jar _____ to composite jar = _____ grams
 - 14) Sample from segment jar _____ to composite jar = _____ grams
 - 15) Sample from segment jar _____ to composite jar = _____ grams
 - 16) Sample from segment jar _____ to composite jar = _____ grams
 - 17) Sample from segment jar _____ to composite jar = _____ grams
 - 18) Sample from segment jar _____ to composite jar = _____ grams
 - 19) Sample from segment jar _____ to composite jar = _____ grams
 - 20) Sample from segment jar _____ to composite jar = _____ grams
- Total grams collected in composite jar # 12665 = 90.3 grams

HNF-SD-WM-DP-254, REV. 0

SAMPLE HANDLING

HNF-SD-WM-DP-254, REV. 0

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LABCORE Data Entry Template for Worklist# 17770

Analyst: JLE Instrument: BA000 Book # NA
Method: LO-160-103 Rev/Mod 30 HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T-201 C192 SEG # 2 RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.01</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.13</u>	<u>N/A</u>	
97000311	T-201	3 SAMPLE	S97T000680	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>250</u>		ml
97000311	T-201	4 SAMPLE	S97T000680	0	DLIQWT01	SOLID	<u>N/A</u>	<u>248.2</u>		g
97000311	T-201	5 SAMPLE	S97T000680	0	EST.G/ML	SOLID	<u>N/A</u>	<u>99</u>		g/ml
97000311	T-201	6 SAMPLE	S97T000680	0	EXTRUD01	SOLID	<u>N/A</u>	<u>Complete</u>		
97000311	T-201	7 SAMPLE	S97T000680	0	LLIQWT01	SOLID	<u>N/A</u>	<u>25</u>		g
97000311	T-201	8 SAMPLE	S97T000680	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>HNF-V-31</u>		
97000311	T-201	9 SAMPLE	S97T000680	0	SLDVOL01	SOLID	<u>N/A</u>	<u>Q</u>		ml
97000311	T-201	10 SAMPLE	S97T000680	0	SLDWT-01	SOLID	<u>N/A</u>	<u>Q</u>		g
97000311	T-201	11 SAMPLE	S97T000680	0	APPEAR01	SOLID	<u>N/A</u>	<u>Complete</u>		
97000311	T-201	12 SAMPLE	S97T000680	0	ORGVOL01	SOLID	<u>N/A</u>	<u>Q</u>		ml

Final page for worklist # 17770

Analyst Signature

Date

Validated by 77 Lapins
6-12-97

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 17771

Analyst: JLS Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod BO HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 C192 SEG # 3 RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.01</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.13</u>	<u>N/A</u>	
97000311	T-201	3 SAMPLE	S97T000681	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>250</u>		ml
97000311	T-201	4 SAMPLE	S97T000681	0	DLIQWT01	SOLID	<u>N/A</u>	<u>280.4</u>		g
97000311	T-201	5 SAMPLE	S97T000681	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.12</u>		g/mL
97000311	T-201	6 SAMPLE	S97T000681	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	7 SAMPLE	S97T000681	0	LLIQWT01	SOLID	<u>N/A</u>	<u><5</u>		g
97000311	T-201	8 SAMPLE	S97T000681	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>HNFN-31</u>		
97000311	T-201	9 SAMPLE	S97T000681	0	SLDVOL01	SOLID	<u>N/A</u>	<u>N/A</u>		ml
97000311	T-201	10 SAMPLE	S97T000681	0	SLDWT-01	SOLID	<u>N/A</u>	<u>Q</u>		g
97000311	T-201	11 SAMPLE	S97T000681	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	12 SAMPLE	S97T000681	0	ORGVOL01	SOLID	<u>N/A</u>	<u>Q</u>		ml

Final page for worklist # 17771

Jessie J. Irish 5/9/97
Analyst Signature Date

Jessie J. Irish 5/9/97
Analyst Signature Date

Validated by H Lapier 5-12-97

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 17772

Analyst: JLF Instrument: BA000 _____ Book # NA

Method: LO-160-103 Rev/Mod 30 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 C192 SEG # 4 RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.01</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.13</u>	<u>N/A</u>	
97000311	T-201	3 SAMPLE	S97T000682	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>250</u>		ml
97000311	T-201	4 SAMPLE	S97T000682	0	DLIQWT01	SOLID	<u>N/A</u>	<u>250.0</u>		g
97000311	T-201	5 SAMPLE	S97T000682	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.01</u>		g/ml
97000311	T-201	6 SAMPLE	S97T000682	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	7 SAMPLE	S97T000682	0	LLIQWT01	SOLID	<u>N/A</u>	<u><5</u>		g
97000311	T-201	8 SAMPLE	S97T000682	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>HNF-N-31</u>		
97000311	T-201	9 SAMPLE	S97T000682	0	SLDVOL01	SOLID	<u>N/A</u>	<u>NA</u>		ml
97000311	T-201	10 SAMPLE	S97T000682	0	SLDWT-01	SOLID	<u>N/A</u>	<u>22</u>		g
97000311	T-201	11 SAMPLE	S97T000682	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	12 SAMPLE	S97T000682	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml

Final page for worklist # 17772

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 17861

Analyst: JLF Instrument: BA000 Book # N/A

Method: LO-160-103 Rev/Mod BO HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 C192 SEG # 1 RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.01</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.13</u>	<u>N/A</u>	
97000311	T-201	3 SAMPLE	S97T000691	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>250</u>		mL
97000311	T-201	4 SAMPLE	S97T000691	0	DLIQWT01	SOLID	<u>N/A</u>	<u>208.6</u>		g
97000311	T-201	5 SAMPLE	S97T000691	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.07</u>		g/mL
97000311	T-201	6 SAMPLE	S97T000691	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	7 SAMPLE	S97T000691	0	LLIQWT01	SOLID	<u>N/A</u>	<u><5</u>		g
97000311	T-201	8 SAMPLE	S97T000691	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>HNF-W31</u>		
97000311	T-201	9 SAMPLE	S97T000691	0	SLDVOL01	SOLID	<u>N/A</u>	<u>2</u>		mL
97000311	T-201	10 SAMPLE	S97T000691	0	SLDWT-01	SOLID	<u>N/A</u>	<u>2</u>		g
97000311	T-201	11 SAMPLE	S97T000691	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	12 SAMPLE	S97T000691	0	ORGVOL01	SOLID	<u>N/A</u>	<u>2</u>		mL

Final page for worklist # 17861

Jessie M. D'Ischia 5/9/97
Analyst Signature Date
Validated by M. Lapins 5-12-97

Jessie M. D'Ischia 5/9/97
Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 17862

Analyst: JLS Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod 30 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 C192 SEG # 5 RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>90.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.13</u>	<u>N/A</u>	
97000311	T-201	3 SAMPLE	S97T000687	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>250</u>		ml
97000311	T-201	4 SAMPLE	S97T000687	0	DLIQWT01	SOLID	<u>N/A</u>	<u>272.9</u>		g
97000311	T-201	5 SAMPLE	S97T000687	0	EST.G/ML	SOLID	<u>N/A</u>	<u>1.09</u>		g/ml
97000311	T-201	6 SAMPLE	S97T000687	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	7 SAMPLE	S97T000687	0	LLIQWT01	SOLID	<u>N/A</u>	<u><5</u>		g
97000311	T-201	8 SAMPLE	S97T000687	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>HNF-N-31</u>		
97000311	T-201	9 SAMPLE	S97T000687	0	SLDVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml
97000311	T-201	10 SAMPLE	S97T000687	0	SLDWT-01	SOLID	<u>N/A</u>	<u>0</u>		g
97000311	T-201	11 SAMPLE	S97T000687	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	12 SAMPLE	S97T000687	0	ORGVOL01	SOLID	<u>N/A</u>	<u>0</u>		ml

Final page for worklist # 17862

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 17863

Analyst: JLF Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod B0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 C192 SEG # 6 RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.10</u>	<u>N/A</u>	
97000311	T-201	3 SAMPLE	S97T000688	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>Q</u>		ml
97000311	T-201	4 SAMPLE	S97T000688	0	DLIQWT01	SOLID	<u>N/A</u>	<u>Q</u>		g
97000311	T-201	5 SAMPLE	S97T000688	0	EST.G/ML	SOLID	<u>N/A</u>	<u>Q</u>		g/ml
97000311	T-201	6 SAMPLE	S97T000688	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	7 SAMPLE	S97T000688	0	LLIQWT01	SOLID	<u>N/A</u>	<u><5</u>		g
97000311	T-201	8 SAMPLE	S97T000688	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>HNF-N-31</u>		
97000311	T-201	9 SAMPLE	S97T000688	0	SLDVOL01	SOLID	<u>N/A</u>	<u>N/A</u>		ml
97000311	T-201	10 SAMPLE	S97T000688	0	SLDWT-01	SOLID	<u>N/A</u>	<u>376.2</u>		g
97000311	T-201	11 SAMPLE	S97T000688	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	12 SAMPLE	S97T000688	0	ORGVOL01	SOLID	<u>N/A</u>	<u>Q</u>		ml

Final page for worklist # 17863

Jessie J. Insley 5/9/97
Analyst Signature Date
Validated by N. Lugin
5-13-97

Jessie J. Insley 5/9/97
Analyst Signature Date

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 17864

Analyst: JLE Instrument: BA000 _____ Book # N/A
Method: LO-160-103 Rev/Mod BO HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T-201 C192 FIELD BLANK RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.01</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.13</u>	<u>N/A</u>	
97000311	T-201	3 SAMPLE	S97T000690	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>250</u>		ml
97000311	T-201	4 SAMPLE	S97T000690	0	DLIQWT01	SOLID	<u>N/A</u>	<u>248.6</u>		g
97000311	T-201	5 SAMPLE	S97T000690	0	EST.G/ML	SOLID	<u>N/A</u>	<u>.99</u>		g/ml
97000311	T-201	6 SAMPLE	S97T000690	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	7 SAMPLE	S97T000690	0	LLIQWT01	SOLID	<u>N/A</u>	<u>Q</u>		g
97000311	T-201	8 SAMPLE	S97T000690	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>HNF-N-31</u>		
97000311	T-201	9 SAMPLE	S97T000690	0	SLDVOL01	SOLID	<u>N/A</u>	<u>Q</u>		ml
97000311	T-201	10 SAMPLE	S97T000690	0	SLDWT-01	SOLID	<u>N/A</u>	<u>Q</u>		g
97000311	T-201	11 SAMPLE	S97T000690	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	12 SAMPLE	S97T000690	0	ORGVOL01	SOLID	<u>N/A</u>	<u>Q</u>		ml

Final page for worklist # 17864

Jessie Shisho 5/5/97
Analyst Signature Date
Validated by 77 Logics
5-12-97

Jessie Shisho 5/9/97
Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 17865

Analyst: JLF Instrument: BA000 Book # WA

Method: LO-160-103 Rev/Mod B0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 C192 SEG # 7 RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.12</u>	<u>N/A</u>	
97000311	T-201	3 SAMPLE	S97T000692	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>Q</u>		ml
97000311	T-201	4 SAMPLE	S97T000692	0	DLIQWT01	SOLID	<u>N/A</u>	<u>Q</u>		g
97000311	T-201	5 SAMPLE	S97T000692	0	EST.G/ML	SOLID	<u>N/A</u>	<u>Q</u>		g/mL
97000311	T-201	6 SAMPLE	S97T000692	0	EXTRUD01	SOLID	<u>N/A</u>	<u>Complete</u>		
97000311	T-201	7 SAMPLE	S97T000692	0	LLIQWT01	SOLID	<u>N/A</u>	<u>Q</u>		g
97000311	T-201	8 SAMPLE	S97T000692	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>HNF-N-31</u>		
97000311	T-201	9 SAMPLE	S97T000692	0	SLDVOL01	SOLID	<u>N/A</u>	<u>N/A</u>		ml
97000311	T-201	10 SAMPLE	S97T000692	0	SLDWT-01	SOLID	<u>N/A</u>	<u>387.8</u>		g
97000311	T-201	11 SAMPLE	S97T000692	0	APPEAR01	SOLID	<u>N/A</u>	<u>Complete</u>		
97000311	T-201	12 SAMPLE	S97T000692	0	ORGVOL01	SOLID	<u>N/A</u>	<u>Q</u>		ml

Final page for worklist # 17865

Jessy J. Sanzby 5/9/97
Analyst Signature Date
Validated by V. Lapier
5-13-97

Jessy J. Sanzby 5/9/97
Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 17866

Analyst: JLC Instrument: BA000 Book # NA

Method: LO-160-103 Rev/Mod BO HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 C192 SEG # 8 RISER 3 EXTRUSION

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 INSTCHK01			EXTRUD01	SOLID	<u>20.00</u>	<u>20.00</u>	<u>N/A</u>	
		2 INSTCHK02			EXTRUD01	SOLID	<u>500.00</u>	<u>500.12</u>	<u>N/A</u>	
97000311	T-201	3 SAMPLE	S97T000689	0	DLIQVOL1	SOLID	<u>N/A</u>	<u>Q</u>		ml
97000311	T-201	4 SAMPLE	S97T000689	0	DLIQWT01	SOLID	<u>N/A</u>	<u>Q</u>		g
97000311	T-201	5 SAMPLE	S97T000689	0	EST.G/ML	SOLID	<u>N/A</u>	<u>Q</u>		g/ml
97000311	T-201	6 SAMPLE	S97T000689	0	EXTRUD01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	7 SAMPLE	S97T000689	0	LLIQWT01	SOLID	<u>N/A</u>	<u>Q</u>		g
97000311	T-201	8 SAMPLE	S97T000689	0	NOTEBOOK	SOLID	<u>N/A</u>	<u>HNF-V-31</u>		
97000311	T-201	9 SAMPLE	S97T000689	0	SLDVOL01	SOLID	<u>N/A</u>	<u>Q</u>		ml
97000311	T-201	10 SAMPLE	S97T000689	0	SLDWT-01	SOLID	<u>N/A</u>	<u>375.6</u>		g
97000311	T-201	11 SAMPLE	S97T000689	0	APPEAR01	SOLID	<u>N/A</u>	<u>complete</u>		
97000311	T-201	12 SAMPLE	S97T000689	0	ORGVOL01	SOLID	<u>N/A</u>	<u>Q</u>		ml

Final page for worklist # 17866

Analyst Signature

Date

Validated by 7/ Lapins 5-13-97

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-254, REV. 0

SAMPLE PREPARATIONS

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LABCORE Data Entry Template for Worklist# 18077

Analyst: KNT Instrument: FUS01 Book # _____
Method: LA-549-141 Rev/Mod F-0 HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T-201 FUSION DIGEST C192S6UH,LH, 7LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP		FUSION01	SOLID	<u>1</u>	<u>.250</u>	<u>N/A</u>	<u>g/L</u>
97000311	T-201	2	SAMPLE S97T000901 O F .5028 → .250L		FUSION01	SOLID	<u>N/A</u>	<u>2.0112</u>		<u>g/L</u>
97000311	T-201	3	SAMPLE S97T000901 O F		DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		<u>mrad/hour</u>
97000311	T-201	4	DUP S97T000901 O F .5146 → .250L		FUSION01	SOLID	<u>2.0112</u>	<u>2.0584</u>	<u>N/A</u>	<u>g/L</u>
97000311	T-201	5	DUP S97T000901 O F		DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	<u>N/A</u>	<u>mrad/hour</u>
97000311	T-201	6	SAMPLE S97T000919 O F .4932 → .250L		FUSION01	SOLID	<u>N/A</u>	<u>1.9728</u>		<u>g/L</u>
97000311	T-201	7	SAMPLE S97T000919 O F		DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		<u>mrad/hour</u>
97000311	T-201	8	DUP S97T000919 O F .5033 → .250L		FUSION01	SOLID	<u>1.9728</u>	<u>2.0132</u>	<u>N/A</u>	<u>g/L</u>
97000311	T-201	9	DUP S97T000919 O F		DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	<u>N/A</u>	<u>mrad/hour</u>
97000311	T-201	10	SAMPLE S97T000921 O F .4617 → .250L		FUSION01	SOLID	<u>N/A</u>	<u>1.8468</u>		<u>g/L</u>
97000311	T-201	11	SAMPLE S97T000921 O F		DOSE-02	SOLID	<u>N/A</u>	<u>1.5</u>		<u>mrad/hour</u>
97000311	T-201	12	DUP S97T000921 O F .4681 → .250L		FUSION01	SOLID	<u>1.8468</u>	<u>1.8724</u>	<u>N/A</u>	<u>g/L</u>
97000311	T-201	13	DUP S97T000921 O F		DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	<u>N/A</u>	<u>mrad/hour</u>

Final page for worklist # 18077

Kim Thomas 5-24-97
Analyst Signature Date

Jan A. Hume 5-24-97
Analyst Signature Date

*Reviewed on 5/26/97
G. Mally 5/27/97*

Data Entry Comments: 30ml. Con HNO₃

HPT was Chuck Felder

Indexed by Kim Thomas 5-24-97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18078

Analyst: DCD Instrument: FUS01 Book # N/A
Method: LA-549-141 Rev/Mód F0 HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T-201 FUSION DIGEST C192S7UH, 8UH,LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>.250</u>	<u>N/A</u>	g/L
97000311	T-201	2 SAMPLE	S97T000920 0 F		FUSION01	SOLID	<u>N/A</u>	<u>1.9924</u>		g/L
		<u>.4981g → .250g</u>								
97000311	T-201	3 SAMPLE	S97T000920 0 F		DOSE-02	SOLID	<u>N/A</u>	<u><0.5</u>		mrad/hour
97000311	T-201	4 DUP	S97T000920 0 F		FUSION01	SOLID	<u>1.9924</u>	<u>2.0212</u>	<u>N/A</u>	g/L
		<u>.5053g → .250g</u>								
97000311	T-201	5 DUP	S97T000920 0 F		DOSE-02	SOLID	<u><0.5</u>	<u><0.5</u>	<u>N/A</u>	mrad/hour
97000311	T-201	6 SAMPLE	S97T000922 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.0412</u>		g/L
		<u>.5103g → .250g</u>								
97000311	T-201	7 SAMPLE	S97T000922 0 F		DOSE-02	SOLID	<u>N/A</u>	<u><0.5</u>		mrad/hour
97000311	T-201	8 DUP	S97T000922 0 F		FUSION01	SOLID	<u>2.0412</u>	<u>2.0300</u>	<u>N/A</u>	g/L
		<u>.5075g → .250g</u>								
97000311	T-201	9 DUP	S97T000922 0 F		DOSE-02	SOLID	<u><0.5</u>	<u><0.5</u>	<u>N/A</u>	mrad/hour
97000311	T-201	10 SAMPLE	S97T000923 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.0168</u>		g/L
		<u>.5042g → .250g</u>								
97000311	T-201	11 SAMPLE	S97T000923 0 F		DOSE-02	SOLID	<u>N/A</u>	<u><0.5</u>		mrad/hour
97000311	T-201	12 DUP	S97T000923 0 F		FUSION01	SOLID	<u>2.0168</u>	<u>1.9648</u>	<u>N/A</u>	g/L
		<u>.4912g → .250g</u>								
97000311	T-201	13 DUP	S97T000923 0 F		DOSE-02	SOLID	<u><0.5</u>	<u><0.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 18078

David D Dunham 5-25-97
Analyst Signature Date

Frank Mark 5-25-97
Analyst Signature Date

Rae Ann Green 5-25-97

Reviewed
G. Mally 5/26/97

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18531

Analyst: gal Instrument: FUS01 Book # N/A
Method: LA-549-141 Rev/Mod F.O HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T-201 Fusion Digest C192 Core Comps lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>10.250</u>	<u>N/A</u>	g/L
97000311	T-201	2 SAMPLE	S97T001248 0 F		FUSION01	SOLID	<u>N/A</u>	<u>1.97%</u>		g/L
97000311	T-201	3 SAMPLE	S97T001248 0 F		DOSE-02	SOLID	<u>N/A</u>	<u>10.5</u>		mrad/hour
97000311	T-201	4 DUP	S97T001248 0 F		FUSION01	SOLID	<u>1.97%</u>	<u>1.97%</u>	<u>N/A</u>	g/L
97000311	T-201	5 DUP	S97T001248 0 F		DOSE-02	SOLID	<u>N/A</u>	<u>10.5</u>	<u>N/A</u>	mrad/hour
97000311	T-201	6 SAMPLE	S97T001255 0 F		FUSION01	SOLID	<u>N/A</u>	<u>2.03%</u>		g/L
97000311	T-201	7 SAMPLE	S97T001255 0 F		DOSE-02	SOLID	<u>N/A</u>	<u>10.5</u>		mrad/hour
97000311	T-201	8 DUP	S97T001255 0 F		FUSION01	SOLID	<u>2.03%</u>	<u>2.04%</u>	<u>N/A</u>	g/L
97000311	T-201	9 DUP	S97T001255 0 F		DOSE-02	SOLID	<u>N/A</u>	<u>10.5</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 18531

gal 06.30.97
Analyst Signature Date

James K. McFarland 7-1-97
Analyst Signature Date

Validated
7-1-97
PK Fuller

Data Entry Comments:

ADDED 5ml 4M HCL = 30 ml Con HNO₃ 4% solids. Heated & stirred
S97T-1248 & DUP Color - Maroon S97T001255 & Dup Color - Tea Brown
HPT: Bob Clements

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 19308

Analyst: AK Instrument: FUS01 Book # _____

Method: LA-549-141 Rev/Mod F-0

Worklist Comment: T-201 Fusion Digest C192 Core Comps lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			FUSION01	SOLID	<u>1</u>	<u>1.250L</u>	<u>N/A</u>	g/L
97000311	T-201	2 SAMPLE	S97T001753 O F		FUSION01	SOLID	<u>N/A</u>	<u>1.947</u>		g/L
		<u>.4888</u> → <u>1.250L</u>								
97000311	T-201	3 SAMPLE	S97T001753 O F		DOSE-02	SOLID	<u>N/A</u>	<u>15</u>		mrads/hour
		<u>.4978</u> → <u>1.250L</u>								
97000311	T-201	4 DUP	S97T001753 O F		FUSION01	SOLID	<u>1.947</u>	<u>1.991</u>	<u>N/A</u>	g/L
		<u>.4978</u> → <u>1.250L</u>								
97000311	T-201	5 DUP	S97T001753 O F		DOSE-02	SOLID	<u>15</u>	<u>10</u>	<u>N/A</u>	mrads/hour
97000311	T-201	6 SAMPLE	S97T001754 O F		FUSION01	SOLID	<u>N/A</u>	<u>1.982</u>		g/L
		<u>.4954</u> → <u>1.250L</u>								
97000311	T-201	7 SAMPLE	S97T001754 O F		DOSE-02	SOLID	<u>N/A</u>	<u>5</u>		mrads/hour
97000311	T-201	8 DUP	S97T001754 O F		FUSION01	SOLID	<u>1.982</u>	<u>1.984</u>	<u>N/A</u>	g/L
		<u>.4960</u> → <u>1.250L</u>								
97000311	T-201	9 DUP	S97T001754 O F		DOSE-02	SOLID	<u>5</u>	<u>5</u>	<u>N/A</u>	mrads/hour

Final page for worklist # 19308

AK 7/17/97
Analyst Signature Date

AKM Gaudin 7-17-97
Analyst Signature Date

S97T001246 → S97T001753
S97T001253 → S97T001754

Validated 7/18/97
SL

Data Entry Comments: Found 7/17/97

LABCORE Data Entry Template for Worklist# 18079

Analyst: DCD Instrument: H2001 Book # N/A

Method: LA-504-101 Rev/Mod F-O

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 H2O DIGEST C192S6LH,UH 7LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2001G01	SOLID	<u>1</u>	<u>.100</u>	<u>N/A</u>	g/L
97000311	T-201	2 SAMPLE	S97T000900 0 W		H2001G01	SOLID	<u>N/A</u>	<u>4.950</u>		g/L
97000311	T-201	3 SAMPLE	S97T000900 0 W		DOSE-02	SOLID	<u>N/A</u>	<u><0.5</u>	<u><0.5</u>	525.97 mrad/hour
97000311	T-201	4 DUP	S97T000900 0 W		H2001G01	SOLID	<u>4.950</u>	<u>4.903</u>	<u>N/A</u>	g/L
97000311	T-201	5 DUP	S97T000900 0 W		DOSE-02	SOLID	<u><0.5</u>	<u><0.5</u>	<u>N/A</u>	525.97 mrad/hour
97000311	T-201	6 SAMPLE	S97T000915 0 W		H2001G01	SOLID	<u>N/A</u>	<u>5.030</u>		g/L
97000311	T-201	7 SAMPLE	S97T000915 0 W		DOSE-02	SOLID	<u>N/A</u>	<u><0.5</u>		mrad/hour
97000311	T-201	8 DUP	S97T000915 0 W		H2001G01	SOLID	<u>5.030</u>	<u>5.190</u>	<u>N/A</u>	g/L
97000311	T-201	9 DUP	S97T000915 0 W		DOSE-02	SOLID	<u><0.5</u>	<u><0.5</u>	<u>N/A</u>	525.97 mrad/hour
97000311	T-201	10 SAMPLE	S97T000931 0 W		H2001G01	SOLID	<u>N/A</u>	<u>4.560</u>		g/L
97000311	T-201	11 SAMPLE	S97T000931 0 W		DOSE-02	SOLID	<u>N/A</u>	<u><0.5</u>		mrad/hour
97000311	T-201	12 DUP	S97T000931 0 W		H2001G01	SOLID	<u>4.560</u>	<u>4.592</u>	<u>N/A</u>	g/L
97000311	T-201	13 DUP	S97T000931 0 W		DOSE-02	SOLID	<u><0.5</u>	<u><0.5</u>	<u>N/A</u>	525.97 mrad/hour

Final page for worklist # 18079

Daniel D. Dunbar 5-25-97
Analyst Signature Date

Jim Mack 5-25-97
Analyst Signature Date

Barbara Green 5-25-97
5-20-97 rev

Reviewed
B. Mally 5/26/97

Data Entry Comments: Weighted by Kim Thomas 5-24-97

HPT Scott Corbally

LABCORE Data Entry Template for Worklist# 18081

Analyst: DCD Instrument: H2O01 Book # N/A

Method: LA-504-101 Rev/Mod F-0

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 H2O DIGEST C192S7UH, 8UH, LH lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK-PREP			H2O01G01	SOLID	<u>1</u>	<u>.100</u>	<u>N/A</u>	<u>g/L</u>
97000311	T-201	2 SAMPLE	S97T000916	0 W	H2O01G01	SOLID	<u>N/A</u>	<u>5.101</u>		<u>g/L</u>
		<u>.5101 g</u> → <u>.100 l</u>						<u>20.5</u> ^{lem} <u>5/25/97</u>		
97000311	T-201	3 SAMPLE	S97T000916	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>4.05</u>		<u>mrad/hour</u>
97000311	T-201	4 DUP	S97T000916	0 W	H2O01G01	SOLID	<u>5.101</u>	<u>4.972</u>	<u>N/A</u>	<u>g/L</u>
		<u>.4972 g</u> → <u>.100 l</u>						<u>20.5</u> <u>20.5</u> ^{lem} <u>5/25/97</u>		
97000311	T-201	5 DUP	S97T000916	0 W	DOSE-02	SOLID	<u>5.05</u>	<u>4.05</u>	<u>N/A</u>	<u>mrad/hour</u>
97000311	T-201	6 SAMPLE	S97T000917	0 W	H2O01G01	SOLID	<u>N/A</u>	<u>4.981</u>		<u>g/L</u>
		<u>.4981 g</u> → <u>.100 l</u>						<u>20.5</u> ^{lem} <u>5/25/97</u>		
97000311	T-201	7 SAMPLE	S97T000917	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>4.05</u>		<u>mrad/hour</u>
97000311	T-201	8 DUP	S97T000917	0 W	H2O01G01	SOLID	<u>4.981</u>	<u>5.057</u>	<u>N/A</u>	<u>g/L</u>
		<u>.5057 g</u> → <u>.100 l</u>						<u>20.5</u> <u>20.5</u> ^{lem} <u>5/25/97</u>		
97000311	T-201	9 DUP	S97T000917	0 W	DOSE-02	SOLID	<u>4.05</u>	<u>4.05</u>	<u>N/A</u>	<u>mrad/hour</u>
97000311	T-201	10 SAMPLE	S97T000918	0 W	H2O01G01	SOLID	<u>N/A</u>	<u>5.096</u>		<u>g/L</u>
		<u>.5096 g</u> → <u>.100 l</u>						<u>20.5</u>		
97000311	T-201	11 SAMPLE	S97T000918	0 W	DOSE-02	SOLID	<u>N/A</u>	<u>4.05</u>		<u>mrad/hour</u>
								^{lem} <u>5/25/97</u>		
97000311	T-201	12 DUP	S97T000918	0 W	H2O01G01	SOLID	<u>5.096</u>	<u>4.923</u>	<u>N/A</u>	<u>g/L</u>
		<u>.4923 g</u> → <u>.100 l</u>						<u>20.5</u> <u>20.5</u> ^{lem} <u>5/25/97</u>		
97000311	T-201	13 DUP	S97T000918	0 W	DOSE-02	SOLID	<u>4.05</u>	<u>4.05</u>	<u>N/A</u>	<u>mrad/hour</u>
								^{lem} <u>5/24/97</u>		

Final page for worklist # 18081

David C. Dorman 5-25-97
Analyst Signature Date
Rae Ann Green 5-25-97

John Muck 5-25-97
Analyst Signature Date

Reviewed
by Holley
5/26/97

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18534

Analyst: ADP Instrument: H2O01 Book # N/A

Method: LA-504-101 Rev/Mod F.O HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 H2O Digest C192 Core Comp lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK-PREP		H2ODIG01	SOLID	<u>1</u>	<u>0.100</u>	<u>N/A</u>	g/L
97000311	T-201	2	SAMPLE S97T001251 0 W		H2ODIG01	SOLID	<u>N/A</u>	<u>4.9280</u>		g/L
97000311	T-201	3	SAMPLE S97T001251 0 W		DOSE-02	SOLID	<u>N/A</u>	<u>4.9280</u>	<u>MT</u>	mrad/hour
97000311	T-201	4	DUP S97T001251 0 W		H2ODIG01	SOLID	<u>4.9280</u>	<u>4.9640</u>	<u>N/A</u>	g/L
97000311	T-201	5	DUP S97T001251 0 W		DOSE-02	SOLID	<u>N/A</u>	<u>4.9280</u>	<u>N/A</u>	mrad/hour
97000311	T-201	6	SAMPLE S97T001257 0 W		H2ODIG01	SOLID	<u>N/A</u>	<u>5.0600</u>		g/L
97000311	T-201	7	SAMPLE S97T001257 0 W		DOSE-02	SOLID	<u>N/A</u>	<u>5.0600</u>	<u>MT</u>	mrad/hour
97000311	T-201	8	DUP S97T001257 0 W		H2ODIG01	SOLID	<u>5.0600</u>	<u>5.0110</u>	<u>N/A</u>	g/L
97000311	T-201	9	DUP S97T001257 0 W		DOSE-02	SOLID	<u>N/A</u>	<u>5.0600</u>	<u>N/A</u>	mrad/hour

Final page for worklist # 18534

Anthony Punter 06-30-97
Analyst Signature Date

AKM 7-1-97
Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18533

Analyst: DeD

Instrument: ACD01

Book # WHC-1A → 2.5 mL
WHC-2 → 2.5 mLMethod: LA-505-163 Rev/Mod A-O

Worklist Comment: T-201 Acid Digest C192 Core Comps lad

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD-PREP			ACIDIG01	SOLID	<u>20</u>	<u>20</u>	<u>N/A</u>	<u>g/L</u> ^{DeD 7-2-97} <u>DF</u>
		2 BLNK-PREP			ACIDIG01	SOLID	^{DeD} <u>0.50</u>	<u>0.50</u>	<u>N/A</u>	<u>g/L</u>
97000311	T-201	3 SAMPLE	S97T001250	0 A	ACIDIG01	SOLID	<u>N/A</u>	<u>7.088</u>	<u>N/A</u>	<u>g/L</u>
		<u>1.3544 g → .050 L</u>								
97000311	T-201	4 SAMPLE	S97T001250	0 A	DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>		<u>mrad/hour</u>
97000311	T-201	5 DUP	S97T001250	0 A	ACIDIG01	SOLID	<u>7.088</u>	<u>7.104</u>	<u>N/A</u>	<u>g/L</u>
		<u>1.3552 g → .050 L</u>								
97000311	T-201	6 DUP	S97T001250	0 A	DOSE-02	SOLID	<u><.5</u>	<u><.5</u>	<u>N/A</u>	<u>mrad/hour</u>
97000311	T-201	7 SAMPLE	S97T001256	0 A	ACIDIG01	SOLID	<u>N/A</u>	<u>7.012</u>		<u>g/L</u>
		<u>SMF 6-28-97 1.1449 g, 1.3506 g → .050 L</u>								
97000311	T-201	8 SAMPLE	S97T001256	0 A	DOSE-02	SOLID	<u>N/A</u>	<u><.5</u>		<u>mrad/hour</u>
97000311	T-201	9 DUP	S97T001256	0 A	ACIDIG01	SOLID	<u>7.012</u>	<u>7.054</u>	<u>N/A</u>	<u>g/L</u>
		<u>SMF 6-28-97 1.1428 g, 1.3527 g → .050 L</u>								
97000311	T-201	10 DUP	S97T001256	0 A	DOSE-02	SOLID	<u><.5</u>	<u><.5</u>	<u>N/A</u>	<u>mrad/hour</u>

Final page for worklist # 18533

Analyst Signature David D. DunbarDate 7-2-97Analyst Signature [Signature]Date 7-2-977/4/97

Data Entry Comments:

HPT: Bob Clements

LABCORE Data Entry Template for Worklist# 19175

Analyst: KPH Instrument: ACD01 Book # WNC-1A WNC-2 2.5ml each - final volume to 30ml DF=20
Method: LA-505-163 Rev/Mod _____
Worklist Comment: ACIDIG01 (T-201 CORE 192 SEG CORE COMP SOLIDS,DL) TDM

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT	
		1 BLNK-PREP			ACIDIG01	SOLID	<u>1</u>	<u>.050</u>	N/A	g/L	
		2 STD-PREP			ACIDIG01	SOLID	<u>20</u>	<u>20</u>	N/A	g/L OF	
97000311	T-201	3 SAMPLE .2607g → .050	S97T001250	0	A	ACIDIG01	SOLID	N/A	<u>5.214</u>	g/L	
97000311	T-201	4 SAMPLE	S97T001250	0	A	DOSE-02	SOLID	N/A	<u>1.5</u>	mrad/hour	
97000311	T-201	5 DUP .2618g → .050	S97T001250	0	A	ACIDIG01	SOLID	<u>5.214</u>	<u>5.236</u>	N/A	g/L
97000311	T-201	6 DUP	S97T001250	0	A	DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	N/A	mrad/hour
97000311	T-201	7 SPK .2583g → .050	S97T001250	0	A	ACIDIG01	SOLID	<u>5.236</u>	<u>5.116</u>	N/A	g/L
97000311	T-201	8 SPK	S97T001250	0	A	DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	N/A	mrad/hour
97000311	T-201	9 SAMPLE .2593g → .050	S97T001256	0	A	ACIDIG01	SOLID	N/A	<u>5.186</u>	g/L	
97000311	T-201	10 SAMPLE	S97T001256	0	A	DOSE-02	SOLID	N/A	<u>1.5</u>	mrad/hour	
97000311	T-201	11 DUP .2622g → .050	S97T001256	0	A	ACIDIG01	SOLID	<u>5.186</u>	<u>5.214</u>	N/A	g/L
97000311	T-201	12 DUP	S97T001256	0	A	DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	N/A	mrad/hour
97000311	T-201	13 SPK .2600g → .050	S97T001256	0	A	ACIDIG01	SOLID	<u>5.214</u>	<u>5.200</u>	N/A	g/L
97000311	T-201	14 SPK	S97T001256	0	A	DOSE-02	SOLID	<u>1.5</u>	<u>1.5</u>	N/A	mrad/hour

Final page for worklist # 19175

Analyst Signature [Signature] Date 7-11-97

Analyst Signature [Signature] Date 7-14-97

Data Entry Comments:

weighed by A. Lambert 07-10-97. * Sample S97T001256 was liquid not solid. BK failed
7/11/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-254, REV. 0

BULK DENSITY WORKSHEETS

HNF-SD-WM-DP-254, REV. 0

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Requestor: AuZuA

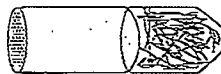
Bulk Density Worksheet

Tank: T-2201
Core: 197
Seg: 6 L H
Auger: ---
Sample ID: SAJT000897

Start Time: ---
End Time: ---
Homogenization
Time (Min.): ---



Jar#: 12603
Jar/Vial Size: --- mL
Initial Weight: --- g
Final Weight: --- g
Net Weight: --- g



Core#: 03
Final Vol: 10.5 mL
Initial Weight: 7.46 g
Final Weight: 22.10 g
Net Weight: 14.64 g

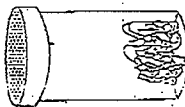
Sample ID: SAJT000897

Appearance/Narrative:

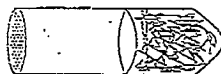
Bulk Density = 14.64 / 10.5 = 1.39 g/mL

Tank: ---
Core: ---
Seg: ---
Auger: ---
Sample ID: ---

Start Time: ---
End Time: ---
Homogenization
Time (Min.): ---



Jar#: ---
Jar/Vial Size: --- mL
Initial Weight: --- g
Final Weight: --- g
Net Weight: --- g

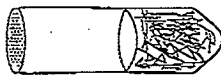
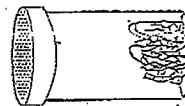
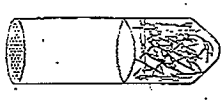
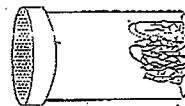


Core#: ---
Final Vol: --- mL
Initial Weight: --- g
Final Weight: --- g
Net Weight: --- g

Sample ID: ---

Appearance/Narrative:

Bulk Density Worksheet

Date: 5-21-97Requestor: NOZUMTank: T-201Core: 102Seg: TLHAuger: ---Sample ID: 597T000895Start Time: 8:21-97End Time: ---Homogenization Time (Min.): ---Jar#: 1-2615Jar/Vial Size: 5 mLInitial Weight: --- gFinal Weight: --- gNet Weight: --- gCone#: 15Final Volume: 5 mLInitial Weight: --- gFinal Weight: 22.9 gNet Weight: 15.3 gSample ID: 597T000895Appearance/Narrative: ---5/20/01 = 15.3 / 100 = 1.46 g/cc15.3 / 12.0 = 1.28 g/ccTank: ---Core: ---Seg: ---Auger: ---Sample ID: ---Start Time: ---End Time: ---Homogenization Time (Min.): ---Jar#: ---Jar/Vial Size: 5 mLInitial Weight: --- gFinal Weight: --- gNet Weight: --- gCone#: ---Final Vol: --- mLInitial Weight: --- gFinal Weight: --- gNet Weight: --- gSample ID: ---Appearance/Narrative: ---

Bulk Density Worksheet

Requestor: ML 7

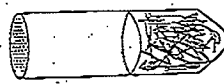
Date: 5-21-97

Tank: T-201
Core: 192
Seg: DLH
Auger:
Sample ID: 5477000 896

Start Time:
End Time:
Homogenization Time (Min.): 52(97)



Jar# 12601
Jar/Vial Size: mL
Initial Weight: DLB
Final Weight: 582197
Net Weight: g

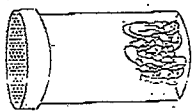


Cone# DL
Final Vol: 11.0 mL
Initial Weight: 7.75 g
Final Weight: 21.07 g
Net Weight: 13.92 g
Sample ID:

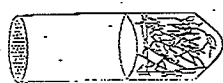
Appearance/Narrative: blk DEN 015 13.92/11.0 = 1.27 g/cc

Tank:
Core:
Seg:
Auger:
Sample ID:

Start Time:
End Time:
Homogenization Time (Min.):



Jar# DLB
Jar/Vial Size: mL
Initial Weight: 52 g
Final Weight: g
Net Weight: g



Cone#
Final Vol: mL
Initial Weight: g
Final Weight: g
Net Weight: g
Sample ID:

Appearance/Narrative:

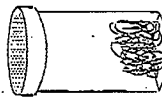
Bulk Density Worksheet

Requestor: W232 JWADate: 6/23/97

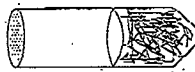
Tank: 1201
 Core: 92
 Seg: Cow
 Auger: 1

Sample ID: SGT001245

Start Time: _____
 End Time: _____
 Homogenization
 Time (Min.): _____



Jar#: 12665
 Jar/Vial Size: m
 Initial Weight: 14.4 g
 Final Weight: _____ g
 Net Weight: _____ g



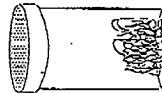
Core#: 12665
 Final Vol: 25 mL
 Initial Weight: 17.9 g
 Final Weight: 17.9 g
 Net Weight: 12.44 g
 Sample ID: SGT001245

Appearance/Narrative: _____

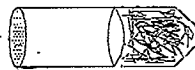
0.44 g ^{11/14} 25 mL = 1.44 g/mL
1.27 g/mL

Tank: _____
 Core: _____
 Seg: _____
 Auger: _____
 Sample ID: _____

Start Time: _____
 End Time: _____
 Homogenization
 Time (Min.): _____



Jar#: 1114 42347
 Jar/Vial Size: m
 Initial Weight: _____ g
 Final Weight: _____ g
 Net Weight: _____ g



Core#: _____
 Final Vol: _____ mL
 Initial Weight: _____ g
 Final Weight: _____ g
 Net Weight: _____ g
 Sample ID: _____

Appearance/Narrative: _____

Bulk Density Worksheet

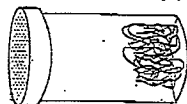
Requestor: NUZUM

Date: 6/24/97

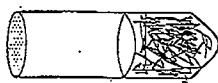
Tank: T201
Core: 192
Seg: Comp
Auger: 11

Sample ID: 597T001252

Start Time: _____
End Time: _____
Homogenization Time (Min.): _____



Jar#: 11834
Jar/Vial Size: _____ mL
Initial Weight: _____ g
Final Weight: 14.75 g
Net Weight: _____ g



Cone#: _____
Final Vol: 10ml mL
Initial Weight: 7.46 g
Final Weight: 14.75 g
Net Weight: 11.29 g

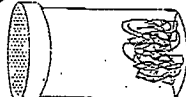
Sample ID: 597T001252

Appearance/Narrative: _____

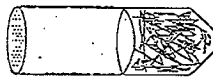
11.29 g / 10ml = 1.13 g/ml

Tank: _____
Core: _____
Seg: _____
Auger: _____
Sample ID: _____

Start Time: _____
End Time: _____
Homogenization Time (Min.): _____



Jar#: AKH
Jar/Vial Size: _____ mL
Initial Weight: _____ g
Final Weight: _____ g
Net Weight: _____ g



Cone#: _____
Final Vol: _____ mL
Initial Weight: _____ g
Final Weight: _____ g
Net Weight: _____ g

Sample ID: _____

Appearance/Narrative: _____

HNF-SD-WM-DP-254, REV. 0

INORGANIC ANALYSES

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LABCORE Data Entry Template for Worklist# 18271

Analyst: RJM Instrument: DSC0 3 Book # 97NBA ^{RS} 5-28-97
12N14B
Method: LA-514-114 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T201, DSC-01 Run under Nitrogen. skm

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	LIQUID	<u>28.45</u>	<u>27.33</u>	<u>N/A</u>	Joules/g
97000311	T-201	2	SAMPLE	S97T000823	0		DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	3	DUP	S97T000823	0		DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000311	T-201	4	SAMPLE	S97T000833	0		DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	5	DUP	S97T000833	0		DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18271

See Attached for Signature
Analyst Signature Date

RS Jones 5-28-97
Analyst Signature Date

Validated 6/2/97 RS Bachelor

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18271

Analyst: RLM Instrument: DSC0 3 Book # 97N8A

Method: LA-514-113 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, DSC-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
97000311	T-201	2 SAMPLE	S97T000823	0	DSC-01	LIQUID	N/A			Joules/g
97000311	T-201	3 DUP	S97T000823	0	DSC-01	LIQUID			N/A	Joules/g
97000311	T-201	4 SAMPLE	S97T000833	0	DSC-01	LIQUID	N/A			Joules/g
97000311	T-201	5 DUP	S97T000833	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 18271

RLM 5/27/97
Analyst Signature Date

Analyst Signature Date

JA Sp 5/27/97

Data Entry Comments:

Ran samples on DSC-03. 5/28/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

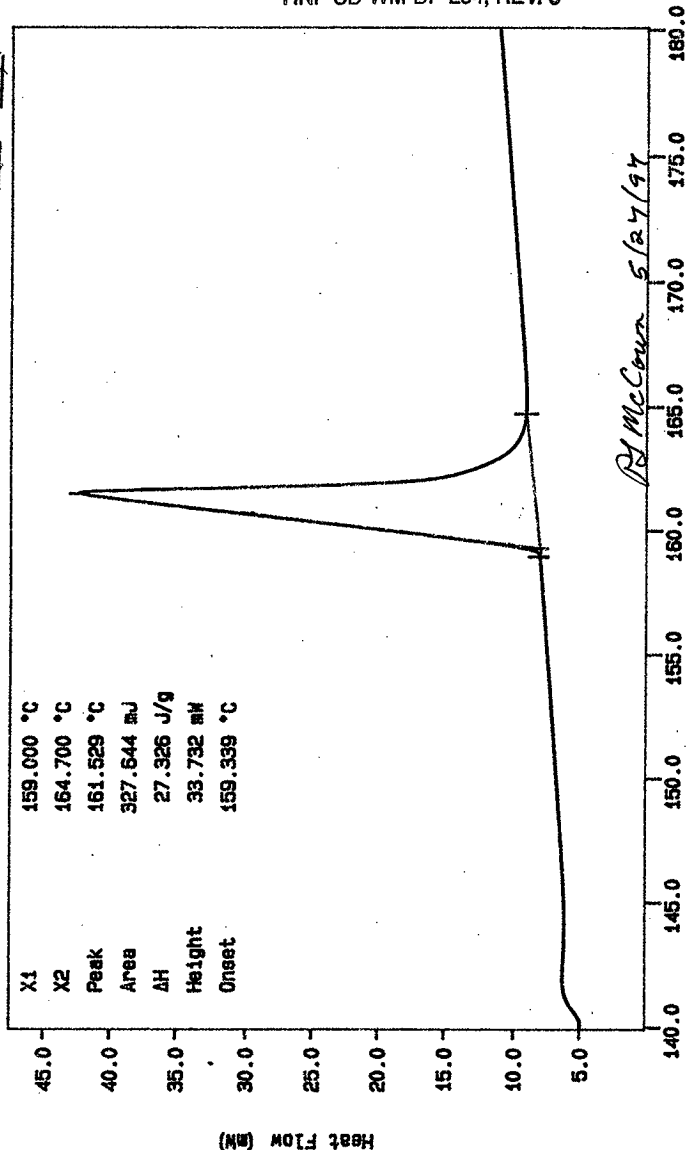
Curve 1: DSC

File Info: IND052701 Tue May 27 06:00:29 1997

Sample Weight: 11.990 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 115 TO 119.



N2, EXOTHERM DOWN

TEMP: 140.8 °C

TIMER: 0.0

0.0 min RATE: 10.0 °C/min

Temperature (°C)

PJ MCCOWN

PERKIN-ELMER

7 Series Thermal Analysis System

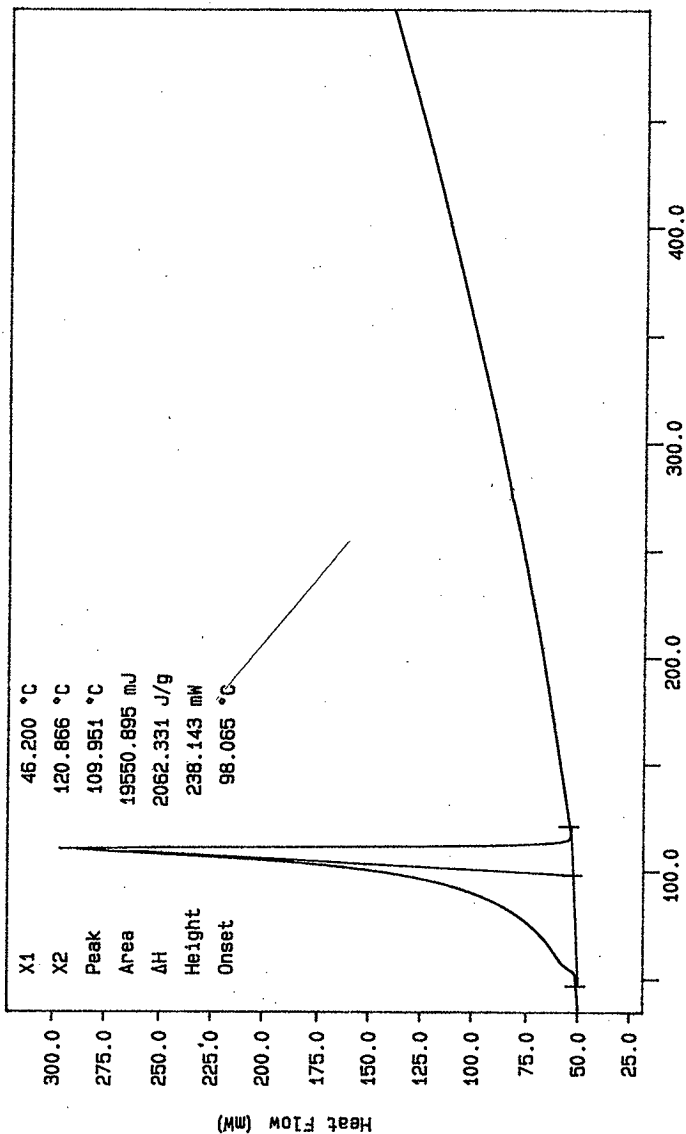
Tue May 27 09:54:17 1997

Heat Flow (mW)

Curve 1: DSC
 File info: SAM052706 Tue May 27 14:49:11 1997
 Sample Weight: 9.480 mg
 S97T000823

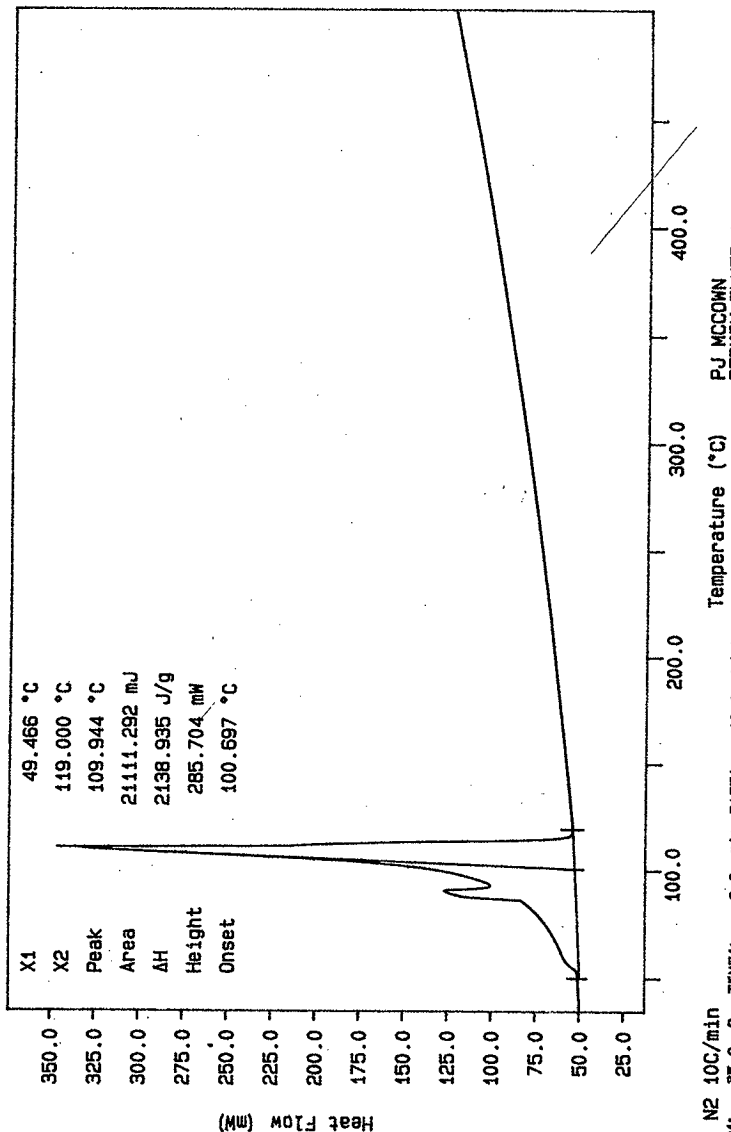
HNF-SD-WM-DP-246, REV. 0 *mtc*
 7-14-97

HNF-SD-WM-DP-254, REV. 0



N2 10C/min
 TEMPI 35.0 °C
 TEMPE 500.0 °C
 TIME: 0.0 min RATE: 10.0 °C/min
 PJ MCCOHN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Tue May 27 14:57:00 1997

Curve 1: DSC
File info: SAM052707 Tue May 27 15:58:21 1997
Sample Weight: 9.870 mg
S97T000823 DUP



N2 10C/min
TEMP: 35.0 °C
TIME: 0.0 min RATE: 10.0 °C/min
PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 27 15:58:14 1997

Curve 1: DSC

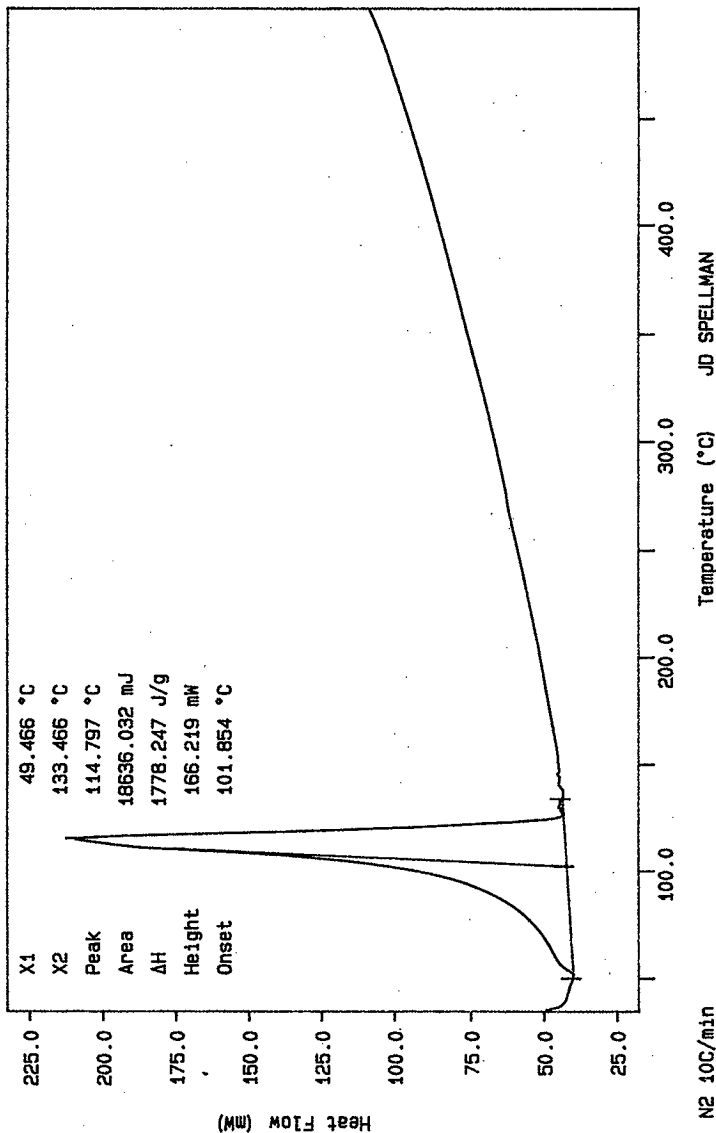
File info: SAM052708 Tue May 27 18: 49: 56 1997

Sample Weight: 10.480 mg

S97T000833

~~HNF-SD-WM-DP-246, REV. 0~~ ^{mtc} 7-14-97

HNF-SD-WM-DP-254, REV. 0



JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 27 18:09:10 1997

N2 100/min
TEMP: 50.0 °C
TIME: 0.0 min RATE: 10.0 °C/min

Curve 1: DSC

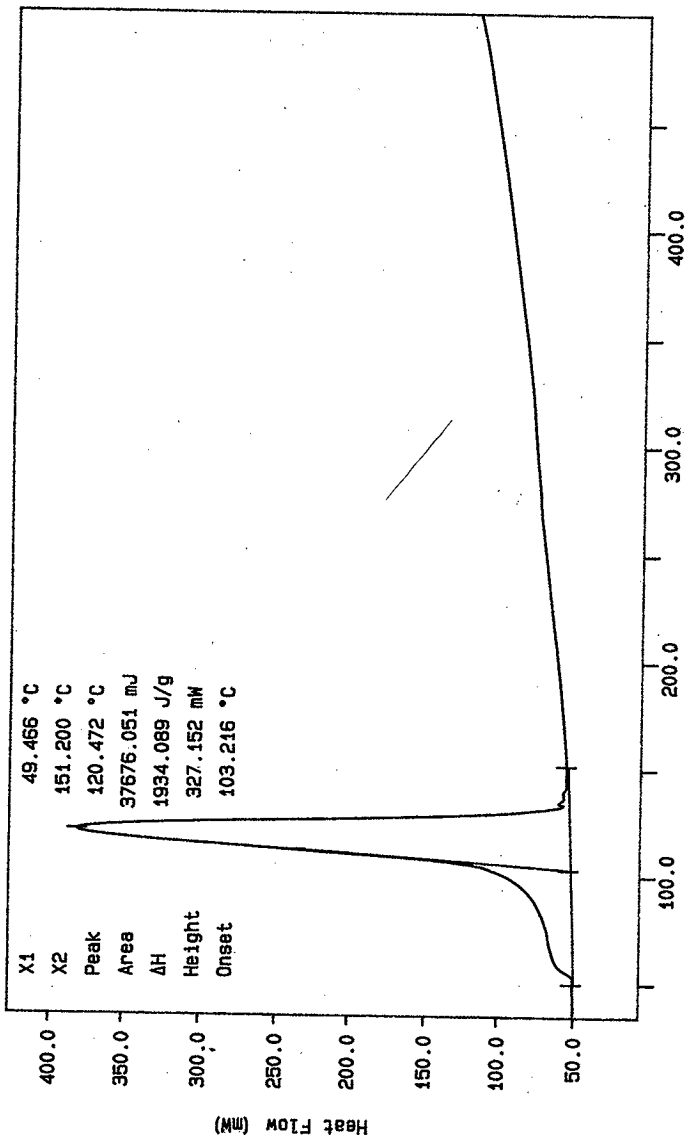
File info: SAM052709 Tue May 27 19:56:34 1997

Sample Weight: 19.480 mg

S97T00833DUP

~~HNF-SD-WM-DP-246, REV. 0~~ ^{MSE} 7-14-97

HNF-SD-WM-DP-254, REV. 0



N2 100/min
TEMP1: 35.0 °C
TEMP2: 500.0 °C

TIME1: 0.0 min RATE: 10.0 °C/min

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 27 20:23:07 1997

LABCORE Data Entry Template for Worklist# 18272

Analyst: JDS Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, DSC-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>27.75</u>	<u>N/A</u>	Joules/g
97000311	T-201	2 SAMPLE	S97T000834	0	DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	3 DUP	S97T000834	0	DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000311	T-201	4 SAMPLE	S97T000835	0	DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	5 DUP	S97T000835	0	DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18272

See Attached for Signature
Analyst Signature Date

[Signature] 5-29-97
Analyst Signature Date

Validated 6/2/97 [Signature]

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18272

Analyst: lds Instrument: DSC0 3 Book # 12 N143

Method: LA-514-113 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, DSC-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
97000311	T-201	2 SAMPLE	S97T000834	0	DSC-01	LIQUID	N/A			Joules/g
97000311	T-201	3 DUP	S97T000834	0	DSC-01	LIQUID			N/A	Joules/g
97000311	T-201	4 SAMPLE	S97T000835	0	DSC-01	LIQUID	N/A			Joules/g
97000311	T-201	5 DUP	S97T000835	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 18272

W Sp
Analyst Signature

5/29/97
Date

Analyst Signature

Date

Data Entry Comments:

Ran samples on DSC-03. 5/29/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

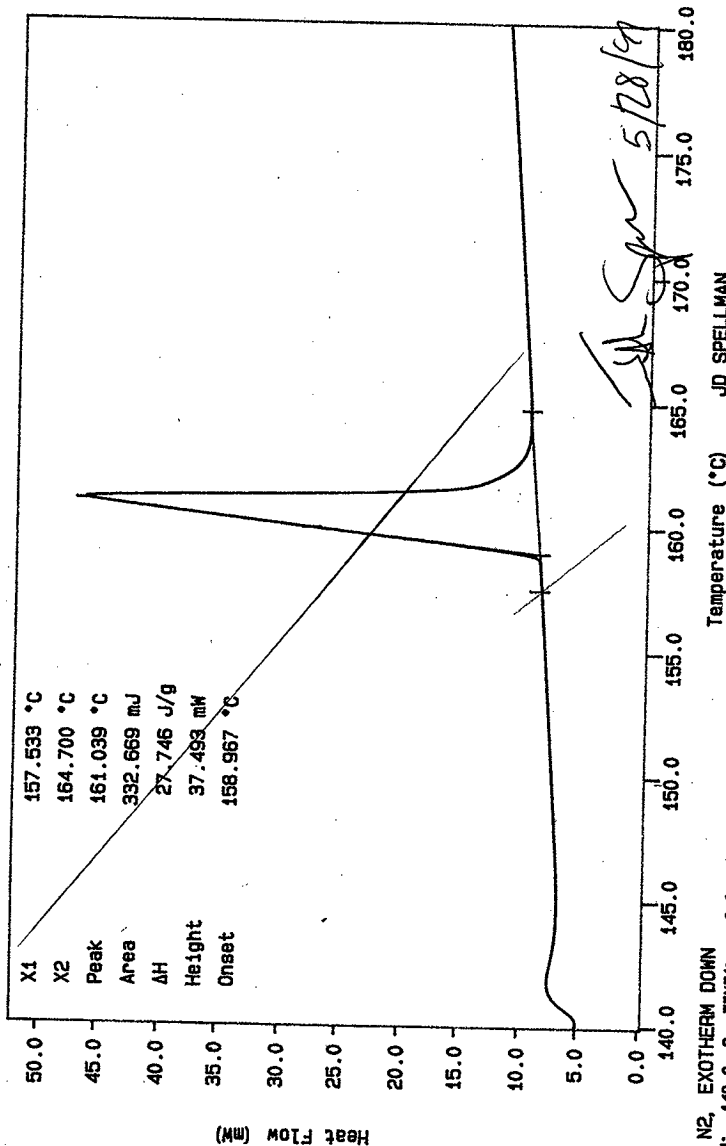
Curve 1: DSC

File info: IND052801 Wed May 28 18:58:59 1997

Sample Weight: 11.990 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 122 TO 126.

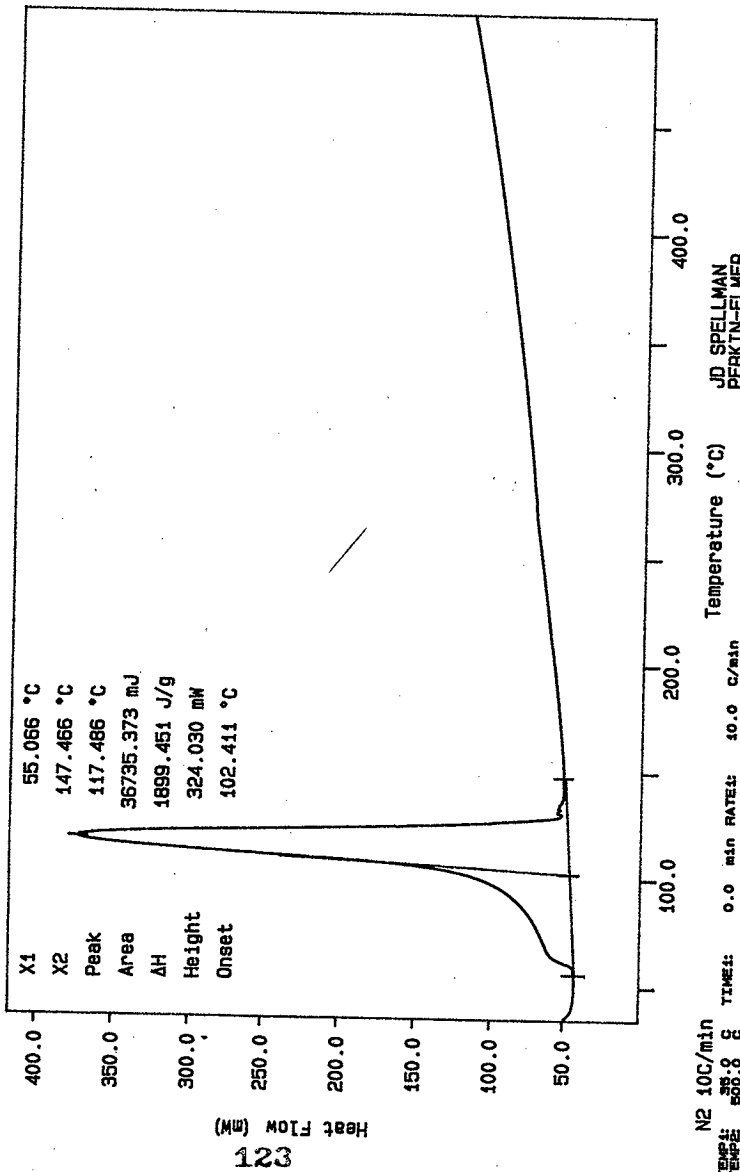


HNF-SD-WM-DP-254, REV. 0

HNF-SD-WM-DP-246, REV. 0 mts
7-14-97

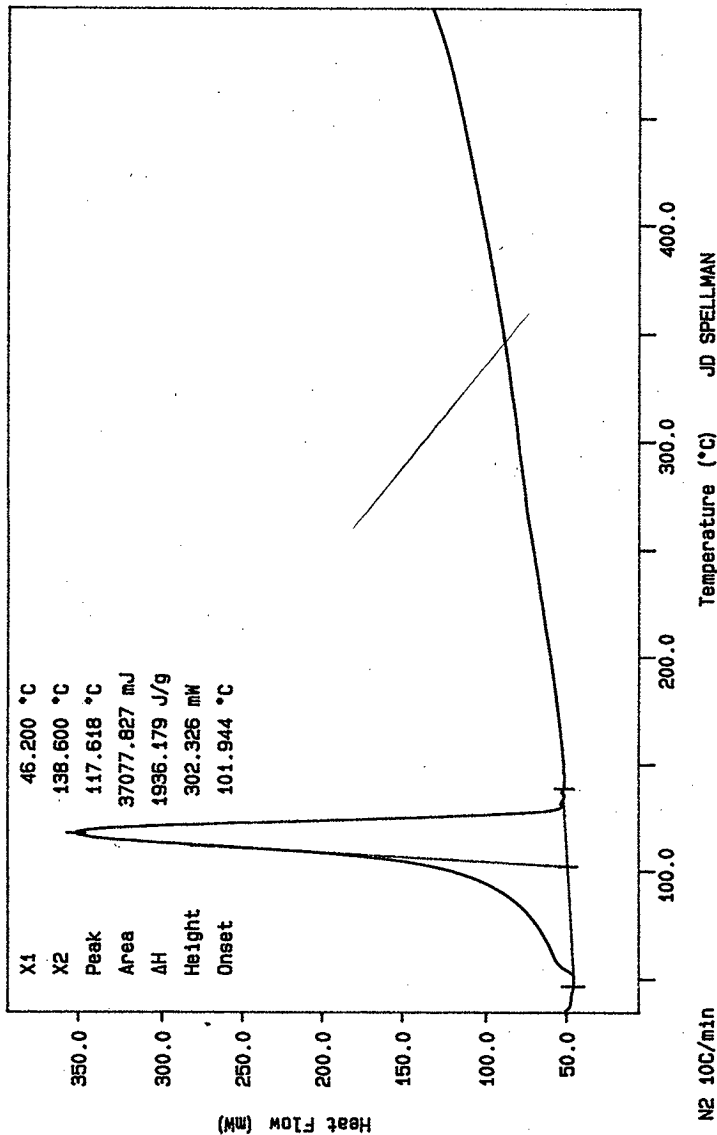
HNF-SD-WM-DP-254, REV. 0

Curve 1: DSC
File Info: SAM052804 Wed May 28 20:30:36 1997
Sample Weight: 19.340 mg
S97T000834



N2 10C/min
TEMP: 55.0 °C
TIME: 0.0 min RATE: 10.0 C/min
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 28 21:16:55 1997

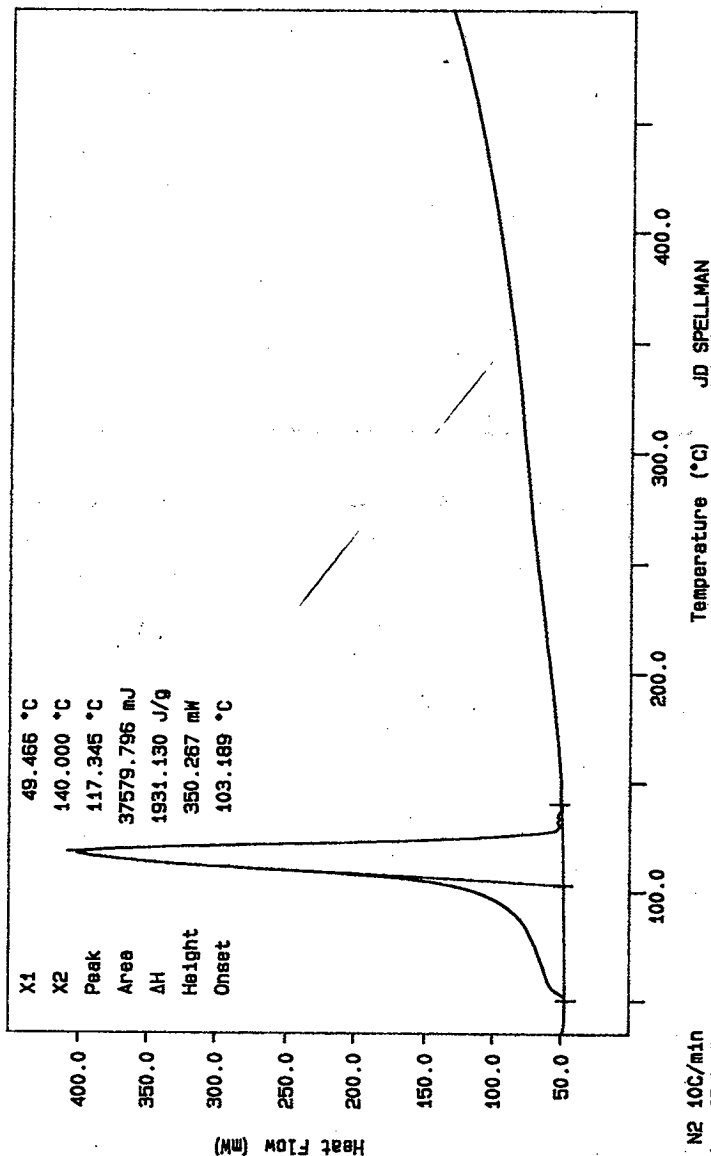
Curve 1: DSC
 File info: SAM052805 Wed May 28 22:05:37 1997
 Sample Weight: 19.150 mg
 SS7T000834DUP



JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed May 28 23:11:13 1997

N2 10C/min
 TEMPI: 35.0 °C
 TIME: 0.0 min RATE: 10.0 C/min

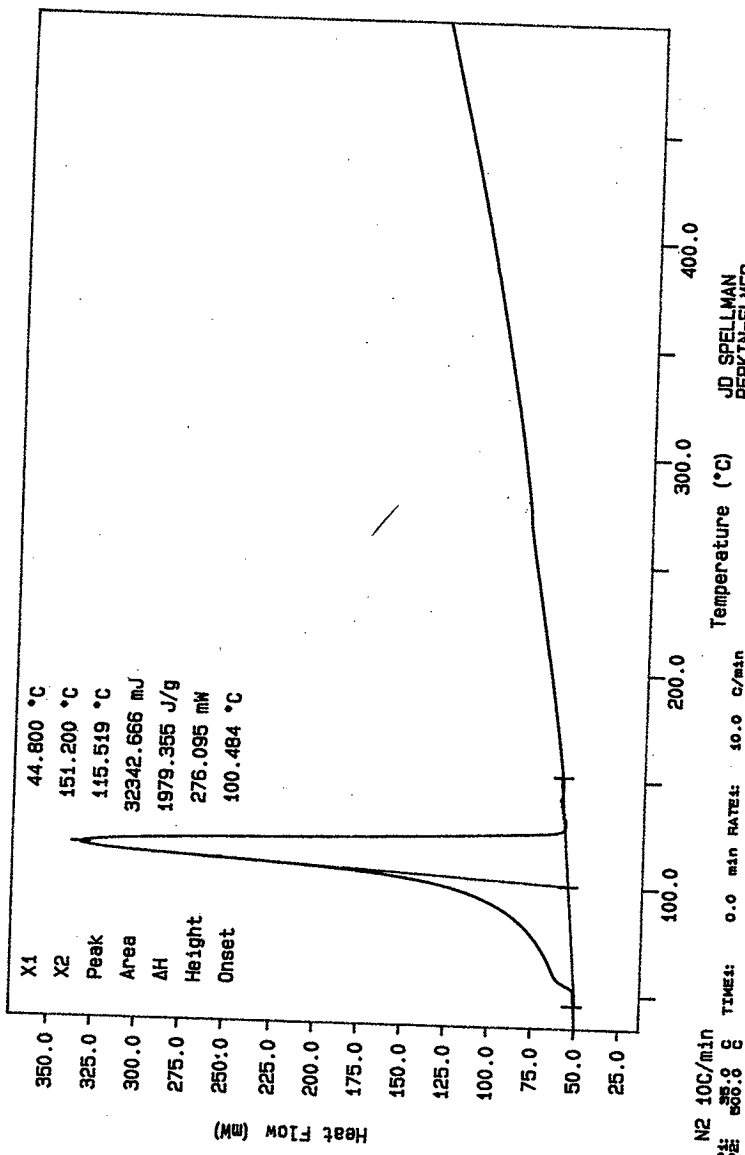
Curve 1: DSC
 File Info: SAM052902 Thu May 29 01:17:55 1997
 Sample Weight: 19.460 mg
 S977000835DUP



JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu May 29 01:20:55 1997

N2 100/min
 Temp: 50.0 °C
 Time: 0.0 min
 Rate: 10.0 °C/min

Curve 1: DSC
 File info: SAM052901 Wed May 28 23:56:56 1997
 Sample Weight: 16.340 mg
 S97T000835



JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu May 29 00:26:45 1997

LABCORE Data Entry Template for Worklist# 18273

Analyst: JDS Instrument: DSC0 3 Book # 12N14BMethod: LA-514-114 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, DSC-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>27.79x</u>	<u>N/A</u>	Joules/g
97000311	T-201	2 SAMPLE	S97T000836	0	DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	3 DUP	S97T000836	0	DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000311	T-201	4 SAMPLE	S97T000837	0	DSC-03	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	5 DUP	S97T000837	0	DSC-03	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18273

See Attached for Signature
Analyst Signature Date
Validated 6/2/97 [Signature]

Final Check
Analyst Signature Date 5-30-97

Data Entry Comments:

Second STD run due to time lag in completion of worklist.
Value is 27.67 J/g, with a % Yield of 97.26. 5/30/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18273

Analyst: JCS Instrument: DSC0 3 Book # 12N14B
Method: LA-514-113 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T201, DSC-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID			N/A	Joules/g
97000311	T-201	2 SAMPLE	S97T000836	0	DSC-01	LIQUID	N/A			Joules/g
97000311	T-201	3 DUP	S97T000836	0	DSC-01	LIQUID			N/A	Joules/g
97000311	T-201	4 SAMPLE	S97T000837	0	DSC-01	LIQUID	N/A			Joules/g
97000311	T-201	5 DUP	S97T000837	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 18273

JCS
Analyst Signature

5/29/97
Date

Analyst Signature

Date

Data Entry Comments:

Run samples on DSC-03. 5/30/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

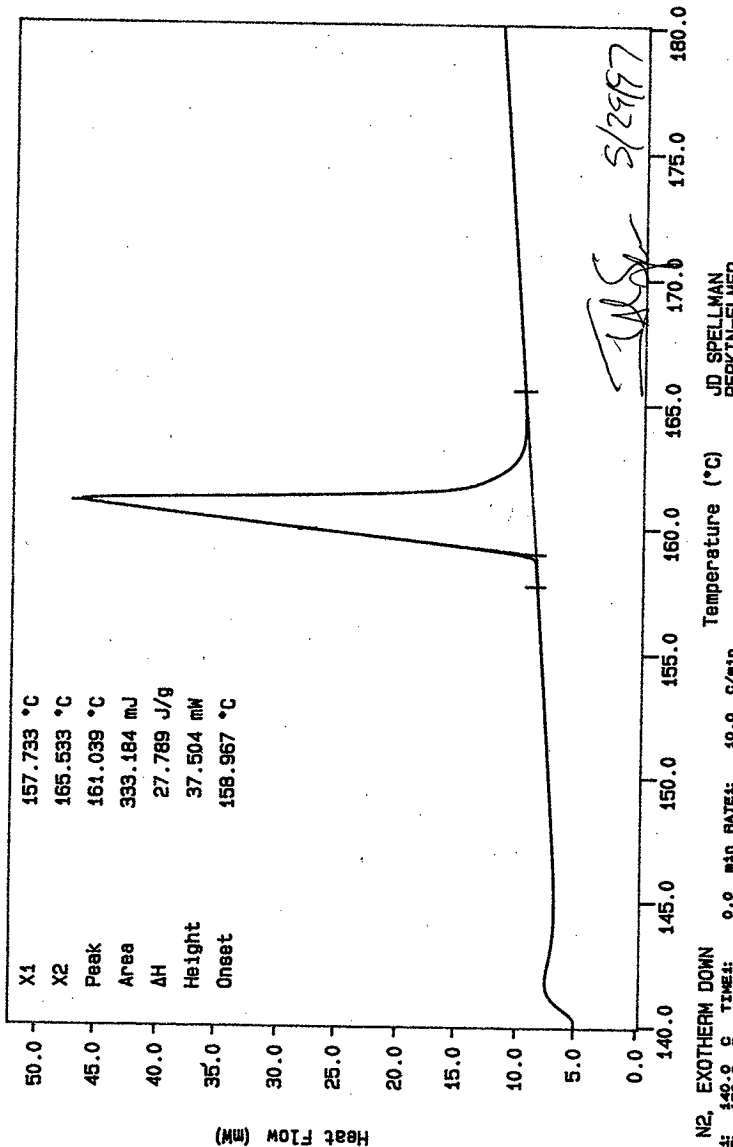
Curve 1: DSC

File info: IND052801 Wed May 28 18:56:59 1997

Sample Weight: 11.990 mg

12N14-B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 129 TO 134



HNF-SD-WM-DP-254, REV. 0

HNF-SD-WM-DP-246, REV. 0 mte
7-14-97

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 29 00:35:23 1997

Curve 1: DSC

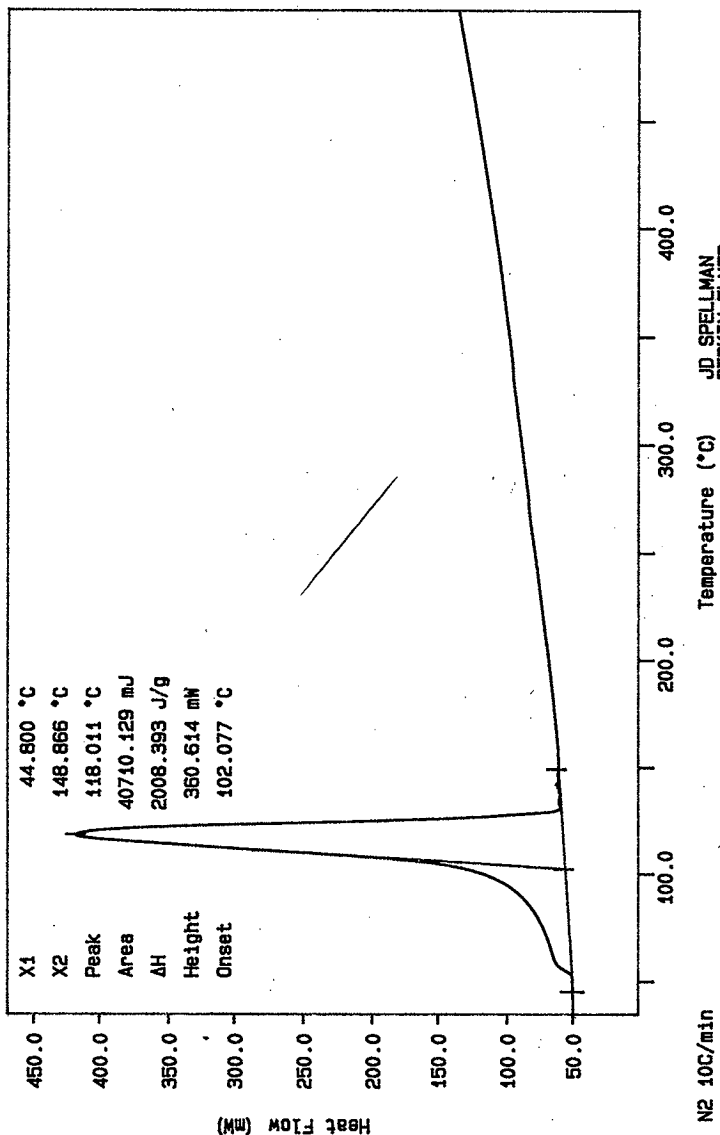
File info: SAM052903 Thu May 29 02:17:36 1997

Sample Weight: 20.270 mg

S97T000836

HNFS-D-WM-DP-246, REV. 0 ^{mtc} 7-14-97

HNFS-D-WM-DP-254, REV. 0



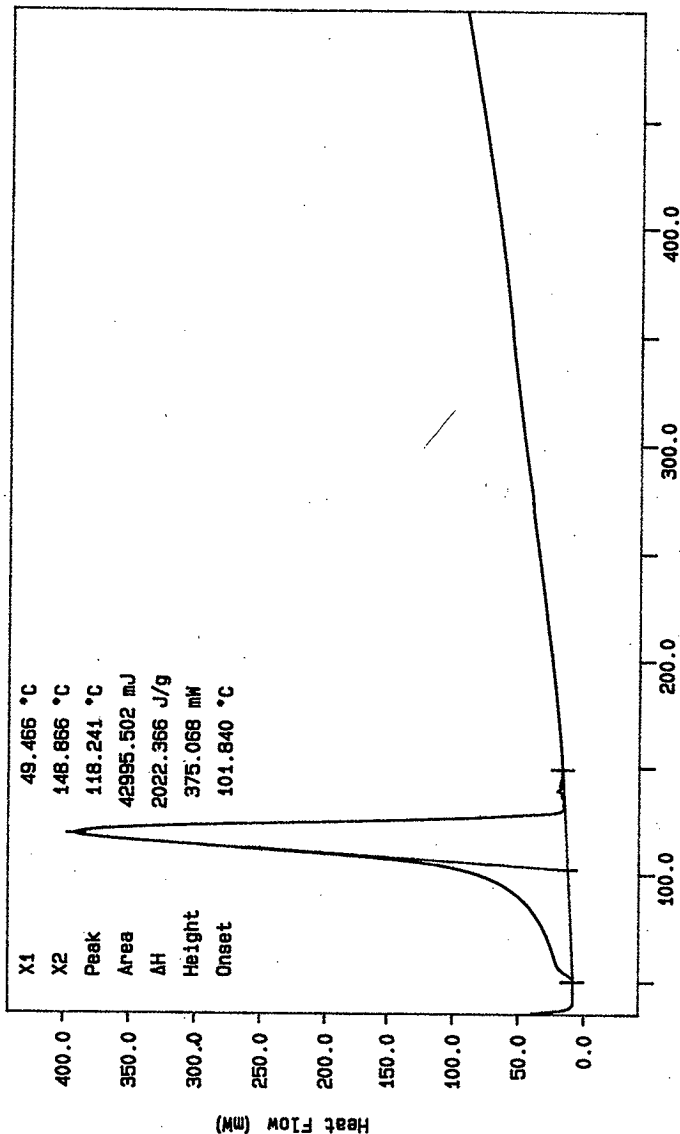
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 29 03:53:20 1997

N2 10C/min
TEMP: 50.0 °C
TIME: 0.0 min RATE: 10.0 C/min

Curve 1: DSC
 File info: SAM052904 Thu May 29 04:42:10 1997
 Sample Weight: 21.260 mg
 S97T000836DUP

HNF-SD-WM-DP-246, REV. 0 *inlc 7-14-97*

HNF-SD-WM-DP-254, REV. 0

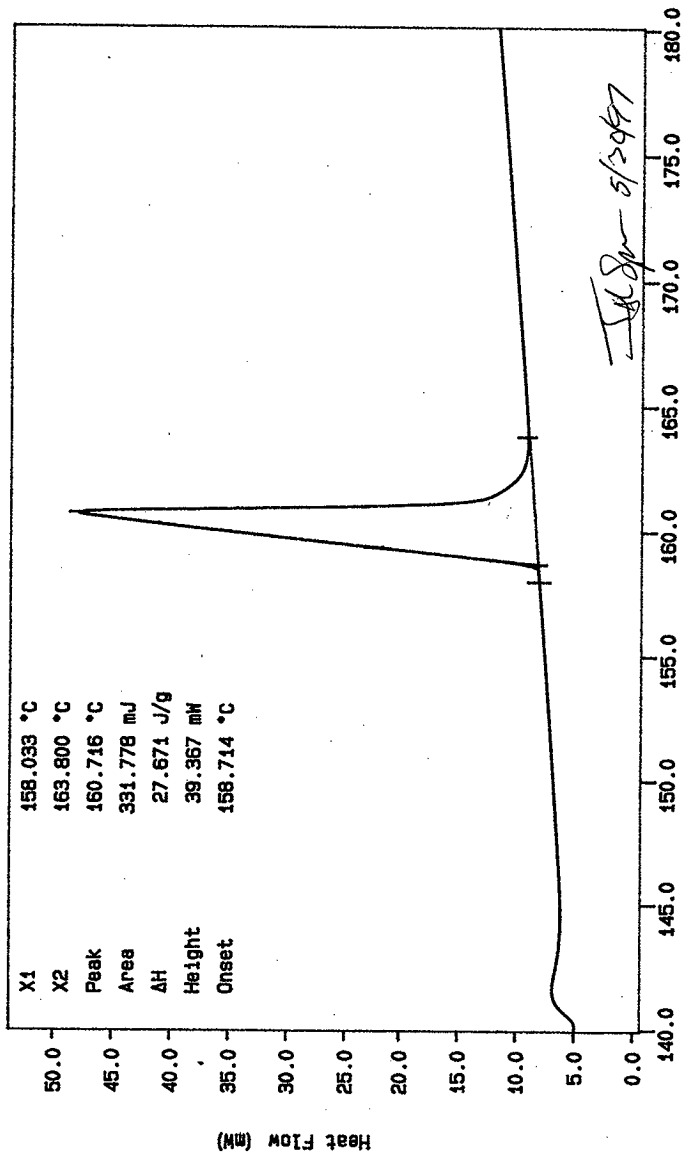


N2 10C/min
 TIME: 0.0 min RATE: 10.0 C/min
 JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu May 29 08:52:32 1997

Curve 1: DSC
 File Info: IND052904 Thu May 29 14:32:55 1997
 Sample Weight: 11.990 mg
 12M14B

HNF-SD-WM-DP-246, REV. 0 *mtc 7-14-97*

HNF-SD-WM-DP-254, REV. 0



N2, EXOTHERM DOWN
 TEMPERATURE 140.0 °C
 RATE 0.0 min RATE 10.0 C/min
 RA GREEN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu May 29 14:34:56 1997

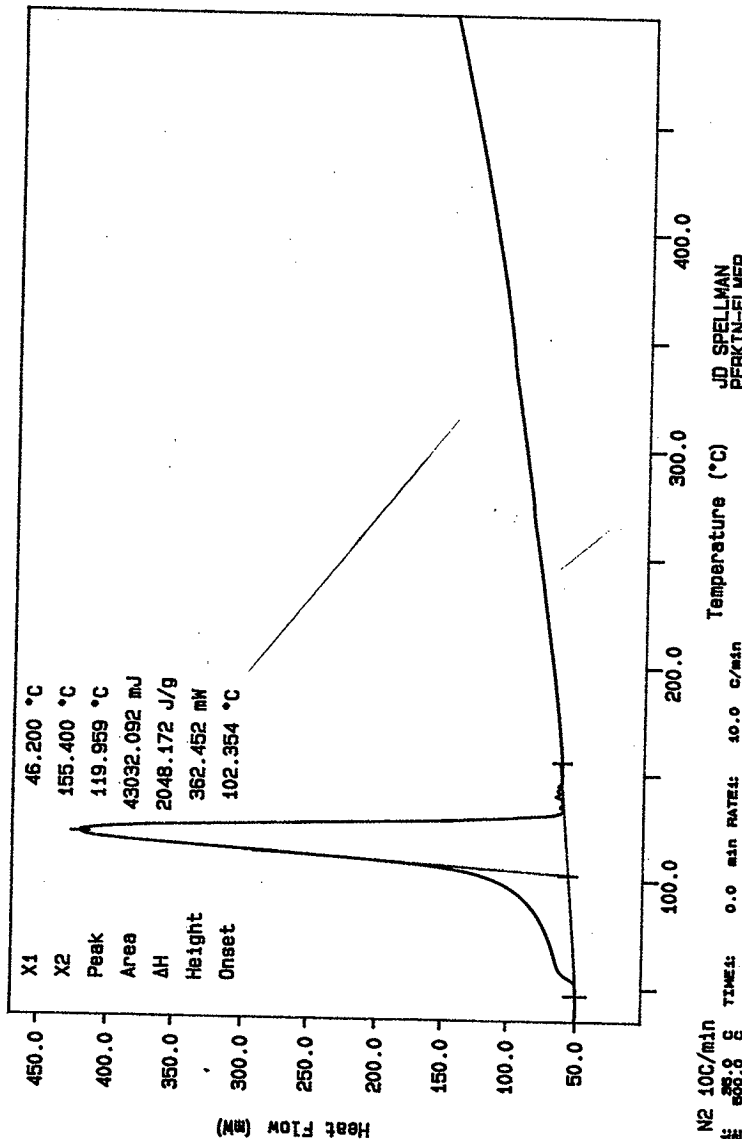
File info: SAM052905 Thu May 29 19:22:34 1997

Sample Weight: 21.010 mg

S97T000837

~~INF-SD-WM DP-246, REV. 0~~ mte
7-14-97

HNF-SD-WM-DP-254, REV. 0



JID SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 29 20:56:09 1997

Curve 1: DSC

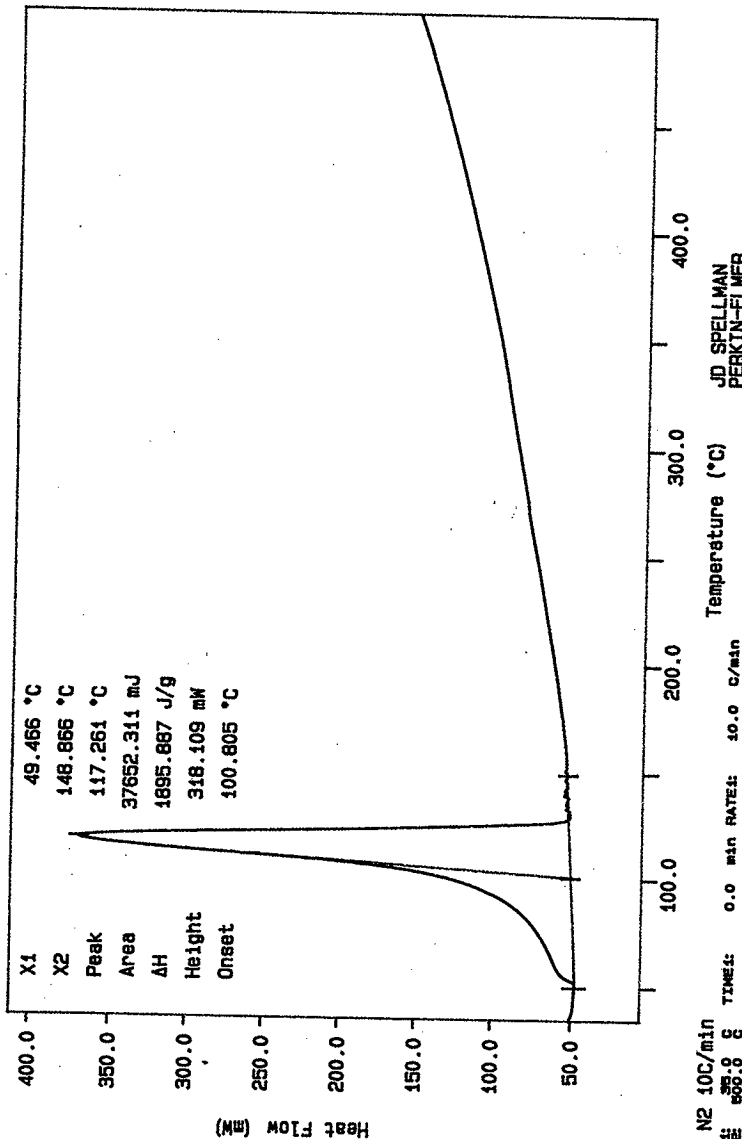
File Info: SAM052906 Thu May 29 21: 41: 55 1997

Sample Weight: 19.860 mg

S97T000837DUP

HNF-SD-WM-DP-246, REV. 0 *me*
7-14-97

HNF-SD-WM-DP-254, REV. 0



JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 29 22: 52 1997

LABCORE Data Entry Template for Worklist# 18278

Analyst: DPB Instrument: DSC0 3 Book # 12N14-B

Method: LA-514-114 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, DSC-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>27.00</u>	<u>N/A</u>	Joules/g
97000311	T-201	2 SAMPLE	S97T000899	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	3 DUP	S97T000899	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000311	T-201	4 SAMPLE	S97T000909	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	5 DUP	S97T000909	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18278

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

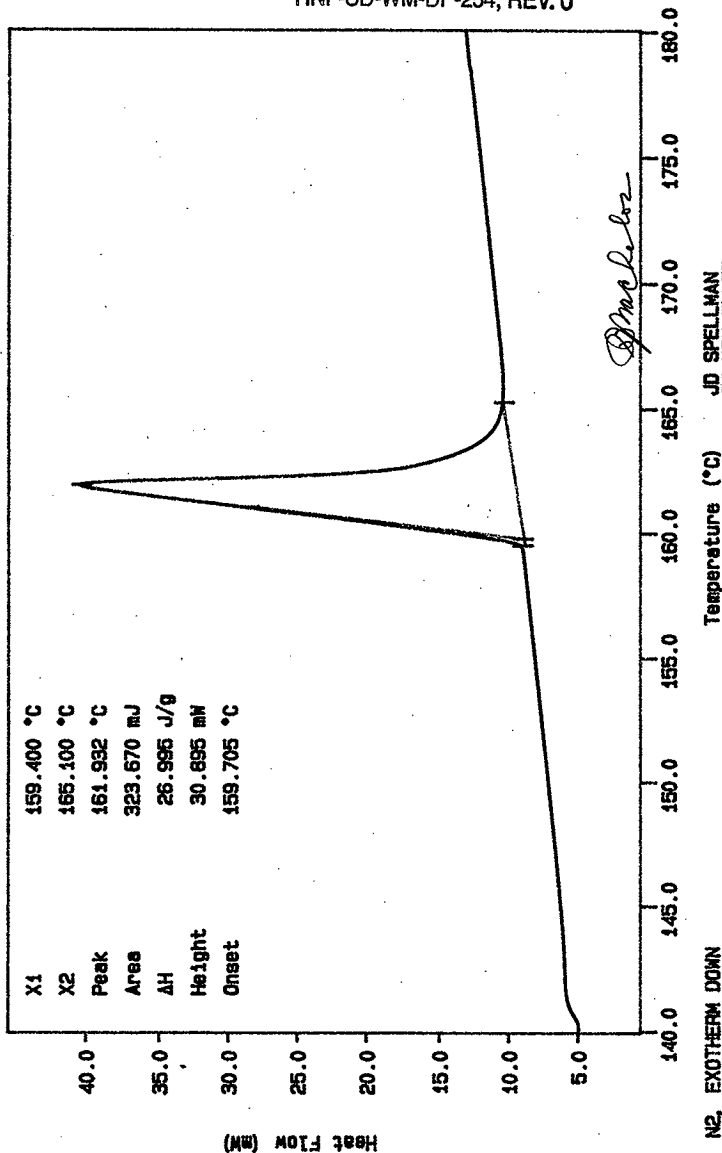
Curve 1: DSC

File Info: IND060501 Thu Jun 5 05:38:22 1997

Sample Weight: 11.990 mg

12M14-B

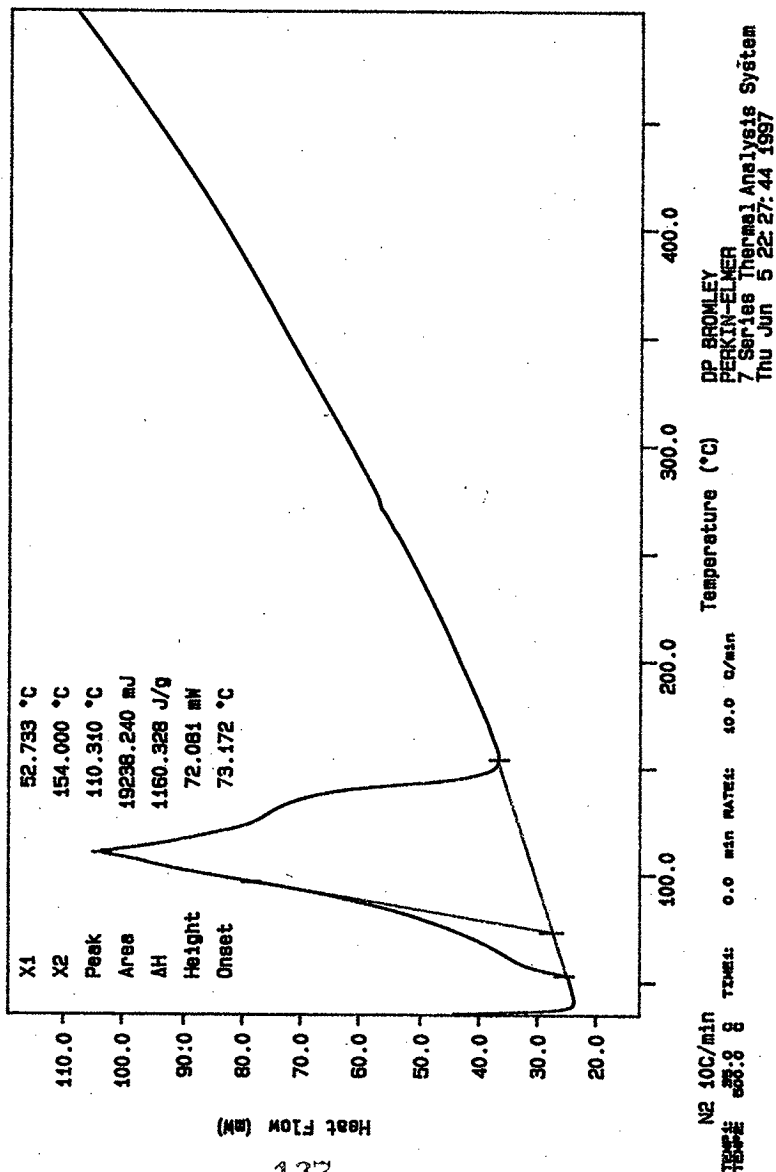
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 136 TO 140.



Curve 1: DSC
 File Info: SAM060509 Thu Jun 5 22:08:13 1997
 Sample Weight: 16.580 mg
 S977000899SAM

HNF-SD-WM-DP-246, REV. 0 *mtc 7-14-97*

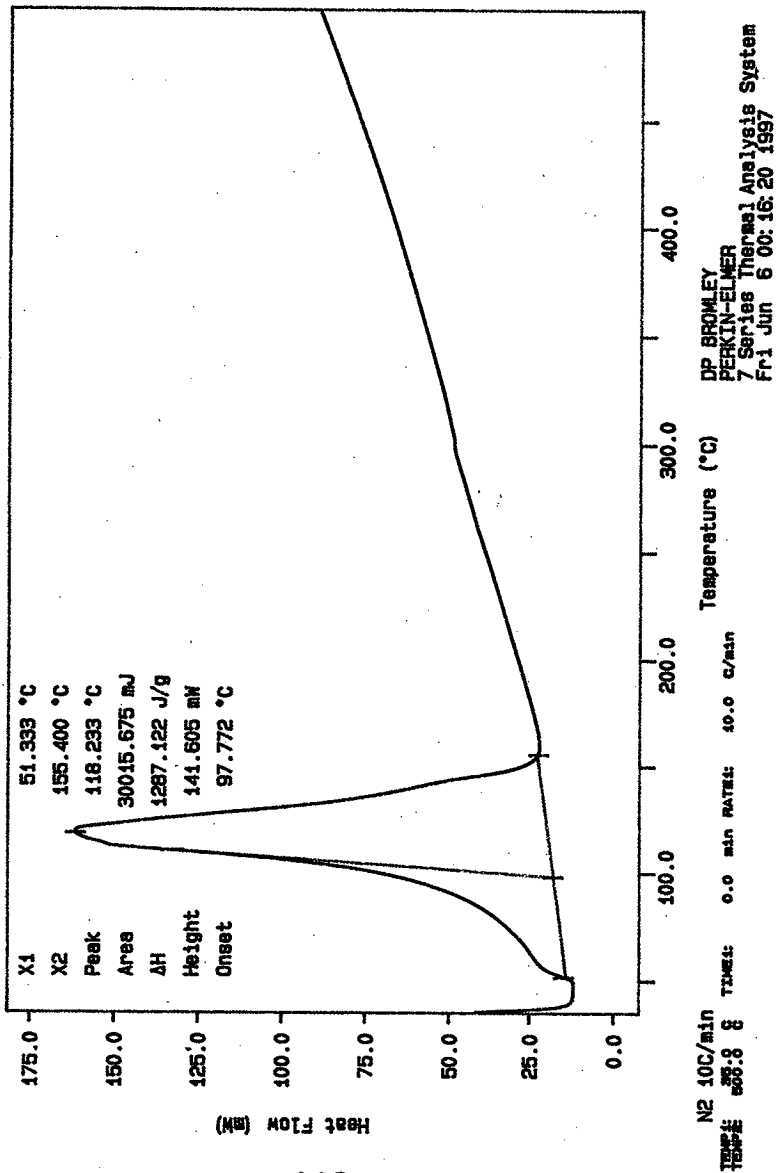
HNF-SD-WM-DP-254, REV. 0



Curve 1: DSC
 File Info: SA060510 Thu Jun 5 23:28:12 1997
 Sample Weight: 23.320 mg
 S9770008990UP

HNF-SD-WM-DP-246, REV. 0 *mts*
 7-14-97

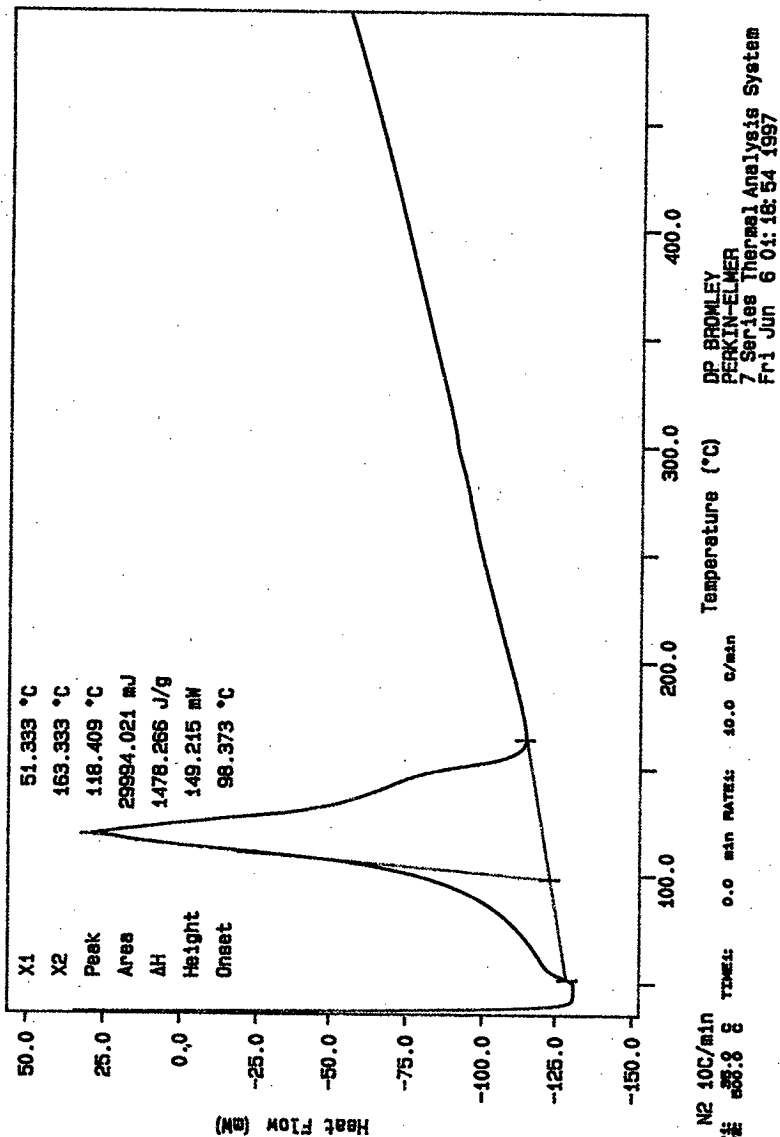
HNF-SD-WM-DP-254, REV. 0



Curve 1: DSC
 File Info: SA060511 Fri Jun 6 01:12:59 1997
 Sample Weight: 20.290 mg
 S97T000909SAM

HNF-SD-WM-DP-246, REV. 0 ^{msc} 7-14-97

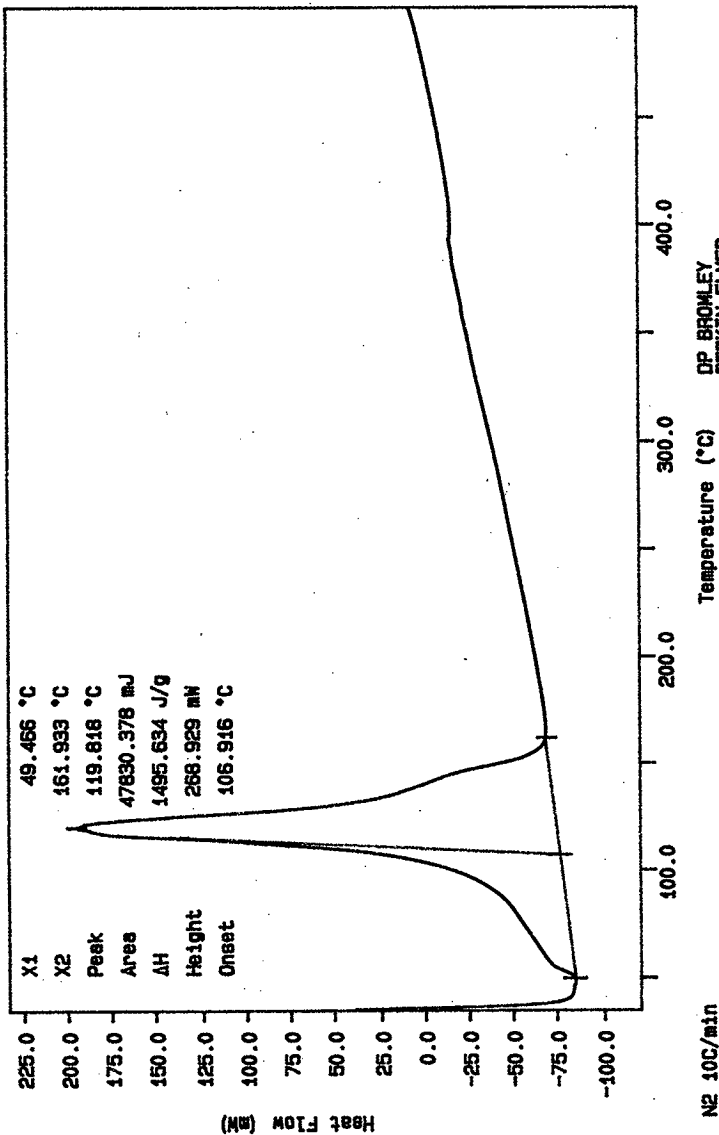
HNF-SD-WM-DP-254, REV. 0



Curve 1: DSC
 File info: SAM060512 Fri Jun 6 02:17:21 1997
 Sample Weight: 31.980 mg
 S97T000909DUP

HNF-SD-WM-DP-246, REV. 0 *mkc*
 7-14-97

HNF-SD-WM-DP-254, REV. 0



DP BROWLEY
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Fri Jun 6 03:23:08 1997

N2 100/min
 Temp: 500.0 °C
 TIME: 0.0 min RATE: 10.0 °C/min

LABCORE Data Entry Template for Worklist# 18279

Analyst: SMF Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, DSC-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>25.98</u>	<u>N/A</u>	Joules/g
97000311	T-201	2 SAMPLE	S97T000910	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	3 DUP	S97T000910	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000311	T-201	4 SAMPLE	S97T000911	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	5 DUP	S97T000911	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18279

See Attached for Signature
Analyst Signature Date

6-3-97
Analyst Signature Date

Validated 6/4/97 Bachelor

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18279

Analyst: SMF Instrument: DSC0 3 Book # 12.11413

Method: LA-514-113 Rev/Mod P-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, DSC-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>25.98</u>	<u>N/A</u>	Joules/g
97000311	T-201	2 SAMPLE	S97T000910	0	DSC-01	SOLID	<u>N/A</u>			Joules/g
97000311	T-201	3 DUP	S97T000910	0	DSC-01	SOLID			<u>N/A</u>	Joules/g
97000311	T-201	4 SAMPLE	S97T000911	0	DSC-01	SOLID	<u>N/A</u>			Joules/g
97000311	T-201	5 DUP	S97T000911	0	DSC-01	SOLID			<u>N/A</u>	Joules/g

Final page for worklist # 18279

Lusie M. Dutton 5-30-97
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Ran samples on DSC-03. 6/3/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC

File Info: IND053001 Fri May 30 05:50:39 1997

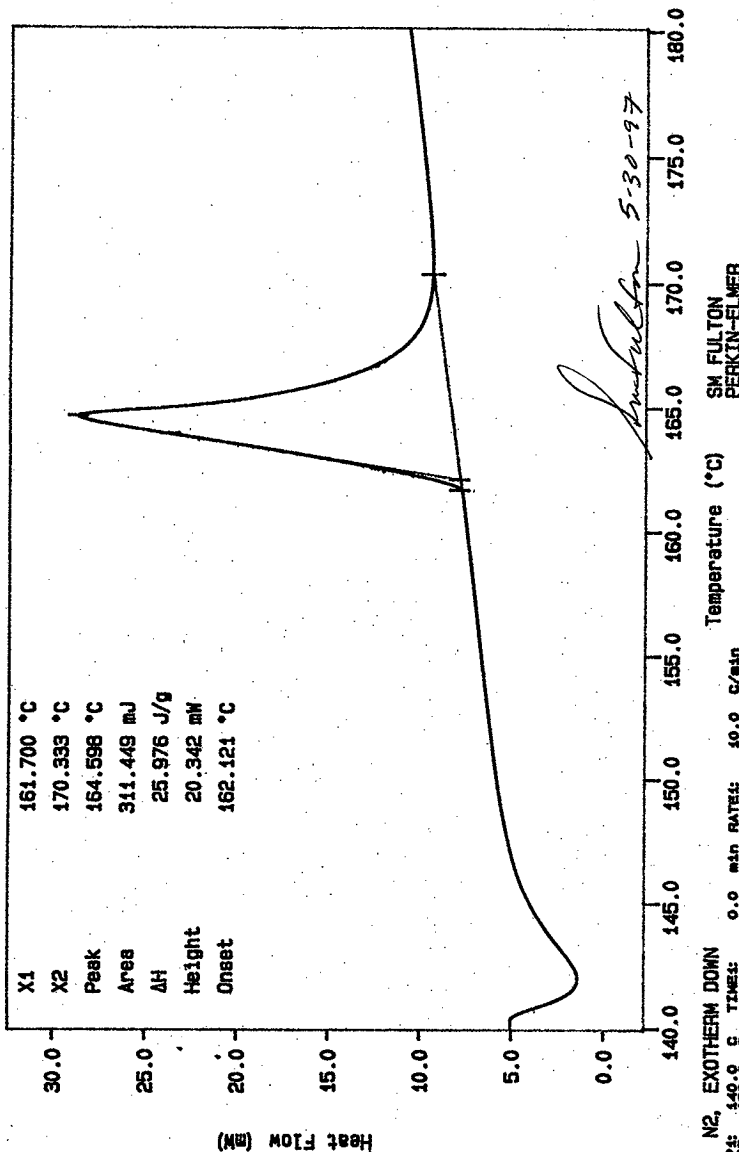
Sample Weight: 11.990 mg

12N14-B

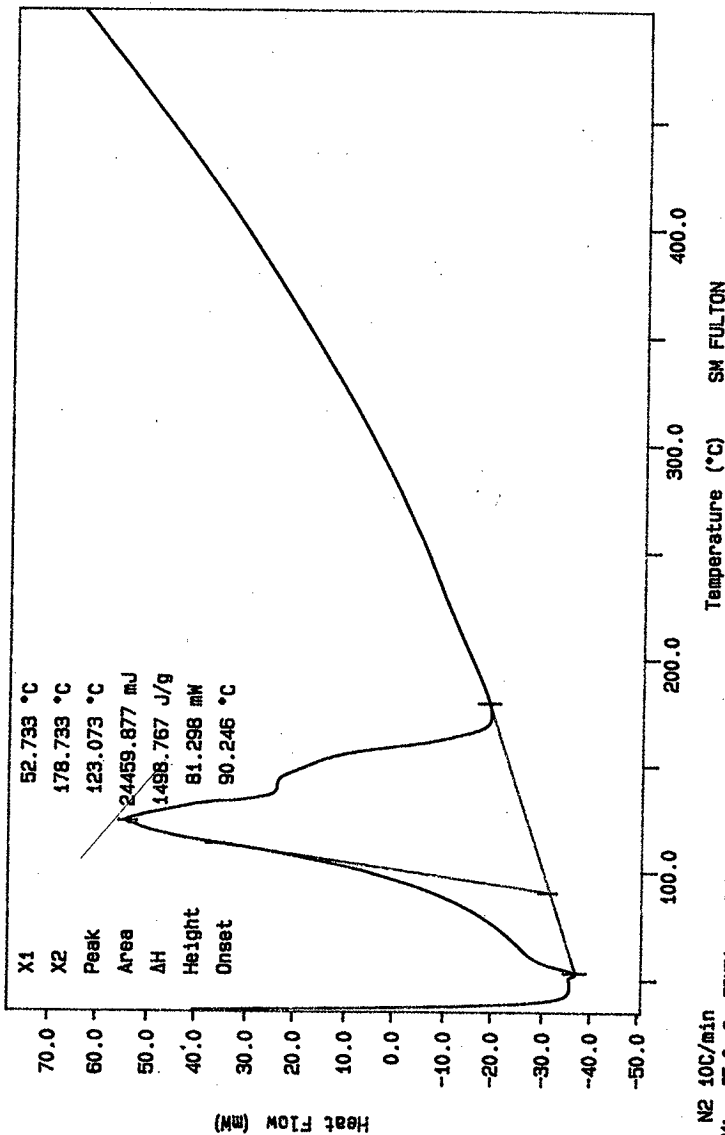
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 143 TO 147.

HNF-SD-WM-DP-246, REV. 0 ^{mts} 7-14-97

HNF-SD-WM-DP-254, REV. 0



Curve 1: DSC
 File Info: SAM053005 Fri May 30 10:30:05 1997
 Sample Weight: 16.320 mg
 S977000910



N2 10C/min
 25.0 °C
 500.0 °C

TIME: 0.0 min RATE: 10.0 °C/min

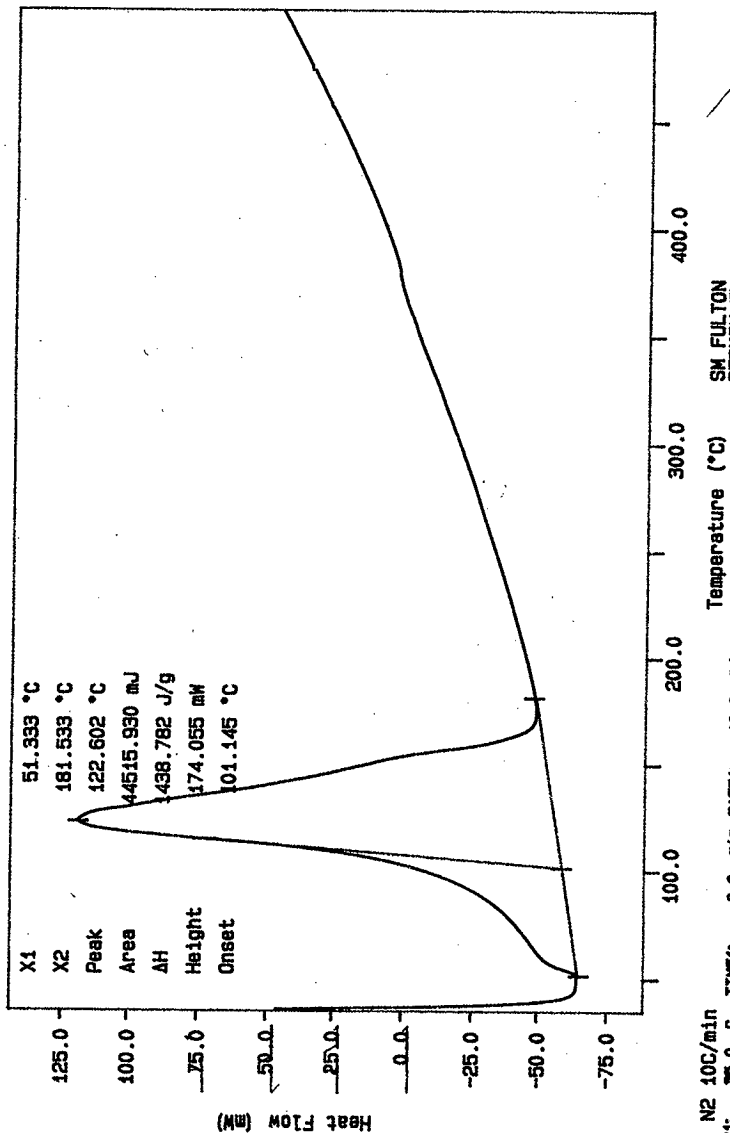
SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Fri May 30 12:29:11 1997

Curve 1: DSC

File info: SAM053006 Fri May 30 13:19:44 1997

Sample Weight: 30.940 mg

S97T000910 DUP



SM FULTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 30 13:20:11 1997

~~HNF-SD-WM-DP-246, REV. 0~~ ⁷⁻¹⁴⁻⁹⁷

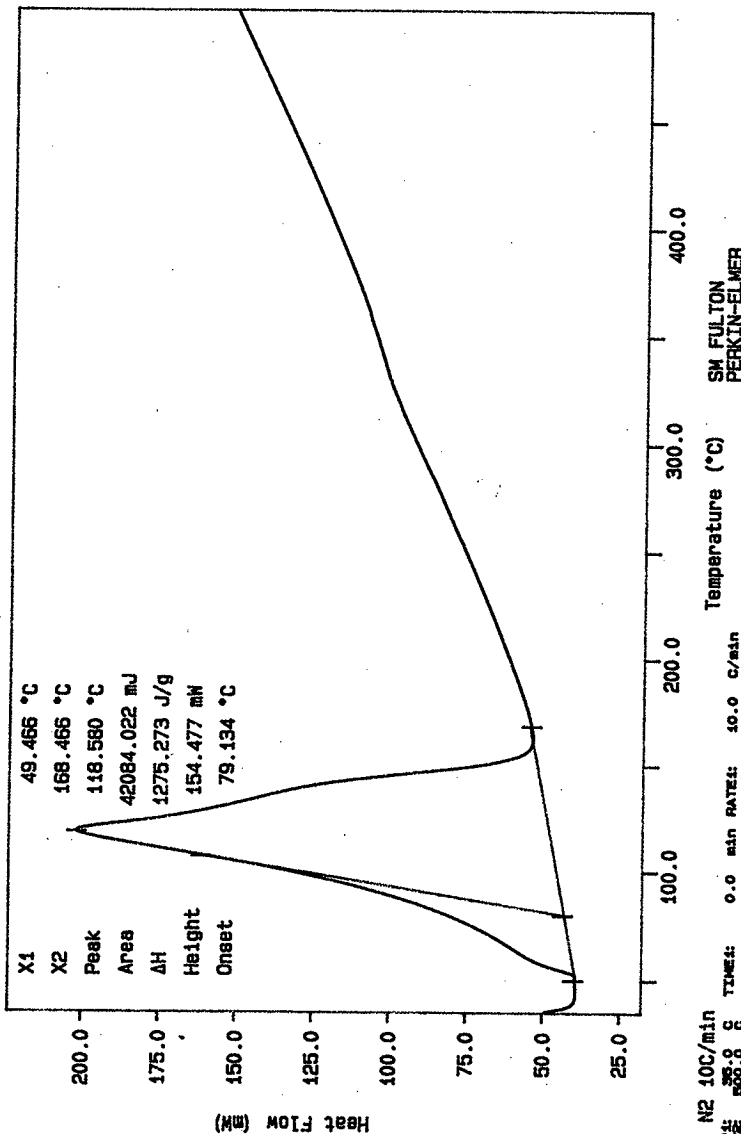
HNF-SD-WM-DP-254, REV. 0

Curve 1: DSC

File info: SAM053007 Fri May 30 14:20:20 1997

Sample Weight: 33.000 mg

S97T000911



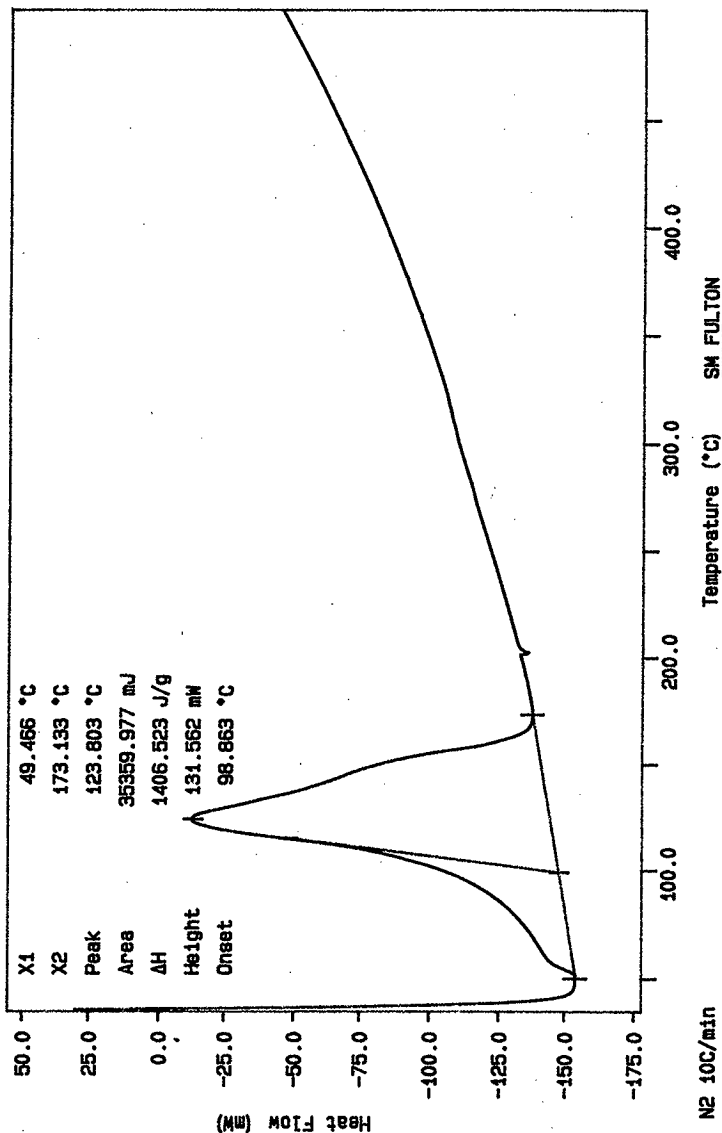
HNF-SD-WM-DP-246, REV. 0 *mkc*
7-14-97

HNF-SD-WM-DP-254, REV. 0

Curve 1: DSC
 File Info: SAM053008 Fri May 30 15:59:35 1997
 Sample Weight: 25.140 mg
 S97T000911 DUP

HNF-SD-WM-DP-246, REV. 0 *mtz*
 7-14-97

HNF-SD-WM-DP-254, REV. 0



N2 10C/min
 TEMPE 500.0 °C
 TIME: 0.0 min RATE: 10.0 °C/min
 SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Fri May 30 16:32:29 1997

LABCORE Data Entry Template for Worklist# 18280

Analyst: JDS Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, DSC-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>27.74</u>	<u>N/A</u>	Joules/g
97000311	T-201	2 SAMPLE	S97T000912 0		DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	3 DUP	S97T000912 0		DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000311	T-201	4 SAMPLE	S97T000913 0		DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	5 DUP	S97T000913 0		DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18280

See Attached for Signature
Analyst Signature Date

6-3-97
Analyst Signature Date

Validated 6/14/97 [Signature]

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18280

Analyst: JS Instrument: DSC0 3 Book # 12N14B

Method: LA-514-113 Rev/Mod D-0

Worklist Comment: T201, DSC-01 Run under Nitrogen. skm HNF-SD-WM-DP-254, REV. 0

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000311	T-201	2 SAMPLE	S97T000912	0	DSC-01	SOLID	N/A			Joules/g
97000311	T-201	3 DUP	S97T000912	0	DSC-01	SOLID			N/A	Joules/g
97000311	T-201	4 SAMPLE	S97T000913	0	DSC-01	SOLID	N/A			Joules/g
97000311	T-201	5 DUP	S97T000913	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18280

JS 5/30/97
Analyst Signature Date
Susie M. Dutton

Analyst Signature Date

Data Entry Comments:

Ran samples on DSC-03. 6/3/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

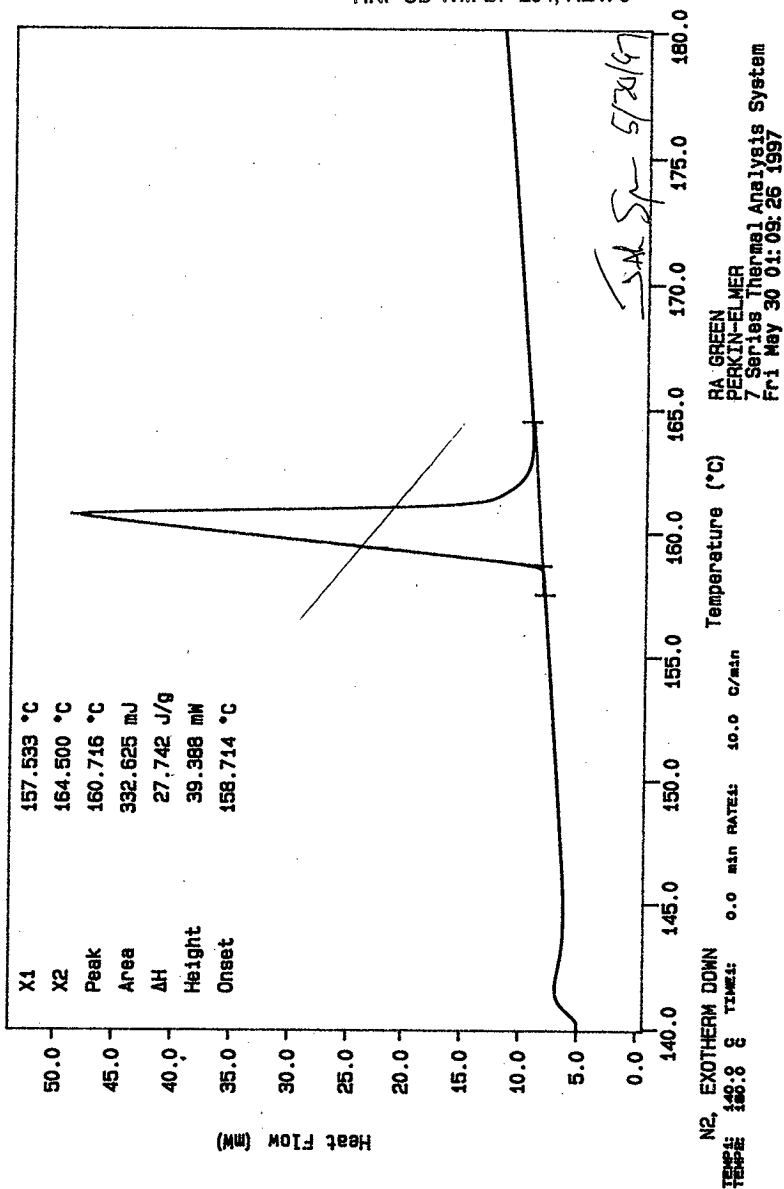
Curve 1: DSC

File info: IND052904 Thu May 29 14:32:55 1997

Sample Weight: 11.990 mg

12N14B

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 150 TO 153



HNF-SD-WM-DP-246, REV. 0 ^{mks} 7-14-97

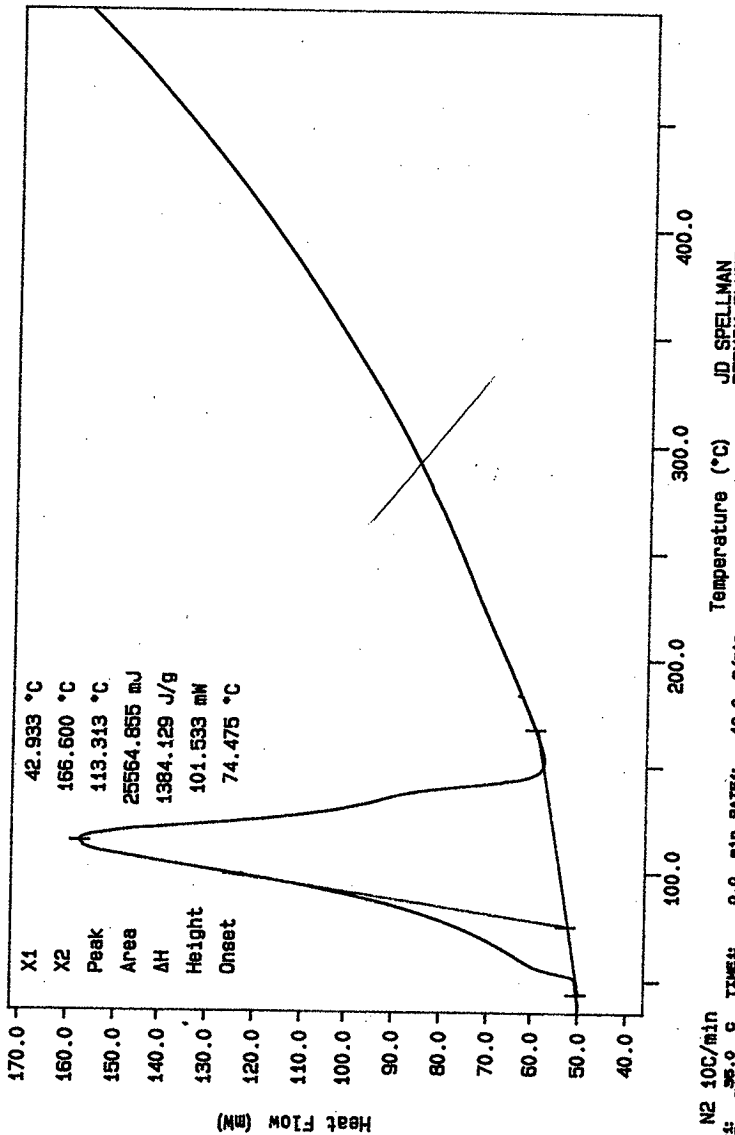
HNF-SD-WM-DP-254, REV. 0

Curve 1: DSC

File Info: SAM053001 Thu May 29 23:57:25 1997

Sample Weight: 18.470 mg

S97T000912



N2 10C/min
TEMP: 55.0 °C
TIME: 00:00

0.0 min RATE: 10.0 C/min

Temperature (°C)

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 30 00:27:27 1997

HNF-SD-WM-DP-246, REV. 0

HNF-SD-WM-DP-254, REV. 0

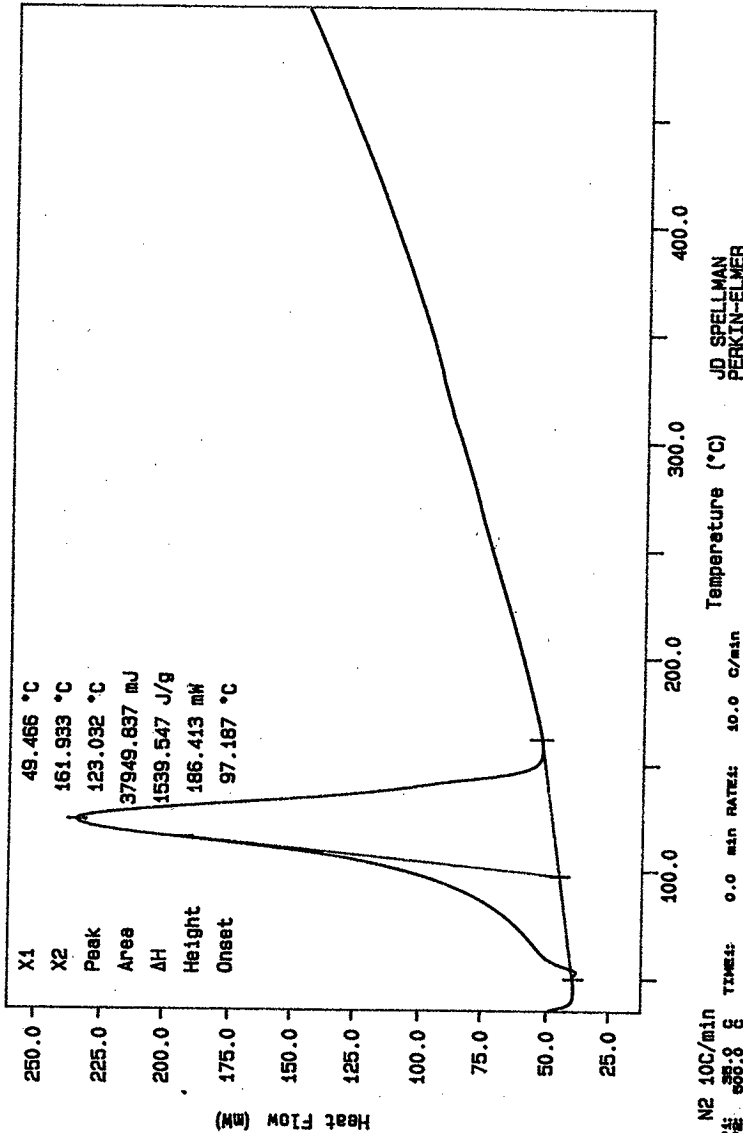
HNF-SD-WM-DP-246, REV. 0 *mtc*
7-4-87

Curve 1: DSC

File Info: SAM053002 Fri May 30 01:17:44 1997

Sample Weight: 24.650 mg

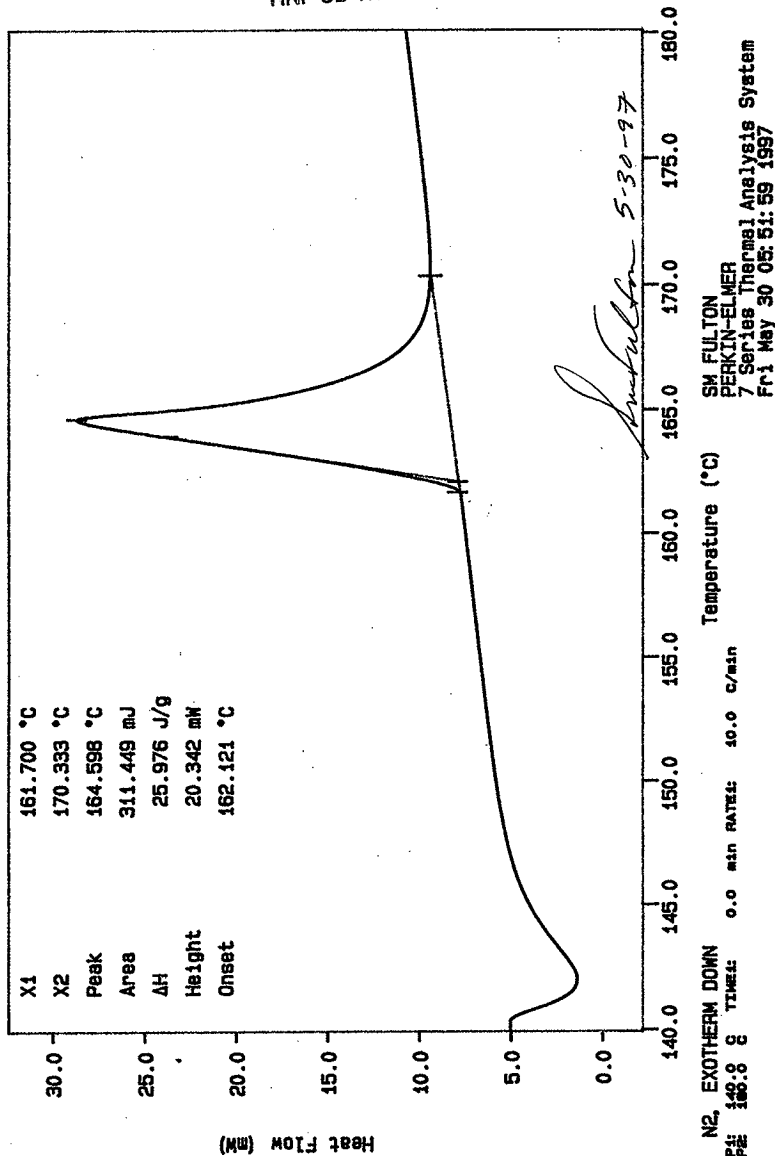
S97T000912DUP



JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 30 01:20:03 1997

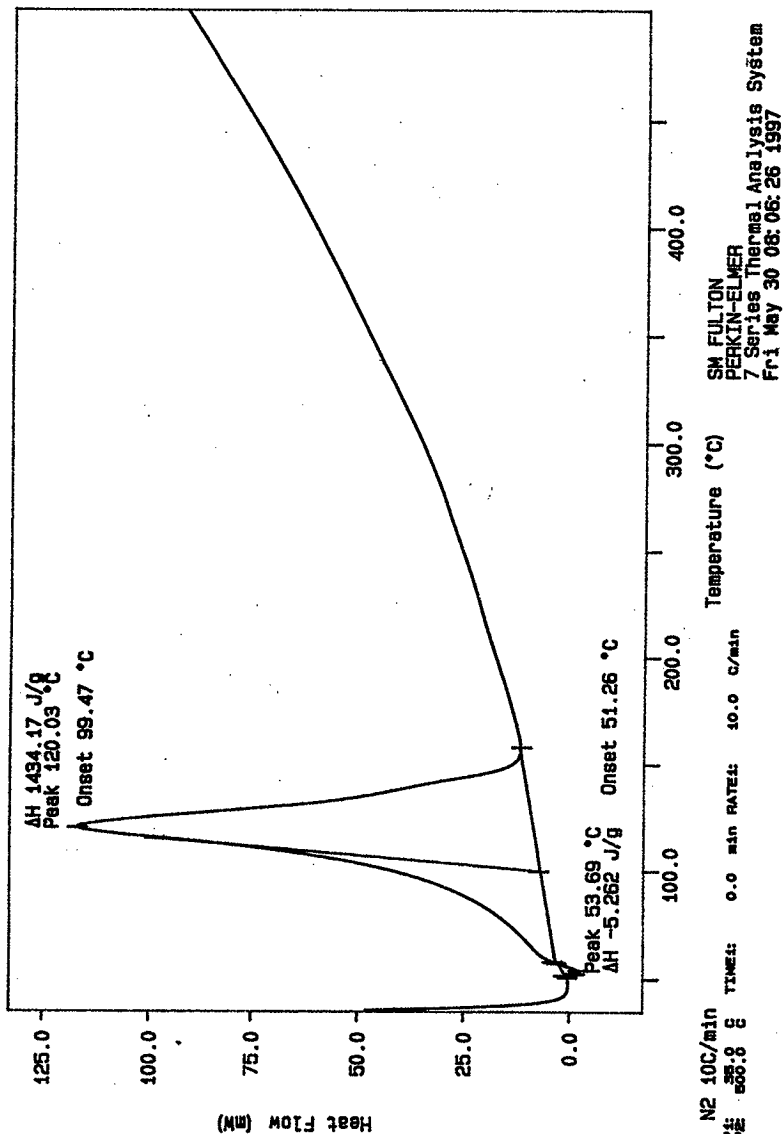
Curve 1: DSC
 File info: IND053001 Fri May 30 05:39 1997
 Sample Weight: 11.990 mg
 12N14-B

~~HNF-SD-WM-DP-246, REV. 0~~
 HNF-SD-WM-DP-254, REV. 0

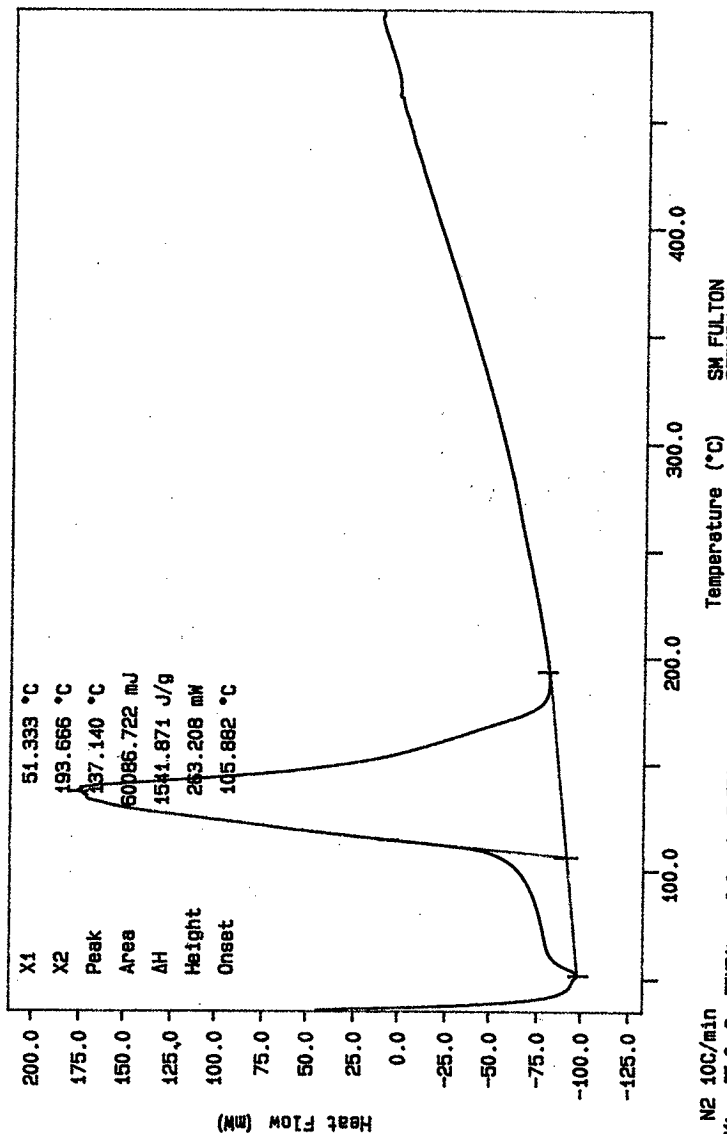


Curve 1: DSC
 File Info: S4W053003 Fri May 30 06:58:54 1997
 Sample Weight: 14.050 mg
 S97T000913

HNF-SD-WM-DP-246, REV. 0 ^{mts} 7-14-97
 HNF-SD-WM-DP-254, REV. 0



Curve 1: DSC
 File Info: SAM053004 Fri May 30 09:14:41 1997
 Sample Weight: 38.970 mg
 S97T000913 DUP



N2 10C/min
 TEMPERATURE 500.0 °C
 TIME: 0.0 min RATE: 10.0 °C/min
 SM FULTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Fri May 30 09:20:38 1997

HNF-SD-WM-DP-246, REV. 0 *mtc*
 7-14-97

HNF-SD-WM-DP-254, REV. 0

LABCORE Data Entry Template for Worklist# 18438

Analyst: ppb Instrument: DSC0 2 Book # NA

Method: LA-514-113 Rev/Mod- Q9b 6/3/97 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: DSC-02 T-202 liquid. -ppb

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000318	T-202	1 SAMPLE	S97T000796	0	DSC-02	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000318	T-202	2 DUP	S97T000796	0	DSC-02	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry

Final page for worklist # 18438

B. Machelor 6/3/97
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18439

Analyst: ppb Instrument: DSC0 2 Book # NA

Method: LA-514-113 Rev/Mod 223 6/3/97 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: DSC-02 T-202 solid. -ppb

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000318	T-202	1	SAMPLE	S97T000802	0		DSC-02	SOLID	N/A	0		Joules/g Dry
97000318	T-202	2	DUP	S97T000802	0		DSC-02	SOLID	0	0	N/A	Joules/g Dry
97000318	T-202	3	SAMPLE	S97T000803	0		DSC-02	SOLID	N/A	0		Joules/g Dry
97000318	T-202	4	DUP	S97T000803	0		DSC-02	SOLID	0	0	N/A	Joules/g Dry
97000318	T-202	5	SAMPLE	S97T000804	0		DSC-02	SOLID	N/A	0		Joules/g Dry
97000318	T-202	6	DUP	S97T000804	0		DSC-02	SOLID	0	0	N/A	Joules/g Dry
97000318	T-202	7	SAMPLE	S97T000805	0		DSC-02	SOLID	N/A	0		Joules/g Dry
97000318	T-202	8	DUP	S97T000805	0		DSC-02	SOLID	0	0	N/A	Joules/g Dry
97000318	T-202	9	SAMPLE	S97T000806	0		DSC-02	SOLID	N/A	0		Joules/g Dry
97000318	T-202	10	DUP	S97T000806	0		DSC-02	SOLID	0	0	N/A	Joules/g Dry
97000318	T-202	11	SAMPLE	S97T000807	0		DSC-02	SOLID	N/A	0		Joules/g Dry
97000318	T-202	12	DUP	S97T000807	0		DSC-02	SOLID	0	0	N/A	Joules/g Dry
97000318	T-202	13	SAMPLE	S97T000808	0		DSC-02	SOLID	N/A	0		Joules/g Dry
97000318	T-202	14	DUP	S97T000808	0		DSC-02	SOLID	0	0	N/A	Joules/g Dry
97000318	T-202	15	SAMPLE	S97T000809	0		DSC-02	SOLID	N/A	0		Joules/g Dry
97000318	T-202	16	DUP	S97T000809	0		DSC-02	SOLID	0	0	N/A	Joules/g Dry
97000318	T-202	17	SAMPLE	S97T000810	0		DSC-02	SOLID	N/A	0		Joules/g Dry
97000318	T-202	18	DUP	S97T000810	0		DSC-02	SOLID	0	0	N/A	Joules/g Dry

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrpt Version 2.1 05/15/95
06/03/97 08:02

~~HNF-SD-WM-DP-246, REV. 0~~
M2 7-14-97

Page: 2

LABCORE Data Entry Template for Worklist# 18439

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
97000318	T-202	19 SAMPLE	S97T000811	0	DSC-02	SOLID	N/A	0		Joules/g Dry
97000318	T-202	20 DUP	S97T000811	0	DSC-02	SOLID	0	0	N/A	Joules/g Dry

Final page for worklist # 18439

B. Rachel 6/3/97

Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18621

Analyst: ppb Instrument: DSC0 2 Book # NA

Method: LA-514-113 Rev/Mod 02 6/12/97 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: DSC-02 T-201 liquid. -ppb

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000311	T-201	1 SAMPLE	S97T000823	0	DSC-02	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	2 DUP	S97T000823	0	DSC-02	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	3 SAMPLE	S97T000833	0	DSC-02	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	4 DUP	S97T000833	0	DSC-02	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	5 SAMPLE	S97T000834	0	DSC-02	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	6 DUP	S97T000834	0	DSC-02	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	7 SAMPLE	S97T000835	0	DSC-02	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	8 DUP	S97T000835	0	DSC-02	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	9 SAMPLE	S97T000836	0	DSC-02	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	10 DUP	S97T000836	0	DSC-02	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	11 SAMPLE	S97T000837	0	DSC-02	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	12 DUP	S97T000837	0	DSC-02	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry

Final page for worklist # 18621

[Signature]
Analyst Signature Date 6/12/97

Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18622

Analyst: ppb Instrument: DSC0 2 Book # N/AMethod: LA-514-113 Rev/Mod 03 6/12/97

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: DSC-02 T-201 solid. -ppb

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000311	T-201	1	SAMPLE	S97T000899	0		DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	2	DUP	S97T000899	0		DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	3	SAMPLE	S97T000909	0		DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	4	DUP	S97T000909	0		DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	5	SAMPLE	S97T000910	0		DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	6	DUP	S97T000910	0		DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	7	SAMPLE	S97T000911	0		DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	8	DUP	S97T000911	0		DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	9	SAMPLE	S97T000912	0		DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	10	DUP	S97T000912	0		DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	11	SAMPLE	S97T000913	0		DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	12	DUP	S97T000913	0		DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry

Final page for worklist # 18622

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18915

Analyst: RDM Instrument: DSC0 3 Book # 12N14B

Method: LA-514-114 Rev/Mod D-1

Worklist Comment: T-201 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	<u>28.45</u>	<u>28.40</u>	<u>N/A</u>	Joules/g
97000311	T-201	2 SAMPLE	S97T001246	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	3 DUP	S97T001246	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
97000311	T-201	4 SAMPLE	S97T001253	0	DSC-03	SOLID	<u>N/A</u>	<u>0</u>		Joules/g
97000311	T-201	5 DUP	S97T001253	0	DSC-03	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 18915

See Attached for Signature
Analyst Signature Date

Susan Bu 7/22/97
Analyst Signature Date

Validated 7/24/97 Rachel

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18915

Analyst: RM Instrument: DSC0 3 Book # 12NH03

Method: LA-514-113 Rev/Mod D-1

Worklist Comment: T-201 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
97000311	T-201	2 SAMPLE	S97T001246	0	DSC-01	SOLID	N/A			Joules/g
97000311	T-201	3 DUP	S97T001246	0	DSC-01	SOLID			N/A	Joules/g
97000311	T-201	4 SAMPLE	S97T001253	0	DSC-01	SOLID	N/A			Joules/g
97000311	T-201	5 DUP	S97T001253	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 18915

Analyst Signature

Date

Analyst Signature

Date

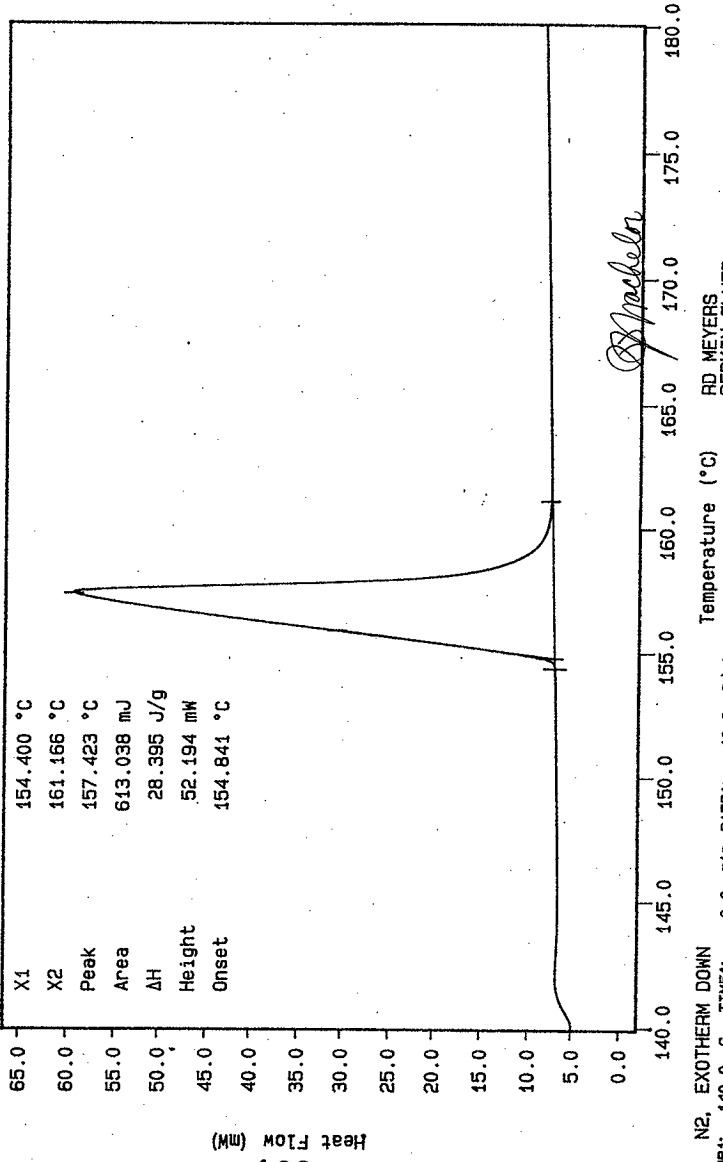
Data Entry Comments:

Can. samples on DSC-03. 882 7/22/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: DSC
 File info: IOND071901 Sat Jul 19 07:20:05 1997
 Sample Weight: 21.590 mg
 12N14-B

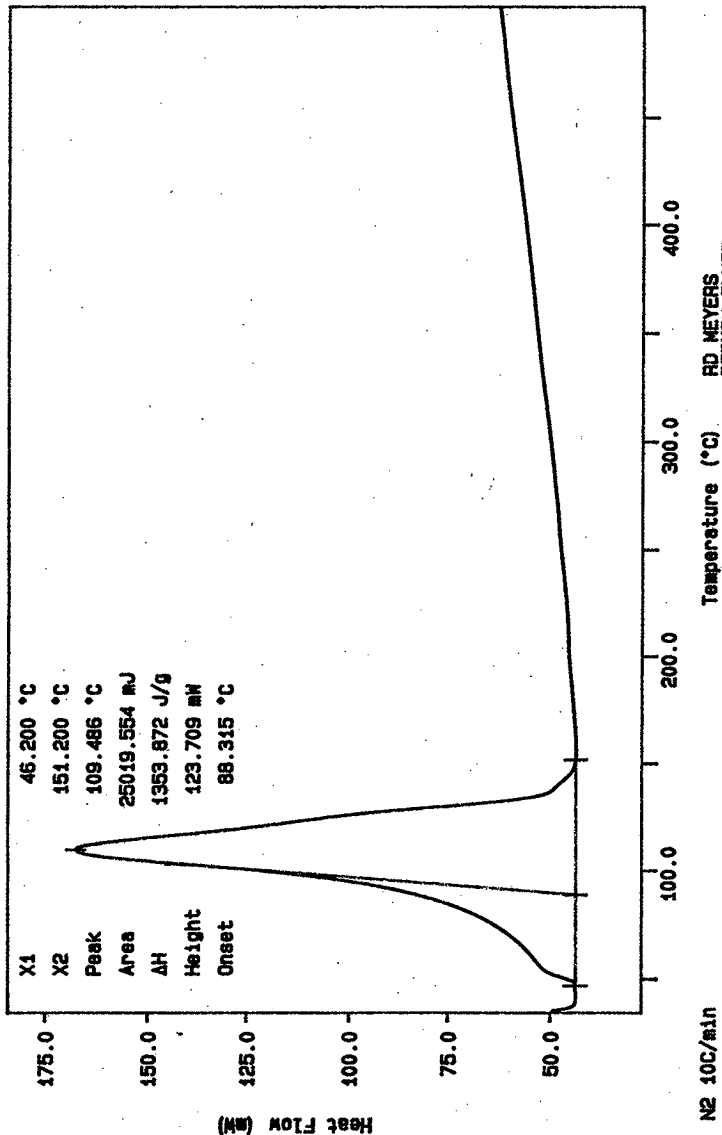
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 163 TO 167



163

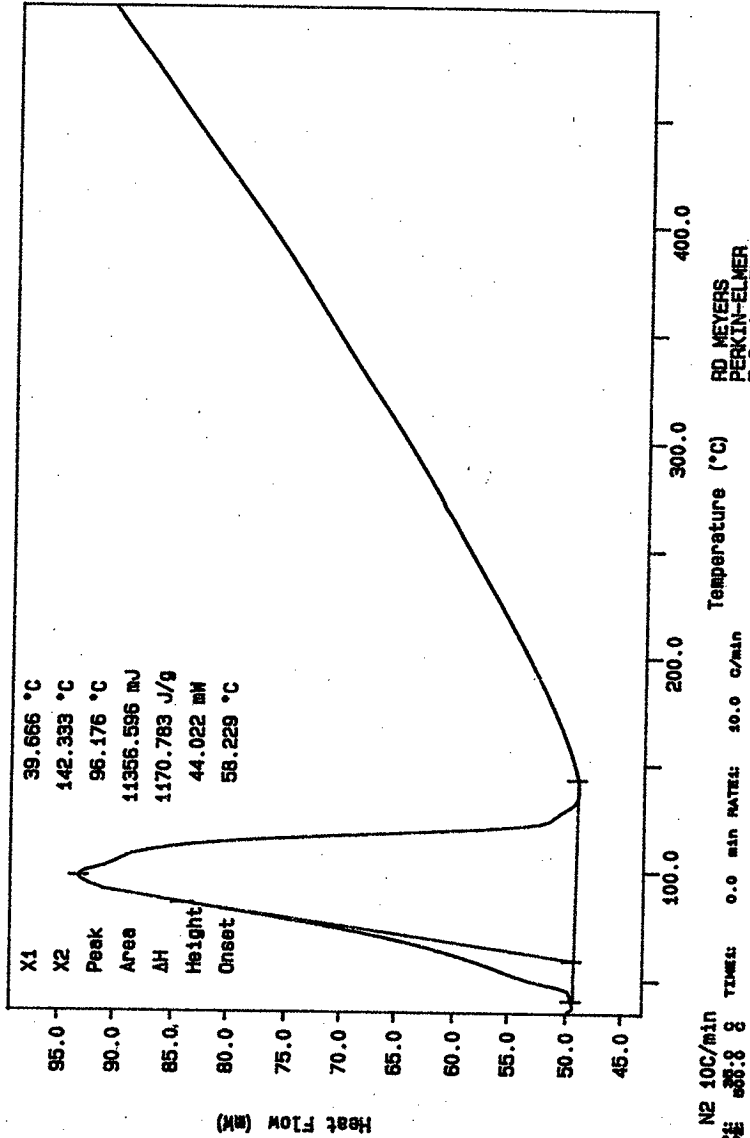
N2, EXOTHERM DOWN
 TEMP: 140.0 °C TIME: 0.0 min RATE: 10.0 °C/min
 RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat Jul 19 19:14:55 1997

Curve 1: DSC
 File Info: SAM071909 Sat Jul 19 12:19:54 1997
 Sample Weight: 18.480 mg
 S97T001246



N2 10C/min
 TIME: 33.8 g
 0.0 min RATE: 10.0 C/min
 RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat Jul 19 19:00:42 1997

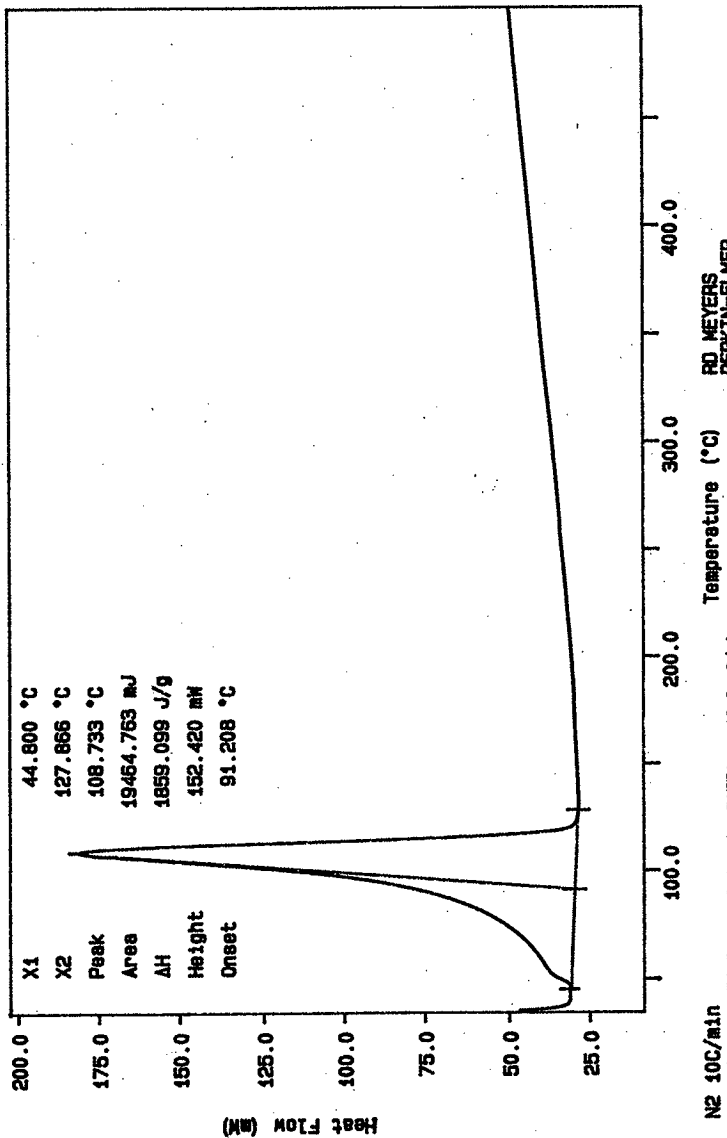
Curve 1: DSC
 File Info: SAM071910 Sat Jul 19 14:19:16 1997
 Sample Weight: 9.700 mg
 S977001246DUP



RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat Jul 19 18:51:09 1997

N2 100/min
 TIME 33.8 s
 0.0 min RATE: 10.0 C/min

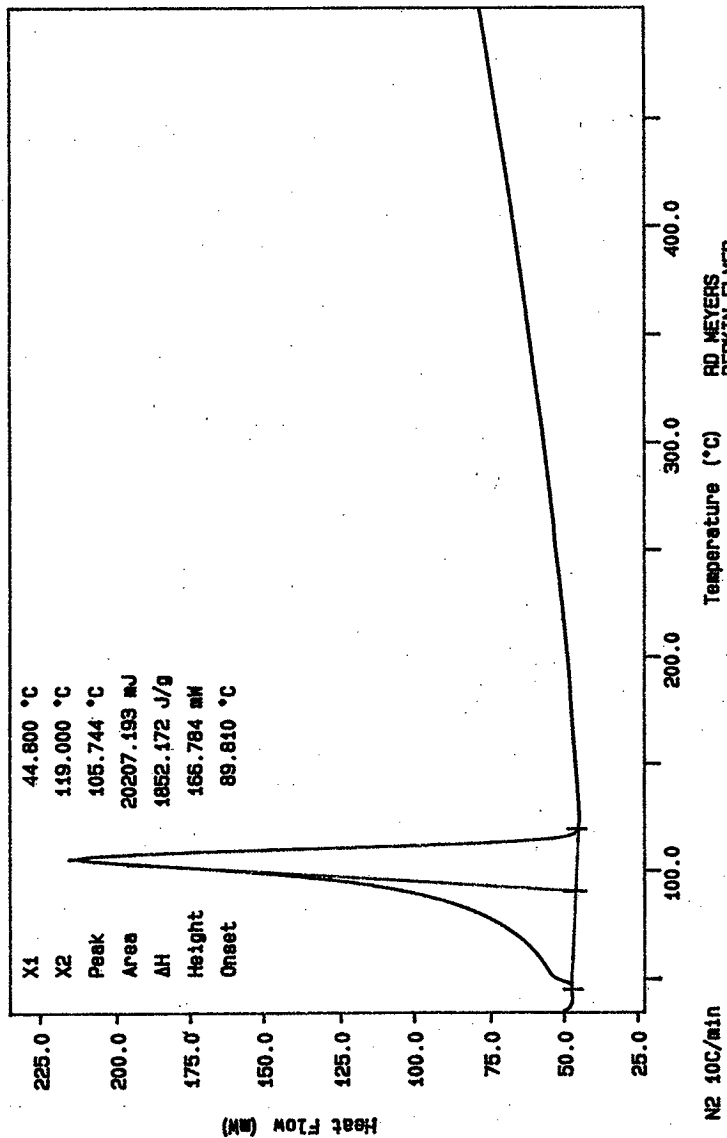
Curve 1: DSC
 File info: SAMP71911 Sat Jul 19 15:20:30 1997
 Sample Weight: 10.470 mg
 S97T001253



RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat Jul 19 16:42:19 1997

N2 10C/min
 TIME: 38.8 s
 RATE: 0.0 min RATE: 10.0 C/min

Curve 1: DSC
File Info: SA4071912 Sat Jul 19 17:01:38 1997
Sample Weight: 10.910 mg
S977001253DUP



RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Jul 19 18:38:20 1997

N2 10C/min
TIME: 35.88
TIME: 35.88

LABCORE Data Entry Template for Worklist# 19452

Analyst: ppb Instrument: DSC0 2 Book # NA

Method: LA 514-113 Rev/Mod 323 7/22/97

Worklist Comment: DSC-02 T-201 comp solid. -ppb

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
97000311	T-201	1 SAMPLE	S97T001246	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	2 DUP	S97T001246	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry
97000311	T-201	3 SAMPLE	S97T001253	0	DSC-02	SOLID	<u>N/A</u>	<u>0</u>		Joules/g Dry
97000311	T-201	4 DUP	S97T001253	0	DSC-02	SOLID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g Dry

Final page for worklist # 19452

ppb
Analyst Signature Date 7/22/97

Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18274

Analyst: PJM Instrument: TGA0 3 Book # 12N4B ^{RT} 5-28-97
97N8A

Method: LA-514-114 Rev/Mod D-0

Worklist Comment: T201, TGA-01 Run under Nitrogen. skm HNF-SD-WM-DP-254, REV. 0

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.4</u>	<u>59.05</u>	<u>N/A</u>	%
97000311	T-201	2 SAMPLE	S97T000823	0	TGA-03	LIQUID	<u>N/A</u>	<u>99.68</u>		%
97000311	T-201	3 DUP	S97T000823	0	TGA-03	LIQUID	<u>99.68</u>	<u>99.68</u>	<u>N/A</u>	%
97000311	T-201	4 SAMPLE	S97T000833	0	TGA-03	LIQUID	<u>N/A</u>	<u>91.10</u>		%
97000311	T-201	5 DUP	S97T000833	0	TGA-03	LIQUID	<u>91.10</u>	<u>90.95</u>	<u>N/A</u>	%

Final page for worklist # 18274

See Attached for Signature
Analyst Signature Date

RS Jones 5-28-97
Analyst Signature Date

Validated 6/2/97 [Signature]

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18274

Analyst: Petm Instrument: TGA0 03 Book # 12014B
Method: LA-560-112 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T201, TGA-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	%
97000311	T-201	2 SAMPLE	S97T000823	0	TGA-01	LIQUID	N/A			%
97000311	T-201	3 DUP	S97T000823	0	TGA-01	LIQUID			N/A	%
97000311	T-201	4 SAMPLE	S97T000833	0	TGA-01	LIQUID	N/A			%
97000311	T-201	5 DUP	S97T000833	0	TGA-01	LIQUID			N/A	%

Final page for worklist # 18274

Petm 5/27/97
Analyst Signature Date

Analyst Signature Date

JM Sp 5/27/97

Data Entry Comments:
Run samples on TGA-03. ~~DB~~ 5/28/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

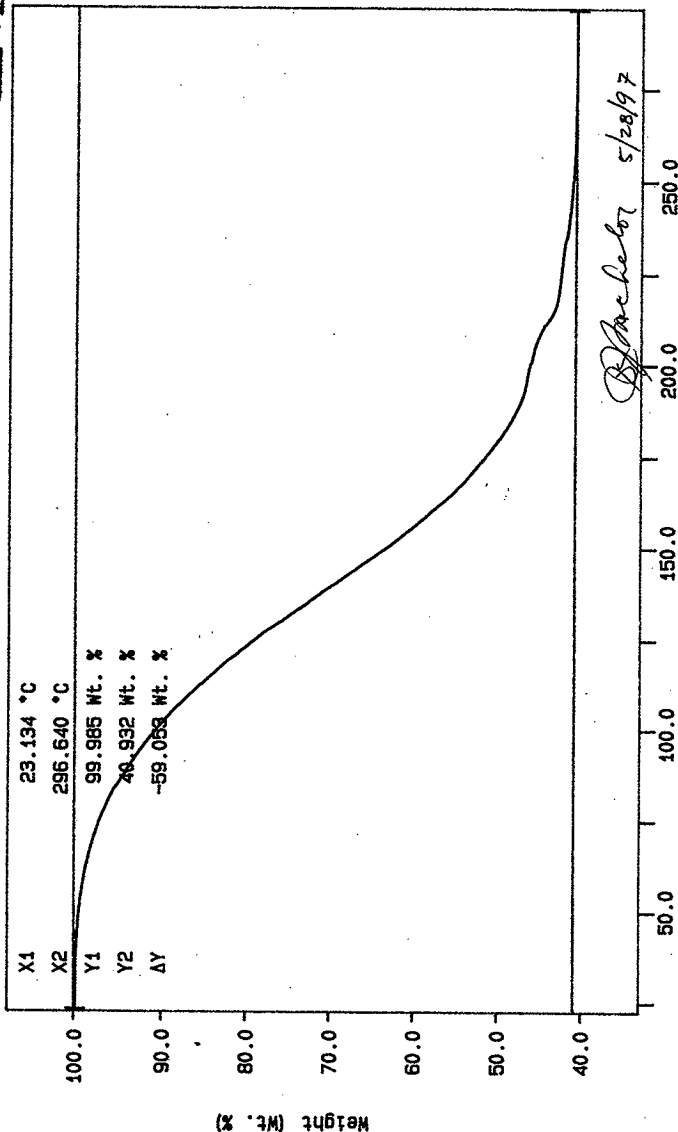
Curve 1: TGA

File info: TER052701 Tue May 27 06:22:47 1997

Sample Weight: 27.183 mg

97N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 171 TO 175.



10C/MIN N2

TEMPERATURE

25.0 °C

TIME: 300.0

0.0 min RATE: 10.0 C/min

Temperature (°C)

PJ MCCOWN

PERKIN-ELMER

7 Series Thermal Analysis System

Wed May 28 06:23 1997

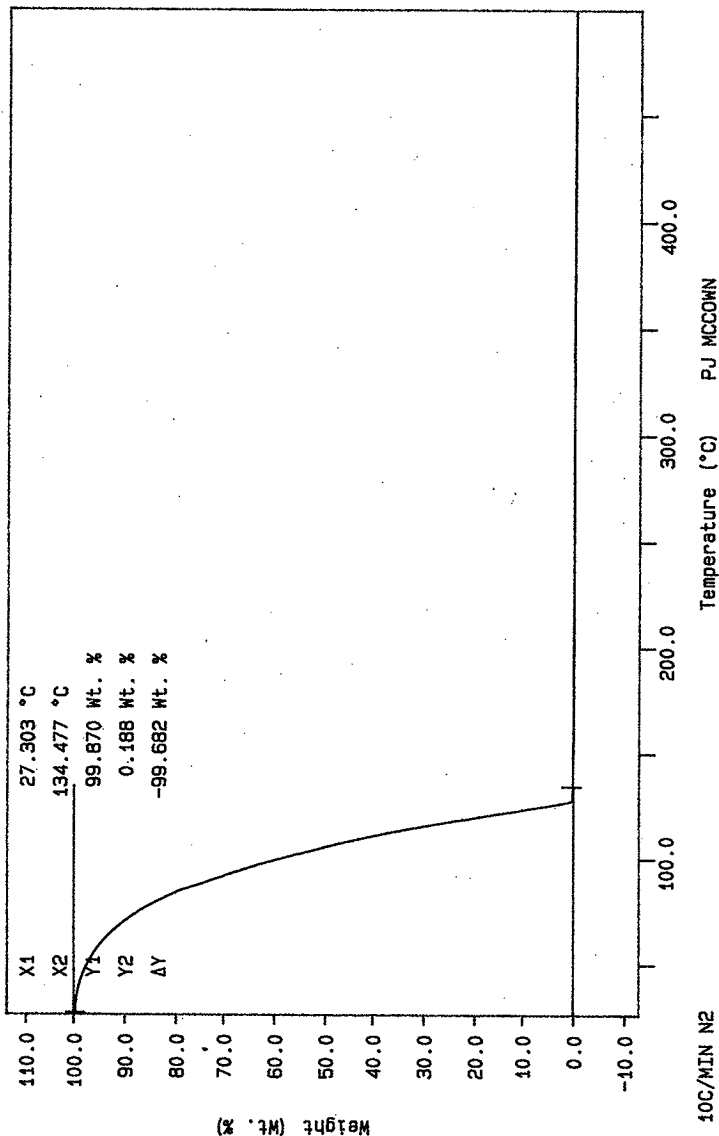
HNF-SD-WM-DP-254, REV. 0

HNF-SD-WM-DP-246, REV. 0 *MSC*
7-14-97

Curve 1: TGA
 File Info: SAM052705 Tue May 27 14: 49: 09 1997
 Sample Weight: 10.116 mg
 S97T000823

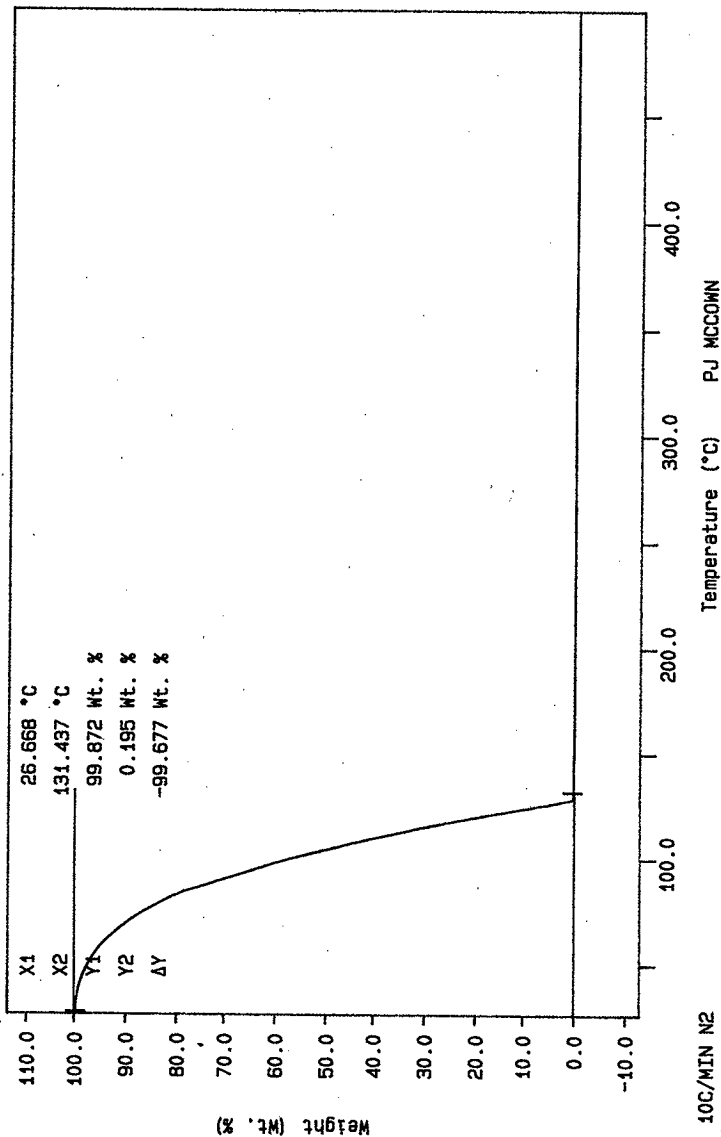
~~HNF-SD-WM-DP-246, REV. 0~~ mte
 7-14-97

HNF-SD-WM-DP-254, REV. 0



10C/MIN N2
 TEMPI: 35.0 C
 TIME1: 0.0 min RATE1: 10.0 C/min
 PJ MCCOWN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Tue May 27 15:03:01 1997

Curve 1: TGA
File info: SAM052706 Tue May 27 15: 58: 19 1997
Sample Weight: 9.934 mg
S97T000823 DUP

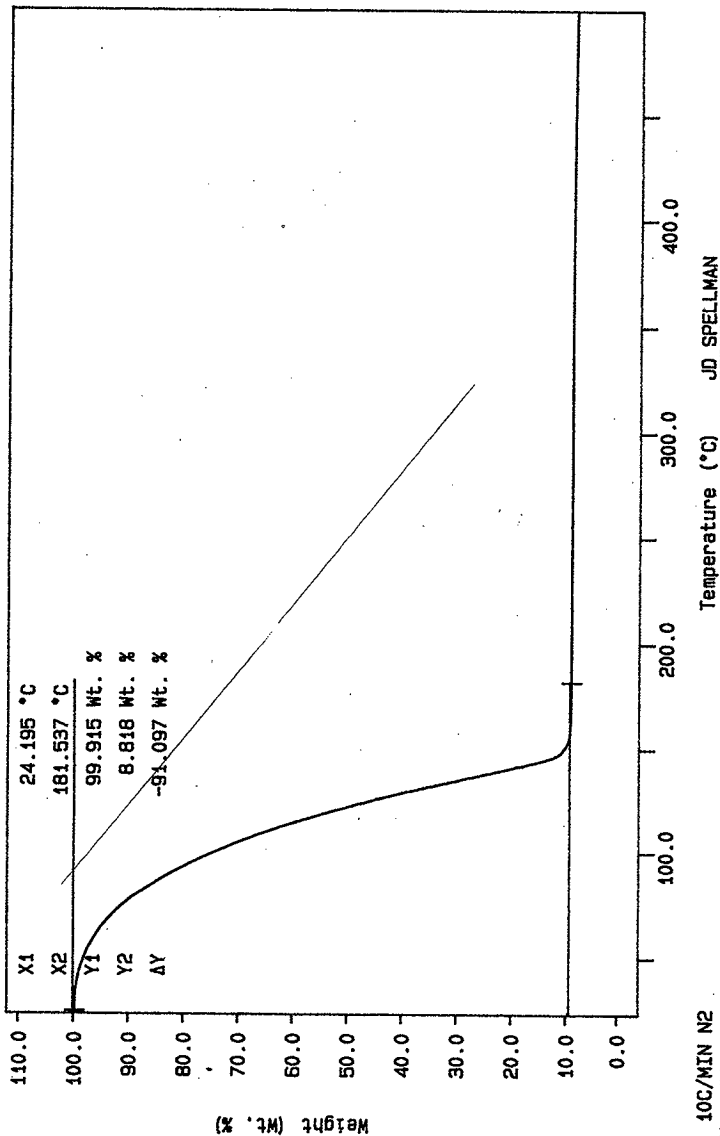


Curve 1: TGA

File info: SAM052708 Tue May 27 18:51:54 1997

Sample Weight: 17.700 mg

S97T000833



HNF-SD-WM-DP-246, REV. 0 mte
7-14-97

HNF-SD-WM-DP-254, REV. 0

Curve 1: TGA

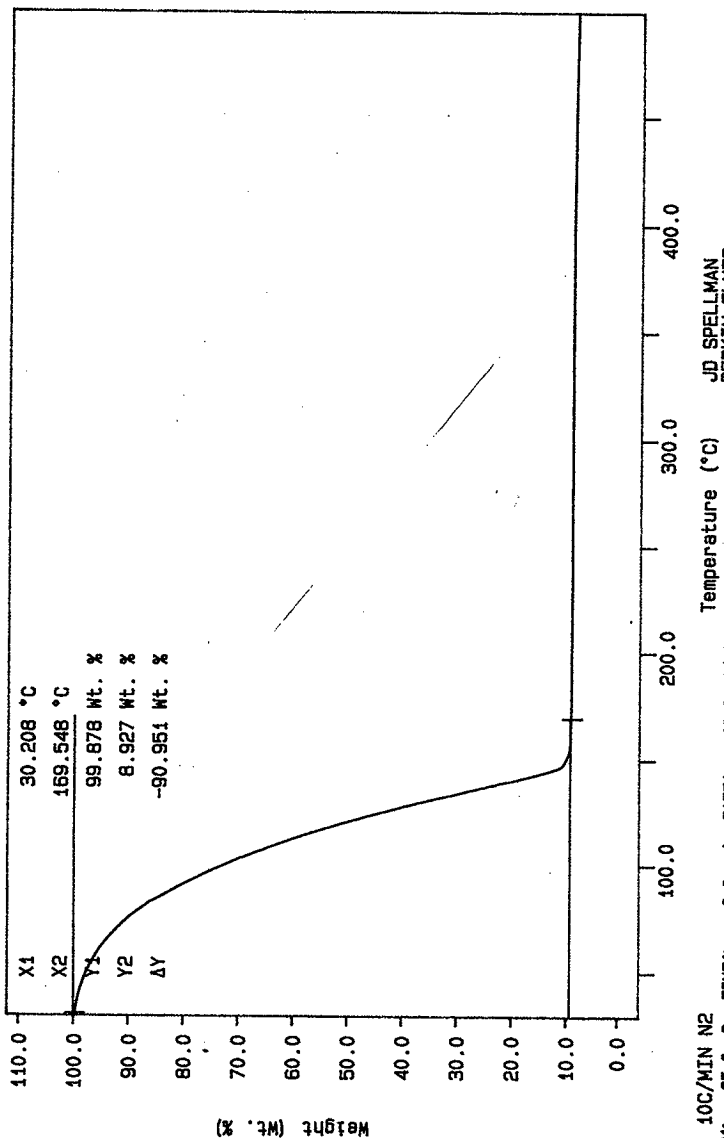
File Info: SAM052709 Tue May 27 19:58:49 1997

Sample Weight: 17.923 mg

S97T000833DUP

HNF-SD-WM-DP-246, REV. 0

7-14-97
HNF-SD-WM-DP-254, REV. 0



JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue May 27 20:26:21 1997

LABCORE Data Entry Template for Worklist# 18275

Analyst: JDS Instrument: TGA0 3 Book # 97N011

Method: LA-514-114 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, TGA-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.4</u>	<u>59.16</u>	<u>N/A</u>	%
97000311	T-201	2 SAMPLE	S97T000834	0	TGA-03	LIQUID	<u>N/A</u>	<u>91.16</u>		%
97000311	T-201	3 DUP	S97T000834	0	TGA-03	LIQUID	<u>91.16</u>	<u>91.05</u>	<u>N/A</u>	%
97000311	T-201	4 SAMPLE	S97T000835	0	TGA-03	LIQUID	<u>N/A</u>	<u>91.80</u>		%
97000311	T-201	5 DUP	S97T000835	0	TGA-03	LIQUID	<u>91.80</u>	<u>91.83</u>	<u>N/A</u>	%

Final page for worklist # 18275

See Attached for Signature
Analyst Signature Date

Signature 5-29-97
Analyst Signature Date

Validated 6/2/97 Signature

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18275

Analyst: sdS Instrument: TGA0 3 Book # 97N/A

Method: LA-560-112 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, TGA-01 Run under Nitrogen. skm

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID			N/A	%
97000311	T-201	2	SAMPLE	S97T000834	0		TGA-01	LIQUID	N/A			%
97000311	T-201	3	DUP	S97T000834	0		TGA-01	LIQUID			N/A	%
97000311	T-201	4	SAMPLE	S97T000835	0		TGA-01	LIQUID	N/A			%
97000311	T-201	5	DUP	S97T000835	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 18275

5/29/97 
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Run samples on TGA-03. ~~SP~~ 5/23/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

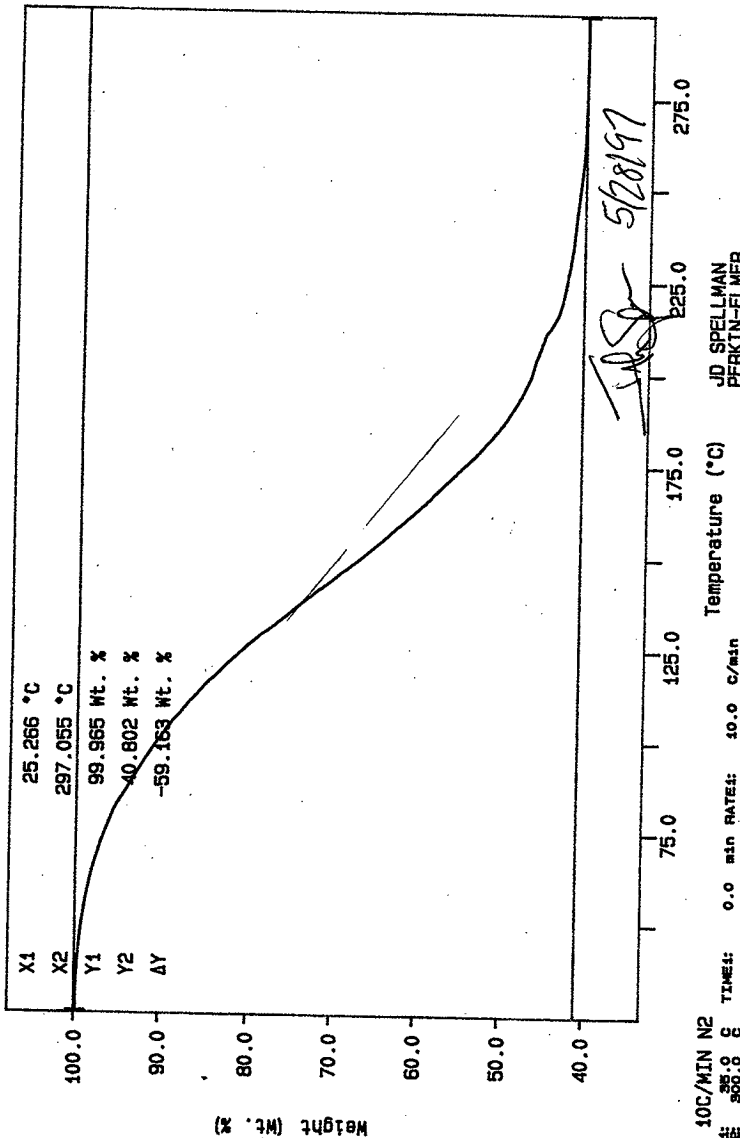
Curve 1: TGA

File Info: TER052801 Wed May 28 19: 02 1997

Sample Weight: 35.976 mg

97N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 172 TO 173.



Curve 1: TGA

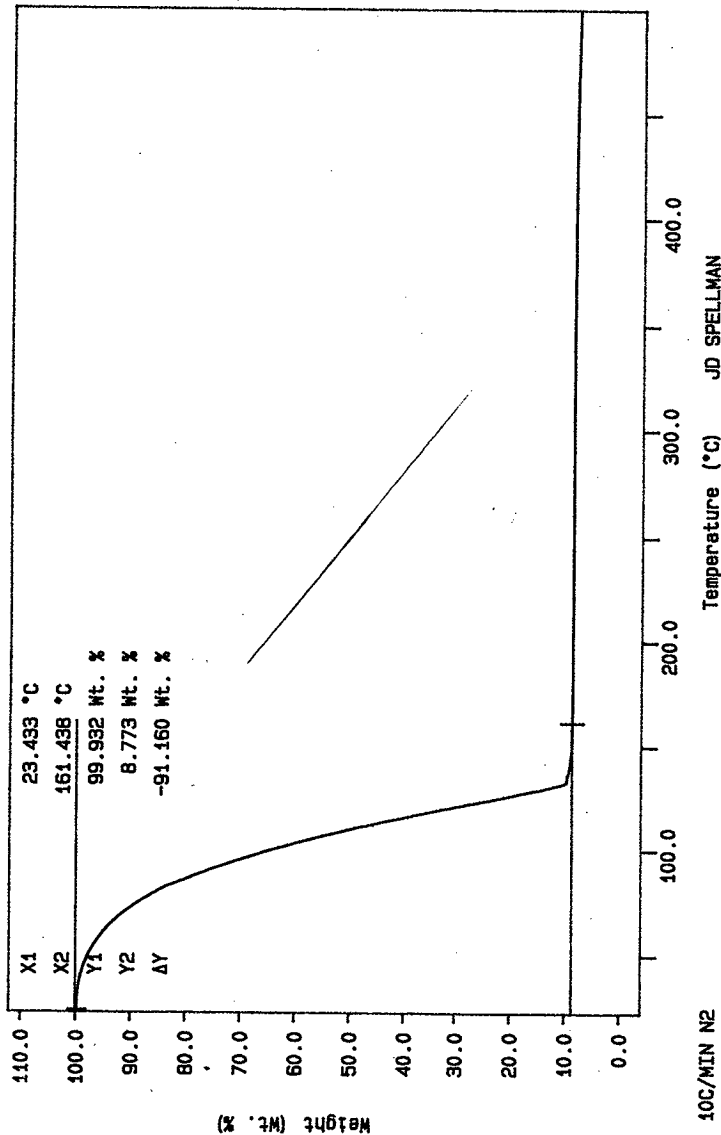
File info: SAM052804 Wed May 28 20:30:52 1997

Sample Weight: 10.599 mg

S97T000834

HNF-SD-WM-DP-254, REV. 0

HNF-SD-WM-DP-246, REV. 00⁰⁰⁰
7-14-97



10C/MIN N2

TEMP: 35.0 °C

TIME:

0.0 min RATE: 10.0 C/min

Temperature (°C)

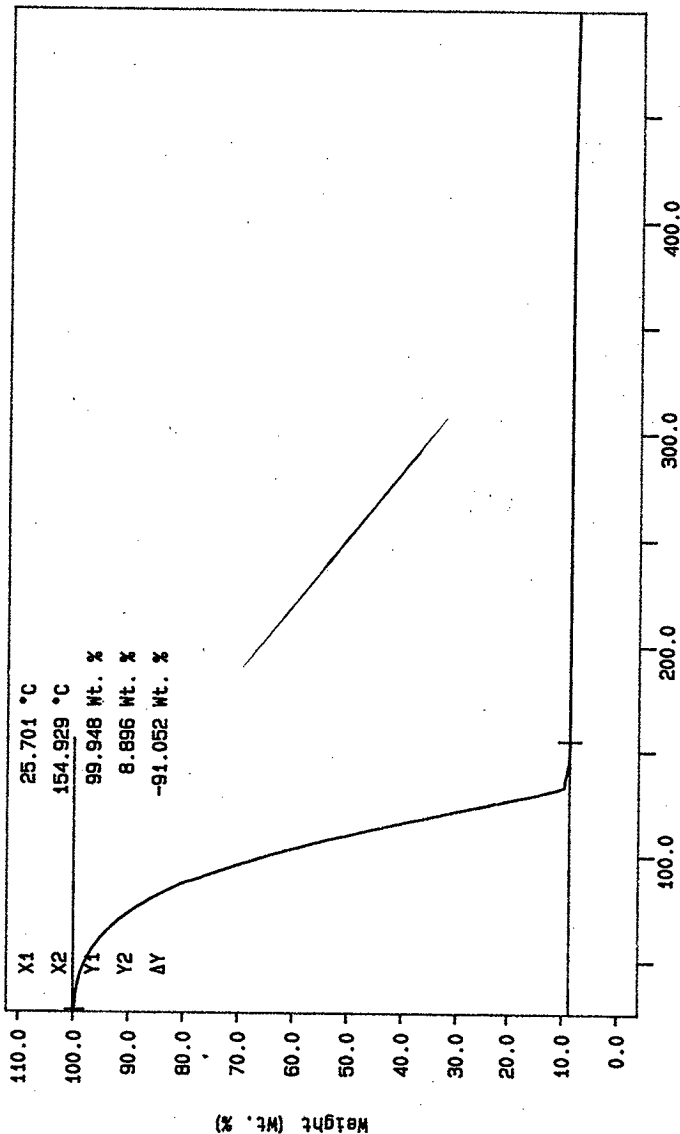
JD SPELLMAN

PERKIN-ELMER

7 Series Thermal Analysis System

Wed May 28 21:10:45 1997

Curve 1: TGA
 File info: SAM052805 Wed May 28 22:03:49 1997
 Sample Weight: 10.061 mg
 S97T000834DUP

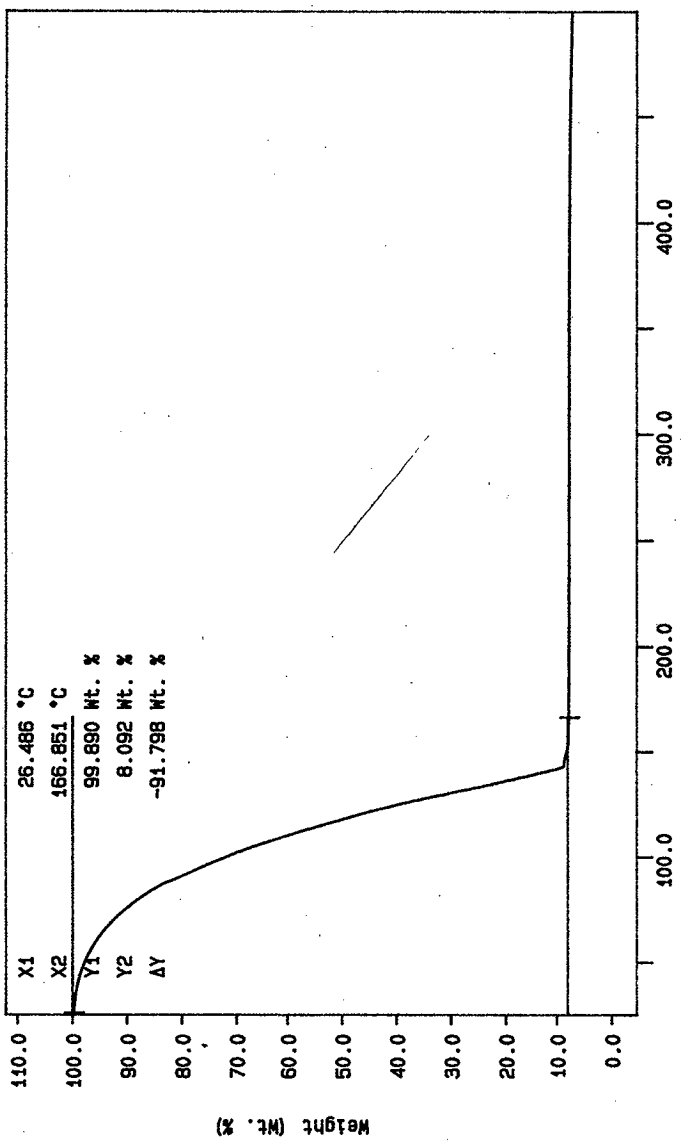


10C/MIN N2
 TEMP: 35.0 C
 TIME: 0.0 min RATE: 10.0 C/min
 JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed May 28 23:05:24 1997

HNF-SD-WM-DP-246, REV. 0 mts
7-14-97

HNF-SD-WM-DP-254, REV. 0

Curve 1: TGA
File info: SAM052901 Wed May 28 23:58:30 1997
Sample Weight: 15.453 mg
S97T000835



10C/MIN N2
TEMP: 35.0 °C
TIME: 500.0 s

JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 29 00:23:43 1997

Curve 1: TGA

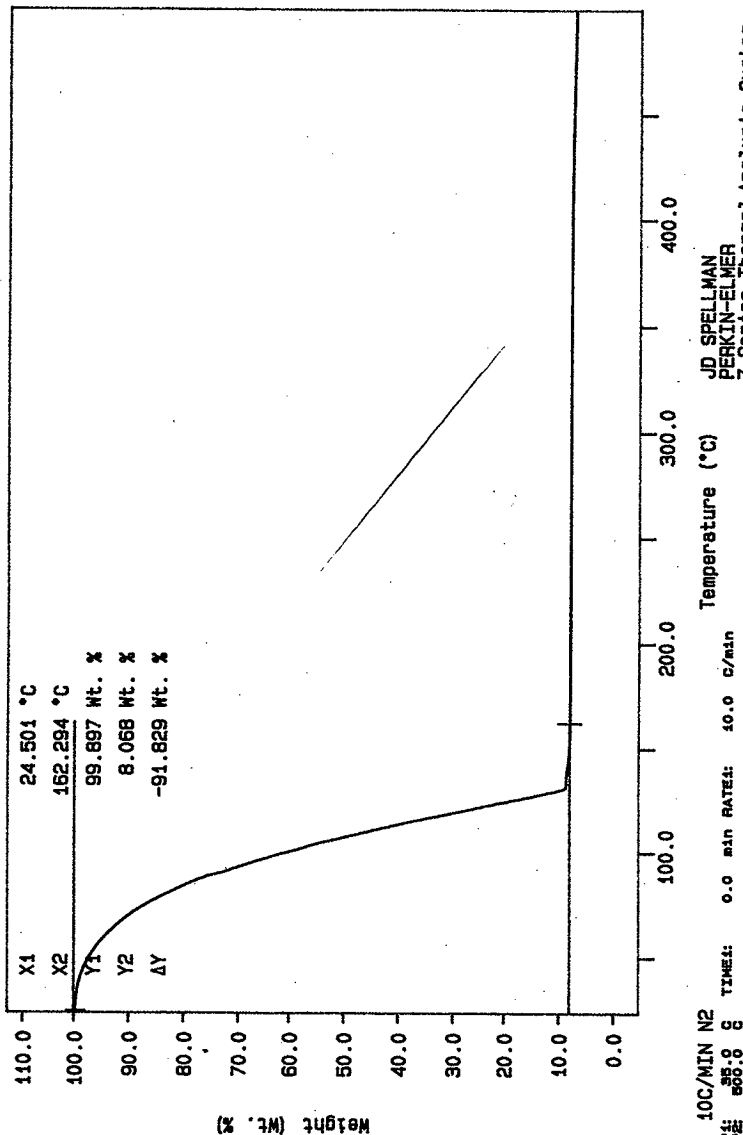
File Info: SAM052902 Thu May 29 01:18:41 1997

Sample Weight: 10.717 mg

S97T000835DUP

HNF-SD-WM-DP-254, REV. 0

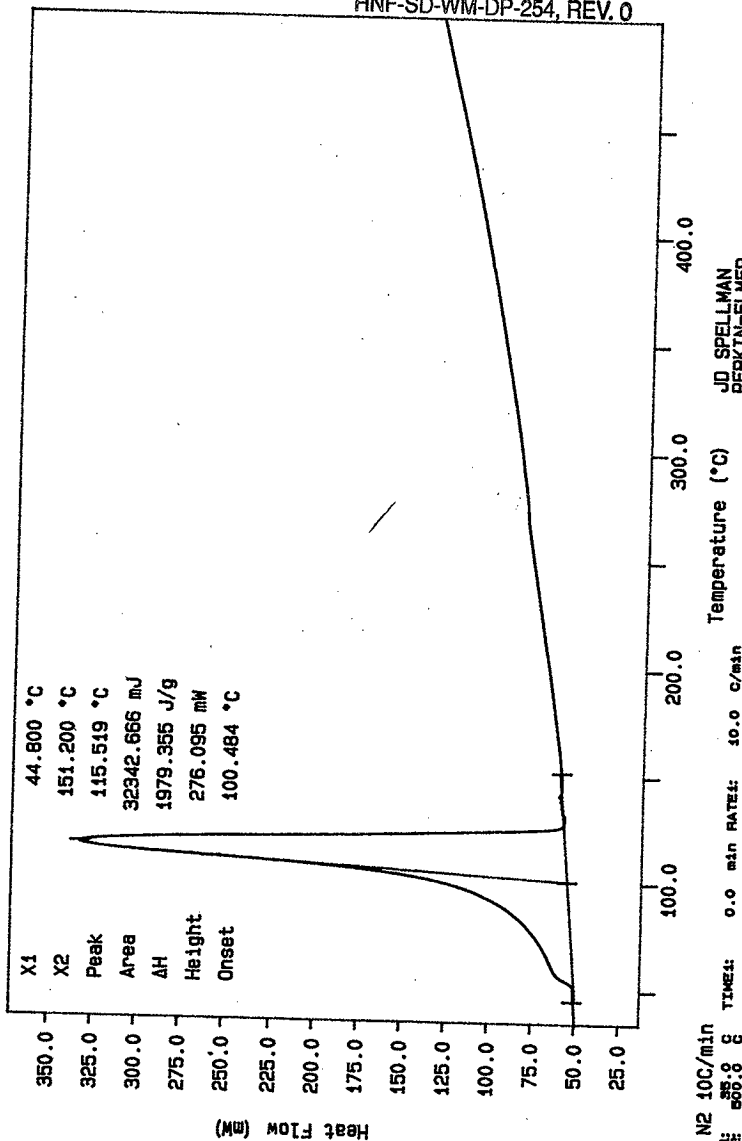
HNF-SD-WM-DP-246, REV. 0 ^{mtg}
7-14-97



Curve 1: DSC
 File Info: SAM052901 Wed May 28 23:58:56 1997
 Sample Weight: 16.340 mg
 S97T000835

HNF-SD-WM-DP-246, REV. 0 *not*
 7-14-97

HNF-SD-WM-DP-254, REV. 0



N2 10C/min
 TEMP: 35.0 °C
 TIME: 0.0 min RATE: 10.0 C/min
 JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu May 29 00:28:45 1997

LABCORE Data Entry Template for Worklist# 18276

Analyst: JDS Instrument: TGA0 3 Book # 97N817

Method: LA-514-114 Rev/Mod D-0

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, TGA-01 Run under Nitrogen. skim

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.4</u>	<u>59.16</u>	<u>N/A</u>	%
97000311	T-201	2 SAMPLE	S97T000836	0	TGA-03	LIQUID	<u>N/A</u>	<u>91.39</u>		%
97000311	T-201	3 DUP	S97T000836	0	TGA-03	LIQUID	<u>91.39</u>	<u>91.13</u>	<u>N/A</u>	%
97000311	T-201	4 SAMPLE	S97T000837	0	TGA-03	LIQUID	<u>N/A</u>	<u>90.99</u>		%
97000311	T-201	5 DUP	S97T000837	0	TGA-03	LIQUID	<u>90.99</u>	<u>90.99</u>	<u>N/A</u>	%

Final page for worklist # 18276

See Attached for Signature
Analyst Signature Date

Paula M. 5-30-97
Analyst Signature Date

Validated 6/2/97 Bachelon

Data Entry Comments:

Second STD run due to time lag in completion of worklist. Value is 59.32 %, with a % yield of 99.86. 5/30/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18276

Analyst: JS Instrument: TGA0 3 Book # 97N84
Method: LA-560-H2 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T201, TGA-01 Run under Nitrogen. skm

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID			N/A	%
97000311	T-201	2	SAMPLE	S97T000836	0		TGA-01	LIQUID	N/A			%
97000311	T-201	3	DUP	S97T000836	0		TGA-01	LIQUID			N/A	%
97000311	T-201	4	SAMPLE	S97T000837	0		TGA-01	LIQUID	N/A			%
97000311	T-201	5	DUP	S97T000837	0		TGA-01	LIQUID			N/A	%

Final page for worklist # 18276

JS
Analyst Signature

5/29/97
Date

Analyst Signature

Date

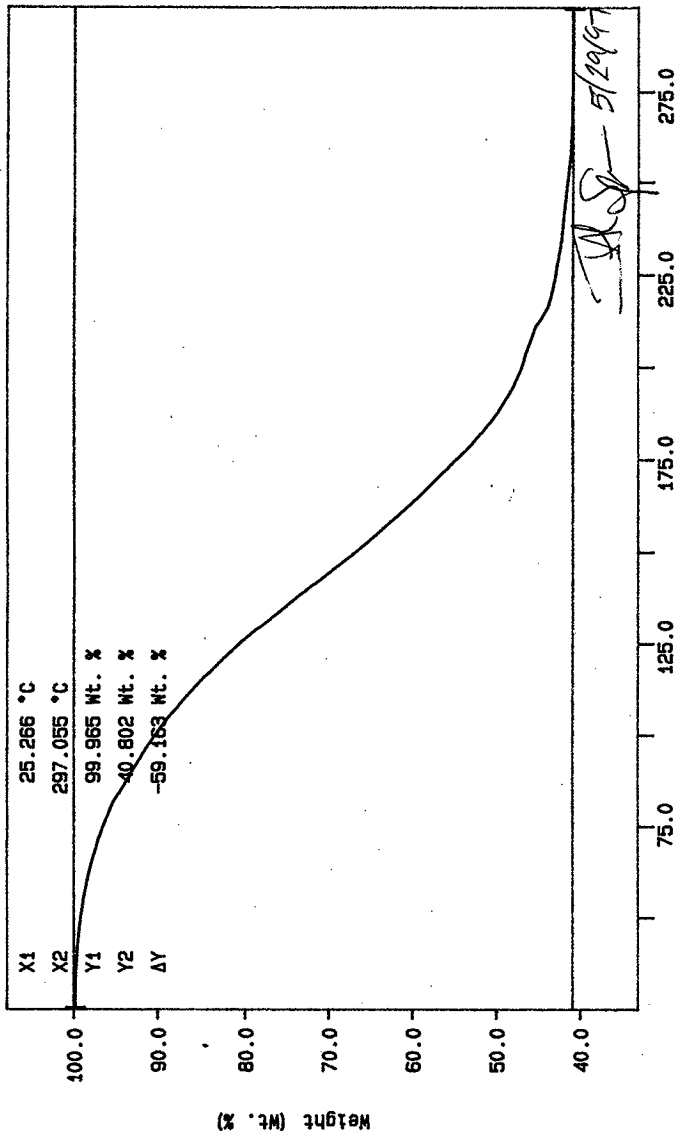
Data Entry Comments:

Ran samples on TGA-03. DB 5/30/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
 File Info: TER052801 Wed May 28 19:19:02 1997
 Sample Weight: 35.976 mg
 97NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 136 TO 141.



10C/MIN N2
 TEMPS: 350.0 C
 TIMES: 0.0 min RATE: 10.0 C/min
 Temperature (°C)
 JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu May 29 00:53:45 1997

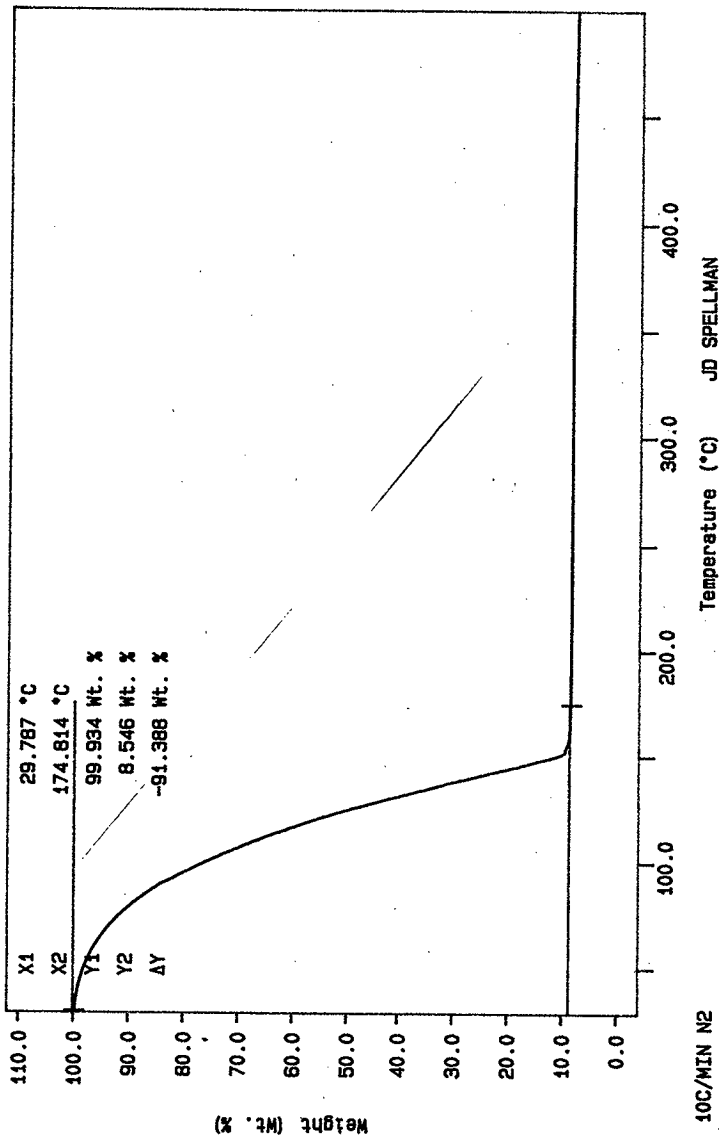
HNF-SD-WM-DP-246, REV. 0 ^{new} 7-14-97

HNF-SD-WM-DP-254, REV. 0

Curve 1: TGA
 File Info: SAM052903 Thu May 29 02:25:03 1997
 Sample Weight: 20.299 mg
 S97T000836

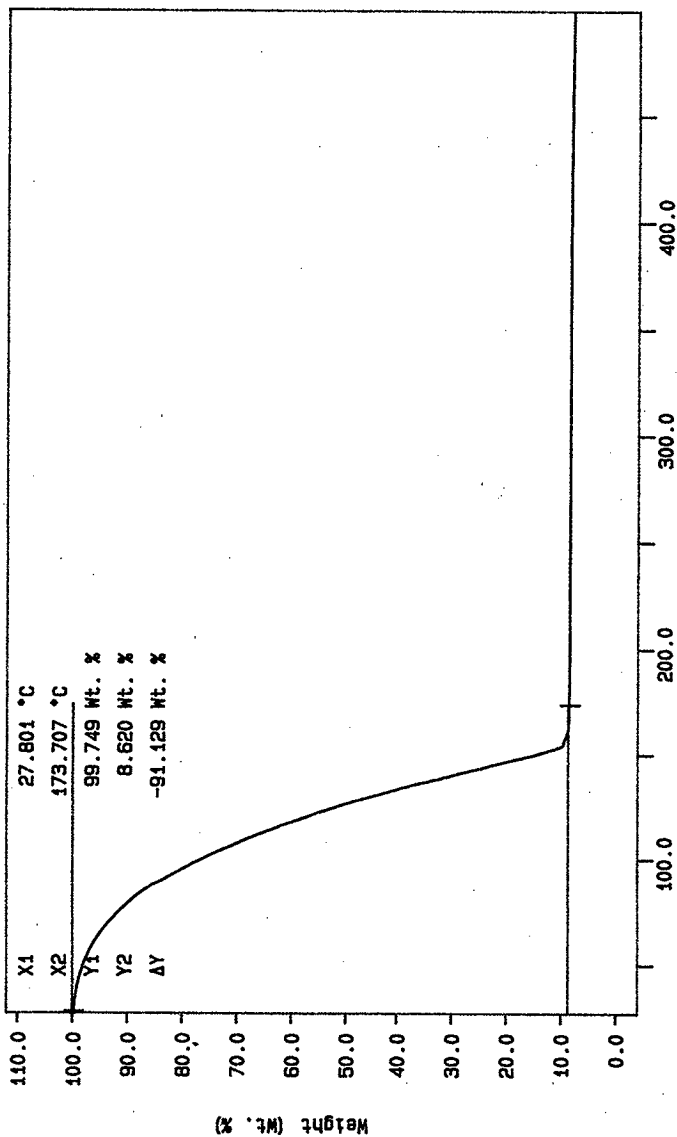
HNF-SD-WM-DP-246, REV. 0 ^{mtc} 7-14-97

HNF-SD-WM-DP-254, REV. 0



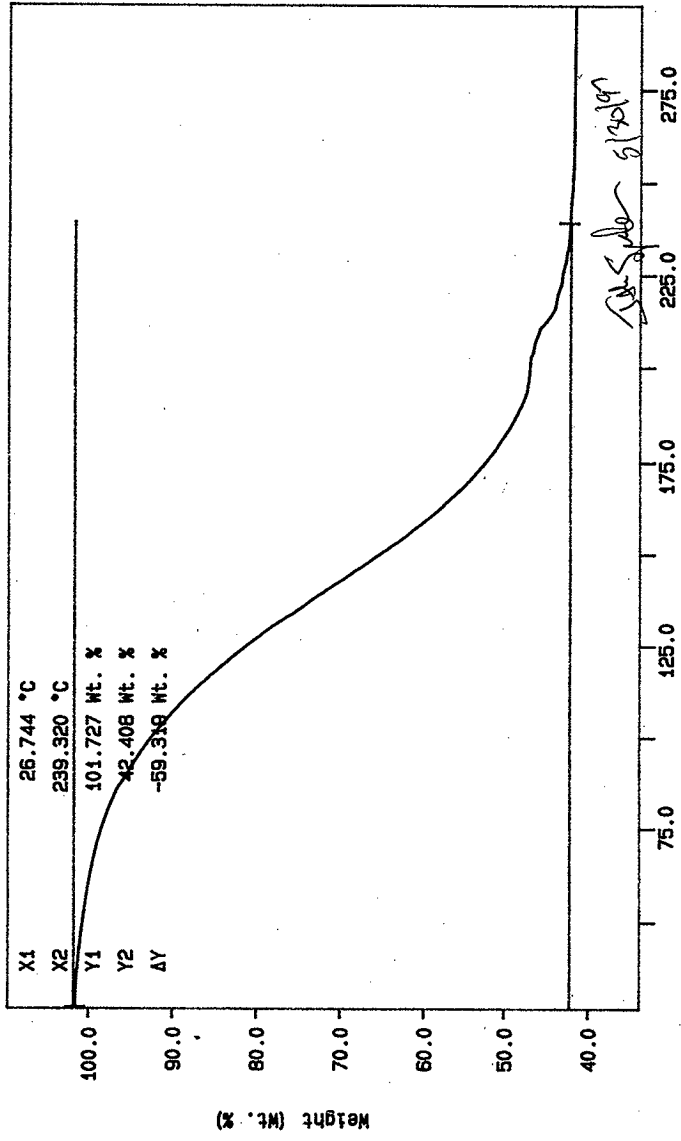
10C/MIN N2
 TEMP: 500.0 °C
 TIME: 0.0 min RATE: 10.0 °C/min
 JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu May 29 03:48:14 1997

Curve 1: TGA
File Info: SAM052904 Thu May 29 04:39:20 1997
Sample Weight: 21.641 mg
S97T000836DUP



10C/MIN N2
TEMP: 35.0 °C
TIME: 500.0 s
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 29 08:56:14 1997

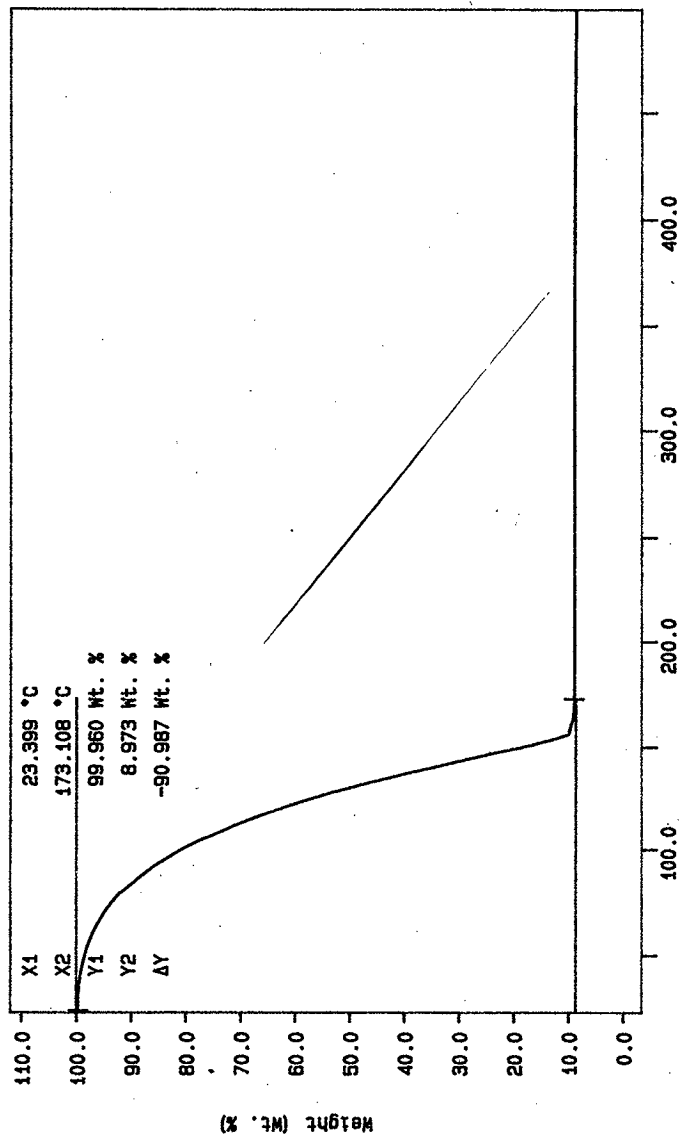
Curve 1: TGA
File Info: TER052904 Thu May 29 14: 47: 22 1997
Sample Weight: 24.301 mg
97N8-A



10C/MIN N2
TEMP: 25.0 °C
TIME: 0.0 min RATE: 10.0 C/min

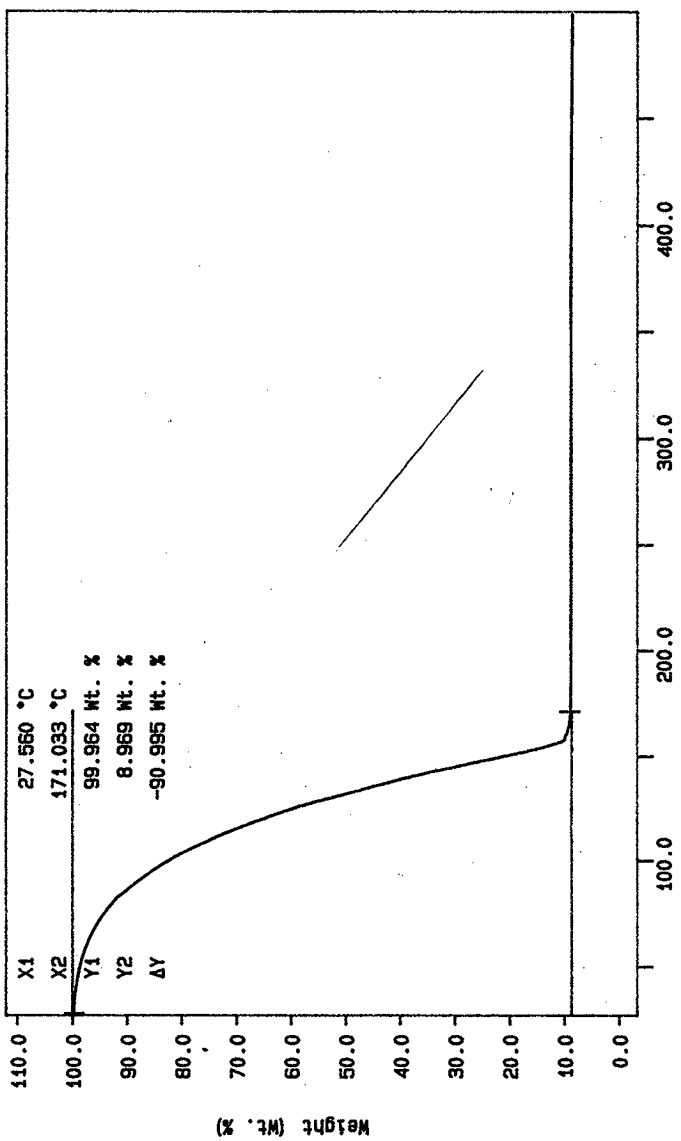
RA GREEN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 29 14: 47: 51 1997

Curve 1: TGA
File Info: SAM052905 Thu May 29 19: 22: 26 1997
Sample Weight: 20.536 mg
S97T000837



10C/MIN N2
TEMP: 85.0 C
TIME: 800.0 S
0.0 min RATE: 10.0 c/min
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 29 20: 46: 54 1997

Curve 1: TGA
File Info: SAM052906 Thu May 29 21:37:00 1997
Sample Weight: 20.390 mg
S97T000837DUP



10C/MIN N2
TEMP: 35.0 °C
TIME: 000.0 S
10C/MIN RATE: 10.0 C/min
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Thu May 29 22:41:33 1997

LABCORE Data Entry Template for Worklist# 18281

Analyst: DPB Instrument: TGA0 3 Book # 97N8-A

Method: LA-514-114 Rev/Mod D-0

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, TGA-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.68</u>	<u>N/A</u>	%
97000311	T-201	2 SAMPLE	S97T000899	0	TGA-03	SOLID	<u>N/A</u>	<u>66.31</u>		%
97000311	T-201	3 DUP	S97T000899	0	TGA-03	SOLID	<u>66.31</u>	<u>64.76</u>	<u>N/A</u>	%
97000311	T-201	4 SAMPLE	S97T000909	0	TGA-03	SOLID	<u>N/A</u>	<u>69.98</u>		%
97000311	T-201	5 DUP	S97T000909	0	TGA-03	SOLID	<u>69.98</u>	<u>69.43</u>	<u>N/A</u>	%

Final page for worklist # 18281

James P. Brown 6/6/97 0450
Analyst Signature Date
Validated 6/12/97 Shasheloz

Suzanne Lee 6/16/97
Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

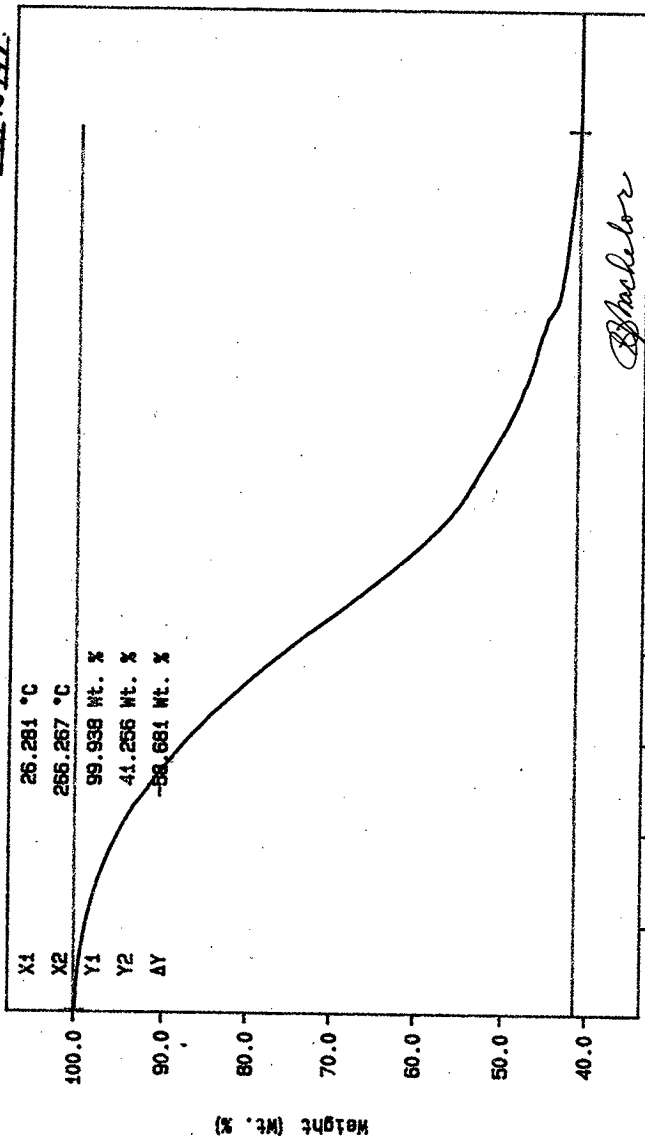
Curve 1: TGA

File info: TER060501 Thu Jun 5 05:57:27 1997

Sample Weight: 27.868 mg

97N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 193 TO 197.



10C/MIN N2

TIME: 00:00

0.0 min RATE: 10.0 C/min

Temperature (°C)

JD SPELLMAN
PERKIN-ELMER

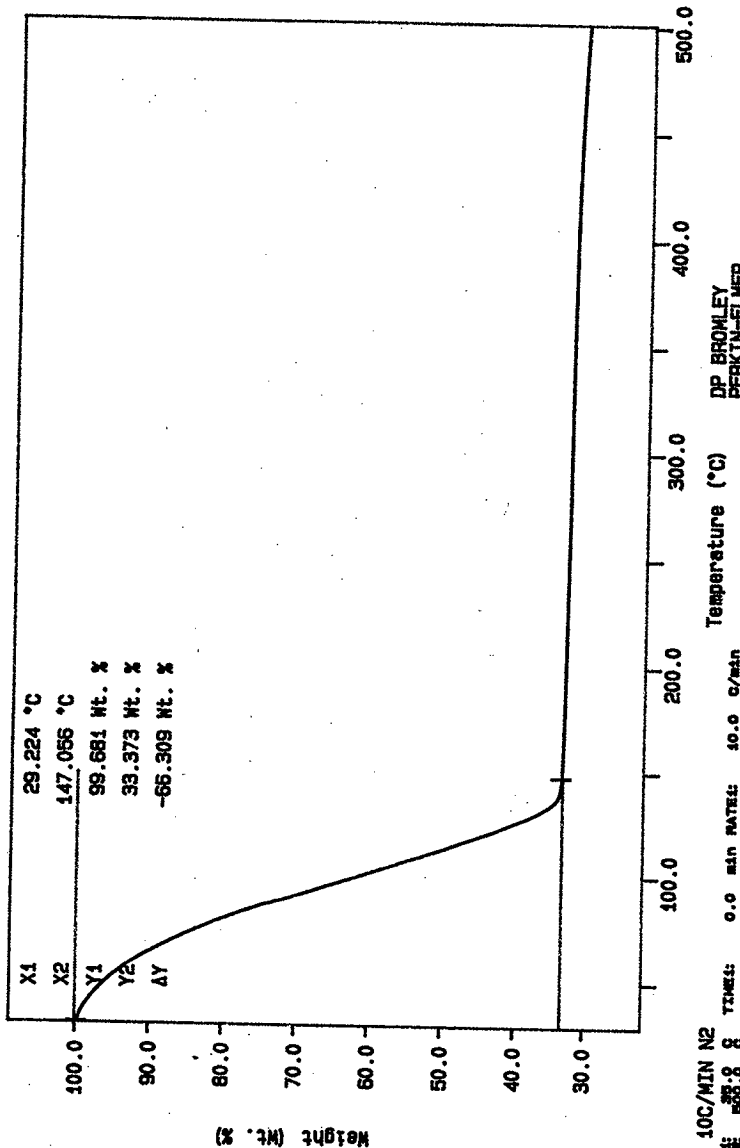
7 Series Thermal Analysis System
Fri Jun 6 03:48:18 1997

Curve 1: T6A

File Info: SAM060509 Thu Jun 5 22:22:41 1997

Sample Weight: 17.016 mg

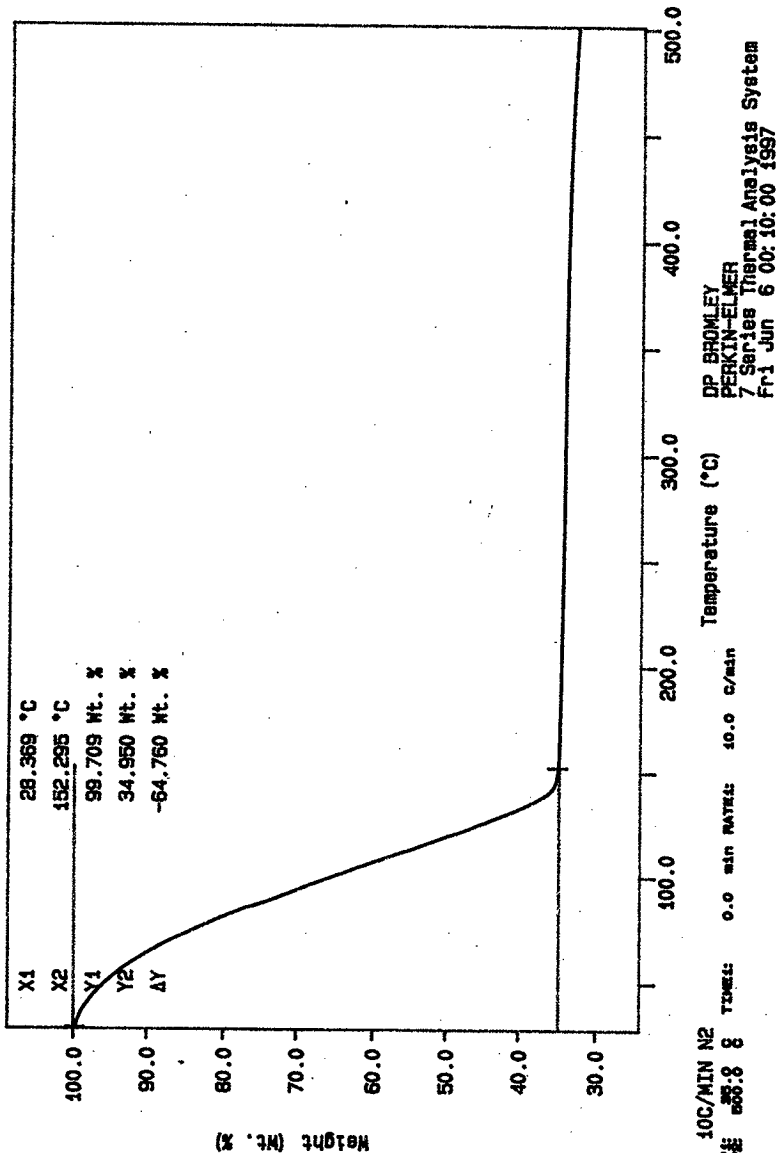
S977000899SAM



HNF-SD-WM-DP-246, REV. 0 mte
7-14-97
HNF-SD-WM-DP-254, REV. 0

DP BROMLEY
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Jun 5 22:37:49 1997

Curve 1: TGA
 File info: SAM060510 Thu Jun 5 23:33:00 1997
 Sample Weight: 18.657 mg
 S97T000898DUP

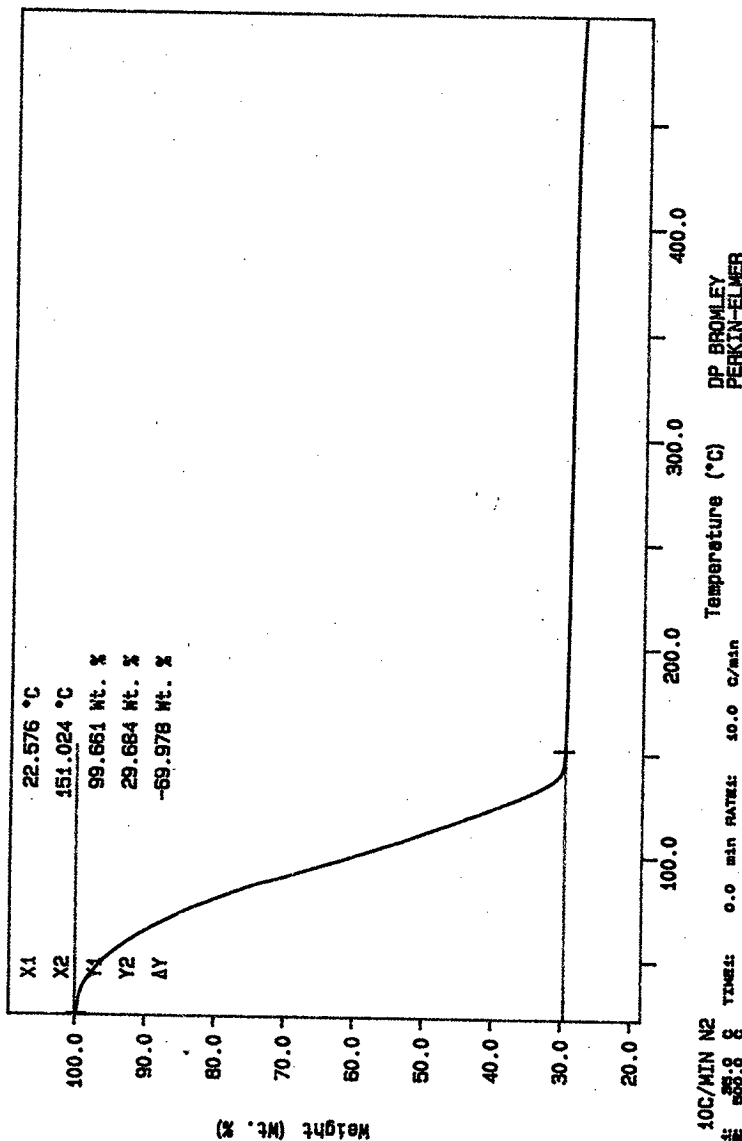


Curve 1: TGA

File Info: SAM050511 Fri Jun 6 04:16:18 1997

Sample Weight: 17.888 mg

S97T000909SAM



~~HNF-SD-WM-DP-246, REV. 0~~ ^{WKE} 7-14-97

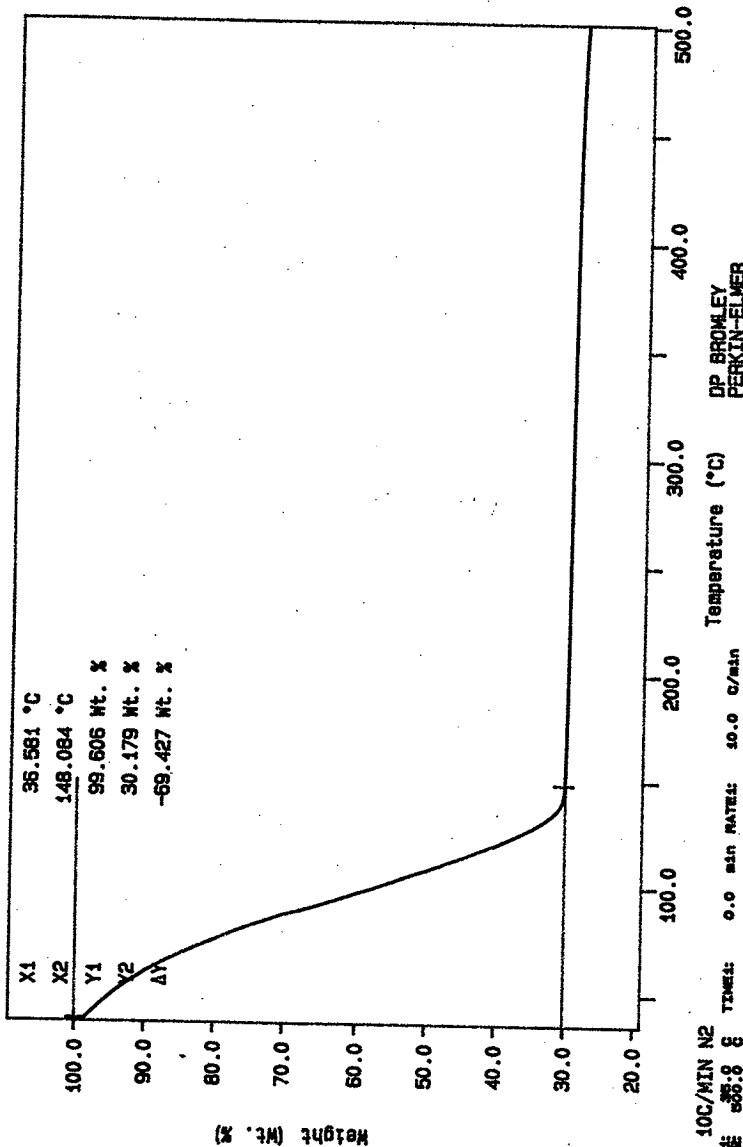
HNF-SD-WM-DP-254, REV. 0

Curve 1: T6A

File Info: SAM060512 Fri Jun 6 02:22:01 1997

Sample Weight: 13.813 mg

S97T000909DUP



DP BROMLEY
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Jun 6 03:15:23 1997

HNF-SD-WM-DP-246, REV. 0 mte
7-14-97
HNF-SD-WM-DP-254, REV. 0

LABCORE Data Entry Template for Worklist# 18282

Analyst: SMF Instrument: TGA0 3 Book # 97N8-A

Method: LA-514-114 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, TGA-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>58.64</u>	<u>N/A</u>	%
97000311	T-201	2 SAMPLE	S97T000910	0	TGA-03	SOLID	<u>N/A</u>	<u>63.52</u>		%
97000311	T-201	3 DUP	S97T000910	0	TGA-03	SOLID	<u>63.52</u>	<u>66.25</u>	<u>N/A</u>	%
97000311	T-201	4 SAMPLE	S97T000911	0	TGA-03	SOLID	<u>N/A</u>	<u>65.64</u>		%
97000311	T-201	5 DUP	S97T000911	0	TGA-03	SOLID	<u>65.64</u>	<u>60.46</u>	<u>N/A</u>	%

Final page for worklist # 18282

See Attached for Signature
Analyst Signature Date

[Signature] 6-23-97
Analyst Signature Date

Validated 6/4/97 [Signature]

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18282

Analyst: SME Instrument: TGA0 3 Book # 9708-A

Method: LA-560-112 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, TGA-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
97000311	T-201	2 SAMPLE	S97T000910	0	TGA-01	SOLID	N/A			%
97000311	T-201	3 DUP	S97T000910	0	TGA-01	SOLID			N/A	%
97000311	T-201	4 SAMPLE	S97T000911	0	TGA-01	SOLID	N/A			%
97000311	T-201	5 DUP	S97T000911	0	TGA-01	SOLID			N/A	%

Final page for worklist # 18282

Susie M. Dalton 5-30-97
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

Ran samples on TGA-05. 5/26/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

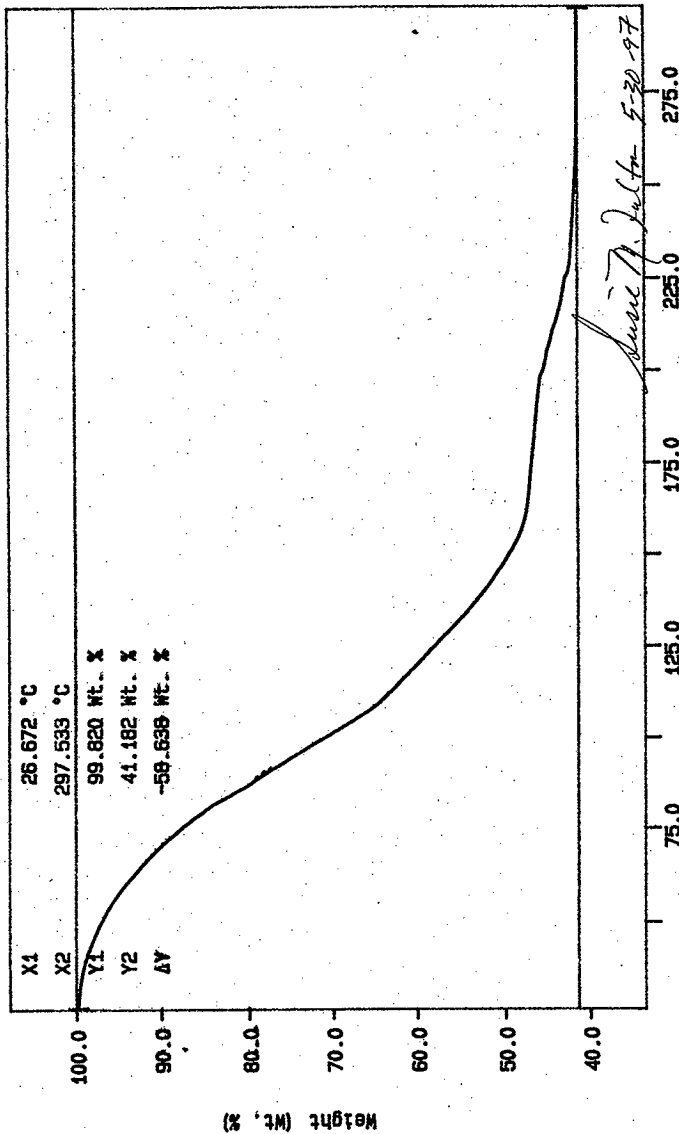
Curve 1: TGA

File Info: TER053001 Fri May 30 06:00:29 1997

Sample Weight: 17.771 mg

97N8-A

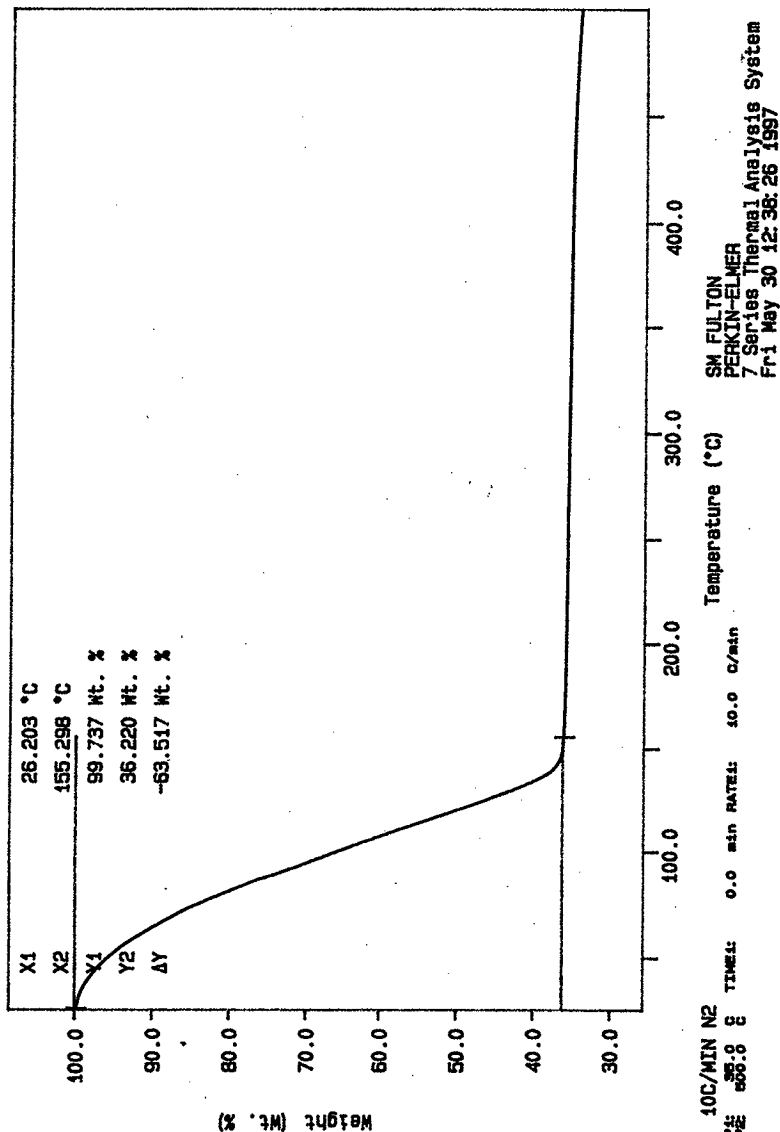
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 200 TO 204



SM FLATON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 30 06:07:33 1997

10C/MIN N2
TEMP: 35.8 °C
TIME: 300.0 s
RATE: 0.0 min RATE: 10.0 °C/min

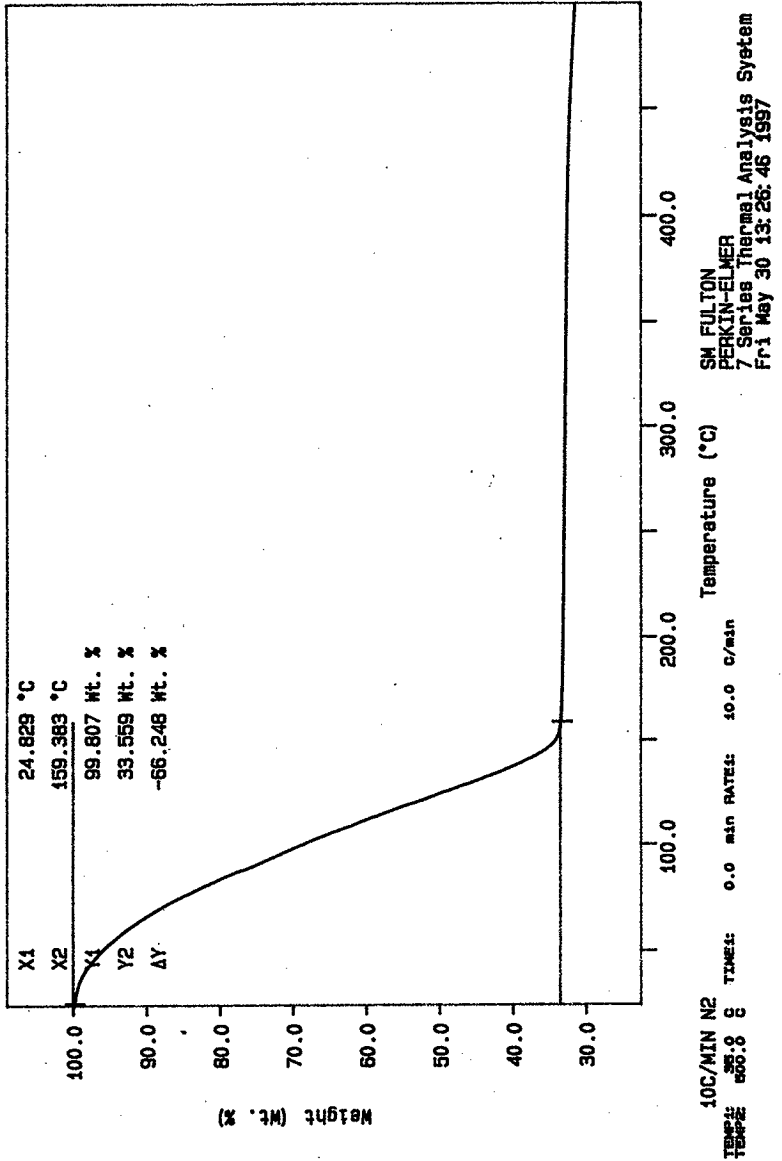
Curve 1: TGA
 File Info: SAM053005 Fri May 30 10:32:29 1997
 Sample Weight: 18.847 mg
 S97T000910



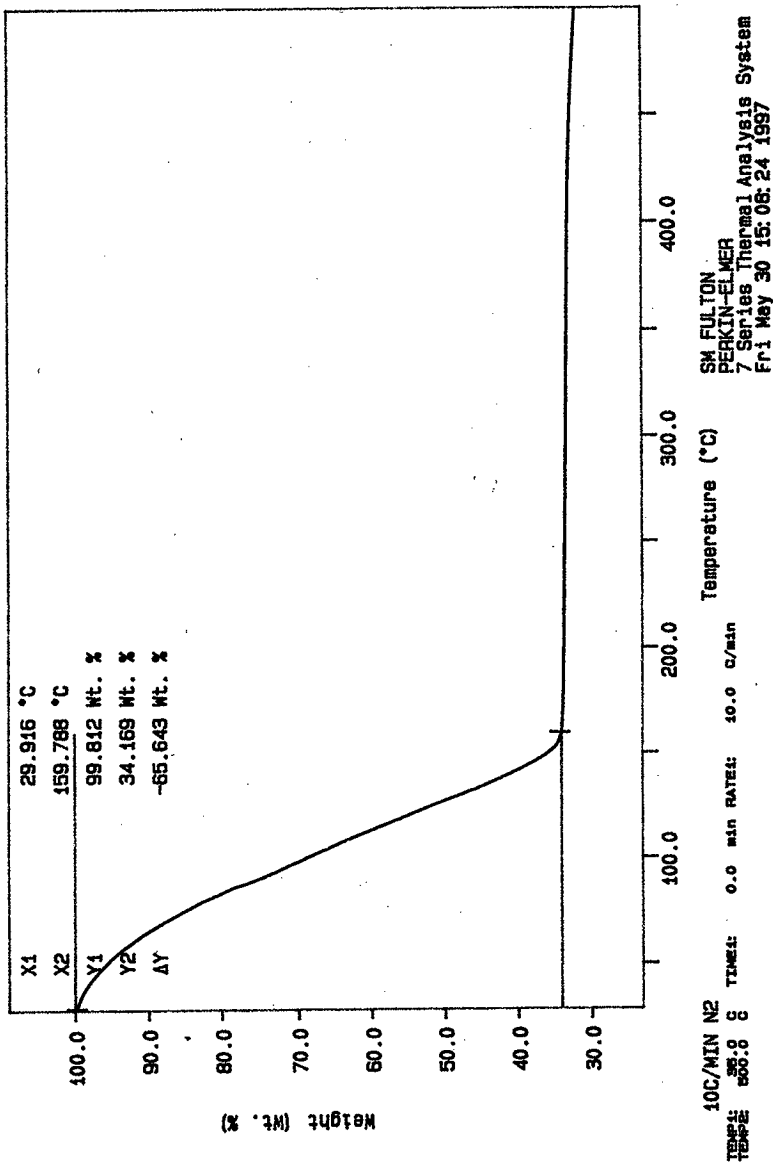
HNF-SD-WM-DP-246, REV. 0 mte
 7-14-97

HNF-SD-WM-DP-254, REV. 0

Curve 1: TGA
File info: SAM053006 Fri May 30 13:23:15 1997
Sample Weight: 20.020 mg
S977000910 DUP



Curve 1: TGA
 File Info: SAM053007 Fri May 30 14:30:49 1997
 Sample Weight: 21.652 mg
 SD71000910-DUP
 5471000911 SMF 5-30-97

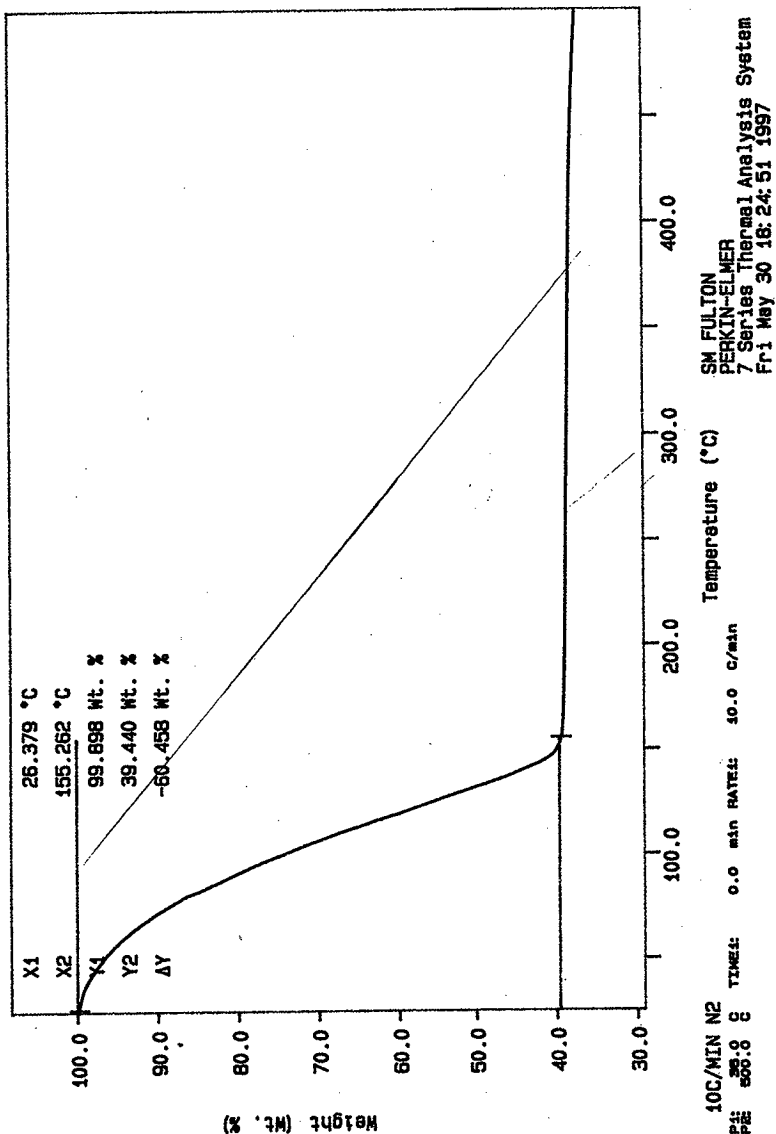


Curve 1: T6A
 File info: SAM053008 Fri May 30 16:01:00 1997
 Sample Weight: 21.453 mg
 S97T000911 DUP

HNF-SD-WM-DP-246, REV. 0 *mtc*

7-14-97

HNF-SD-WM-DP-254, REV. 0



LABCORE Data Entry Template for Worklist# 18283

Analyst: JDS Instrument: TGA0 3 Book # 97NBA

Method: LA-514-114 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, TGA-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.4</u>	<u>59.92</u>	<u>N/A</u>	%
97000311	T-201	2 SAMPLE	S97T000912	0	TGA-03	SOLID	<u>N/A</u>	<u>72.09</u>		%
97000311	T-201	3 DUP	S97T000912	0	TGA-03	SOLID	<u>72.09</u>	<u>71.34</u>	<u>N/A</u>	%
97000311	T-201	4 SAMPLE	S97T000913	0	TGA-03	SOLID	<u>N/A</u>	<u>70.72</u>		%
97000311	T-201	5 DUP	S97T000913	0	TGA-03	SOLID	<u>70.72</u>	<u>69.89</u>	<u>58.64</u>	<u>63.197</u>
							<u>58.64</u>	<u>63.197</u>	<u>N/A</u>	%

Final page for worklist # 18283

See Attached for Signature

Analyst Signature

Date

Validated 6/4/97 Phachol

Analyst Signature

Date

6-3-97

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18283

Analyst: Jds Instrument: TGA0 3 Book # 97N84
Method: LA-560-112 Rev/Mod D-0 HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T201, TGA-01 Run under Nitrogen. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
97000311	T-201	2 SAMPLE	S97T000912	0	TGA-01	SOLID	N/A			%
97000311	T-201	3 DUP	S97T000912	0	TGA-01	SOLID			N/A	%
97000311	T-201	4 SAMPLE	S97T000913	0	TGA-01	SOLID	N/A			%
97000311	T-201	5 DUP	S97T000913	0	TGA-01	SOLID			N/A	%

Final page for worklist # 18283

JM Sp 5/30/97
Analyst Signature Date
Susie M. Dutton

Analyst Signature Date

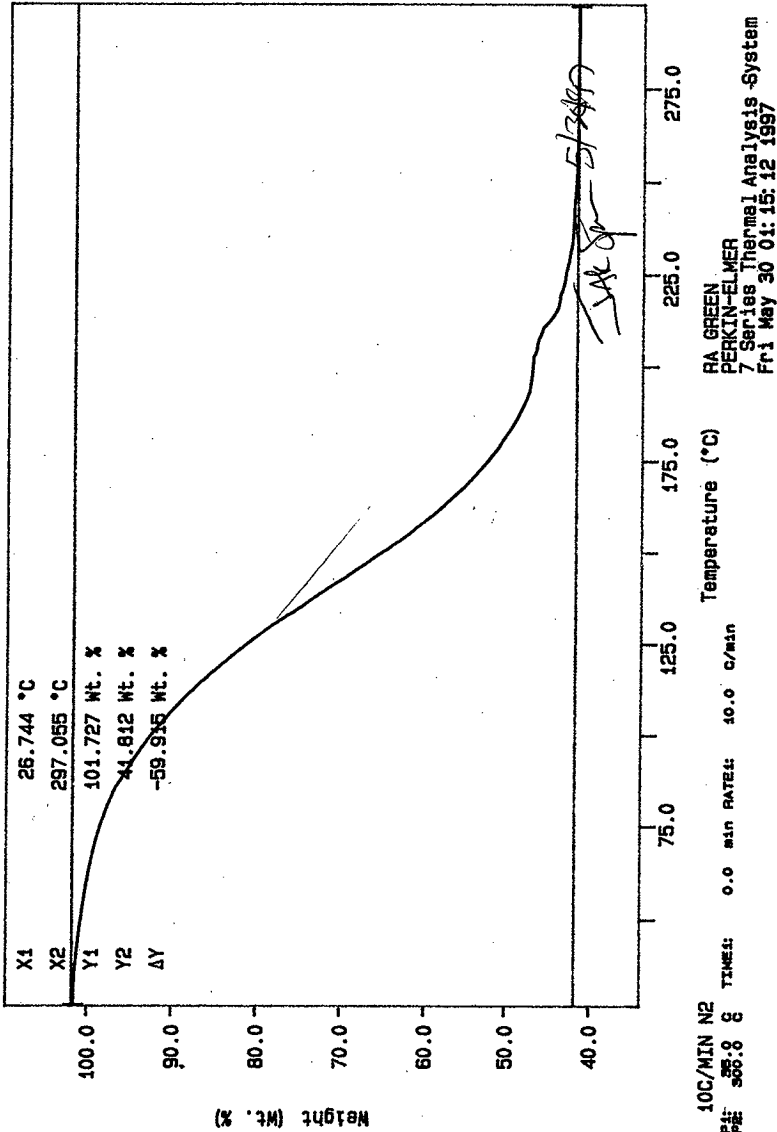
Data Entry Comments:

Ran samples on TGA-03. DBS 6/3/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Curve 1: TGA
File Info: TER052904 Thu May 29 14: 47: 22 1997
Sample Weight: 24.301 mg
97N8-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 207 TO 210



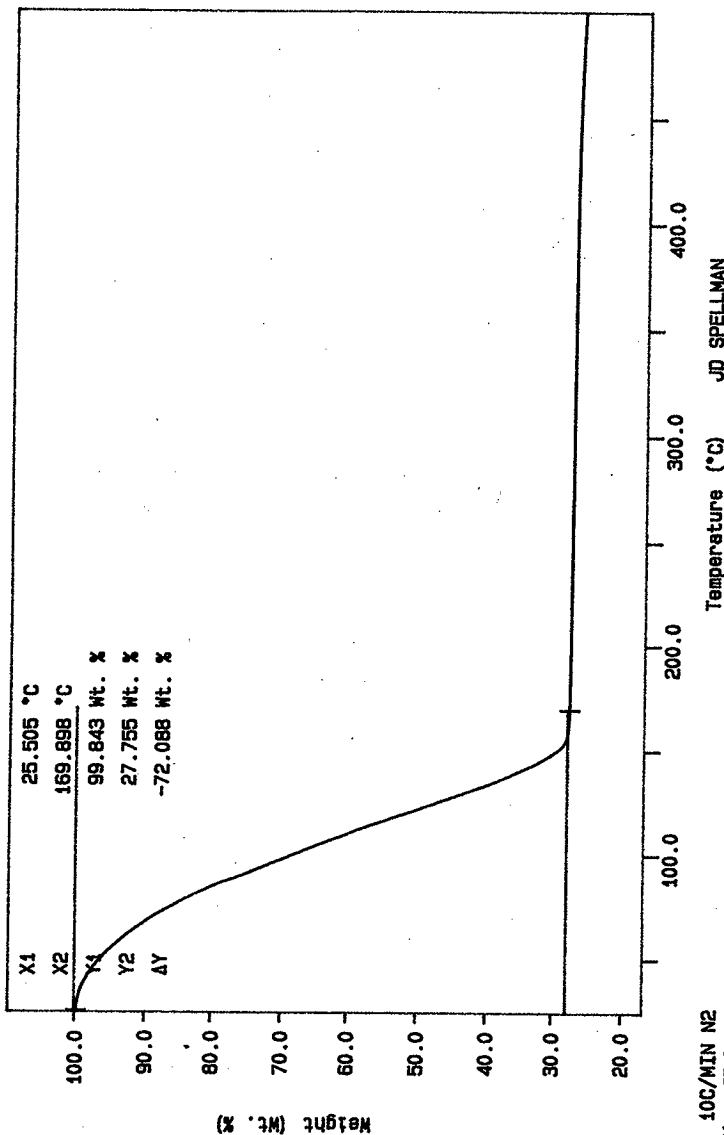
Curve 1: TGA

File info: SAM053001 Thu May 29 23:57:17 1997

Sample Weight: 21.927 mg

S97T000912

HNF-SD-WM-DP-246, REV. 0 *mtc*
7-14-97
HNF-SD-WM-DP-254, REV. 0

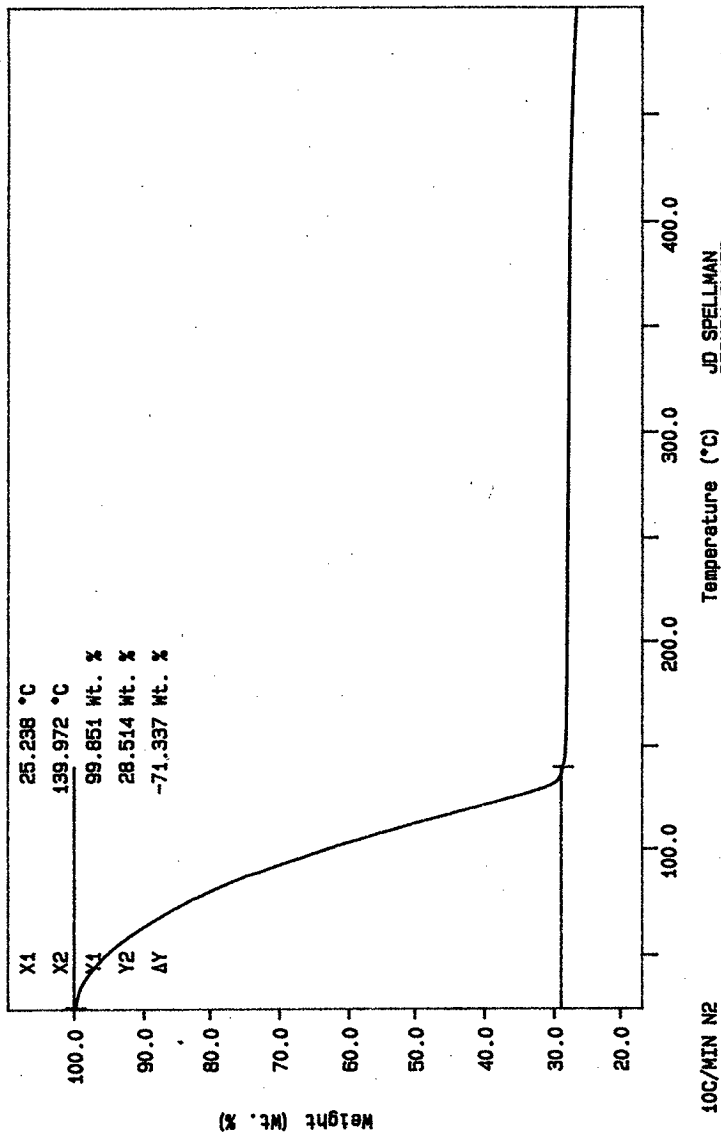


100/MIN N2
TEMP: 35.0 °C
TIME: 00:00:00
10.0 min RATE: 10.0 C/min
JD SPELLMAN
PERKIN-ELMER
7 Series Thermal Analysis System
Fri May 30 00:33:16 1997

Curve 1: TGA
 File Info: SAM053002 Fri May 30 01:22:57 1997
 Sample Weight: 16.957 mg
 S97T000912DUP

HNF-SD-WM-DP-254, REV. 0
 HNF-SD-WM-DP-246, REV. 0 *Monte*

7-14-97



JD SPELLMAN
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Fri May 30 05:35:08 1997

10C/MIN N2
 TEMP: 30.0 °C
 TIME: 0.0 min RATE: 10.0 C/min

Curve 1: TGA

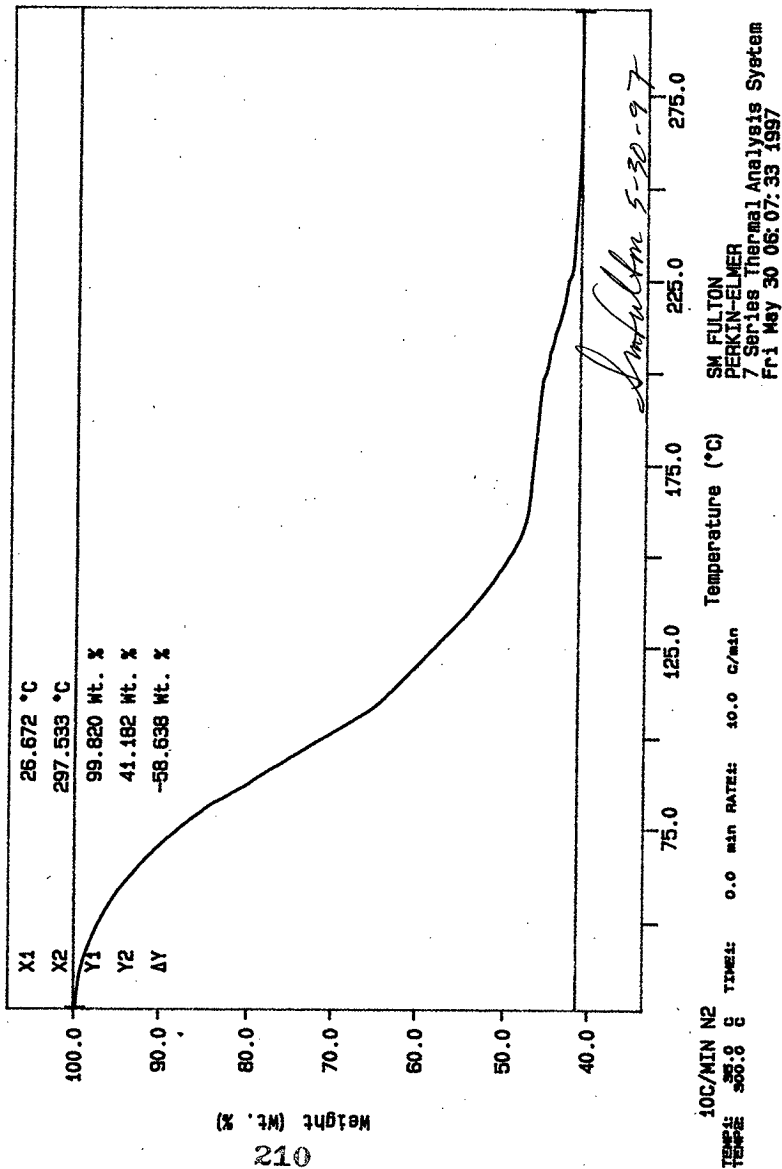
File info: TER053001 Fri May 30 06: 00: 29 1997

Sample Weight: 17.771 mg

97NB-A

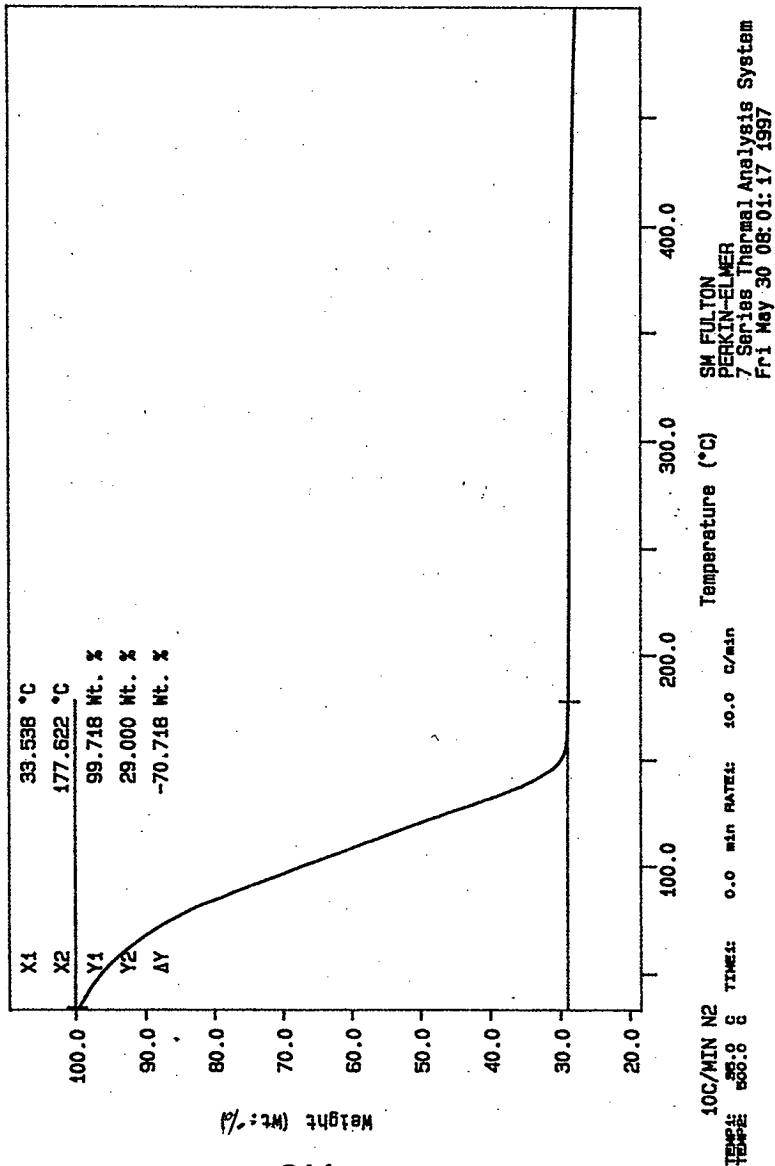
HNF-SD-WM-DP-254, REV. 0
HNF-SD-WM-DP-246, REV. 0

7-14-97

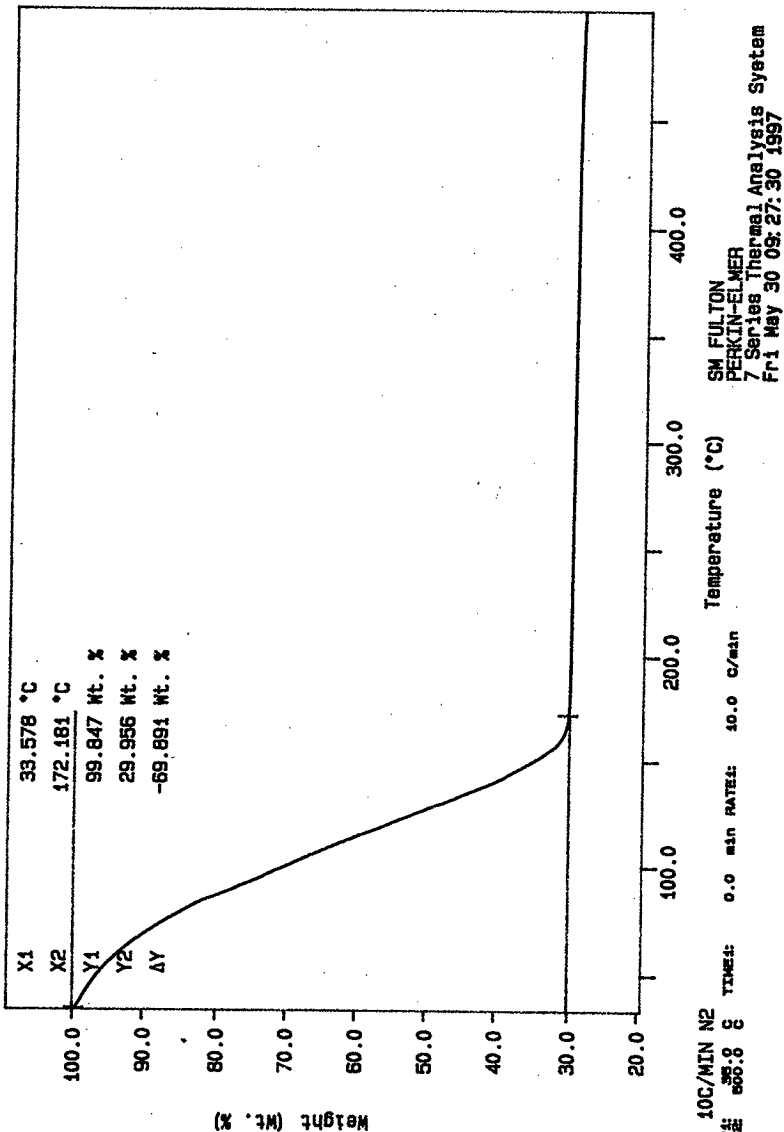


Curve 1: TGA
 File info: SAH053003 Fri May 30 07:04:26 1997
 Sample Weight: 24.830 mg
 S977000913

~~HNF-SD-WM-DP-246, REV. 0 mte~~
 7-14-97
 HNF-SD-WM-DP-254, REV. 0



Curve 1: TGA
File info: SAK053004 Fri May 30 09:17:00 1997
Sample Weight: 23.654 mg
S97T000913 Duf SAF 5-30-97



LABCORE Data Entry Template for Worklist# 18906

Analyst: RDM Instrument: TGA0 3 Book # 103 N8A

Method: LA-514-114 Rev/Mod D-1

Worklist Comment: T-201 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	SOLID	<u>59.0</u>	<u>58.67*</u>	<u>N/A</u>	%
97000311	T-201	2 SAMPLE	S97T001246	0	TGA-03	SOLID	<u>N/A</u>	<u>60.26</u>		%
97000311	T-201	3 DUP	S97T001246	0	TGA-03	SOLID	<u>60.26</u>	<u>62.85</u>	<u>N/A</u>	%
97000311	T-201	4 SAMPLE	S97T001253	0	TGA-03	SOLID	<u>N/A</u>	<u>83.94</u>		%
97000311	T-201	5 DUP	S97T001253	0	TGA-03	SOLID	<u>83.94</u>	<u>87.28</u>	<u>N/A</u>	%

Final page for worklist # 18906

See Attached For Signature
Analyst Signature _____ Date _____

Susan Bee 7/22/97
Analyst Signature _____ Date _____

Validated 7/24/97 Rachel

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18906

Analyst: RW Instrument: TGA0 3 Book # 103N/A

Method: LA-560-112 Rev/Mod D-1

Worklist Comment: T-201 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
97000311	T-201	2 SAMPLE	S97T001246	0	TGA-01	SOLID	N/A			%
97000311	T-201	3 DUP	S97T001246	0	TGA-01	SOLID			N/A	%
97000311	T-201	4 SAMPLE	S97T001253	0	TGA-01	SOLID	N/A			%
97000311	T-201	5 DUP	S97T001253	0	TGA-01	SOLID			N/A	%

Final page for worklist # 18906

Analyst Signature RW Date 7/12/97

Analyst Signature _____ Date _____

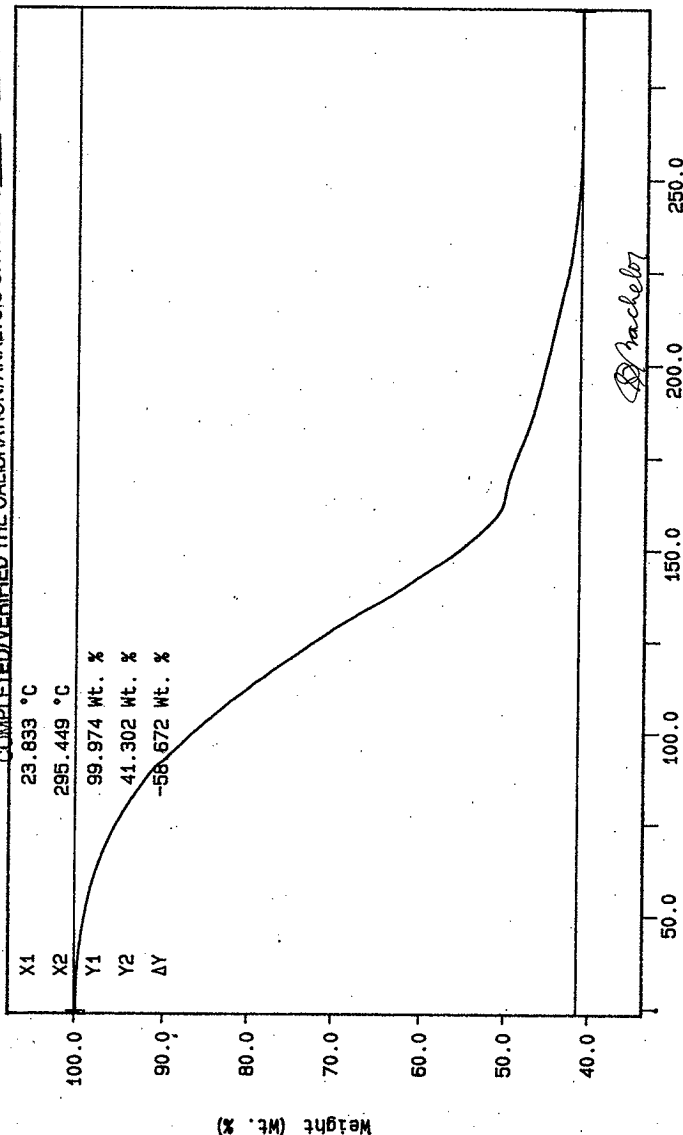
Data Entry Comments:

Ran samples on TGA-03. Q23 7/22/97

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

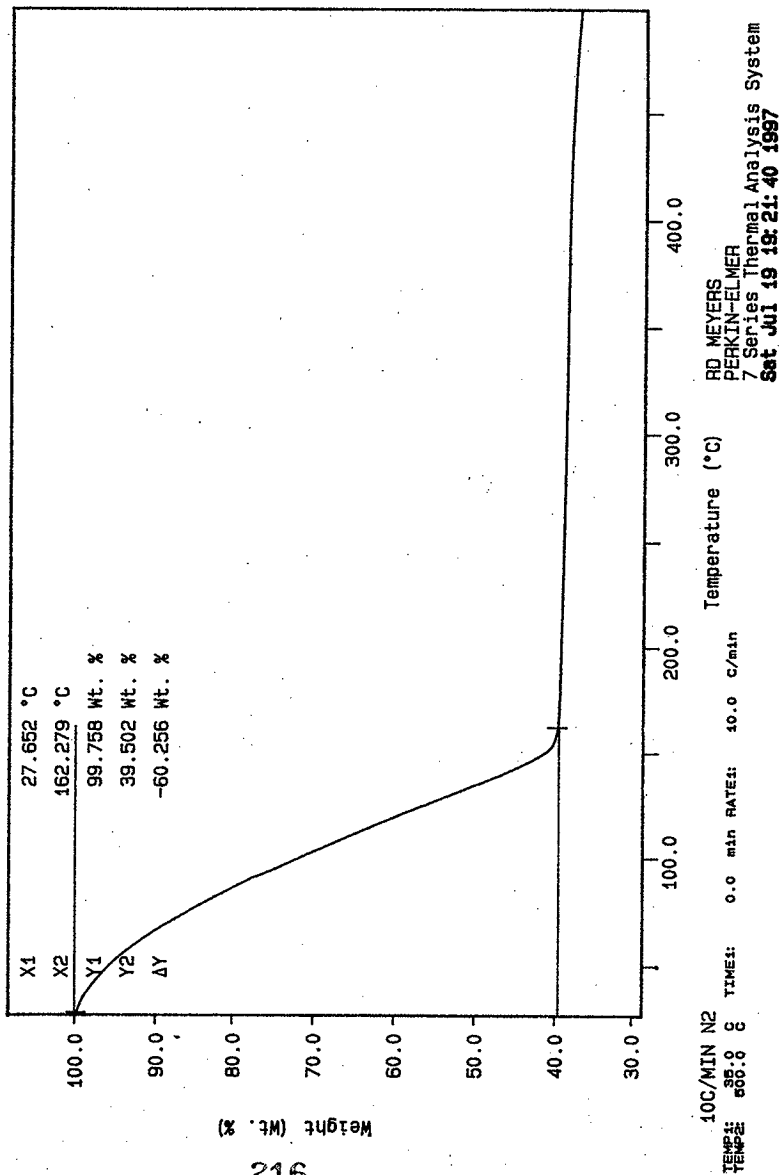
Curve 1: TGA
 File Info: TER071901 Sat Jul 19 07:31:57 1997
 Sample Weight: 13.821 mg
 STD 103NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 212 TO 219

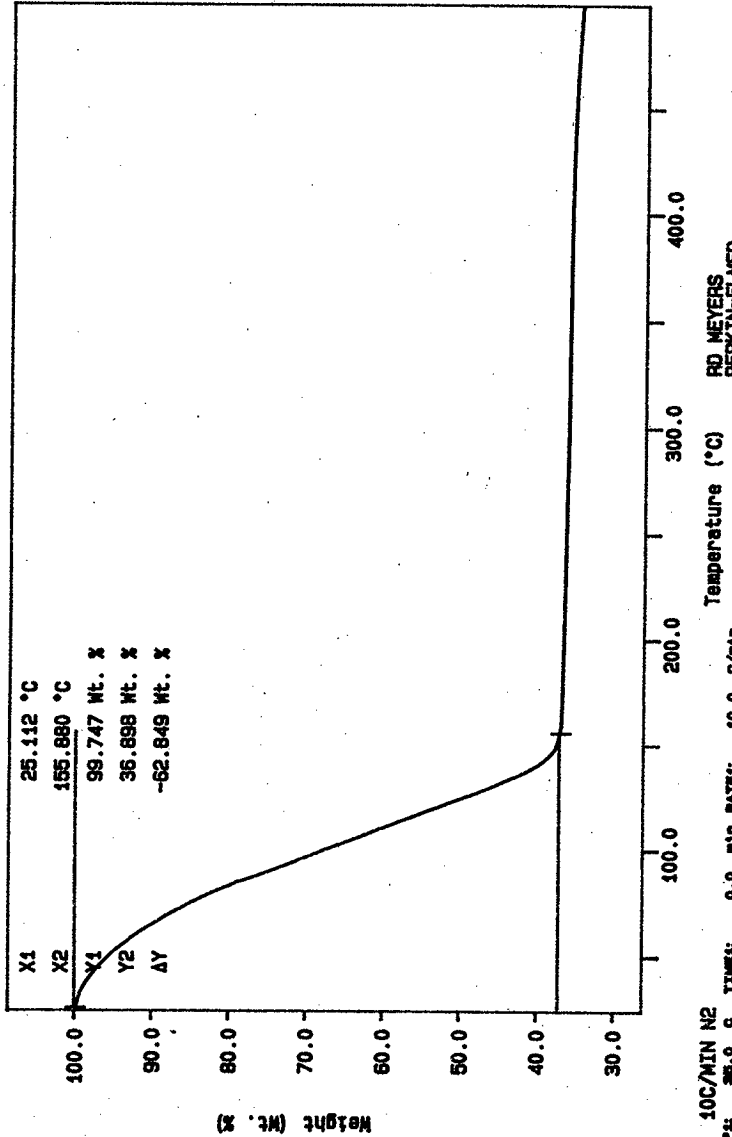


10C/MIN N2
 TEMP: 35.0 °C
 TIME: 0.0 min RATE: 10.0 C/min
 RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat Jul 19 18:34:20 1997

Curve 1: TGA
File info: SAM071909 Sat Jul 19 12:27:20 1997
Sample Weight: 19.624 mg
S97T001246

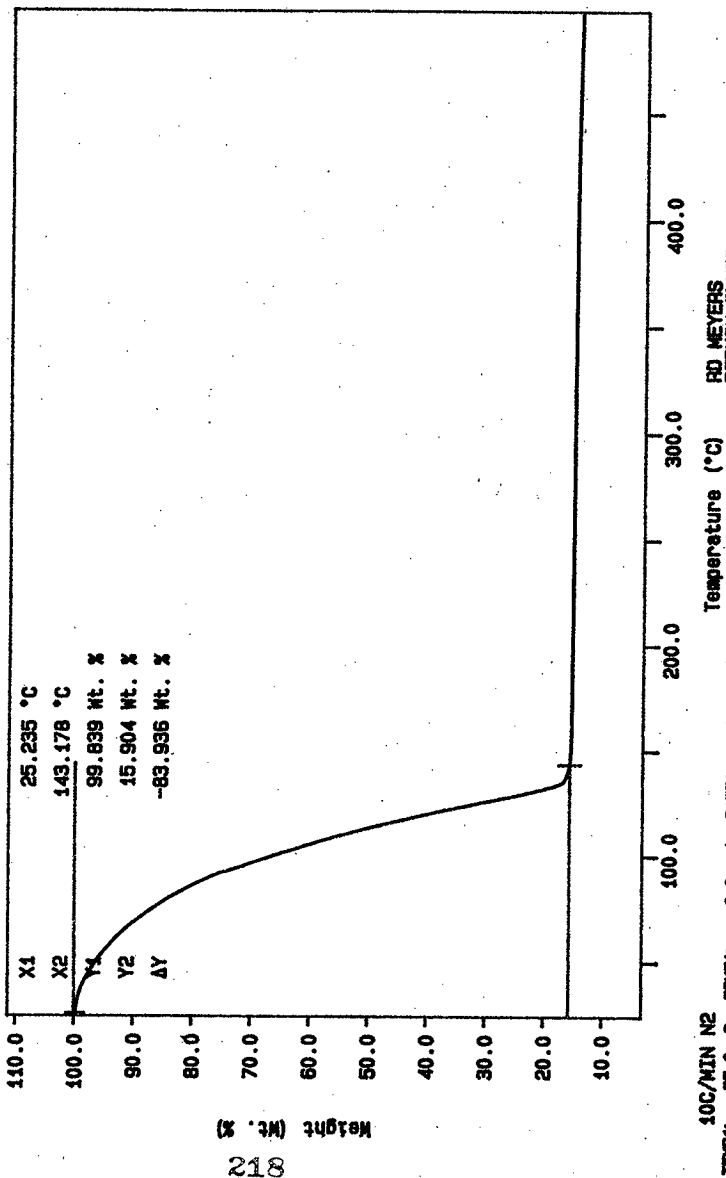


Curve 1: TGA
 File info: SA0071910 Sat Jul 19 14:16:39 1997
 Sample Weight: 13.239 mg
 S97T001-459UP-1846DUP 008 7/23/97



RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat Jul 19 16:55:06 1997

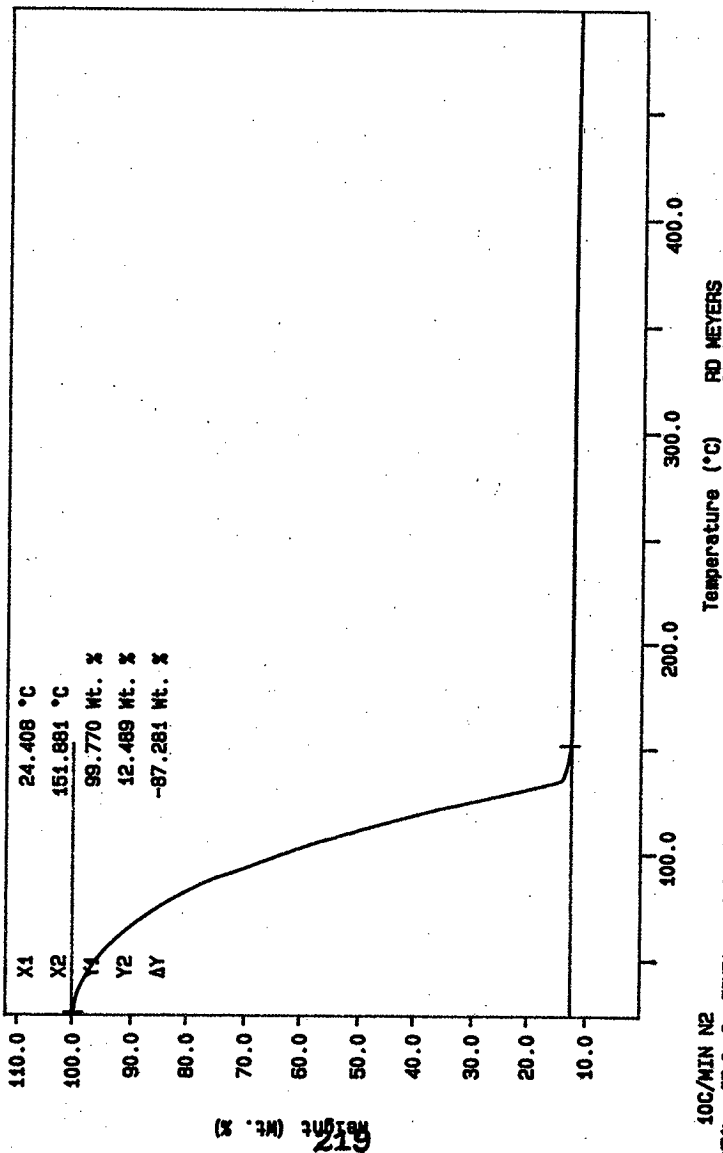
Curve 4: TGA
 File Info: SAN074911 Sat Jul 19 15:28:32 1997
 Sample Weight: 10.334 mg
 S97T001253



RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat Jul 19 15:28:32 1997

100/MIN N2
 TIME: 0.0 min RATE: 10.0 °C/min
 THERM: 0.0

Curve 1: TGA
 File Info: SAN071912 Set Jul 19 16:59:10 1997
 Sample Weight: 10.938 mg
 S97T0012530JP



10C/MIN N2
 TIME: 0.0 min RATE: 10.0 C/min
 25.8 g
 25.8 g

RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sat Jul 19 16:45:27 1997

LABCORE Completed Worklist Report for Worklist# 18277

Analyst: rag

Instrument: BA001

Book# 133N16A

Method: LA 510-112 Rev/Mod D-1

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, SPG Use a calibrated pipette. skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		SPG-01	LIQUID	1.39755	1.395	99.818 % Recovery	
2 SAMPLE	S97T000823	0	SPG-01	LIQUID	N/A	0.997	1.00e-002	Sp.G.
3 DUP	S97T000823	0	SPG-01	LIQUID	0.997	0.998	0.100	RPD
4 SAMPLE	S97T000833	0	SPG-01	LIQUID	N/A	1.055	1.00e-002	Sp.G.
5 DUP	S97T000833	0	SPG-01	LIQUID	1.055	1.054	0.095	RPD
6 SAMPLE	S97T000834	0	SPG-01	LIQUID	N/A	1.055	1.00e-002	Sp.G.
7 DUP	S97T000834	0	SPG-01	LIQUID	1.055	1.061	0.567	RPD
8 SAMPLE	S97T000835	0	SPG-01	LIQUID	N/A	1.058	1.00e-002	Sp.G.
9 DUP	S97T000835	0	SPG-01	LIQUID	1.058	1.050	0.759	RPD
10 SAMPLE	S97T000836	0	SPG-01	LIQUID	N/A	1.065	1.00e-002	Sp.G.
11 DUP	S97T000836	0	SPG-01	LIQUID	1.065	1.051	1.323	RPD
12 SAMPLE	S97T000837	0	SPG-01	LIQUID	N/A	1.057	1.00e-002	Sp.G.
13 DUP	S97T000837	0	SPG-01	LIQUID	1.057	1.071	1.316	RPD

Final page for worklist# 18277

Analyst Signature

Date

Analyst Signature

Date

RW Schroeder 5/29/97
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 18277

Analyst: RES Instrument: BA001 Book # 133N16-A

Method: LA-510-112 Rev/Mod D-1 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, SPG Use a calibrated pipette. skm

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			SPG-01	LIQUID	<u>1.39755</u>	<u>1.395</u> <u>0.997</u>	<u>N/A</u>	Sp.G.
97000311	T-201	2 SAMPLE	S97T000823	0	SPG-01	LIQUID	<u>N/A</u> <u>0.997</u>	<u>0.998</u> <u>0.998</u>	<u>0.010</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	3 DUP	S97T000823	0	SPG-01	LIQUID	<u>0.998</u> <u>0.998</u>	<u>0.998</u> <u>1.055</u>	<u>N/A</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	4 SAMPLE	S97T000833	0	SPG-01	LIQUID	<u>N/A</u> <u>1.055</u>	<u>1.055</u> <u>1.054</u>	<u>0.010</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	5 DUP	S97T000833	0	SPG-01	LIQUID	<u>1.055</u> <u>1.055</u>	<u>1.054</u> <u>1.055</u>	<u>N/A</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	6 SAMPLE	S97T000834	0	SPG-01	LIQUID	<u>N/A</u> <u>1.055</u>	<u>1.061</u> <u>1.061</u>	<u>0.010</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	7 DUP	S97T000834	0	SPG-01	LIQUID	<u>1.055</u> <u>1.055</u>	<u>1.067</u> <u>1.058</u>	<u>N/A</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	8 SAMPLE	S97T000835	0	SPG-01	LIQUID	<u>N/A</u> <u>1.058</u>	<u>1.058</u> <u>1.050</u>	<u>0.010</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	9 DUP	S97T000835	0	SPG-01	LIQUID	<u>1.058</u> <u>1.058</u>	<u>1.050</u> <u>1.065</u>	<u>N/A</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	10 SAMPLE	S97T000836	0	SPG-01	LIQUID	<u>N/A</u> <u>1.065</u>	<u>1.067</u> <u>1.051</u>	<u>0.010</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	11 DUP	S97T000836	0	SPG-01	LIQUID	<u>1.065</u> <u>1.067</u>	<u>1.051</u> <u>1.057</u>	<u>N/A</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	12 SAMPLE	S97T000837	0	SPG-01	LIQUID	<u>N/A</u> <u>1.057</u>	<u>1.057</u> <u>1.071</u>	<u>0.010</u>	Sp.G. <i>RWS 5/29/97</i>
97000311	T-201	13 DUP	S97T000837	0	SPG-01	LIQUID	<u>1.057</u> <u>1.057</u>	<u>1.071</u> <u>1.073</u>	<u>N/A</u>	Sp.G. <i>RWS 5/29/97</i>

Final page for worklist # 18277

Rae Ann Green 5-27-97
Analyst Signature Date

[Signature] 5-27-97
Analyst Signature Date

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

HNF-SD-WM-DP-254, REV. 0

SPECIFIC GRAVITY : LA-510-112 ^{D-1} (G-3) ^{Rev 5/29/97}

Type		STANDARD	STANDARD
STANDARD	Gross Weight (W2)	1.5018	1.5390
Work List	Tare Weight (W1)	1.3965	1.4346
18277	Weight of Solution (W2-W1)	0.1053	0.1044
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.4014	1.3894
Matrix	Specific Gravity (Average)	1.3954	
LIQUID			
Sample #			
STD			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RAG	Specific Gravity = [(W2-W1) * 1000 μ L/mL] / [Vol. of Solution μ L * 1.000 g/mL]		
Date			
05/27/97	v RESULT v		
Time	Specific Gravity Average =	1.395	
11:30 AM			

Data Entry by: <i>[Signature]</i>	Date: 05/27/97
Approved by: <i>[Signature]</i>	Date: 5/29/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

HNF-SD-WM-DP-254, REV. 0

SPECIFIC GRAVITY : LA-510-112 (G-3)

D1 Rev 5/29/97

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.4976	1.5134
Work List	Tare Weight (W1)	1.4227	1.4384
18277	Weight of Solution (W2-W1)	0.0749	0.075
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	0.9968	0.9981
Matrix	Specific Gravity (Average)	0.9975	
LIQUID			
Sample #			
S97T000823			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RAG	Specific Gravity = $[(W2-W1) \times 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} \times 1.000 \text{ g/mL}]$		
Date			
05/27/97	v RESULT v		
Time	Specific Gravity Average =	0.997	
11:30 AM			

Data Entry by: <i>Ray J. Hume</i>	Date: 05/27/97
Approved by: <i>Ray J. Hume</i>	Date: 5/29/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

HNF-SD-WM-DP-254, REV. 0

SPECIFIC GRAVITY : LA-510-112 (C-3)

D-1 RWS 5/29/97

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.4086	1.5094
Work List	Tare Weight (W1)	1.3293	1.4302
18277	Weight of Solution (W2-W1)	0.0793	0.0792
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.0554	1.0540
Matrix	Specific Gravity (Average)	1.0547	
LIQUID			
Sample #			
S97T000833			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RAG	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
05/27/97	ν RESULT ν		
Time	Specific Gravity Average =	1.055	
11:30 AM			

Data Entry by: *May J. Schaefer* Date: 05/27/97

Approved by: *R. J. Schaefer* Date: 5/29/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

HNF-SD-WM-DP-254, REV. 0

SPECIFIC GRAVITY : LA-510-112 (C-3)

Dr. rev 5/29/97

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.5511	1.4032
Work List	Tare Weight (W1)	1.4718	1.3235
18277	Weight of Solution (W2-W1)	0.0793	0.0797
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.0554	1.0607
Matrix	Specific Gravity (Average)	1.0580	
LIQUID			
Sample #			
S97T000834			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RAG	Specific Gravity = $[(W2-W1) \times 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} \times 1.000 \text{ g/mL}]$		
Date			
05/27/97	v RESULT v		
Time	Specific Gravity Average =	1.058	
11:30 AM			

Data Entry by: <i>Dr. J. Schmitt</i>	Date: 05/27/97
Approved by: <i>RW Schmitt</i>	Date: 5/29/97

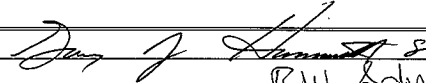
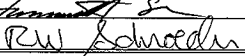
PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

HNF-SD-WM-DP-254, REV. 0

SPECIFIC GRAVITY : LA-510-112 (C-3)

D-1 RWS 5/29/97

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.5042	1.4434
Work List	Tare Weight (W1)	1.4247	1.3645
18277	Weight of Solution (W2-W1)	0.0795	0.0789
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.0580	1.0500
Matrix	Specific Gravity (Average)	1.0540	
LIQUID			
Sample #			
S97T000835			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RAG	Specific Gravity = $[(W2-W1) * 1000 \mu\text{L/mL}] / [\text{Vol. of Solution } \mu\text{L} * 1.000 \text{ g/mL}]$		
Date			
05/27/97	v RESULT v		
Time	Specific Gravity Average =	1.054	
11:30 AM			

Data Entry by: 	Date: 05/27/97
Approved by: 	Date: 5/29/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

HNF-SD-WM-DP-254, REV. 0

SPECIFIC GRAVITY : LA-510-112

D-1 ^{mkc} RWS 5/29/97

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.4909	1.5047
Work List	Tare Weight (W1)	1.4109	1.4257
18277	Weight of Solution (W2-W1)	0.08	0.079
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.0647	1.0514
Matrix	Specific Gravity (Average)	1.0580	
LIQUID			
Sample #			
S97T000836			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RAG	Specific Gravity = $[(W2-W1) \times 1000 \mu\text{L}/\text{mL}] / [\text{Vol. of Solution } \mu\text{L} \times 1.000 \text{ g/mL}]$		
Date			
05/27/97	ν RESULT ν		
Time	Specific Gravity Average =	1.058	
11:30 AM			

Data Entry by:	Date: 05/27/97
Approved by:	Date: 5/29/97

PLACE ANALYTICAL CARD IN BOX BELOW OR ATTACH TRAVELER

HNF-SD-WM-DP-254, REV. 0

SPECIFIC GRAVITY : LA-510-112 (C-3)

D-1 RWS 5/29/97

Type		SAMPLE	REPLICATE
SAMPLE	Gross Weight (W2)	1.4281	1.4035
Work List	Tare Weight (W1)	1.3487	1.3230
18277	Weight of Solution (W2-W1)	0.0794	0.0805
Test Code	Volume of Solution μ L	75.1400	75.1400
SPG-01	Specific Gravity	1.0567	1.0713
Matrix	Specific Gravity (Average)	1.0640	
LIQUID			
Sample #			
S97T000837			
Instrument Code	Gross Weight (W2) = Wt. of vial + cap + cotton + solution		
BA001	Tare Weight (W1) = Wt. of vial + cap + cotton		
Analyst			
RAG	Specific Gravity = [(W2-W1) * 1000 μ L/mL] / [Vol. of Solution μ L * 1.000 g/mL]		
Date			
05/27/97	v RESULT v		
Time	Specific Gravity Average =	1.064	
11:30 AM			

Data Entry by:	Date: 05/27/97
Approved by:	Date: 5/29/97

LABCORE Completed Worklist Report for Worklist# 18268

Analyst: dpb

Instrument: IC01

Book# 61A20AB

Method: 14-53-105 Rev/Mod D-1

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @IC-01 skm

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	@IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	@IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	@IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	@IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	@IC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	@IC-QC P04	QC	1	<1.20e-1		ug/mL
1 CCB	0	@IC-QC S04	QC	1	<1.39e-1		ug/mL
1 CCB	0	@IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	@IC-QC F	QC	5.90e01	5.45e+01	92.373 % Recovery	
2 CCV	0	@IC-QC CL	QC	7.90e01	7.77e+01	98.354 % Recovery	
2 CCV	0	@IC-QC NO2	QC	5.44e02	5.51e+02	101.287 % Recovery	
2 CCV	0	@IC-QC BR	QC	5.89e02	5.96e+02	101.188 % Recovery	
2 CCV	0	@IC-QC NO3	QC	5.94e02	6.06e+02	102.020 % Recovery	
2 CCV	0	@IC-QC P04	QC	5.45e02	5.50e+02	100.917 % Recovery	
2 CCV	0	@IC-QC S04	QC	6.31e02	6.26e+02	99.208 % Recovery	
2 CCV	0	@IC-QC OXALATE2	QC	5.36e02	5.55e+02	103.545 % Recovery	
3 SAMPLE	S97T001242 0	@IC-01 F-02	LIQUID	N/A	3.630e-01	0.132	ug/mL
3 SAMPLE	S97T001242 0	@IC-01 CL-02	LIQUID	N/A	8.780e+00	0.187	ug/mL
3 SAMPLE	S97T001242 0	@IC-01 NO2-02	LIQUID	N/A	< 1.188e+00	1.188	ug/mL
3 SAMPLE	S97T001242 0	@IC-01 BR-02	LIQUID	N/A	< 1.375e+00	1.375	ug/mL
3 SAMPLE	S97T001242 0	@IC-01 NO3-02	LIQUID	N/A	1.953e+00	1.529	ug/mL
3 SAMPLE	S97T001242 0	@IC-01 P04-02	LIQUID	N/A	< 1.320e+00	1.320	ug/mL
3 SAMPLE	S97T001242 0	@IC-01 S04-02	LIQUID	N/A	1.544e+01	1.518	ug/mL
3 SAMPLE	S97T001242 0	@IC-01 OXALATE2	LIQUID	N/A	< 1.155e+00	1.155	ug/mL
4 DUP	S97T001242 0	@IC-01 F-02	LIQUID	3.63e-01	3.60e-01	0.930	RPD
4 DUP	S97T001242 0	@IC-01 CL-02	LIQUID	8.78e+00	8.25e+00	6.224	RPD
4 DUP	S97T001242 0	@IC-01 NO2-02	LIQUID	<1.19e0	<1.19e0		RPD
4 DUP	S97T001242 0	@IC-01 BR-02	LIQUID	<1.38e0	<1.38e0		RPD
4 DUP	S97T001242 0	@IC-01 NO3-02	LIQUID	1.95e+00	2.32e+00	17.330	RPD
4 DUP	S97T001242 0	@IC-01 P04-02	LIQUID	<1.32e0	<1.32e0		RPD
4 DUP	S97T001242 0	@IC-01 S04-02	LIQUID	1.54e+01	1.56e+01	1.290	RPD
4 DUP	S97T001242 0	@IC-01 OXALATE2	LIQUID	<1.16e0	<1.16e0		RPD
5 SAMPLE	S97T001203 0	@IC-01 F-02	LIQUID	N/A	4.177e+03	25.450	ug/mL
5 SAMPLE	S97T001203 0	@IC-01 CL-02	LIQUID	N/A	9.407e+02	36.060	ug/mL
5 SAMPLE	S97T001203 0	@IC-01 NO2-02	LIQUID	N/A	3.102e+02	229.100	ug/mL
5 SAMPLE	S97T001203 0	@IC-01 BR-02	LIQUID	N/A	< 2.651e+02	265.100	ug/mL
5 SAMPLE	S97T001203 0	@IC-01 NO3-02	LIQUID	N/A	4.766e+04	294.800	ug/mL
5 SAMPLE	S97T001203 0	@IC-01 P04-02	LIQUID	N/A	7.576e+02	254.500	ug/mL
5 SAMPLE	S97T001203 0	@IC-01 S04-02	LIQUID	N/A	< 2.927e+02	292.700	ug/mL
5 SAMPLE	S97T001203 0	@IC-01 OXALATE2	LIQUID	N/A	< 2.227e+02	222.700	ug/mL
6 DUP	S97T001203 0	@IC-01 F-02	LIQUID	4.18e+03	4.24e+03	1.425	RPD

LABCORE Completed Worklist Report for Worklist# 18268

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
6	DUP	S97T001203	0		@IC-01	CL-02	LIQUID	9.41e+02	9.89e+02	4.974 RPD
6	DUP	S97T001203	0		@IC-01	NO2-02	LIQUID	3.10e+02	3.12e+02	0.643 RPD
6	DUP	S97T001203	0		@IC-01	BR-02	LIQUID	<2.65e2	<2.65e2	RPD
6	DUP	S97T001203	0		@IC-01	NO3-02	LIQUID	4.77e+04	4.71e+04	1.266 RPD
6	DUP	S97T001203	0		@IC-01	PO4-02	LIQUID	7.58e+02	6.94e+02	8.815 RPD
6	DUP	S97T001203	0		@IC-01	SO4-02	LIQUID	<2.93e2	<2.93e2	RPD
6	DUP	S97T001203	0		@IC-01	OXALATE2	LIQUID	<2.23e2	<2.23e2	RPD
7	SPK	S97T001203	0		@IC-01	F-02	LIQUID	5.90e01	5.74e+01	97.288 % Recovery
7	SPK	S97T001203	0		@IC-01	CL-02	LIQUID	7.90e01	8.39e+01	106.203 % Recovery
7	SPK	S97T001203	0		@IC-01	NO2-02	LIQUID	5.44e02	5.25e+02	96.507 % Recovery
7	SPK	S97T001203	0		@IC-01	BR-02	LIQUID	5.89e02	5.48e+02	93.039 % Recovery
7	SPK	S97T001203	0		@IC-01	NO3-02	LIQUID	5.94e02	5.66e+02	95.286 % Recovery
7	SPK	S97T001203	0		@IC-01	PO4-02	LIQUID	5.45e02	5.37e+02	98.532 % Recovery
7	SPK	S97T001203	0		@IC-01	SO4-02	LIQUID	6.31e02	6.27e+02	99.366 % Recovery
7	SPK	S97T001203	0		@IC-01	OXALATE2	LIQUID	5.36e02	5.58e+02	104.104 % Recovery

Final page for worklist# 18268

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____


Reviewer Signature _____ Date 6/12/97

LABCORE Data Entry Template for Worklist# 18268

Analyst: DPB Instrument: IC0 1 Book# 61N20-13
Method: LA-533-105 Rev/Mod D-1 HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T201, @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S97T001242 0		@IC-01	LIQUID	97000311	T-201
	Analytes Requested:		BR-02	CL-02	F-02	NO2-02
			OXALATE2	PO4-02	S04-02	NO3-02
4 DUP	S97T001242 0		@IC-01	LIQUID		
5 SAMPLE	S97T001203 0		@IC-01	LIQUID	97000311	T-201
	Analytes Requested:		BR-02	CL-02	F-02	NO2-02
			OXALATE2	PO4-02	S04-02	NO3-02
6 DUP	S97T001203 0		@IC-01	LIQUID		
7 SPK	S97T001203 0		@IC-01	LIQUID		

Final page for worklist # 18268

David P. Bromley 6/6/97 0450
Analyst Signature Date

Analyst Signature Date

Uploaded 6-10-97

John Wonnell

18268JUN.CSV

Validated 6/11/97 mty

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

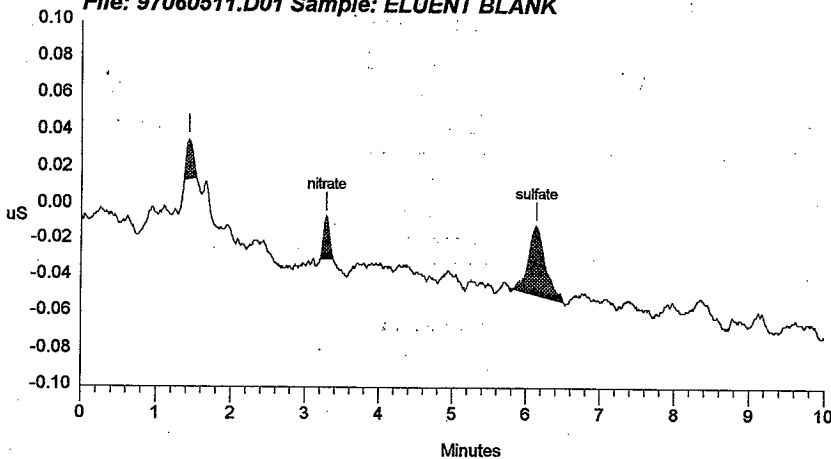
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 Data File : C:\DX\DATA\97060511.D01
 Method : C:\DX\METHOD\KIT.MET HNF-SD-WM-DP-254, REV. 0
 ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
 Analyst : *John Faye* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.43		0.000	22	129	1	
2	3.28	nitrate	0.090	23	127	1	0.92
3	6.13	sulfate	-0.015	37	593	1	1.77
Totals			0.075	82	849		

File: 97060511.D01 Sample: ELUENT BLANK



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 222 TO 228

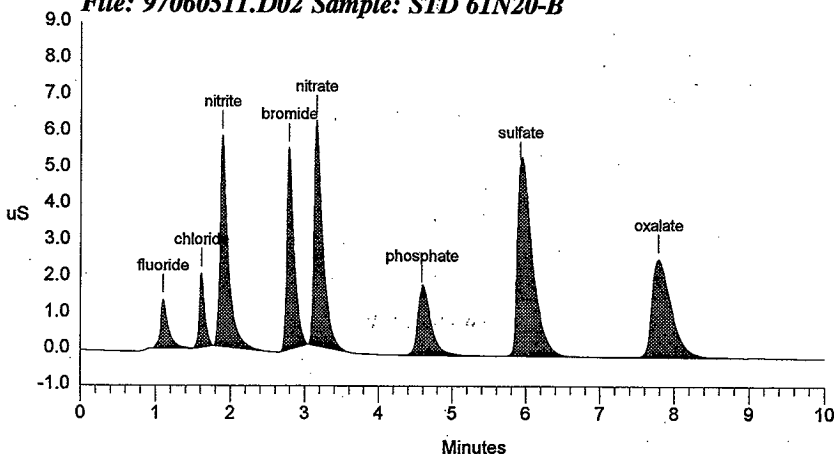
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 Data File : C:\DX\DATA\97060511.D02
 Method : C:\DX\METHOD\KIT.MET HNF-SD-WM-DP-254, REV. 0
 ACI Address: 1 System: 1 Inject#: 2 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 101 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.10	fluoride	54.494	1361	9791	1	-1.79
2	1.61	chloride	77.652	2054	10137	1	0.84
3	1.89	nitrite	551.161	5823	43582	1	-2.08
4	2.78	bromide	596.361	5563	37298	1	1.83
5	3.15	nitrate	605.919	6228	50490	1	-2.97
6	4.59	phosphate	549.550	1825	24377	1	-0.58
7	5.92	sulfate	625.894	5249	76831	1	-1.77
8	7.79	oxalate	554.841	2734	49081	1	-0.68
Totals			3615.873	30836	301587		

File: 97060511.D02 Sample: STD 61N20-B



```

=====
Sample Name: S97T001242 SAM      Date: 06/05/1997 22:46:37
Data File  : C:\DX\DATA\97060511.D05      HNF-SD-WM-DP-254, REV. 0
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 5      Detector: CDM-1
Analyst    :      Column: AG4A/AS4A anion column
=====
  
```

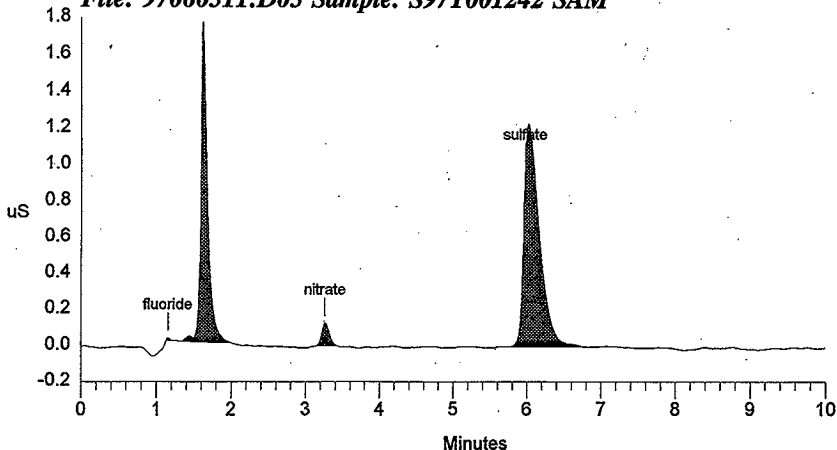
```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          11    3000 5Hz   0.00 10.00          30
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.15	fluoride	0.363	15	39	1	2.98
2	1.62	chloride	8.780	1755	10528	1	1.67
3	3.26	nitrate	1.953	125	862	1	0.31
4	5.97	sulfate	15.441	985	17788	1	-0.88
Totals			26.537	2879	29217		

File: 97060511.D05 Sample: S97T001242 SAM



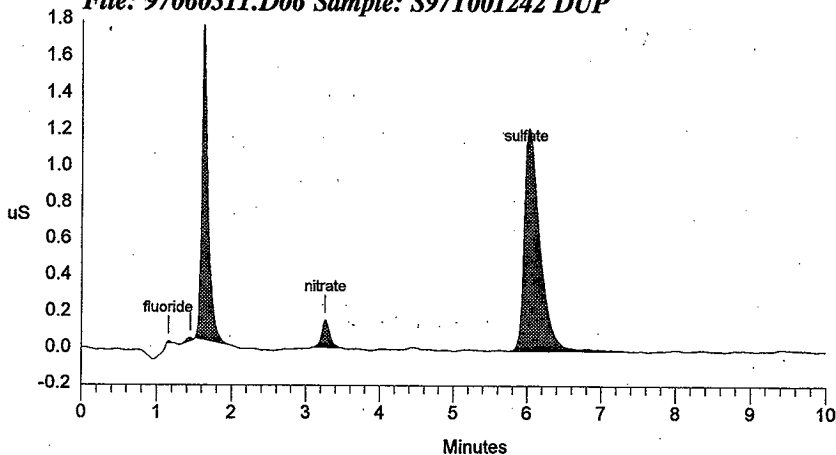
Sample Name: S97T001242 DUP Date: 06/05/1997 22:57:16
 Data File : C:\DX\DATA\97060511.D06
 Method : C:\DX\METHOD\KIT.MET HNF-SD-WM-DP-254, REV. 0
 ACI Address: 1 System: 1 Inject#: 6 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 11 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.15	fluoride	0.360	14	35	1	2.98
2	1.45		0.000	18	105	1	
3	1.61	chloride	8.252	1723	9889	1	1.26
4	3.26	nitrate	2.320	153	1142	1	0.31
5	5.97	sulfate	15.635	1001	18003	1	-0.88
Totals			26.568	2909	29174		

File: 97060511.D06 Sample: S97T001242 DUP



```

=====
Sample Name: S97T001203 SAM          Date: 06/06/1997 01:59:25
Data File  : C:\DX\DATA\97060511.D12
Method     : C:\DX\METHOD\KIT.MET   HNF-SD-WM-DP-254, REV. 0
ACI Address: 1 System: 1 Inject#: 12  Detector: CDM-1
Analyst    :                        Column: AG4A/AS4A anion column
=====
  
```

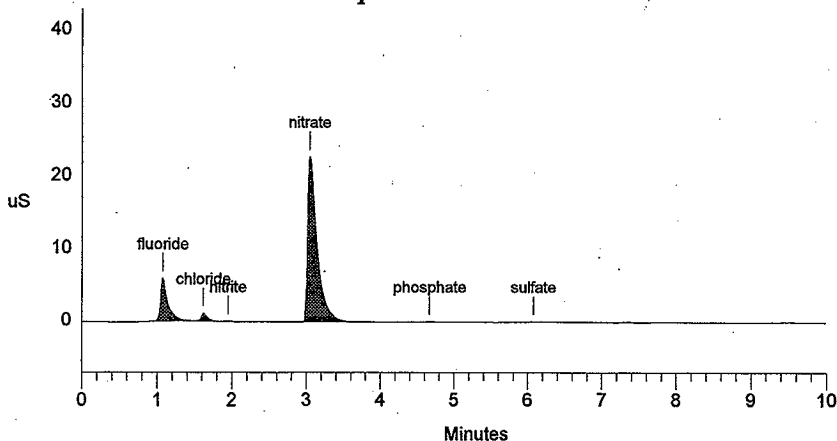
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-----
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          2121   3000  5Hz   0.00 10.00          30
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	4176.901	5904	38711	1	-4.17
2	1.61	chloride	940.690	1088	5835	1	1.26
3	1.95	nitrite	310.153	69	403	1	1.04
4	3.05	nitrate	47659.298	22767	199838	1	-6.26
5	4.67	phosphate	757.607	103	1312	1	1.16
6	6.08	sulfate	114.413	97	1431	1	0.88
Totals			53959.061	30029	247530		

File: 97060511.D12 Sample: S97T001203 SAM



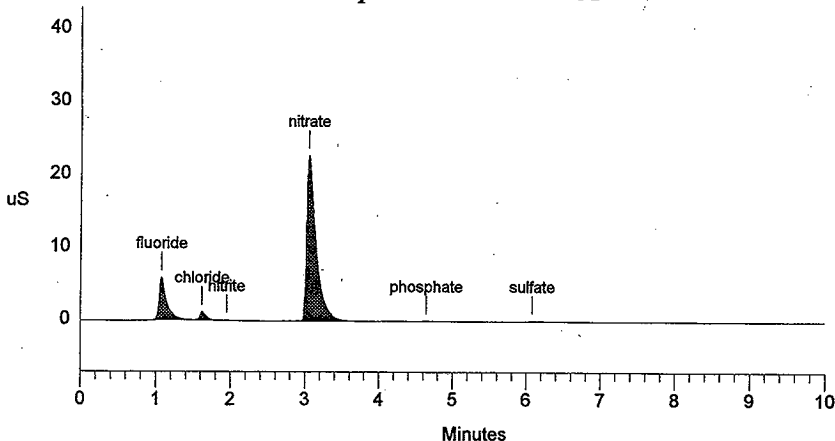
Sample Name: S97T001203 DUP Date: 06/06/1997 02:42:14
 Data File : C:\DX\DATA\97060511.D15 HNF-SD-WM-DP-254, REV. 0
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 15 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 2121 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	4242.028	5853	39357	1	-4.17
2	1.61	chloride	988.800	1123	6133	1	1.26
3	1.95	nitrite	312.082	70	410	1	1.04
4	3.05	nitrate	47103.981	22724	197347	1	-6.26
5	4.64	phosphate	694.118	98	1178	1	0.58
6	6.08	sulfate	277.264	136	2358	1	0.88
Totals			53618.273	30003	246784		

File: 97060511.D15 Sample: S97T001203 DUP



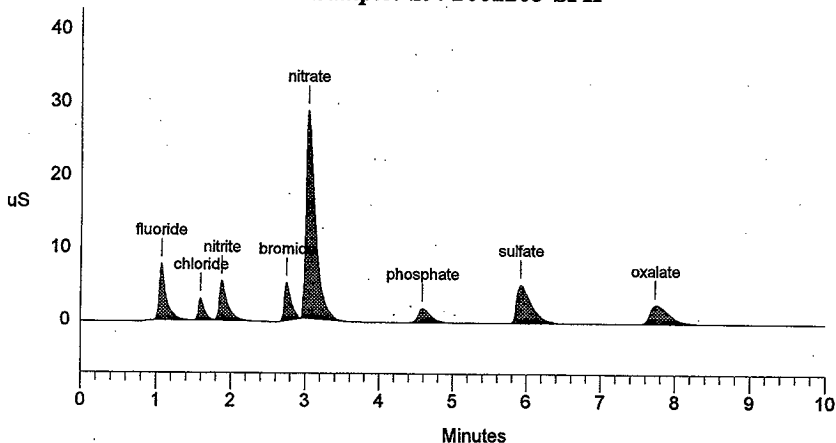
Sample Name: S97T001203 SPK Date: 06/06/1997 02:58:47
 Data File : C:\DX\DATA\97060511.D16 HNF-SD-WM-DP-254, REV. 0
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 16 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 2121 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	5335.598	7829	50384	1	-4.76
2	1.59	chloride	2635.434	3052	16517	1	0.00
3	1.87	nitrite	10906.297	5440	40989	1	-2.77
4	2.75	bromide	11063.480	5252	32837	1	0.61
5	3.03	nitrate	59091.543	28674	252080	1	-6.67
6	4.59	phosphate	11598.212	2005	24502	1	-0.58
7	5.92	sulfate	12673.561	5295	74066	1	-1.77
8	7.73	oxalate	11280.682	2608	47500	1	-1.36
Totals			124584.807	60155	538874		

File: 97060511.D16 Sample: S97T001203 SPK



LABCORE Completed Worklist Report for Worklist# 18269

Analyst: krq Instrument: IC01

Book# *61N20A*

Method: *6A-533-105* Rev/Mod *D-1*

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @IC-01 skm

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	①IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	①IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	①IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	①IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	①IC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	①IC-QC P04	QC	1	<1.20e-1		ug/mL
1 CCB	0	①IC-QC S04	QC	1	<1.38e-1		ug/mL
1 CCB	0	①IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	①IC-QC F	QC	5.90e01	5.74e+01	97.288 % Recovery	
2 CCV	0	①IC-QC CL	QC	7.90e01	7.70e+01	97.468 % Recovery	
2 CCV	0	①IC-QC NO2	QC	5.44e02	5.37e+02	98.713 % Recovery	
2 CCV	0	①IC-QC BR	QC	5.89e02	5.64e+02	95.756 % Recovery	
2 CCV	0	①IC-QC NO3	QC	5.94e02	5.62e+02	94.613 % Recovery	
2 CCV	0	①IC-QC P04	QC	5.45e02	5.22e+02	95.780 % Recovery	
2 CCV	0	①IC-QC S04	QC	6.31e02	5.99e+02	94.929 % Recovery	
2 CCV	0	①IC-QC OXALATE2	QC	5.32e02	5.28e+02	99.248 % Recovery	
3 SAMPLE	S97T000834 0	①IC-01 F-02	LIQUID	N/A	4.482e+03	13.330	ug/mL
3 SAMPLE	S97T000834 0	①IC-01 CL-02	LIQUID	N/A	1.012e+03	18.890	ug/mL
3 SAMPLE	S97T000834 0	①IC-01 NO2-02	LIQUID	N/A	2.293e+02	120.000	ug/mL
3 SAMPLE	S97T000834 0	①IC-01 BR-02	LIQUID	N/A	< 1.389e+02	138.900	ug/mL
3 SAMPLE	S97T000834 0	①IC-01 NO3-02	LIQUID	N/A	4.843e+04	154.400	ug/mL
3 SAMPLE	S97T000834 0	①IC-01 P04-02	LIQUID	N/A	7.365e+02	133.300	ug/mL
3 SAMPLE	S97T000834 0	①IC-01 S04-02	LIQUID	N/A	< 1.533e+02	153.300	ug/mL
3 SAMPLE	S97T000834 0	①IC-01 OXALATE2	LIQUID	N/A	< 1.167e+02	116.700	ug/mL
4 DUP	S97T000834 0	①IC-01 F-02	LIQUID	4.48e+03	4.38e+03	2.257 RPD	
4 DUP	S97T000834 0	①IC-01 CL-02	LIQUID	1.01e+03	1.03e+03	1.961 RPD	
4 DUP	S97T000834 0	①IC-01 NO2-02	LIQUID	2.29e+02	2.32e+02	1.302 RPD	
4 DUP	S97T000834 0	①IC-01 BR-02	LIQUID	<1.39e2	<1.39e2	RPD	
4 DUP	S97T000834 0	①IC-01 NO3-02	LIQUID	4.84e+04	4.82e+04	0.414 RPD	
4 DUP	S97T000834 0	①IC-01 P04-02	LIQUID	7.36e+02	7.06e+02	4.161 RPD	
4 DUP	S97T000834 0	①IC-01 S04-02	LIQUID	<1.53e2	<1.53e2	RPD	
4 DUP	S97T000834 0	①IC-01 OXALATE2	LIQUID	<1.17e2	1.35e+02	RPD	
5 SAMPLE	S97T000835 0	①IC-01 F-02	LIQUID	N/A	3.917e+03	13.330	ug/mL
5 SAMPLE	S97T000835 0	①IC-01 CL-02	LIQUID	N/A	9.105e+02	18.890	ug/mL
5 SAMPLE	S97T000835 0	①IC-01 NO2-02	LIQUID	N/A	1.947e+02	120.000	ug/mL
5 SAMPLE	S97T000835 0	①IC-01 BR-02	LIQUID	N/A	< 1.389e+02	138.900	ug/mL
5 SAMPLE	S97T000835 0	①IC-01 NO3-02	LIQUID	N/A	4.333e+04	154.400	ug/mL
5 SAMPLE	S97T000835 0	①IC-01 P04-02	LIQUID	N/A	6.167e+02	133.300	ug/mL
5 SAMPLE	S97T000835 0	①IC-01 S04-02	LIQUID	N/A	< 1.533e+02	153.300	ug/mL
5 SAMPLE	S97T000835 0	①IC-01 OXALATE2	LIQUID	N/A	< 1.167e+02	116.700	ug/mL
6 DUP	S97T000835 0	①IC-01 F-02	LIQUID	3.92e+03	3.83e+03	2.323 RPD	

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18269

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 DUP	S97T000835	0	QIC-01	CL-02	LIQUID	9.10e+02	8.79e+02	3.466 RPD
6 DUP	S97T000835	0	QIC-01	NO2-02	LIQUID	1.95e+02	2.06e+02	5.486 RPD
6 DUP	S97T000835	0	QIC-01	BR-02	LIQUID	<1.39e2	<1.39e2	RPD
6 DUP	S97T000835	0	QIC-01	NO3-02	LIQUID	4.33e+04	4.29e+04	0.928 RPD
6 DUP	S97T000835	0	QIC-01	PO4-02	LIQUID	6.17e+02	5.99e+02	2.961 RPD
6 DUP	S97T000835	0	QIC-01	SO4-02	LIQUID	<1.53e2	<1.53e2	RPD
6 DUP	S97T000835	0	QIC-01	OXALATE2	LIQUID	<1.17e2	<1.17e2	RPD

Final page for worklist# 18269

Analyst Signature Date

Analyst Signature Date

Jan M. Luy 5/29/97
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 18269

Analyst: AKP Instrument: IC0 1

Book# 61120-A

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: T201, @IC-01 skm

HNFS-D-WM-DP-254, REV. 0

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S97T000834 0		@IC-01	LIQUID	97000311	T-201
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
4 DUP	S97T000834 0		@IC-01	LIQUID		
	<i>spike</i> S97T000834					
5 SAMPLE	S97T000835 0		@IC-01	LIQUID	97000311	T-201
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
6 DUP	S97T000835 0		@IC-01	LIQUID		

Final page for worklist # 18269

Analyst Signature

Date

Analyst Signature

Date

uploaded 5-29-97

John W. Wall

18269MAY.CSV

Validated 5/29/97 GML

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

```

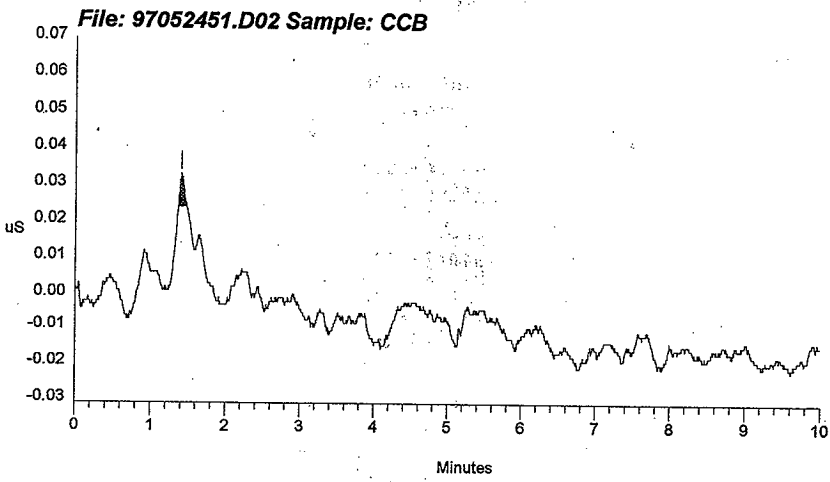
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Sample Name: CCB                               Date: 05/24/1997 19:06:01
Data File  : C:\DX\DATA\97052451.D02
Method     : C:\DX\METHOD\AUTOMEL.MET        HNF-SD-WM-DP-254, REV. 0
ACI Address: 1 System, 1 Inject#: 2           Detector: CDM-1
Analyst    : [Signature]                   Column: AG4A/AS4A anion column
=====
  
```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
External          1          1 3000 5Hz 0.00 10.00          30
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.40		0.000	8	31	1	
Totals			0.000	8	31		



Sample Name: CCV 61N20-A

Date: 05/24/1997 19:18:39

Data File : C:\DX\DATA\97052451.D03

HNF-SD-WM-DP-254, REV. 0

Method : C:\DX\METHOD\AUTOMEL.MET

ACI Address: 1 System: 1 Inject#: 3

Detector: CDM-1

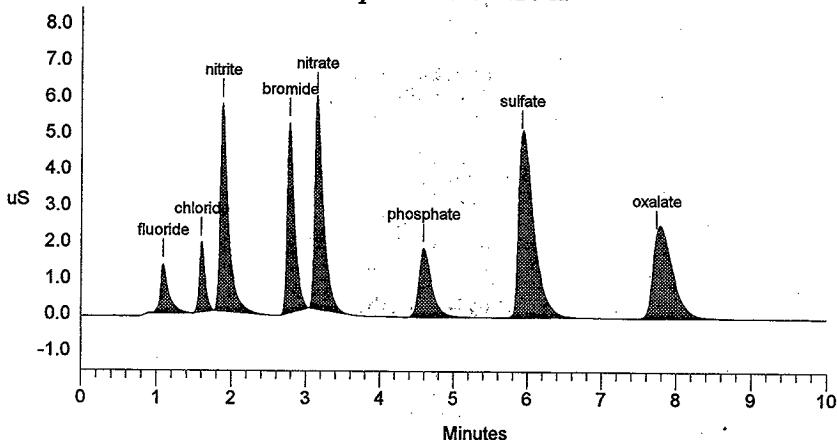
Analyst *[Signature]* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.09	fluoride	57.427	1363	10357	1	-2.98
2	1.59	chloride	76.978	1919	10048	1	0.00
3	1.88	nitrite	537.420	5717	42462	1	-2.42
4	2.77	bromide	564.105	5246	35226	1	-2.69
5	3.14	nitrate	562.451	5852	46770	1	-3.38
6	4.59	phosphate	522.268	1915	23134	1	-0.58
7	5.92	sulfate	599.006	5051	73511	1	-1.77
8	7.73	oxalate	527.547	2324	46638	1	-1.36
Totals			3447.202	29388	288146		

File: 97052451.D03 Sample: CCV 61N20-A



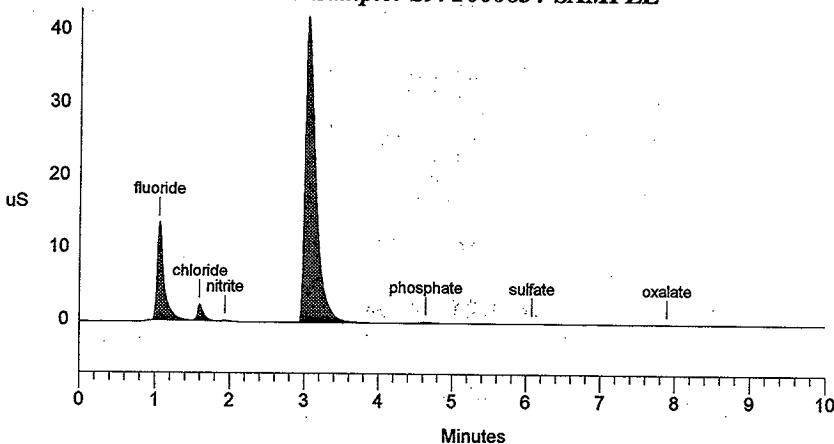
Sample Name: S97T000834 SAMPLE Date: 05/24/1997 20:10:20
 Data File : C:\DX\DATA\97052461.D05 HNF-SD-WM-DP-254, REV. 0
 Method : C:\DX\METHOD\AUTOMEL.MET
 ACI Address: 1 System: 1 Inject#: 5 Detector: CDM-1
 Analyst: *[Signature]* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1111 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.05	fluoride	4481.742	13457	85057	1	-5.95
2	1.59	chloride	1011.513	2168	12029	1	0.00
3	1.93	nitrite	229.295	148	886	1	0.35
4	3.03	nitrate	48431.884	42177	416783	1	-6.67
5	4.64	phosphate	736.513	210	2680	1	0.58
6	6.08	sulfate	109.853	114	1973	1	0.88
7	7.89	oxalate	98.697	32	553	1	0.68
Totals			55099.497	58305	519961		

File: 97052461.D05 Sample: S97T000834 SAMPLE



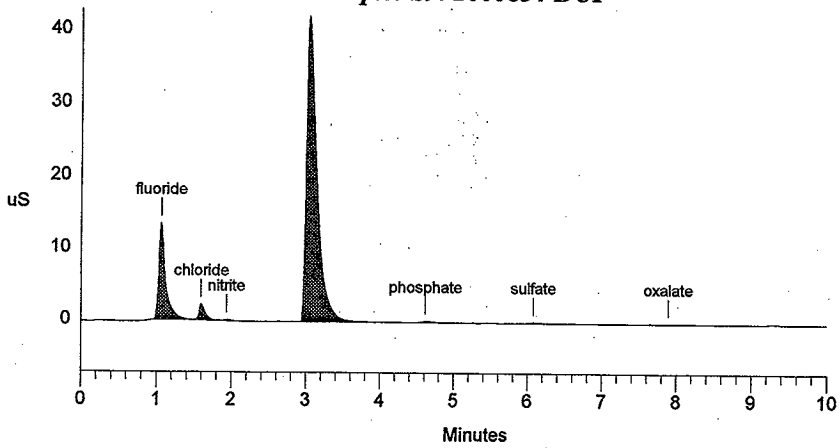
Sample Name: S97T000834 DUP Date: 05/24/1997 20:22:59
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 Method : C:\DX\METHOD\AUTOMEL.MET
 ACI Address: 1 System: 1 Inject#: 6 Detector: CDM-1
 Analyst: *[Signature]* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1111 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	4381.999	13404	82903	1	-5.36
2	1.59	chloride	1031.475	2190	12270	1	0.00
3	1.93	nitrite	232.077	150	906	1	0.35
4	3.03	nitrate	48156.295	42027	414021	1	-6.87
5	4.61	phosphate	706.143	191	2558	1	0.00
6	6.08	sulfate	130.951	134	2203	1	0.88
7	7.89	oxalate	135.045	38	844	1	0.68
Totals			54773.986	58135	515705		

File: 97052451.D06 Sample: S97T000834 DUP



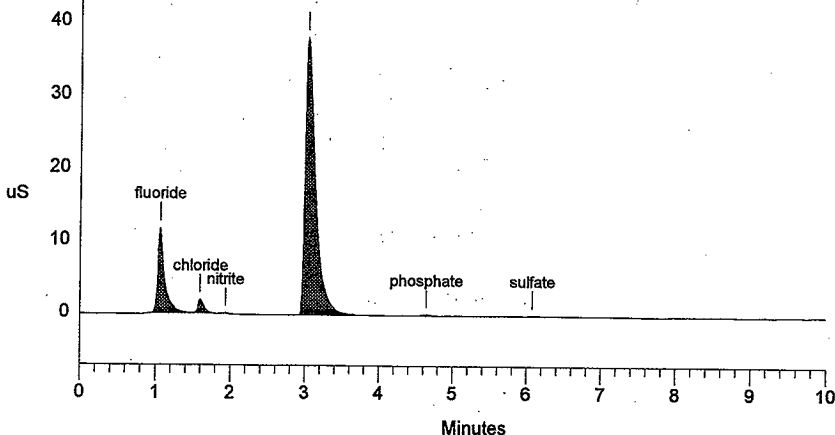
Sample Name: S97T000835 SAMPLE Date: 05/24/1997 20:48:18
 Data File : C:\DX\DATA\97052451.D08 HNF-SD-WM-DP-254, REV. 0
 Method : C:\DX\METHOD\AUTOMEL.MET
 ACI Address: 1 System: 1 Inject#: 8 Detector: CDM-1
 Analyst: *[Signature]* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1111 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	3916.803	11735	73041	1	-5.36
2	1.59	chloride	910.495	1930	10813	1	0.00
3	1.93	nitrite	194.704	124	636	1	0.35
4	3.03	nitrate	43326.348	38178	366551	1	-6.87
5	4.64	phosphate	616.669	173	2197	1	0.58
6	6.08	sulfate	78.100	106	1628	1	0.88
Totals			49043.118	52247	454866		

File: 97052451.D08 Sample: S97T000835 SAMPLE



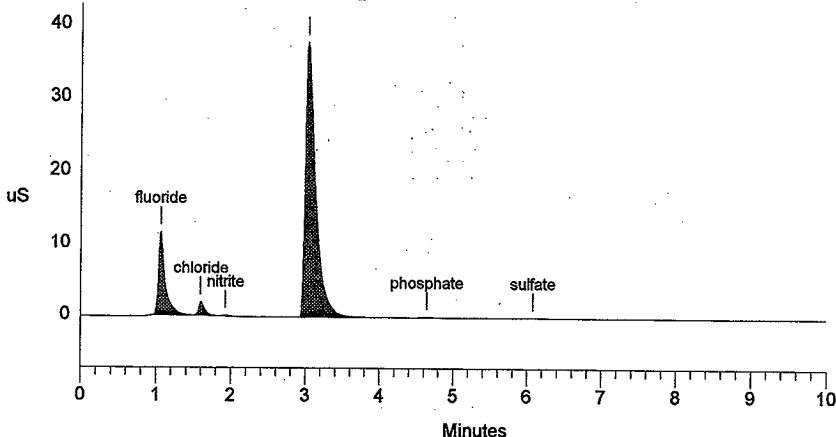
Sample Name: S97T000835 DUP Date: 05/24/1997 21:00:57
 Data File : C:\DX\DATA\97052451.D09 HNF-SD-WM-DP-254, REV. 0
 Method : C:\DX\METHOD\AUTOMEL.MET
 ACI Address: 1 System: 1 Inject#: 9 Detector: CDM-1
 Analyst: Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1111 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.06	fluoride	3834.337	11593	71324	1	-5.36
2	1.59	chloride	878.970	1924	10434	1	0.00
3	1.93	nitrite	206.069	123	718	1	0.00
4	3.03	nitrate	42874.102	37820	362193	1	-6.87
5	4.64	phosphate	599.042	166	2126	1	0.58
6	6.08	sulfate	73.058	105	1573	1	0.88
Totals			48465.578	51731	448368		

File: 97052451.D09 Sample: S97T000835 DUP



LABCORE Completed Worklist Report for Worklist# 18270

Analyst: krq

Instrument: IC02

Book# *6/1/20A*

Method: *4A-533-105* Rev/Mod *D-1*

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @IC-01 skm

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	@IC-QC F	QC	1	<1.21e0		ug/mL
1 CCB	0	@IC-QC CL	QC	1	<1.72e0		ug/mL
1 CCB	0	@IC-QC NO2	QC	1	<1.09e1		ug/mL
1 CCB	0	@IC-QC BR	QC	1	<1.26e1		ug/mL
1 CCB	0	@IC-QC NO3	QC	1	<1.40e1		ug/mL
1 CCB	0	@IC-QC P04	QC	1	<1.21e1		ug/mL
1 CCB	0	@IC-QC S04	QC	1	<1.39e1		ug/mL
1 CCB	0	@IC-QC OXALATE2	QC	1	<1.06e1		ug/mL
2 CCV	0	@IC-QC F	QC	5.90e01	5.45e+01	92.173 % Recovery	
2 CCV	0	@IC-QC CL	QC	7.90e01	7.41e+01	93.797 % Recovery	
2 CCV	0	@IC-QC NO2	QC	5.44e02	5.03e+02	92.463 % Recovery	
2 CCV	0	@IC-QC BR	QC	5.89e02	5.49e+02	93.209 % Recovery	
2 CCV	0	@IC-QC NO3	QC	5.94e02	5.39e+02	90.741 % Recovery	
2 CCV	0	@IC-QC P04	QC	5.45e02	5.10e+02	93.578 % Recovery	
2 CCV	0	@IC-QC S04	QC	6.31e02	5.81e+02	92.076 % Recovery	
2 CCV	0	@IC-QC OXALATE2	QC	5.32e02	4.86e+02	91.353 % Recovery	
3 SAMPLE	S97T000836 0	@IC-01 F-02	LIQUID	N/A	4.279e+03	25.450	ug/mL
3 SAMPLE	S97T000836 0	@IC-01 CL-02	LIQUID	N/A	9.032e+02	36.060	ug/mL
3 SAMPLE	S97T000836 0	@IC-01 NO2-02	LIQUID	N/A	4.776e+02	229.100	ug/mL
3 SAMPLE	S97T000836 0	@IC-01 BR-02	LIQUID	N/A	< 2.651e+02	265.100	ug/mL
3 SAMPLE	S97T000836 0	@IC-01 NO3-02	LIQUID	N/A	4.482e+04	294.800	ug/mL
3 SAMPLE	S97T000836 0	@IC-01 P04-02	LIQUID	N/A	6.511e+02	254.500	ug/mL
3 SAMPLE	S97T000836 0	@IC-01 S04-02	LIQUID	N/A	< 2.927e+02	292.700	ug/mL
3 SAMPLE	S97T000836 0	@IC-01 OXALATE2	LIQUID	N/A	< 2.227e+02	222.700	ug/mL
4 DUP	S97T000836 0	@IC-01 F-02	LIQUID	4.28e+03	4.28e+03	0.000	RPD
4 DUP	S97T000836 0	@IC-01 CL-02	LIQUID	9.03e+02	8.96e+02	0.778	RPD
4 DUP	S97T000836 0	@IC-01 NO2-02	LIQUID	4.78e+02	4.64e+02	2.972	RPD
4 DUP	S97T000836 0	@IC-01 BR-02	LIQUID	<2.65e2	<2.65e2		RPD
4 DUP	S97T000836 0	@IC-01 NO3-02	LIQUID	4.48e+04	4.42e+04	1.348	RPD
4 DUP	S97T000836 0	@IC-01 P04-02	LIQUID	6.51e+02	5.98e+02	8.487	RPD
4 DUP	S97T000836 0	@IC-01 S04-02	LIQUID	<2.93e2	<2.93e2		RPD
4 DUP	S97T000836 0	@IC-01 OXALATE2	LIQUID	<2.23e2	<2.23e2		RPD
5 SAMPLE	S97T000837 0	@IC-01 F-02	LIQUID	N/A	4.618e+03	25.450	ug/mL
5 SAMPLE	S97T000837 0	@IC-01 CL-02	LIQUID	N/A	9.674e+02	36.060	ug/mL
5 SAMPLE	S97T000837 0	@IC-01 NO2-02	LIQUID	N/A	4.655e+02	229.100	ug/mL
5 SAMPLE	S97T000837 0	@IC-01 BR-02	LIQUID	N/A	< 2.651e+02	265.100	ug/mL
5 SAMPLE	S97T000837 0	@IC-01 NO3-02	LIQUID	N/A	4.726e+04	294.800	ug/mL
5 SAMPLE	S97T000837 0	@IC-01 P04-02	LIQUID	N/A	7.333e+02	254.500	ug/mL
5 SAMPLE	S97T000837 0	@IC-01 S04-02	LIQUID	N/A	< 2.927e+02	292.700	ug/mL
5 SAMPLE	S97T000837 0	@IC-01 OXALATE2	LIQUID	N/A	< 2.227e+02	222.700	ug/mL
6 DUP	S97T000837 0	@IC-01 F-02	LIQUID	4.62e+03	4.78e+03	3.404	RPD

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18270

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 DUP	S97T000837	0	@IC-01 CL-02	LIQUID	9.67e+02	1.01e+03	4.350	RPD
6 DUP	S97T000837	0	@IC-01 NO2-02	LIQUID	4.66e+02	4.62e+02	0.862	RPD
6 DUP	S97T000837	0	@IC-01 BR-02	LIQUID	<2.65e2	<2.65e2		RPD
6 DUP	S97T000837	0	@IC-01 NO3-02	LIQUID	4.73e+04	4.79e+04	1.261	RPD
6 DUP	S97T000837	0	@IC-01 PO4-02	LIQUID	7.33e+02	6.43e+02	13.081	RPD
6 DUP	S97T000837	0	@IC-01 SO4-02	LIQUID	<2.93e2	<2.93e2		RPD
6 DUP	S97T000837	0	@IC-01 OXALATE2	LIQUID	<2.23e2	<2.23e2		RPD
7 SPK	S97T000837	0	@IC-01 F-02	LIQUID	5.90e01	6.12e+01	103.729	% Recovery
7 SPK	S97T000837	0	@IC-01 CL-02	LIQUID	7.90e01	7.18e+01	90.886	% Recovery
7 SPK	S97T000837	0	@IC-01 NO2-02	LIQUID	5.44e02	4.90e+02	90.074	% Recovery
7 SPK	S97T000837	0	@IC-01 BR-02	LIQUID	5.89e02	5.37e+02	91.171	% Recovery
7 SPK	S97T000837	0	@IC-01 NO3-02	LIQUID	5.94e02	6.40e+02	107.744	% Recovery
7 SPK	S97T000837	0	@IC-01 PO4-02	LIQUID	5.45e02	5.00e+02	91.743	% Recovery
7 SPK	S97T000837	0	@IC-01 SO4-02	LIQUID	6.31e02	5.90e+02	93.502	% Recovery
7 SPK	S97T000837	0	@IC-01 OXALATE2	LIQUID	5.32e02	4.95e+02	93.045	% Recovery

Final page for worklist# 18270

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

James M. Lyle 5/28/97
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 18270

Analyst: ASD Instrument: IC0 2

Book# 6/18/20-A

Method: LA-533-105 Rev/Mod D-1

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 SAMPLE	S97T000836 0		@IC-01	LIQUID	97000311	T-201
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
4 DUP	S97T000836 0		@IC-01	LIQUID		
5 SAMPLE	S97T000837 0		@IC-01	LIQUID	97000311	T-201
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
6 DUP	S97T000837 0		@IC-01	LIQUID		
7 SPK	S97T000837 0		@IC-01	LIQUID		

Final page for worklist # 18270

Analyst Signature

Date

5/24/97

Analyst Signature

Date

uploaded 5-28-97

John Waneell

18270 MAY. CSV

fixed file for S97T000836 sample & re-uploaded 5/28/97 JMF

Validated 5/28/97 JMF

Data Entry Comments:

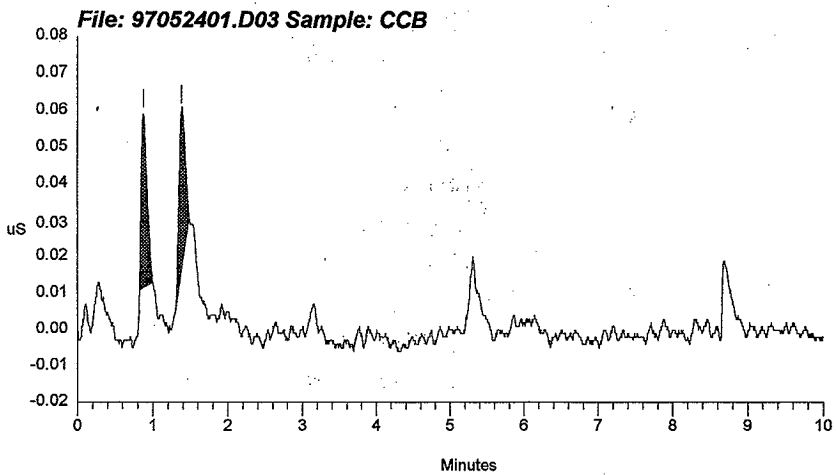
S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: CCB Date: 05/24/1997 19:46:48
Data File : C:\DX\DATA\97052401.D03
Method : C:\DX\METHOD\ANIONSA.MET HNF-SD-WM-DP-254, REV. 0
ACI Address: 1 System: 1 Inject#: 3 Detector: CDM-1
Analyst *[Signature]* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
External 1 101 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	47	260	1	
2	1.38		0.000	43	244	1	
Totals			0.000	91	503		



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 257 TO 257

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Sample Name: CCV 61N20-A	Date: 05/24/1997 19:59:26
Data File : C:\DX\DATA\97052401.D04	
Method : C:\DX\METHOD\ANIONSA.MET	HNF-SD-WM-DP-254, REV. 0
ACI Address: 1 System: 1 Inject#: 4	Detector: CDM-1
Analyst: <i>[Signature]</i>	Column: AG4A/AS4A anion column

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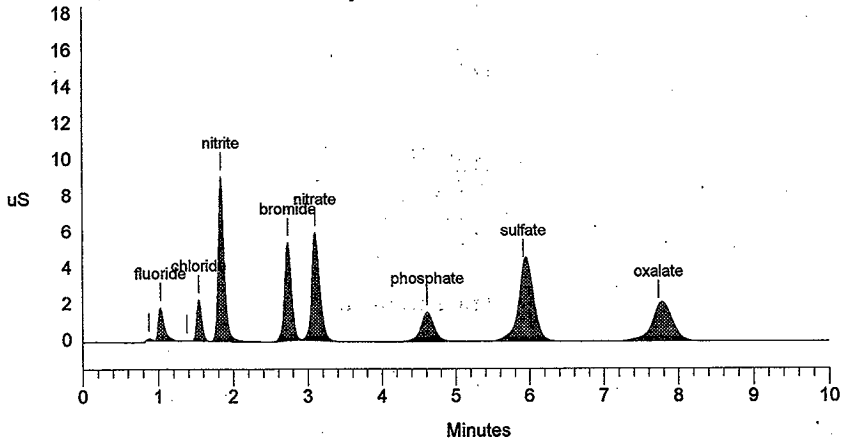
Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 101 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	99	427	2	
2	1.03	fluoride	54.527	1823	9906	2	1.65
3	1.38		0.000	21	83	1	
4	1.54	chloride	74.134	2251	10502	1	0.00
5	1.84	nitrite	503.369	9067	48756	1	-1.43
6	2.73	bromide	549.060	5394	34311	1	1.49
7	3.10	nitrate	539.097	5927	43881	1	3.79
8	4.61	phosphate	509.515	1592	19904	1	3.59
9	5.92	sulfate	581.161	4227	63818	1	3.68
10	7.73	oxalate	485.827	1966	40803	1	-2.73
Totals			3296.690	32367	272391		

File: 97052401.D04 Sample: CCV 61N20-A



Data Reprocessed On 05/28/1997 14:19:48

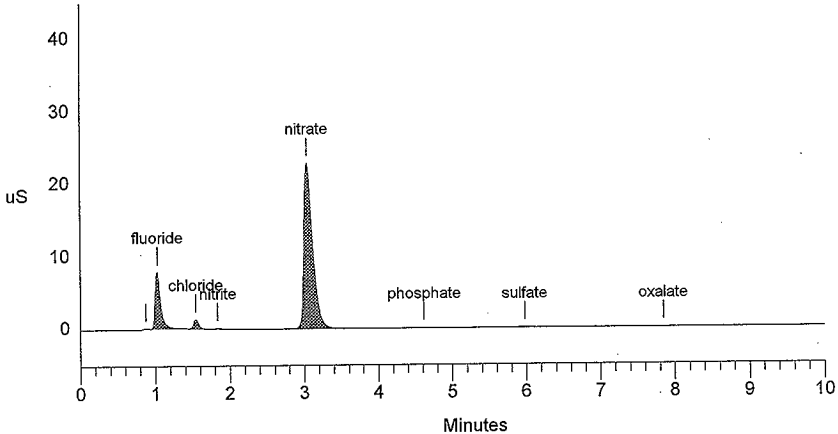
Sample Name: S97T000836 SAMPLE Date: 05/24/1997 20:12:05
Data File : E:\DATA\97052401.D05 HNF-SD-WM-DP-254, REV. 0
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 5 Detector: CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	84	318	1	
2	1.03	fluoride	4278.597	7826	39431	1	1.65
3	1.54	chloride	903.164	1307	6002	1	0.00
4	1.83	nitrite	477.577	178	922	1	-1.79
5	3.04	nitrate	44819.152	22856	185995	1	1.79
6	4.61	phosphate	651.138	78	931	1	3.59
7	5.97	sulfate	222.009	71	979	1	4.61
8	7.84	oxalate	-134.335	24	381	1	-1.38
Totals			51217.301	32424	234958		

File: 97052401.D05 Sample: S97T000836 SAMPLE



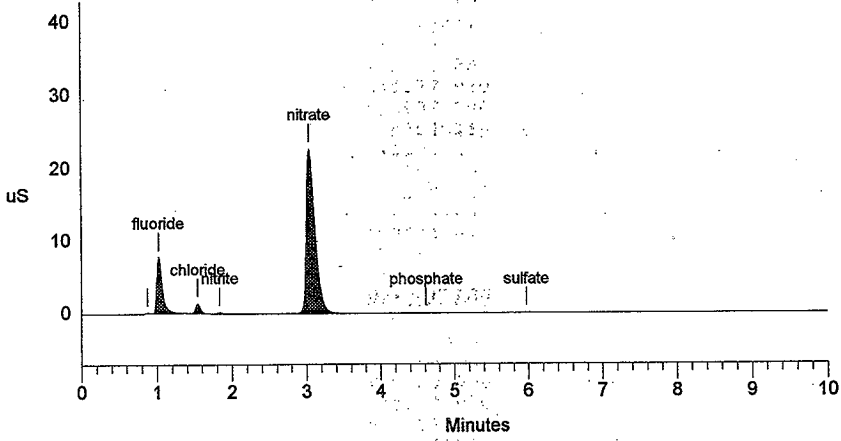
Sample Name: S97T000836 DUP Date: 05/24/1997 20:24:43
Data File : C:\DX\DATA\97052401.D06 HNH-SD-WM-DP-254, REV. 0
Method : C:\DX\METHOD\ANIONSA.MET
ACI Address: 1 System: 1 Inject#: 6 Detector: CDM-1
Analyst: *[Signature]* Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	82	290	1	
2	1.02	fluoride	4277.930	7738	39424	1	0.99
3	1.54	chloride	896.180	1331	5954	1	0.00
4	1.83	nitrite	464.118	174	858	1	-1.79
5	3.04	nitrate	44179.621	22802	183125	1	1.79
6	4.61	phosphate	598.099	73	833	1	3.59
7	5.97	sulfate	228.953	74	1015	1	4.61
Totals			50644.901	32274	231498		

File: 97052401.D06 Sample: S97T000836 DUP



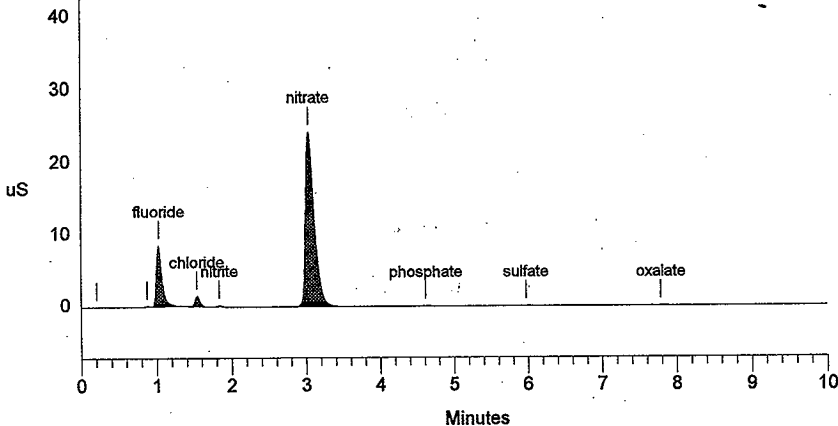
Sample Name: S97T000837 SAMPLE Date: 05/24/1997 20:37:21
 Data File : C:\DX\DATA\97052401.D07
 Method : C:\DX\METHOD\ANIONSA.MET HNF-SD-WM-DP-254, REV. 0
 ACI Address: 1 System: 1 Inject#: 7 Detector: CDM-1
 Analyst *[Signature]* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 2121 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.21		0.000	22	165	1	
2	0.87		0.000	93	342	1	
3	1.03	fluoride	4617.974	8449	42809	1	1.65
4	1.53	chloride	967.426	1413	6443	1	-0.43
5	1.83	nitrite	465.493	174	865	1	-1.79
6	3.03	nitrate	47255.608	24274	196994	1	1.56
7	4.61	phosphate	733.264	79	1084	1	3.59
8	5.97	sulfate	240.242	74	1073	1	4.61
9	7.79	oxalate	8.601	52	935	1	-2.05
Totals			54288.609	34631	250709		

File: 97052401.D07 Sample: S97T000837 SAMPLE



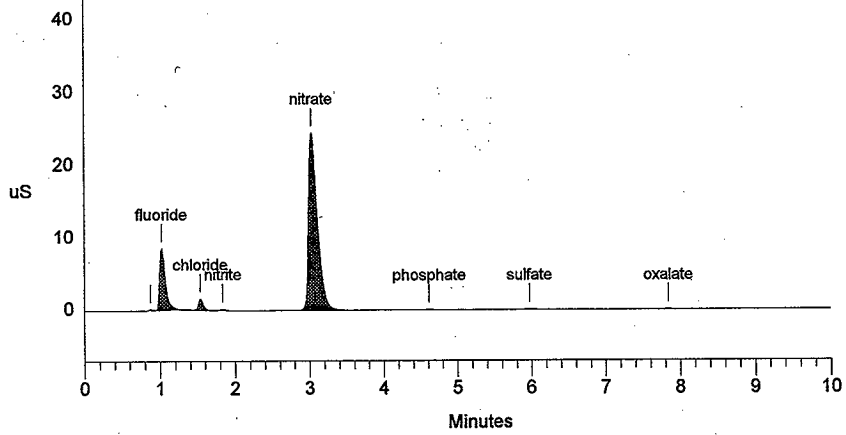
Sample Name: S97T000837 DUP		Date: 05/24/1997 20:49:59
Data File : C:\DX\DATA\97052401.D08	HNFS-SD-WM-DP-254, REV. 0	
Method : C:\DX\METHOD\ANIONSA.MET		
ACI Address: 1	System: 1	Inject#: 8
Analyst <i>[Signature]</i>	Column: AG4A/AS4A anion column	Detector: CDM-1

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	93	338	1	
2	1.02	fluoride	4780.931	8454	44446	1	0.99
3	1.53	chloride	1013.642	1493	6760	1	-0.43
4	1.83	nitrite	461.917	171	848	1	-1.79
5	3.03	nitrate	47889.604	24457	199873	1	1.34
6	4.61	phosphate	643.485	76	917	1	3.59
7	5.97	sulfate	284.368	94	1301	1	4.61
8	7.84	oxalate	43.563	61	1071	1	-1.38
Totals			55117.510	34899	255553		

File: 97052401.D08 Sample: S97T000837 DUP



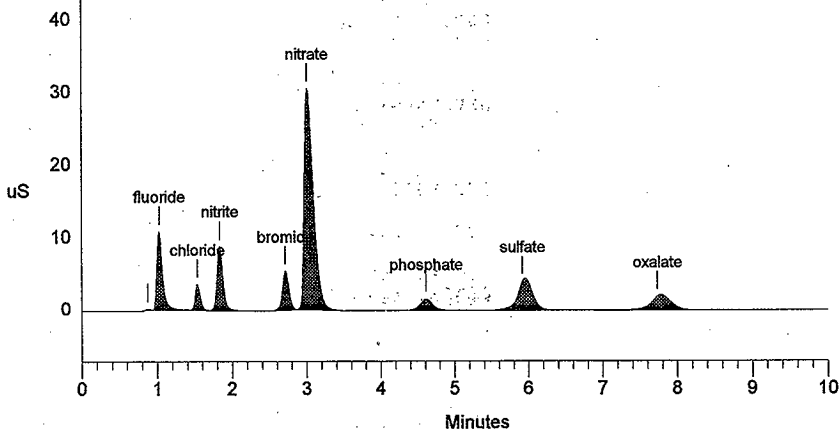
Sample Name: S97T000837 SPIKE Date: 05/24/1997 21:02:37
Data File : C:\DX\DATA\97052401.D09 HNF-SD-WM-DP-254, REV. 0
Method : C:\DX\METHOD\ANIONSA.MET
ACI Address: 1 System: 1 Inject#: 9 Detector: CDM-1
Analyst *[Signature]* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
External 1 2121 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	151	587	2	
2	1.03	fluoride	5853.627	10820	55459	2	1.65
3	1.53	chloride	2418.664	3566	16492	1	-0.43
4	1.83	nitrite	10369.043	8869	47797	1	-1.79
5	2.71	bromide	10847.756	5419	32195	1	0.74
6	3.01	nitrate	60184.399	30586	257151	1	0.67
7	4.61	phosphate	10836.113	1619	20166	1	3.59
8	5.92	sulfate	11926.721	4055	62337	1	3.68
9	7.73	oxalate	10008.178	1943	40037	1	-2.73
Totals			122444.502	67028	532221		

File: 97052401.D09 Sample: S97T000837 SPIKE



LABCORE Completed Worklist Report for Worklist# 18311

Analyst: dpb

Instrument: IC01

Book# 161204

Method: 1A53-105 Rev/Mod D-1

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @IC-01 skm

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	④IC-QC F	QC	1	<1.20e-2		ug/mL
1 CCB	0	④IC-QC CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	④IC-QC NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	④IC-QC BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	④IC-QC NO3	QC	1	<1.39e-1		ug/mL
1 CCB	0	④IC-QC PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	④IC-QC SO4	QC	1	<1.38e-1		ug/mL
1 CCB	0	④IC-QC OXALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	④IC-QC F	QC	5.90e01	5.44e+01	92.203 % Recovery	
2 CCV	0	④IC-QC CL	QC	7.90e01	7.65e+01	96.835 % Recovery	
2 CCV	0	④IC-QC NO2	QC	5.44e02	5.23e+02	96.140 % Recovery	
2 CCV	0	④IC-QC BR	QC	5.89e02	5.68e+02	96.435 % Recovery	
2 CCV	0	④IC-QC NO3	QC	5.94e02	5.80e+02	97.643 % Recovery	
2 CCV	0	④IC-QC PO4	QC	5.45e02	5.23e+02	95.963 % Recovery	
2 CCV	0	④IC-QC SO4	QC	6.31e02	6.14e+02	97.305 % Recovery	
2 CCV	0	④IC-QC OXALATE2	QC	5.32e02	5.25e+02	98.684 % Recovery	
3 BLNK-PREP	0	④IC-01 F-02	SOLID	1	<1.20e-2		ug/g
3 BLNK-PREP	0	④IC-01 CL-02	SOLID	1	<1.70e-2		ug/g
3 BLNK-PREP	0	④IC-01 NO2-02	SOLID	1	<1.08e-1		ug/g
3 BLNK-PREP	0	④IC-01 BR-02	SOLID	1	<1.25e-1		ug/g
3 BLNK-PREP	0	④IC-01 NO3-02	SOLID	1	<1.39e-1		ug/g
3 BLNK-PREP	0	④IC-01 PO4-02	SOLID	1	<1.20e-1		ug/g
3 BLNK-PREP	0	④IC-01 SO4-02	SOLID	1	<1.38e-1		ug/g
3 BLNK-PREP	0	④IC-01 OXALATE2	SOLID	1	<1.05e-1		ug/g
4 SAMPLE	S97T000900 0 W	④IC-01 F-02	SOLID	N/A	4.772e+03	26.660	ug/g
4 SAMPLE	S97T000900 0 W	④IC-01 CL-02	SOLID	N/A	1.004e+03	37.770	ug/g
4 SAMPLE	S97T000900 0 W	④IC-01 NO2-02	SOLID	N/A	3.168e+02	240.000	ug/g
4 SAMPLE	S97T000900 0 W	④IC-01 BR-02	SOLID	N/A	< 2.778e+02	277.800	ug/g
4 SAMPLE	S97T000900 0 W	④IC-01 NO3-02	SOLID	N/A	4.431e+04	308.900	ug/g
4 SAMPLE	S97T000900 0 W	④IC-01 PO4-02	SOLID	N/A	5.543e+02	266.600	ug/g
4 SAMPLE	S97T000900 0 W	④IC-01 SO4-02	SOLID	N/A	< 3.067e+02	306.700	ug/g
4 SAMPLE	S97T000900 0 W	④IC-01 OXALATE2	SOLID	N/A	1.079e+03	233.300	ug/g
5 DUP	S97T000900 0 W	④IC-01 F-02	SOLID	4.77e+03	4.40e+03	9.070	RPD
5 DUP	S97T000900 0 W	④IC-01 CL-02	SOLID	1.00e+03	9.40e+02	6.186	RPD
5 DUP	S97T000900 0 W	④IC-01 NO2-02	SOLID	3.17e+02	2.98e+02	6.179	RPD
5 DUP	S97T000900 0 W	④IC-01 BR-02	SOLID	<2.78e2	<2.80e2		RPD
5 DUP	S97T000900 0 W	④IC-01 NO3-02	SOLID	4.43e+04	4.36e+04	1.593	RPD
5 DUP	S97T000900 0 W	④IC-01 PO4-02	SOLID	5.54e+02	6.80e+02	20.421	RPD
5 DUP	S97T000900 0 W	④IC-01 SO4-02	SOLID	<3.07e2	3.92e+02		RPD
5 DUP	S97T000900 0 W	④IC-01 OXALATE2	SOLID	1.08e+03	9.84e+02	9.302	RPD
6 SAMPLE	S97T000915 0 W	④IC-01 F-02	SOLID	N/A	4.559e+03	26.250	ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 18311

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S97T000915	0 W	QIC-01	CL-02	SOLID	N/A	9.543e+02	37.180 ug/g
6 SAMPLE	S97T000915	0 W	QIC-01	NO2-02	SOLID	N/A	3.020e+02	236.200 ug/g
6 SAMPLE	S97T000915	0 W	QIC-01	BR-02	SOLID	N/A	2.734e+02	273.400 ug/g
6 SAMPLE	S97T000915	0 W	QIC-01	NO3-02	SOLID	N/A	4.326e+04	303.900 ug/g
6 SAMPLE	S97T000915	0 W	QIC-01	PO4-02	SOLID	N/A	5.769e+02	262.500 ug/g
6 SAMPLE	S97T000915	0 W	QIC-01	SO4-02	SOLID	N/A	3.018e+02	301.800 ug/g
6 SAMPLE	S97T000915	0 W	QIC-01	OXALATE2	SOLID	N/A	1.031e+03	229.600 ug/g
7 DUP	S97T000915	0 W	QIC-01	F-02	SOLID	4.56e+03	4.56e+03	0.000 RPD
7 DUP	S97T000915	0 W	QIC-01	CL-02	SOLID	9.54e+02	1.01e+03	5.703 RPD
7 DUP	S97T000915	0 W	QIC-01	NO2-02	SOLID	3.02e+02	2.96e+02	2.007 RPD
7 DUP	S97T000915	0 W	QIC-01	BR-02	SOLID	<2.73e2	<2.65e2	RPD
7 DUP	S97T000915	0 W	QIC-01	NO3-02	SOLID	4.33e+04	4.35e+04	0.461 RPD
7 DUP	S97T000915	0 W	QIC-01	PO4-02	SOLID	5.77e+02	4.17e+02	32.193 RPD
7 DUP	S97T000915	0 W	QIC-01	SO4-02	SOLID	<3.02e2	9.81e+02	RPD
7 DUP	S97T000915	0 W	QIC-01	OXALATE2	SOLID	1.03e+03	9.88e+02	4.163 RPD
8 SAMPLE	S97T000931	0 W	QIC-01	F-02	SOLID	N/A	4.637e+03	28.950 ug/g
8 SAMPLE	S97T000931	0 W	QIC-01	CL-02	SOLID	N/A	9.763e+02	41.010 ug/g
8 SAMPLE	S97T000931	0 W	QIC-01	NO2-02	SOLID	N/A	3.167e+02	260.500 ug/g
8 SAMPLE	S97T000931	0 W	QIC-01	BR-02	SOLID	N/A	3.015e+02	301.500 ug/g
8 SAMPLE	S97T000931	0 W	QIC-01	NO3-02	SOLID	N/A	4.559e+04	335.300 ug/g
8 SAMPLE	S97T000931	0 W	QIC-01	PO4-02	SOLID	N/A	1.224e+03	489.500 ug/g
8 SAMPLE	S97T000931	0 W	QIC-01	SO4-02	SOLID	N/A	9.632e+02	332.900 ug/g
8 SAMPLE	S97T000931	0 W	QIC-01	OXALATE2	SOLID	N/A	1.023e+03	253.300 ug/g
9 DUP	S97T000931	0 W	QIC-01	F-02	SOLID	4.64e+03	4.71e+03	1.497 RPD
9 DUP	S97T000931	0 W	QIC-01	CL-02	SOLID	9.76e+02	9.83e+02	0.715 RPD
9 DUP	S97T000931	0 W	QIC-01	NO2-02	SOLID	3.17e+02	3.17e+02	0.000 RPD
9 DUP	S97T000931	0 W	QIC-01	BR-02	SOLID	<3.02e2	<2.99e2	RPD
9 DUP	S97T000931	0 W	QIC-01	NO3-02	SOLID	4.56e+04	4.68e+04	2.597 RPD
9 DUP	S97T000931	0 W	QIC-01	PO4-02	SOLID	1.22e+03	1.16e+03	5.042 RPD
9 DUP	S97T000931	0 W	QIC-01	SO4-02	SOLID	9.63e+02	<3.31e2	RPD
9 DUP	S97T000931	0 W	QIC-01	OXALATE2	SOLID	1.02e+03	1.12e+03	9.346 RPD

Final page for worklist# 18311

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

James M. Lyle
Reviewer Signature Date 6/5/97

LABCORE Data Entry Template for Worklist# 18311

Analyst: DPB Instrument: IC0 1 Book# 61N20-4
Method: LA-533-105 Rev/Mod D-1 HNF-SD-WM-DP-254, REV. 0
Worklist Comment: T201, @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S97T000900 0 W	@IC-01	SOLID		97000311	T-201
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
5 DUP	S97T000900 0 W	@IC-01	SOLID			
6 SAMPLE	S97T000915 0 W	@IC-01	SOLID		97000311	T-201
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
7 DUP	S97T000915 0 W	@IC-01	SOLID			
8 SAMPLE	S97T000931 0 W	@IC-01	SOLID		97000311	T-201
	Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02					
9 DUP	S97T000931 0 W	@IC-01	SOLID			

Final page for worklist # 18311

James P. Bromley
Analyst Signature

5/30/97 1700
Date

Analyst Signature

Date

uploaded 6-4-97

John Waneil

18311MAY.CSV

Validated 6/4/97 M. Lye

Data Entry Comments:

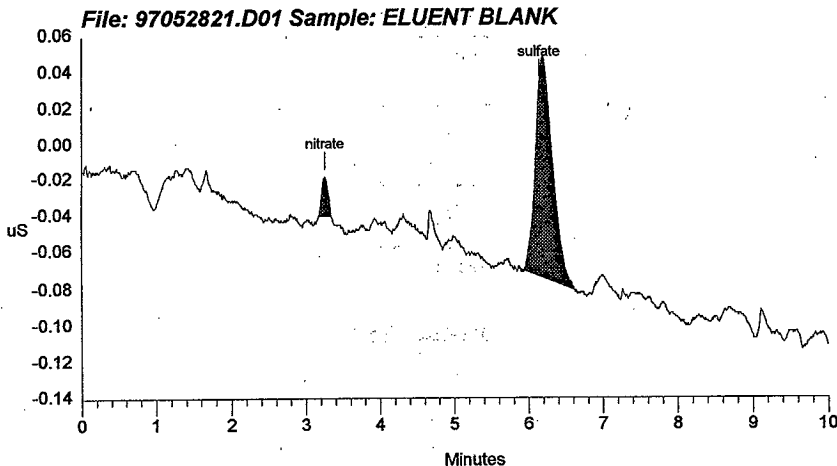
S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: ELUENT BLANK Date: 05/30/1997 07:39:58
 Data File : C:\DX\DATA\97052821.D01
 Method : C:\DX\METHOD\KIT.MET HNF-SD-WM-DP-254, REV. 0
 ACI Address: 1 System: 1 Inject#: 1 Detector: CDM-1
 Analyst *[Signature]* Column: AG4A/AS4A anion column

Calibration Volume Dilution Points Rate Start Stop Area Reject
 External 1 1 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	3.25	nitrate	0.090	22	126	1	-0.10
2	6.13	sulfate	0.095	105	1933	1	1.77
Totals			0.185	127	2059		



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 261 TO 261

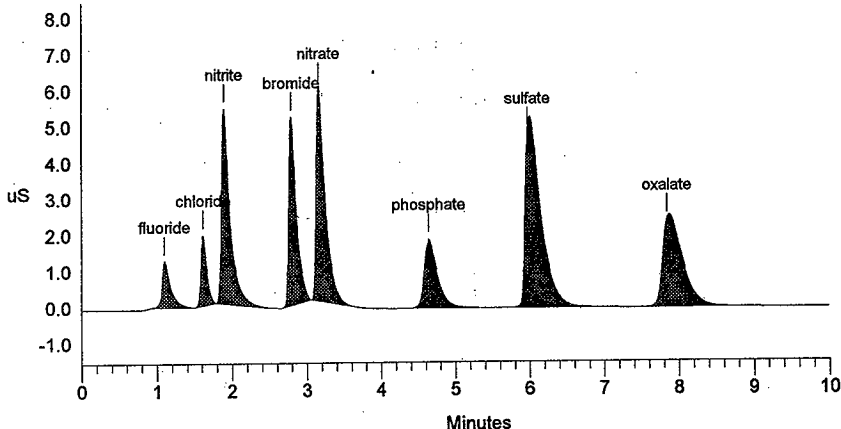
Sample Name: STD 61N20-A	Date: 05/30/1997 10:19:56
Data File : C:\DX\DATA\97052821.D05	HNF-SD-WM-DP-254, REV. 0
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 5	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.10	fluoride	54.374	1277	9767	1	-1.79
2	1.61	chloride	76.485	1952	9983	1	1.26
3	1.89	nitrite	522.509	5392	41247	1	-1.73
4	2.79	bromide	567.729	5213	35459	1	2.32
5	3.16	nitrate	579.526	5910	48230	1	-2.77
6	4.64	phosphate	523.400	1915	23185	1	0.58
7	5.97	sulfate	613.846	4832	75343	1	-0.88
8	7.84	oxalate	524.506	2420	46366	1	0.00
Totals			3462.374	28910	289580		

File: 97052821.D05 Sample: STD 61N20-A

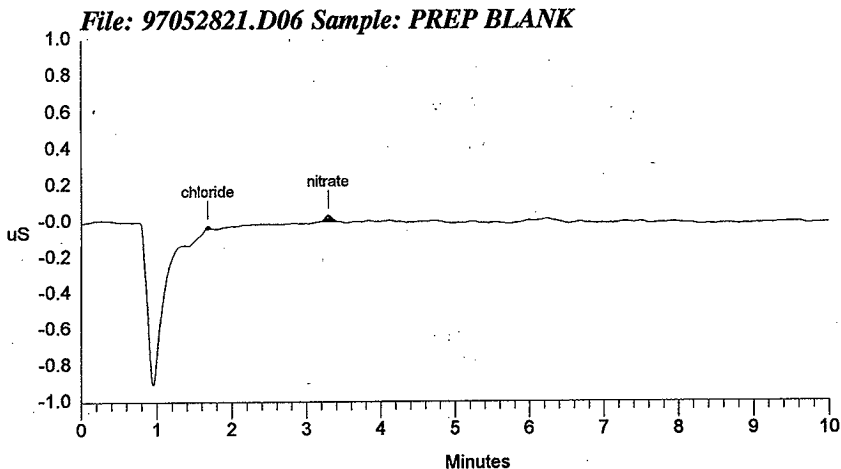


Sample Name: PREP BLANK	Date: 05/30/1997 10:36:21
Data File : C:\DX\DATA\97052821.D06	HNF-SD-WM-DP-254, REV. 0
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 6	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.68	chloride	-0.000	18	64	1	5.44
2	3.29	nitrate	0.101	34	222	1	1.33
Totals			0.101	53	286		



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Sample Name: S97T000900 SAM                      Date: 05/30/1997 11:15:41
Data File  : C:\DX\DATA\97052821.D09             HNF-SD-WM-DP-254, REV. 0
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 9               Detector: CDM-1
Analyst    :                                     Column: AG4A/AS4A anion column
=====
  
```

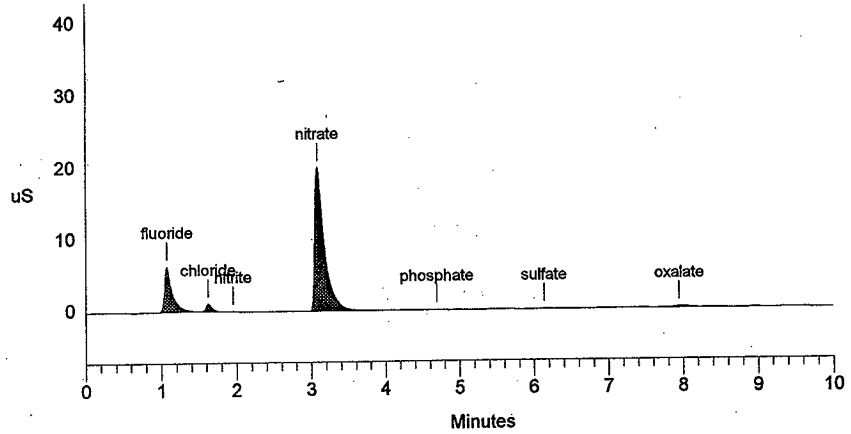
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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          11    3000  5Hz   0.00 10.00          30
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	23.628	6293	42489	1	-4.17
2	1.62	chloride	4.972	1065	5947	1	1.67
3	1.95	nitrite	1.568	63	373	1	1.38
4	3.09	nitrate	219.359	20024	175953	1	-5.03
5	4.69	phosphate	2.744	61	831	1	1.73
6	6.13	sulfate	0.769	86	1623	1	1.77
7	7.95	oxalate	5.342	204	4092	1	1.36
Totals			258.382	27797	231307		

File: 97052821.D09 Sample: S97T000900 SAM



7-14-97

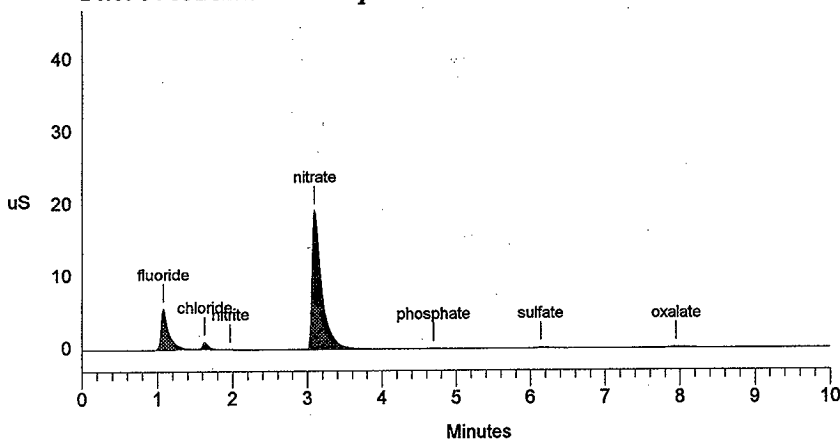
Sample Name: S97T000900 DUP Date: 05/30/1997 11:29:47
 Data File : C:\DX\DATA\97052821.D10
 Method : C:\DX\METHOD\KIT.MET HNF-SD-WM-DP-254, REV. 0
 ACI Address: 1 System: 1 Inject#: 10 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	21.573	5570	38541	1	-4.17
2	1.63	chloride	4.608	993	5513	1	2.09
3	1.97	nitrite	1.463	54	297	1	2.08
4	3.09	nitrate	213.622	19203	171073	1	-4.82
5	4.69	phosphate	3.336	87	1071	1	1.73
6	6.13	sulfate	1.921	174	2889	1	1.77
7	7.95	oxalate	4.826	186	3673	1	1.36
Totals			251.350	26267	223057		

File: 97052821.D10 Sample: S97T000900 DUP



7-14-97

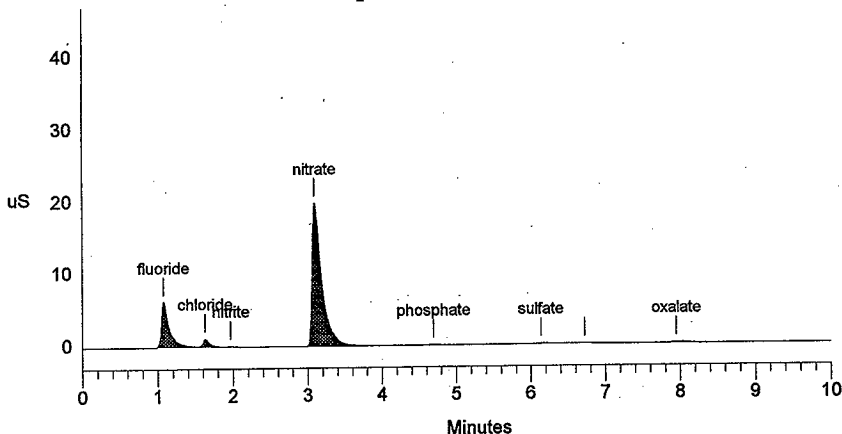
Sample Name: S97T000915 SAM Date: 05/30/1997 11:40:35
 Data File : C:\DX\DATA\97052821.D11 HNF-SD-WM-DP-254, REV. 0
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 11 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	22.930	6114	41142	1	-4.17
2	1.63	chloride	4.800	1031	5742	1	2.09
3	1.97	nitrite	1.519	61	337	1	2.08
4	3.09	nitrate	217.603	19829	174458	1	-4.82
5	4.69	phosphate	2.902	63	895	1	1.73
6	6.13	sulfate	0.301	85	1110	1	1.77
7	6.72		0.000	45	1163	1	
8	7.95	oxalate	5.186	195	3965	1	1.36
Totals			255.242	27423	228813		

File: 97052821.D11 Sample: S97T000915 SAM



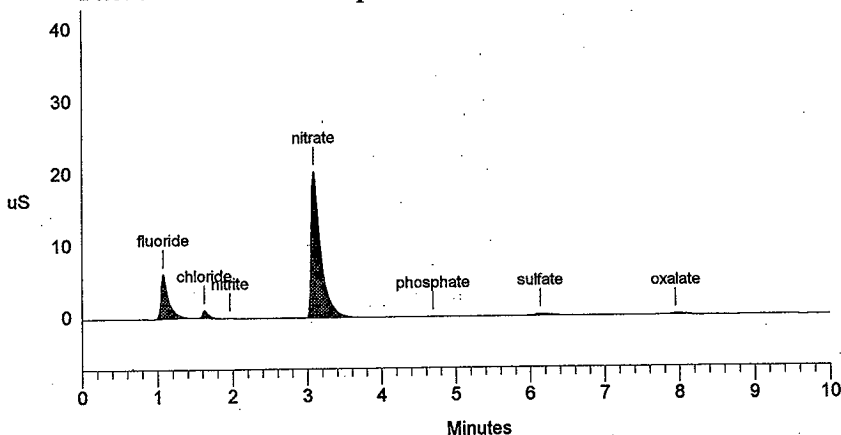
Sample Name: S97T000915 DUP Date: 05/30/1997 11:51:50
Data File : C:\DX\DATA\97052821.D12 HNF-SD-WM-DP-254, REV. 0
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 12 Detector: CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	23.672	6129	42572	1	-4.17
2	1.62	chloride	5.236	1088	6262	1	1.67
3	1.96	nitrite	1.534	60	349	1	1.73
4	3.09	nitrate	225.559	20340	181245	1	-5.03
5	4.69	phosphate	2.166	44	596	1	1.73
6	6.13	sulfate	5.090	276	6372	1	1.77
7	7.95	oxalate	5.126	189	3917	1	1.36
Totals			268.383	28126	241313		

File: 97052821.D12 Sample: S97T000915 DUP



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Sample Name: S97T000931 SAM                      Date: 05/30/1997 12:03:15
Data File  : C:\DX\DATA\97052821.D13
Method     : C:\DX\METHOD\KIT.MET               HNF-SD-WM-DP-254, REV. 0
ACI Address: 1 System: 1 Inject#: 13             Detector: CDM-1
Analyst    :                                     Column: AG4A/AS4A anion column
=====
  
```

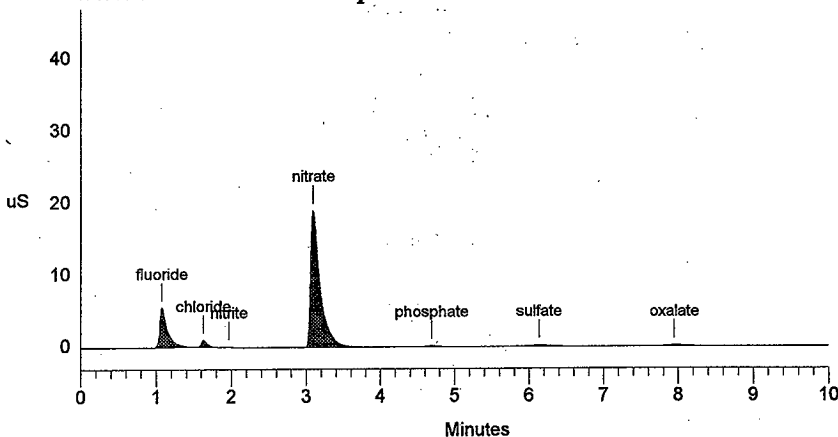
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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          11    3000   5Hz   0.00 10.00          30
=====
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	21.143	5474	37720	1	-4.17
2	1.63	chloride	4.452	953	5327	1	2.09
3	1.97	nitrite	1.444	53	283	1	2.08
4	3.09	nitrate	207.893	19044	166216	1	-4.82
5	4.69	phosphate	5.581	146	1984	1	1.73
6	6.13	sulfate	4.392	222	5605	1	1.77
7	7.95	oxalate	4.667	180	3544	1	1.36
Totals			249.573	26070	220679		

File: 97052821.D13 Sample: S97T000931 SAM



mke
7-14-97

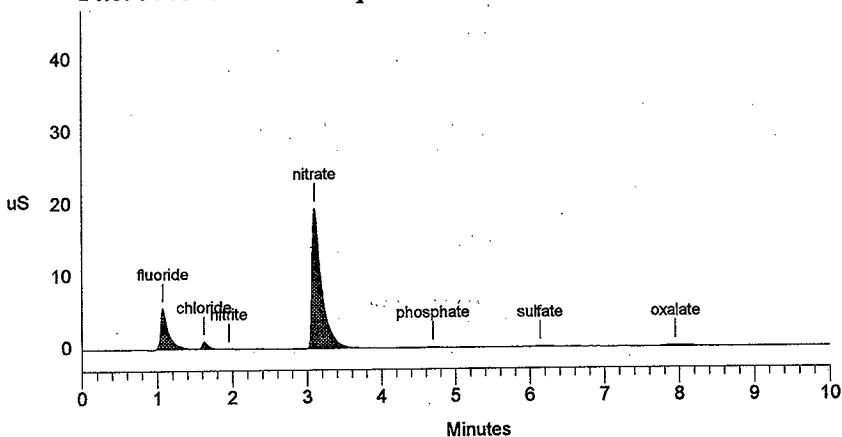
Sample Name: S97T000931 DUP Date: 05/30/1997 13:51:34
 Data File : C:\DX\DATA\97052821.D14 HNF-SD-WM-DP-254, REV. 0
 Method : C:\DX\METHOD\KIT.MET
 ACI Address: 1 System: 1 Inject#: 14 Detector: CDM-1
 Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	21.643	5593	38674	1	-4.17
2	1.62	chloride	4.513	984	5399	1	1.67
3	1.95	nitrite	1.456	50	292	1	1.38
4	3.10	nitrate	214.714	19442	172001	1	-4.62
5	4.69	phosphate	5.310	142	1873	1	1.73
6	6.13	sulfate	1.161	137	2054	1	1.77
7	7.95	oxalate	5.128	176	3919	1	1.36
Totals			253.925	26524	224212		

File: 97052821.D14 Sample: S97T000931 DUP



LABCORE Completed Worklist Report for Worklist# 18312

Analyst: rag

Instrument: IC02

Book# 61N20A

Method: LA-533-105 Rev/Mod D-1

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @IC-01 skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0	@IC-QC	F	QC	1	<1.20e-2		ug/mL
1 CCB	0	@IC-QC	CL	QC	1	<1.70e-2		ug/mL
1 CCB	0	@IC-QC	NO2	QC	1	<1.08e-1		ug/mL
1 CCB	0	@IC-QC	BR	QC	1	<1.25e-1		ug/mL
1 CCB	0	@IC-QC	NO3	QC	1	1.49e+01	0.149	ug/mL
1 CCB	0	@IC-QC	PO4	QC	1	<1.20e-1		ug/mL
1 CCB	0	@IC-QC	SO4	QC	1	1.51e+01	0.151	ug/mL
1 CCB	0	@IC-QC	OxALATE2	QC	1	<1.05e-1		ug/mL
2 CCV	0	@IC-QC	F	QC	5.90e01	5.60e+01	94.915 % Recovery	
2 CCV	0	@IC-QC	CL	QC	7.90e01	7.41e+01	93.797 % Recovery	
2 CCV	0	@IC-QC	NO2	QC	5.44e02	5.08e+02	93.382 % Recovery	
2 CCV	0	@IC-QC	BR	QC	5.89e02	5.55e+02	94.228 % Recovery	
2 CCV	0	@IC-QC	NO3	QC	5.94e02	5.80e+02	97.643 % Recovery	
2 CCV	0	@IC-QC	PO4	QC	5.45e02	5.34e+02	97.982 % Recovery	
2 CCV	0	@IC-QC	SO4	QC	6.31e02	6.21e+02	98.415 % Recovery	
2 CCV	0	@IC-QC	OxALATE2	QC	5.32e02	5.01e+02	94.173 % Recovery	
3 BLNK-PREP	0	@IC-01	F-02	SOLID	1	<1.20e-2		ug/g
3 BLNK-PREP	0	@IC-01	CL-02	SOLID	1	4.20e-02	0.042	ug/g
3 BLNK-PREP	0	@IC-01	NO2-02	SOLID	1	<1.08e-1		ug/g
3 BLNK-PREP	0	@IC-01	BR-02	SOLID	1	<1.25e-1		ug/g
3 BLNK-PREP	0	@IC-01	NO3-02	SOLID	1	2.01e-01	0.201	ug/g
3 BLNK-PREP	0	@IC-01	PO4-02	SOLID	1	<1.20e-1		ug/g
3 BLNK-PREP	0	@IC-01	SO4-02	SOLID	1	<1.38e-1		ug/g
3 BLNK-PREP	0	@IC-01	OxALATE2	SOLID	1	<1.05e-1		ug/g
4 SAMPLE	S97T000916	0 W	@IC-01	F-02	SOLID	N/A	4.817e+03	25.870 ug/g
4 SAMPLE	S97T000916	0 W	@IC-01	CL-02	SOLID	N/A	9.016e+02	36.660 ug/g
4 SAMPLE	S97T000916	0 W	@IC-01	NO2-02	SOLID	N/A	4.640e+02	292.900 ug/g
4 SAMPLE	S97T000916	0 W	@IC-01	BR-02	SOLID	N/A	2.696e+02	269.500 ug/g
4 SAMPLE	S97T000916	0 W	@IC-01	NO3-02	SOLID	N/A	4.026e+04	299.800 ug/g
4 SAMPLE	S97T000916	0 W	@IC-01	PO4-02	SOLID	N/A	3.787e+02	258.700 ug/g
4 SAMPLE	S97T000916	0 W	@IC-01	SO4-02	SOLID	N/A	4.640e+02	297.600 ug/g
4 SAMPLE	S97T000916	0 W	@IC-01	OxALATE2	SOLID	N/A	6.438e+02	226.400 ug/g
5 DUP	S97T000916	0 W	@IC-01	F-02	SOLID	4.82e+03	4.92e+03	2.053 RPD
5 DUP	S97T000916	0 W	@IC-01	CL-02	SOLID	9.02e+02	9.23e+02	2.301 RPD
5 DUP	S97T000916	0 W	@IC-01	NO2-02	SOLID	4.64e+02	4.85e+02	4.426 RPD
5 DUP	S97T000916	0 W	@IC-01	BR-02	SOLID	<2.70e2	<2.77e2	RPD
5 DUP	S97T000916	0 W	@IC-01	NO3-02	SOLID	4.03e+04	4.10e+04	1.722 RPD
5 DUP	S97T000916	0 W	@IC-01	PO4-02	SOLID	3.79e+02	6.18e+02	47.944 RPD
5 DUP	S97T000916	0 W	@IC-01	SO4-02	SOLID	4.64e+02	5.27e+02	12.714 RPD
5 DUP	S97T000916	0 W	@IC-01	OxALATE2	SOLID	6.44e+02	7.21e+02	11.282 RPD
6 SAMPLE	S97T000917	0 W	@IC-01	F-02	SOLID	N/A	5.416e+03	26.500 ug/g

LABCORE Completed Worklist Report for Worklist# 18312

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S97T000917 0 W @IC-01	CL-02	SOLID	N/A	1.015e+03	37.540	ug/g
6 SAMPLE	S97T000917 0 W @IC-01	NO2-02	SOLID	N/A	4.999e+02	238.500	ug/g
6 SAMPLE	S97T000917 0 W @IC-01	BR-02	SOLID	N/A	2.780e+02	276.100	ug/g
6 SAMPLE	S97T000917 0 W @IC-01	NO3-02	SOLID	N/A	4.538e+04	307.000	ug/g
6 SAMPLE	S97T000917 0 W @IC-01	PO4-02	SOLID	N/A	3.164e+02	265.000	ug/g
6 SAMPLE	S97T000917 0 W @IC-01	SO4-02	SOLID	N/A	3.969e+02	304.800	ug/g
6 SAMPLE	S97T000917 0 W @IC-01	OXALATE2	SOLID	N/A	8.093e+02	231.900	ug/g
7 DUP	S97T000917 0 W @IC-01	F-02	SOLID	5.42e+03	5.01e+03	7.862	RPD
7 DUP	S97T000917 0 W @IC-01	CL-02	SOLID	1.02e+03	9.51e+02	7.002	RPD
7 DUP	S97T000917 0 W @IC-01	NO2-02	SOLID	5.00e+02	4.84e+02	3.252	RPD
7 DUP	S97T000917 0 W @IC-01	BR-02	SOLID	<2.76e2	<2.72e2		RPD
7 DUP	S97T000917 0 W @IC-01	NO3-02	SOLID	4.54e+04	4.25e+04	6.598	RPD
7 DUP	S97T000917 0 W @IC-01	PO4-02	SOLID	3.16e+02	4.78e+02	40.806	RPD
7 DUP	S97T000917 0 W @IC-01	SO4-02	SOLID	3.97e+02	5.59e+02	33.891	RPD
7 DUP	S97T000917 0 W @IC-01	OXALATE2	SOLID	8.09e+02	7.22e+02	11.365	RPD
8 SPK	S97T000917 0 W @IC-01	F-02	SOLID	5.90e01	6.39e+01	108.305	% Recovery
8 SPK	S97T000917 0 W @IC-01	CL-02	SOLID	7.90e01	7.56e+01	95.696	% Recovery
8 SPK	S97T000917 0 W @IC-01	NO2-02	SOLID	5.44e02	4.82e+02	88.603	% Recovery
8 SPK	S97T000917 0 W @IC-01	BR-02	SOLID	5.89e02	5.37e+02	91.171	% Recovery
8 SPK	S97T000917 0 W @IC-01	NO3-02	SOLID	5.94e02	6.41e+02	107.912	% Recovery
8 SPK	S97T000917 0 W @IC-01	PO4-02	SOLID	5.45e02	5.19e+02	95.229	% Recovery
8 SPK	S97T000917 0 W @IC-01	SO4-02	SOLID	6.31e02	5.86e+02	92.868	% Recovery
8 SPK	S97T000917 0 W @IC-01	OXALATE2	SOLID	5.32e02	10.54.12		% Recovery
9 SAMPLE	S97T000918 0 W @IC-01	F-02	SOLID	N/A	5.224e+03	25.910	ug/g
9 SAMPLE	S97T000918 0 W @IC-01	CL-02	SOLID	N/A	1.026e+03	36.700	ug/g
9 SAMPLE	S97T000918 0 W @IC-01	NO2-02	SOLID	N/A	5.128e+02	233.100	ug/g
9 SAMPLE	S97T000918 0 W @IC-01	BR-02	SOLID	N/A	2.698e+02	269.800	ug/g
9 SAMPLE	S97T000918 0 W @IC-01	NO3-02	SOLID	N/A	4.369e+04	300.100	ug/g
9 SAMPLE	S97T000918 0 W @IC-01	PO4-02	SOLID	N/A	3.675e+02	259.100	ug/g
9 SAMPLE	S97T000918 0 W @IC-01	SO4-02	SOLID	N/A	7.268e+02	297.900	ug/g
9 SAMPLE	S97T000918 0 W @IC-01	OXALATE2	SOLID	N/A	7.686e+02	226.600	ug/g
10 DUP	S97T000918 0 W @IC-01	F-02	SOLID	5.22e+03	5.17e+03	0.962	RPD
10 DUP	S97T000918 0 W @IC-01	CL-02	SOLID	1.03e+03	1.00e+03	2.956	RPD
10 DUP	S97T000918 0 W @IC-01	NO2-02	SOLID	5.13e+02	5.16e+02	0.583	RPD
10 DUP	S97T000918 0 W @IC-01	BR-02	SOLID	<2.70e2	<2.73e2		RPD
10 DUP	S97T000918 0 W @IC-01	NO3-02	SOLID	4.37e+04	4.38e+04	0.229	RPD
10 DUP	S97T000918 0 W @IC-01	PO4-02	SOLID	3.68e+02	3.48e+02	5.587	RPD
10 DUP	S97T000918 0 W @IC-01	SO4-02	SOLID	7.27e+02	5.96e+02	19.803	RPD
10 DUP	S97T000918 0 W @IC-01	OXALATE2	SOLID	7.69e+02	7.42e+02	3.574	RPD

Final page for worklist# 18312

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

John M. Lyle 6/2/97
Reviewer Signature Date

05/27/97 13:49
A-0004-1

Page: 1

LABCORE Data Entry Template for Worklist# 18312

Analyst: Rg Instrument: IC0 2

Book# 61N20-A

Method: LA-533-105 Rev/Mod 0-1

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S97T000916 0 W		@IC-01	SOLID	97000311	T-201
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S97T000916 0 W		@IC-01	SOLID		
6 SAMPLE	S97T000917 0 W		@IC-01	SOLID	97000311	T-201
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7 DUP	S97T000917 0 W		@IC-01	SOLID		
8 SPK	S97T000917 0 W		@IC-01	SOLID		
9 SAMPLE	S97T000918 0 W		@IC-01	SOLID	97000311	T-201
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
10 DUP	S97T000918 0 W		@IC-01	SOLID		

Final page for worklist # 18312

Bae Ann Green 05-30-97
Analyst Signature Date

Analyst Signature Date

uploaded 6-2-97

John W. Hall

18312 MAY. CSV

Data Entry Comments:

Validated 6/2/97 Jm Lye

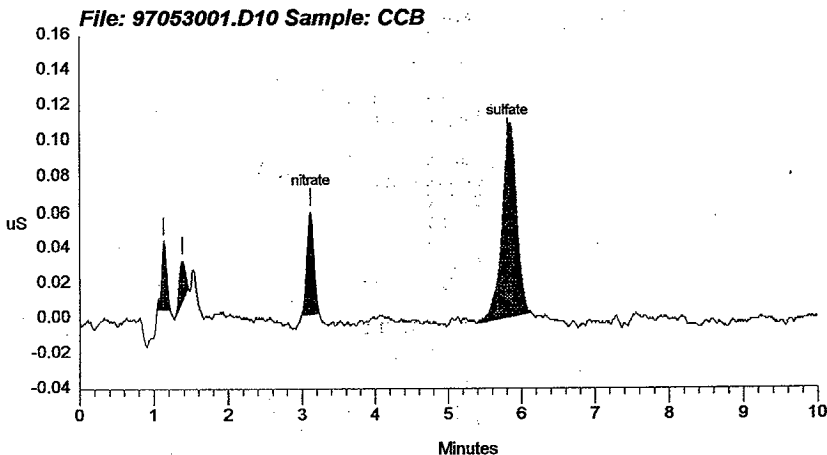
S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Sample Name: CCB		Date: 05/30/1997 10:05:18
Data File : C:\DX\DATA\97053001.D10		
Method : C:\DX\METHOD\ANIONS.MET		HNF-SD-WM-DP-254, REV. 0
ACI Address: 1	System: 1	Inject#: 10
Analyst : <i>Rae Ann Green</i>	Column: AG4A/AS4A anion column	Detector: CDM-1

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.13		0.000	39	180	1	
2	1.39		0.000	22	128	1	
3	3.12	nitrate	0.149	57	373	1	-1.58
4	5.81	sulfate	0.151	99	1491	1	1.81
Totals			0.301	217	2172		



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES *222 TO 282*

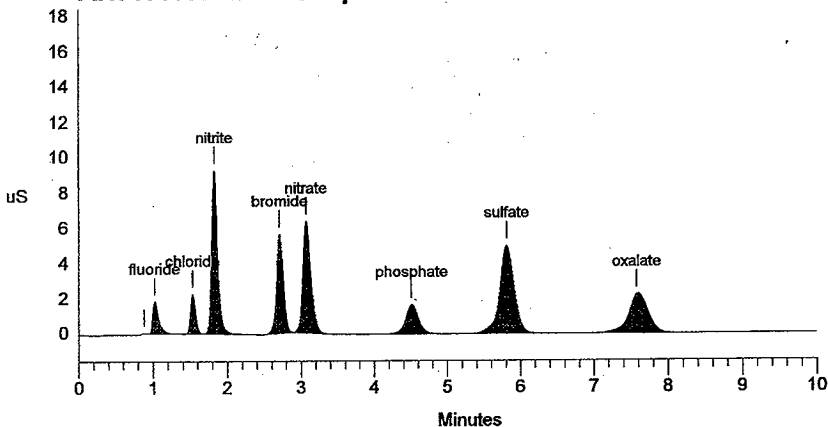
Sample Name: STD 61N20-A	Date: 05/30/1997 10:18:11
Data File : C:\DX\DATA\97053001.D11	HNF-SD-WM-DP-254, REV. 0
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 11	Detector: CDM-1
Analyst : <i>Rae Ann Green</i>	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	52	195	2	
2	1.02	fluoride	56.050	1838	10194	2	0.99
3	1.53	chloride	74.131	2285	10502	1	-0.87
4	1.83	nitrite	508.104	9291	49229	1	-2.14
5	2.71	bromide	555.026	5646	34700	1	-2.99
6	3.07	nitrate	579.773	6386	47318	1	-3.26
7	4.51	phosphate	534.158	1701	20900	1	1.20
8	5.81	sulfate	620.818	5027	68267	1	1.81
9	7.57	oxalate	500.509	2253	42019	1	-4.74
Totals			3428.570	34478	283323		

File: 97053001.D11 Sample: STD 61N20-A



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=====
Sample Name: PREP BLANK                      Date: 05/30/1997 10:30:38
Data File  : C:\DX\DATA\97053001.D12
Method     : C:\DX\METHOD\ANIONS.MET       HNF-SD-WM-DP-254, REV. 0
ACI Address: 1 System: 1 Inject#: 12         Detector: CDM-1
Analyst    : Rae Ann Green                Column: AG4A/AS4A anion column
=====

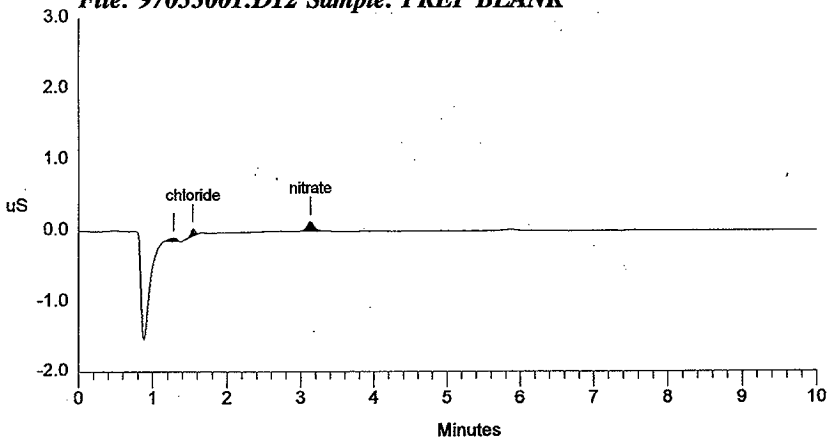
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Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.28		0.000	54	451	1	
2	1.54	chloride	0.042	98	445	1	0.00
3	3.13	nitrate	0.201	126	803	1	-1.16
Totals			0.243	279	1698		

File: 97053001.D12 Sample: PREP BLANK



7-14-97

```

=====
Sample Name: S97T000916                      Date: 05/30/1997 11:05:50
Data File  : C:\DX\DATA\97053001.D15
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 15
Analyst    : Rae Ann Green
Column: AG4A/AS4A anion column
Detector: CDM-1
=====
  
```

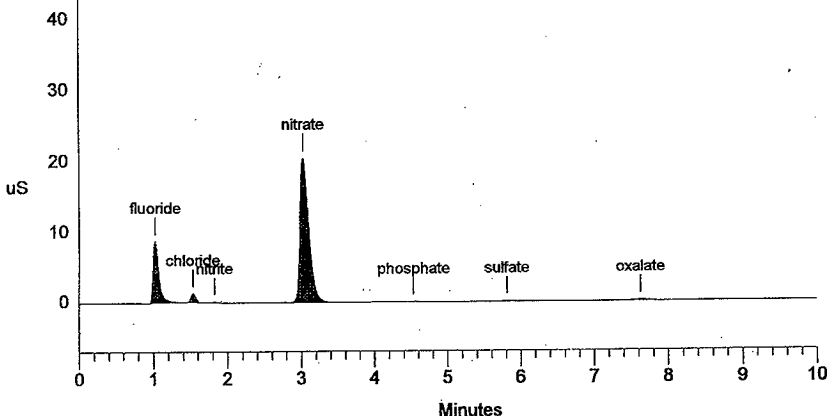
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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
=====
External          1          11    3000  5Hz   0.00 10.00      50
  
```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.03	fluoride	24.570	8768	44009	1	1.65
2	1.53	chloride	4.599	1279	5889	1	-0.43
3	1.83	nitrite	2.367	164	822	1	-2.14
4	3.03	nitrate	205.366	20509	162759	1	-4.52
5	4.53	phosphate	1.932	47	415	1	1.80
6	5.81	sulfate	2.367	146	2188	1	1.81
7	7.63	oxalate	3.284	192	3359	1	-4.07
Totals			244.485	31105	219441		

File: 97053001.D15 Sample: S97T000916



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=====
Sample Name: S97T000916 DUP                               Date: 05/30/1997 10:53:09
Data File  : C:\DX\DATA\97053001.D14                      HNF-SD-WM-DP-254, REV. 0
Method     : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 14                       Detector: CDM-1
Analyst    : Rae Ann Green                               Column: AG4A/AS4A anion column
=====

```

```

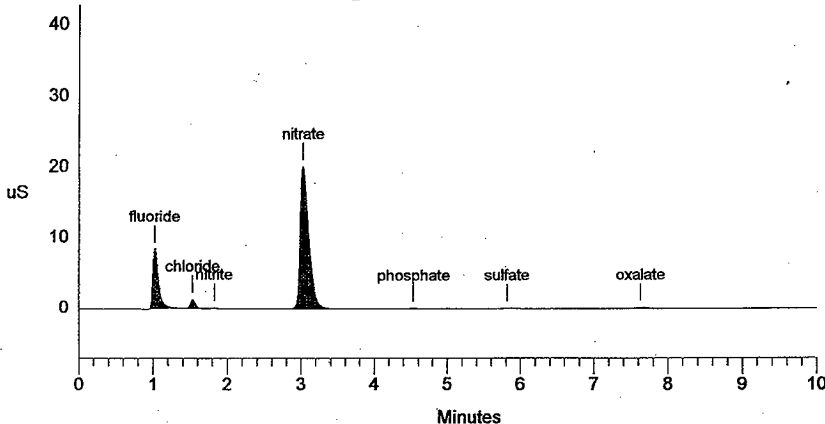
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
=====
External          1          11    3000  5Hz   0.00 10.00          50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.02	fluoride	24.473	8373	43821	1	0.99
2	1.53	chloride	4.587	1283	5873	1	-0.87
3	1.82	nitrite	2.410	172	861	1	-2.50
4	3.02	nitrate	203.604	20197	161262	1	-4.73
5	4.53	phosphate	3.075	72	823	1	1.80
6	5.81	sulfate	2.622	135	2442	1	1.81
7	7.63	oxalate	3.586	195	3585	1	-4.07
Totals			244.357	30426	218668		

File: 97053001.D14 Sample: S97T000916 DUP



7-14-97

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=====
Sample Name: S97T000917                      Date: 05/30/1997 11:17:43
Data File  : C:\DX\DATA\97053001.D16
Method     : C:\DX\METHOD\ANIONS.MET        HNF-SD-WM-DP-254, REV. 0
ACI Address: 1 System: 1 Inject#: 16
Analyst    : Pae Ann Green                 Column: AG4A/AS4A anion column
Detector: CDM-1
=====

```

```

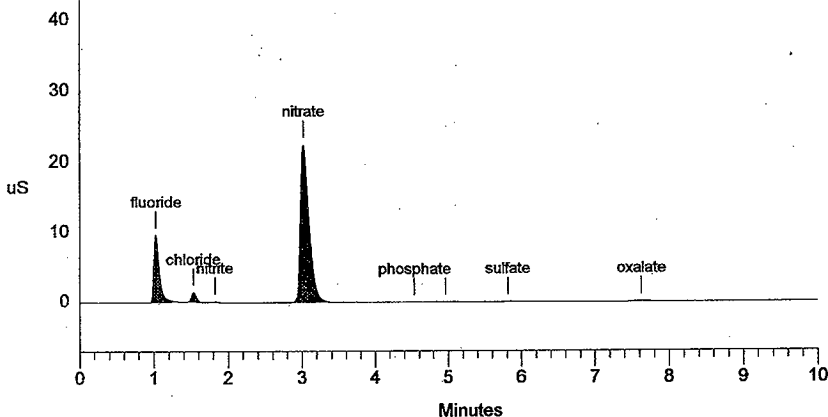
=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          11    3000  5Hz   0.00 10.00      50
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.03	fluoride	26.976	9577	48713	1	1.65
2	1.53	chloride	5.056	1401	6494	1	-0.87
3	1.82	nitrite	2.490	184	933	1	-2.50
4	3.02	nitrate	226.049	22475	180468	1	-4.73
5	4.53	phosphate	1.576	31	288	1	1.80
6	4.96		0.000	44	1068	1	
7	5.81	sulfate	1.977	127	1799	1	1.81
8	7.63	oxalate	4.031	214	3918	1	-4.07
Totals			268.155	34053	243680		

File: 97053001.D16 Sample: S97T000917



7-14-97

=====

Sample Name:	S97T000917DUP	Date:	05/30/1997 11:28:46
Data File :	C:\DX\DATA\97053001.D17		
Method :	C:\DX\METHOD\ANIONS.MET	HNF-SD-WM-DP-254, REV. 0	
ACI Address:	1	System: 1	Inject#: 17
Analyst :	<i>Rae Ann Green</i>	Column:	AG4A/AS4A anion column

=====

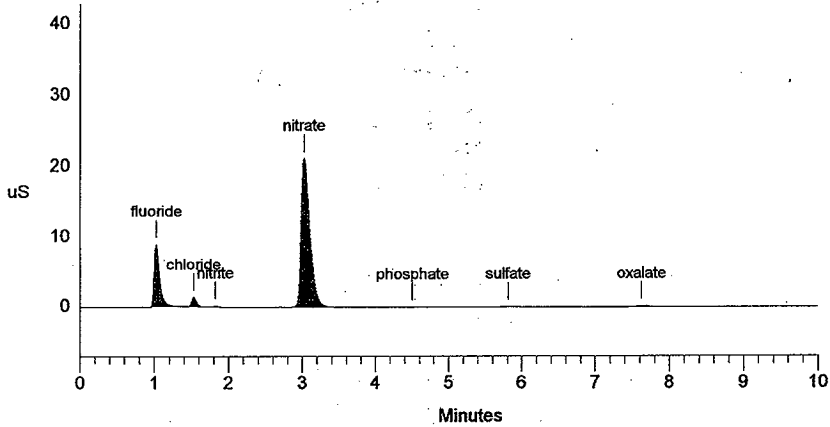
Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 11 3000 5Hz 0.00 10.00 50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.03	fluoride	25.339	8975	45504	1	1.65
2	1.53	chloride	4.807	1339	6164	1	-0.87
3	1.82	nitrite	2.448	180	895	1	-2.50
4	3.02	nitrate	214.983	21153	170961	1	-4.73
5	4.51	phosphate	2.418	48	589	1	1.20
6	5.81	sulfate	2.825	150	2643	1	1.81
7	7.63	oxalate	3.653	205	3635	1	-4.07
Totals			256.473	32048	230392		

File: 97053001.D17 Sample: S97T000917DUP



Data Reprocessed On 06/02/1997 08:00:42

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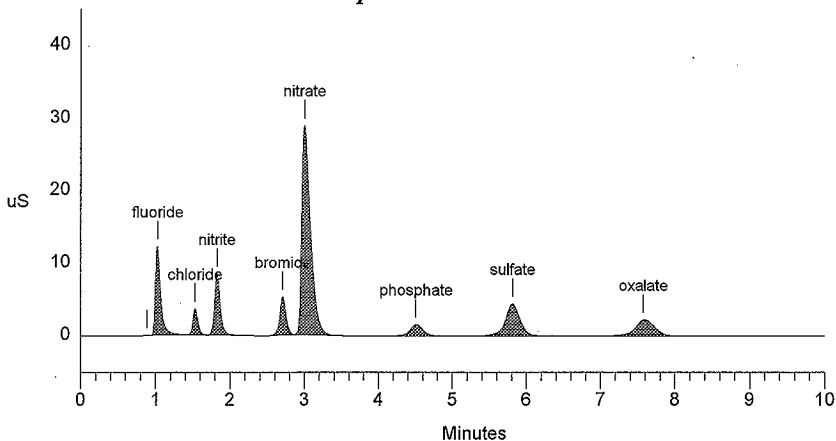
=====
Sample Name: S97T000917SPK                      Date: 05/30/1997 11:39:27
Data File  : E:\DATA\97053001.D18
Method     : C:\DX\METHOD\ANIONS.MET           HNF-SD-WM-DP-254, REV. 0
ACI Address: 1 System: 1 Inject#: 18             Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====
  
```

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	43	161	1	
2	1.03	fluoride	33.367	12258	61603	1	1.65
3	1.53	chloride	12.613	3624	16586	1	-0.87
4	1.83	nitrite	50.675	8485	44956	1	-2.14
5	2.71	bromide	53.664	5265	30647	1	-2.99
6	3.00	nitrate	290.105	28906	237043	1	0.00
7	4.51	phosphate	53.525	1574	19176	1	1.20
8	5.81	sulfate	60.573	4435	61020	1	1.81
9	7.57	oxalate	54.120	2252	41722	1	-4.74
Totals			608.643	66842	512913		

File: 97053001.D18 Sample: S97T000917SPK



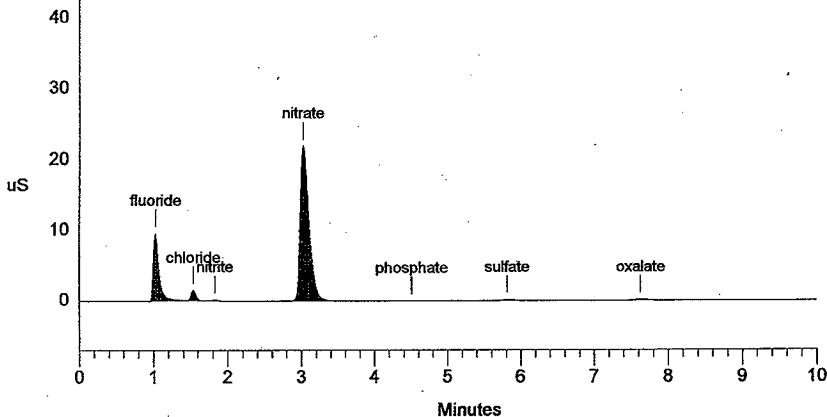
Sample Name: S97T000918	Date: 05/30/1997 11:50:42
Data File : C:\DX\DATA\97053001.D19	HNF-SD-WM-DP-254, REV. 0
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 19	Detector: CDM-1
Analyst : <i>RaeAnn Green</i>	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.03	fluoride	26.624	9591	48019	1	1.65
2	1.53	chloride	5.239	1493	6736	1	-0.43
3	1.83	nitrite	2.613	207	1046	1	-2.14
4	3.02	nitrate	222.660	21976	177549	1	-4.73
5	4.51	phosphate	1.873	36	394	1	1.20
6	5.81	sulfate	3.704	200	3518	1	1.81
7	7.63	oxalate	3.917	213	3833	1	-4.07
Totals			266.630	33717	241094		

File: 97053001.D19 Sample: S97T000918



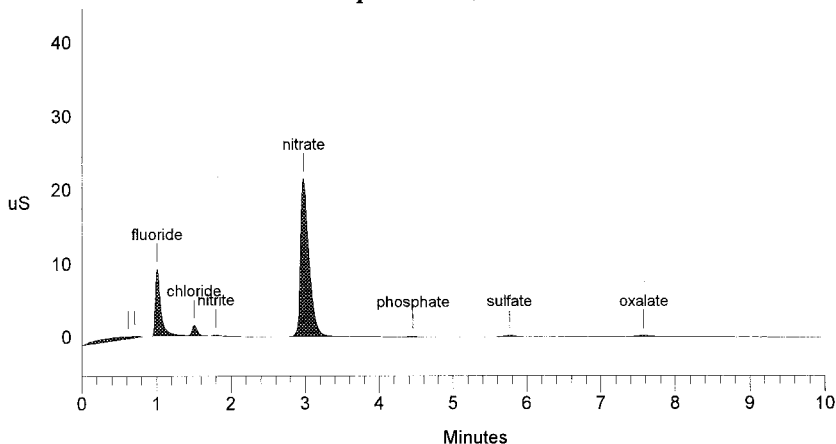
Sample Name: S97T000918 DUP	Date: 05/30/1997 14:02:25
Data File : E:\DATA\97053001.D22	
Method : C:\DX\METHOD\ANIONS.MET	HNF-SD-WM-DP-254, REV. 0
ACI Address: 1 System: 1 Inject#: 22	Detector: CDM-1
Analyst :	Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	11	3000	5Hz	0.00	10.00		50

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.61		0.000	350	15146	2	
2	0.71		0.000	276	1917	2	
3	1.01	fluoride	25.428	9116	45678	1	-0.33
4	1.50	chloride	4.936	1366	6336	1	-2.60
5	1.79	nitrite	2.540	190	979	1	-3.93
6	2.97	nitrate	215.399	21426	171317	1	0.11
7	4.45	phosphate	1.712	31	336	1	0.00
8	5.76	sulfate	2.933	193	2751	1	0.88
9	7.57	oxalate	3.652	198	3635	1	-4.74
Totals			256.601	33145	248094		

File: 97053001.D22 Sample: S97T000918 DUP



LABCORE Completed Worklist Report for Worklist# 19089

Analyst: pjm

Instrument: IC01

Book# 22A20D

Method: AA-533-05 Rev/Mod D-1

Worklist Comment: T201, @IC-01 skm

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 CCB	0 @IC-QC F	QC		1	<1.20e-2		ug/mL
1 CCB	0 @IC-QC CL	QC		1	<1.70e-2		ug/mL
1 CCB	0 @IC-QC NO2	QC		1	<1.08e-1		ug/mL
1 CCB	0 @IC-QC BR	QC		1	<1.25e-1		ug/mL
1 CCB	0 @IC-QC NO3	QC		1	<1.39e-1		ug/mL
1 CCB	0 @IC-QC P04	QC		1	<1.20e-1		ug/mL
1 CCB	0 @IC-QC S04	QC		1	<1.38e-1		ug/mL
1 CCB	0 @IC-QC OXALATE2	QC		1	<1.05e-1		ug/mL
2 CCV	0 @IC-QC F	QC		5.90e01	6.01e+01	101.864 % Recovery	
2 CCV	0 @IC-QC CL	QC		7.90e01	8.04e+01	101.772 % Recovery	
2 CCV	0 @IC-QC NO2	QC		5.42e02	5.71e+02	105.351 % Recovery	
2 CCV	0 @IC-QC BR	QC		5.89e02	6.09e+02	103.396 % Recovery	
2 CCV	0 @IC-QC NO3	QC		5.94e02	6.02e+02	101.347 % Recovery	
2 CCV	0 @IC-QC P04	QC		5.45e02	5.35e+02	98.165 % Recovery	
2 CCV	0 @IC-QC S04	QC		6.32e02	6.38e+02	100.949 % Recovery	
2 CCV	0 @IC-QC OXALATE2	QC		5.33e02	5.24e+02	98.311 % Recovery	
3 BLNK-PREP	0 @IC-01 F-02	SOLID		1	<1.20e-2		ug/g
3 BLNK-PREP	0 @IC-01 CL-02	SOLID		1	1.90e-02	0.019	ug/g
3 BLNK-PREP	0 @IC-01 NO2-02	SOLID		1	<1.08e-1		ug/g
3 BLNK-PREP	0 @IC-01 BR-02	SOLID		1	<1.25e-1		ug/g
3 BLNK-PREP	0 @IC-01 NO3-02	SOLID		1	1.41e-01	0.141	ug/g
3 BLNK-PREP	0 @IC-01 P04-02	SOLID		1	<1.20e-1		ug/g
3 BLNK-PREP	0 @IC-01 S04-02	SOLID		1	<1.38e-1		ug/g
3 BLNK-PREP	0 @IC-01 OXALATE2	SOLID		1	<1.05e-1		ug/g
4 SAMPLE	S97T001251 0 W @IC-01 F-02	SOLID		N/A	5.03e+03	26.790	ug/g
4 SAMPLE	S97T001251 0 W @IC-01 CL-02	SOLID		N/A	1.063e+03	37.950	ug/g
4 SAMPLE	S97T001251 0 W @IC-01 NO2-02	SOLID		N/A	3.093e+02	241.100	ug/g
4 SAMPLE	S97T001251 0 W @IC-01 BR-02	SOLID		N/A	2.790e+02	279.100	ug/g
4 SAMPLE	S97T001251 0 W @IC-01 NO3-02	SOLID		N/A	4.711e+04	310.300	ug/g
4 SAMPLE	S97T001251 0 W @IC-01 P04-02	SOLID		N/A	3.659e+02	267.900	ug/g
4 SAMPLE	S97T001251 0 W @IC-01 S04-02	SOLID		N/A	3.080e+02	308.000	ug/g
4 SAMPLE	S97T001251 0 W @IC-01 OXALATE2	SOLID		N/A	1.149e+03	234.400	ug/g
5 DUP	S97T001251 0 W @IC-01 F-02	SOLID		5.03e+03	5.12e+03	1.773 RPD	
5 DUP	S97T001251 0 W @IC-01 CL-02	SOLID		1.06e+03	1.09e+03	2.791 RPD	
5 DUP	S97T001251 0 W @IC-01 NO2-02	SOLID		3.09e+02	3.18e+02	2.871 RPD	
5 DUP	S97T001251 0 W @IC-01 BR-02	SOLID		<2.79e2	<2.77e2	RPD	
5 DUP	S97T001251 0 W @IC-01 NO3-02	SOLID		4.71e+04	4.95e+04	4.969 RPD	
5 DUP	S97T001251 0 W @IC-01 P04-02	SOLID		3.66e+02	5.20e+02	34.763 RPD	
5 DUP	S97T001251 0 W @IC-01 S04-02	SOLID		<3.08e2	1.25e+03	RPD	
5 DUP	S97T001251 0 W @IC-01 OXALATE2	SOLID		1.15e+03	1.14e+03	0.873 RPD	
6 SAMPLE	S97T001257 0 W @IC-01 F-02	SOLID		N/A	4.292e+03	26.890	ug/g

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 19089

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 SAMPLE	S97T001257	0 W	@IC-01	CL-02	SOLID	N/A	8.292e+02	36.960 ug/g
6 SAMPLE	S97T001257	0 W	@IC-01	NO2-02	SOLID	N/A	2.887e+02	234.700 ug/g
6 SAMPLE	S97T001257	0 W	@IC-01	BR-02	SOLID	N/A	2.717e+02	271.700 ug/g
6 SAMPLE	S97T001257	0 W	@IC-01	NO3-02	SOLID	N/A	4.212e+04	302.200 ug/g
6 SAMPLE	S97T001257	0 W	@IC-01	PO4-02	SOLID	N/A	1.132e+03	260.900 ug/g
6 SAMPLE	S97T001257	0 W	@IC-01	S04-02	SOLID	N/A	1.082e+03	300.000 ug/g
6 SAMPLE	S97T001257	0 W	@IC-01	OXALATE2	SOLID	N/A	2.283e+02	228.200 ug/g
7 DUP	S97T001257	0 W	@IC-01	F-02	SOLID	4.29e+03	4.30e+03	0.233 RPD
7 DUP	S97T001257	0 W	@IC-01	CL-02	SOLID	8.29e+02	8.50e+02	2.501 RPD
7 DUP	S97T001257	0 W	@IC-01	NO2-02	SOLID	2.89e+02	3.02e+02	4.399 RPD
7 DUP	S97T001257	0 W	@IC-01	BR-02	SOLID	<2.72e2	<2.74e2	RPD
7 DUP	S97T001257	0 W	@IC-01	NO3-02	SOLID	4.21e+04	4.24e+04	0.710 RPD
7 DUP	S97T001257	0 W	@IC-01	PO4-02	SOLID	1.13e+03	1.11e+03	1.786 RPD
7 DUP	S97T001257	0 W	@IC-01	S04-02	SOLID	1.08e+03	<3.03e2	RPD
7 DUP	S97T001257	0 W	@IC-01	OXALATE2	SOLID	<2.28e2	<2.30e2	RPD

Final page for worklist# 19089

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Jenni M. Lyle 7/14/97
 Reviewer Signature _____ Date _____

07/02/97 17:29
A-0004-1

Page: 1

LABCORE Data Entry Template for Worklist# 19089

Analyst: RLM Instrument: IC0 1 Book# 72 N20 DMethod: LA-533-105 Rev/Mod D-1

Worklist Comment: T201, @IC-01 skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 CCB			@IC-QC	QC		
2 CCV			@IC-QC	QC		
3 BLNK-PREP			@IC-01	SOLID		
4 SAMPLE	S97T001251 0 W	@IC-01	SOLID	97000311 T-201		
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
5 DUP	S97T001251 0 W	@IC-01	SOLID			
6 SAMPLE	S97T001257 0 W	@IC-01	SOLID	97000311 T-201		
Analytes Requested: BR-02 , CL-02 , F-02 , NO2-02 , NO3-02 , OXALATE2, PO4-02 , SO4-02						
7 DUP	S97T001257 0 W	@IC-01	SOLID			

Final page for worklist # 19089

RLM 7/6/97
 Analyst Signature Date

 Analyst Signature Date

uploaded 7-9-97

John W. Wall

19089JUL.CSV

Validated 7/10/97 JmFrye

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

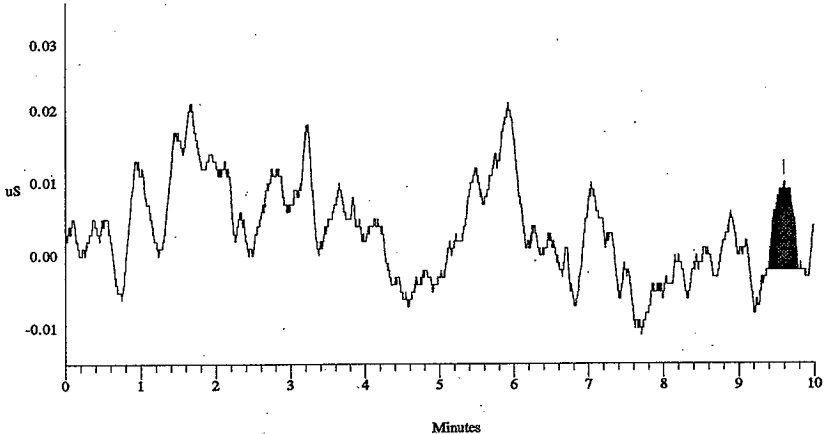
Sample Name: CCB ELUENT BLNK Date: 07/06/1997 02:14:28
Data File : C:\DX\DATA\97070511.D09
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 9 Detector: CDM-1
Analyst : *Jim Fuy* Column: AG4A/AS4A anion column

Calibration Volume *7/14/97* Dilution Points Rate Start Stop Area Reject
External 1 1 3000 5Hz 0.00 10.00 30

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	9.60		0.000	12	188	1	
Totals			0.000	12	188		

DIRECT RSM
File: 97070511.D09 Sample: CCB ELUENT BLNK



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES ~~286~~ TO ~~292~~

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=====
Sample Name: CCV 72N20D                      Date: 07/06/1997 02:26:48
Data File  : C:\DX\DATA\97070511.D11
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 11          Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

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=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          101    3000   5Hz   0.00 10.00        30
=====

```

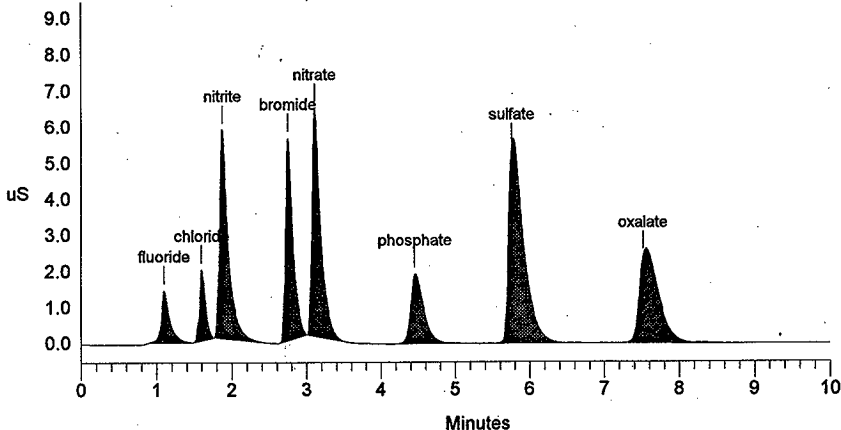
***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.10	fluoride	60.089	1443	10872	1	-1.79
2	1.59	chloride	80.396	1961	10499	1	0.00
3	1.87	nitrite	570.578	5774	45167	1	-2.77
4	2.75	bromide	609.316	5608	38132	1	0.61
5	3.11	nitrate	602.049	6318	50159	1	-4.41
6	4.45	phosphate	535.259	1932	23725	1	-3.47
7	5.76	sulfate	637.958	5417	78322	1	-4.42
8	7.52	oxalate	524.299	2427	46347	1	-4.08

Totals 3619.944 30880 303223

100 mL - 10 mg Ref. McCown 7/6/97

File: 97070511.D11 Sample: CCV 72N20D



```

=====
Sample Name: BLNK -PREP                      Date: 07/06/1997 02:49:48
Data File  : C:\DX\DATA\97070511.D12
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 12         Detector: CDM-1
Analyst    :                               Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          1    3000  5Hz   0.00 10.00      30
=====

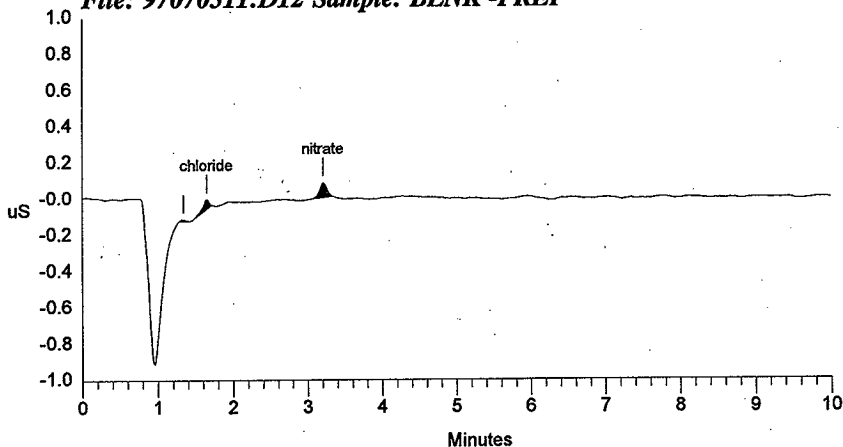
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***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.34		0.000	9	38	1	
2	1.65	chloride	0.019	53	309	1	3.35
3	3.21	nitrate	0.141	80	555	1	-1.33
Totals			0.160	142	903		

DIRECT Rlu

File: 97070511.D12 Sample: BLNK -PREP



```

=====
Sample Name: S97T001251 SMPL          Date: 07/06/1997 04:34:28
Data File  : C:\DX\DATA\97070511.D14
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 14   Detector: CDM-1
Analyst    :                          Column: AG4A/AS4A anion column
=====

```

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 11 3000 5Hz 0.00 10.00 30

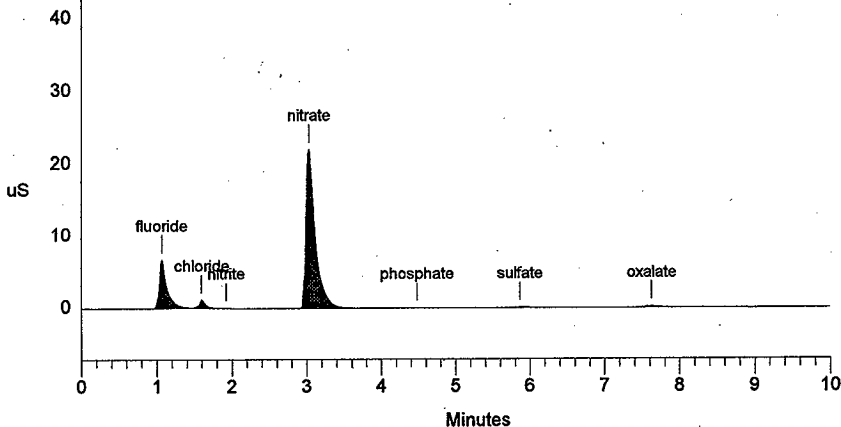
***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	24.795	6705	44748	1	-4.76
2	1.59	chloride	5.238	1123	6264	1	0.00
3	1.92	nitrite	1.524	65	341	1	-0.35
4	3.03	nitrate	232.148	22059	186889	1	-6.87
5	4.48	phosphate	1.803	38	449	1	-2.89
6	5.87	sulfate	1.337	140	2247	1	-2.65
7	7.63	oxalate	5.660	227	4350	1	-2.72

Totals 272.504 30356 245287

1.0 mL - 10 mL Rtn

File: 97070511.D14 Sample: S97T001251 SMPL



```

=====
Sample Name: S97T001251 DUP                      Date: 07/06/1997 04:45:08
Data File  : C:\DX\DATA\97070511.D15
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 15              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

Calibration Volume Dilution Points Rate Start Stop Area Reject

External 1 11 3000 5Hz 0.00 10.00 30

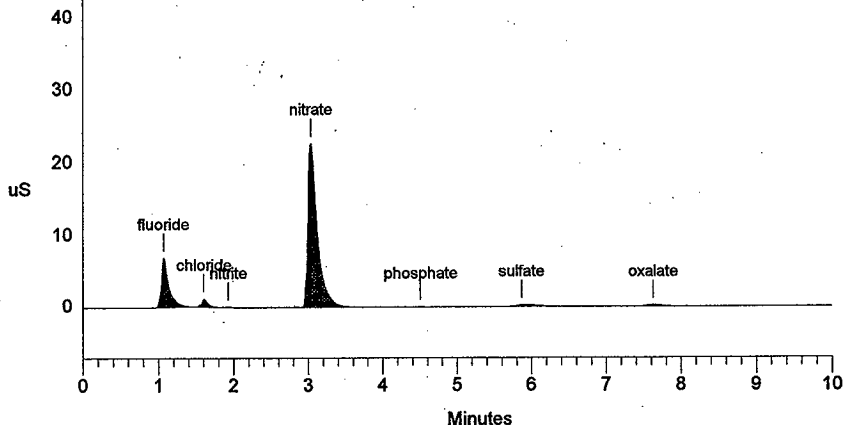
***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	25.435	6864	45995	1	-4.76
2	1.60	chloride	5.395	1155	6452	1	0.42
3	1.93	nitrite	1.578	63	381	1	0.00
4	3.03	nitrate	245.841	22720	198686	1	-6.67
5	4.51	phosphate	2.582	63	765	1	-2.31
6	5.87	sulfate	6.187	295	7580	1	-2.65
7	7.63	oxalate	5.658	237	4349	1	-2.72

Totals 292.676 31397 264206

1.0 mL - 10 mL RSM

File: 97070511.D15 Sample: S97T001251 DUP



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=====
Sample Name: S97T001257 SMPL                      Date: 07/06/1997 04:55:51
Data File  : C:\DX\DATA\97070511.D16
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 16                Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume  Dilution Points Rate  Start  Stop Area Reject
=====

```

```

External      1      11      3000      5Hz      0.00      10.00      30
=====

```

```

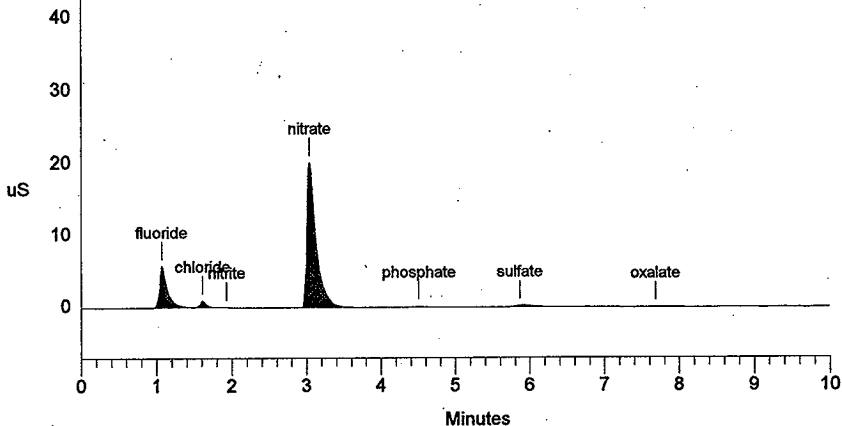
***** Peak Report: All Peaks *****

```

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	21.715	5626	38811	1	-4.76
2	1.61	chloride	4.196	906	5022	1	0.84
3	1.93	nitrite	1.461	52	295	1	0.00
4	3.04	nitrate	213.114	20147	170642	1	-6.46
5	4.51	phosphate	5.729	163	2044	1	-2.31
6	5.87	sulfate	5.477	269	6798	1	-2.65
7	7.68	oxalate	0.878	27	472	1	-2.04
Totals			252.569	27191	224084		

1.0 mL - 10 mL Blw

File: 97070511.D16 Sample: S97T001257 SMPL



```

=====
Sample Name: S97T001257 DUP                      Date: 07/06/1997 05:06:32
Data File  : C:\DX\DATA\97070511.D17
Method     : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 17              Detector: CDM-1
Analyst    :                      Column: AG4A/AS4A anion column
=====

```

```

=====
Calibration Volume Dilution Points Rate Start Stop Area Reject
-----
External          1          11    3000  5Hz   0.00 10.00          30
=====

```

***** Peak Report: All Peaks *****

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.07	fluoride	21.571	5591	38536	1	-4.76
2	1.61	chloride	4.258	931	5095	1	0.84
3	1.93	nitrite	1.512	59	333	1	0.35
4	3.03	nitrate	212.478	19946	170102	1	-6.67
5	4.48	phosphate	5.550	149	1971	1	-2.89
6	5.87	sulfate	1.482	132	2406	1	-2.65

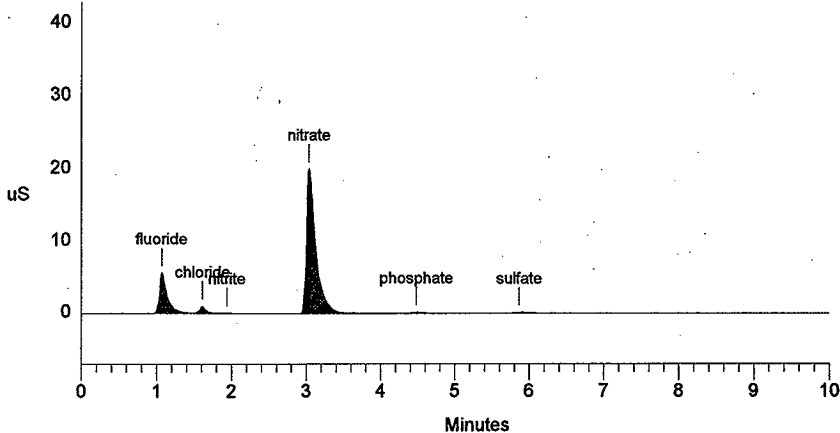
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Totals          246.852          26806          218444
-----

```

1.0 ML - 10 ML RSM.

File: 97070511.D17 Sample: S97T001257 DUP



LABCORE Data Entry Template for Worklist# 18330

Analyst:

JK Sato

Instrument:

ICP012 JK 5-28-97

Book#

C-1 66648B

Method: LA-505-154/161 Rev/Mod

C-1

JK 5-28-97

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: ICP T-201 (DIRECT)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	SAMPLE	S97T000823 0 D	@ICP-D01	LIQUID	97000311	T-201
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
7	DUP	S97T000823 0 D	@ICP-D01	LIQUID		
8	CCV		@ICP-QC	QC		
9	CCB		@ICP-QC	QC		
10	SAMPLE	S97T000834 0 D	@ICP-D01	LIQUID	97000311	T-201
Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
11	DUP	S97T000834 0 D	@ICP-D01	LIQUID		
12	SAMPLE	S97T000835 0 D	@ICP-D01	LIQUID	97000311	T-201

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18330

S Type	Sample#	R	A	Test	Matrix	Group#	Project
	Analytes Requested:			AG-D-01 ,	AL-D-01 ,	AS-D-01 ,	B-D-01 , BA-D-01 ,
				BE-D-01 ,	BI-D-01 ,	CA-D-01 ,	CD-D-01 , CE-D-01 , CO-D-01 ,
				CR-D-01 ,	CU-D-01 ,	FE-D-01 ,	K-D-01 , LA-D-01 , LI-D-01 ,
				MG-D-01 ,	MN-D-01 ,	MO-D-01 ,	NA-D-01 , ND-D-01 , NI-D-01 ,
				P-D-01 ,	PB-D-01 ,	S-D-01 ,	SB-D-01 , SE-D-01 , SI-D-01 ,
				SM-D-01 ,	SR-D-01 ,	TI-D-01 ,	TL-D-01 , U-D-01 , V-D-01 ,
				ZN-D-01 ,	ZR-D-01		
13 DUP	S97T000835	0	D	@ICP-D01	LIQUID		
14 CCV				@ICP-QC	QC		
15 CCB				@ICP-QC	QC		
16 SAMPLE	S97T000836	0	D	@ICP-D01	LIQUID	97000311	T-201
	Analytes Requested:			AG-D-01 ,	AL-D-01 ,	AS-D-01 ,	B-D-01 , BA-D-01 ,
				BE-D-01 ,	BI-D-01 ,	CA-D-01 ,	CD-D-01 , CE-D-01 , CO-D-01 ,
				CR-D-01 ,	CU-D-01 ,	FE-D-01 ,	K-D-01 , LA-D-01 , LI-D-01 ,
				MG-D-01 ,	MN-D-01 ,	MO-D-01 ,	NA-D-01 , ND-D-01 , NI-D-01 ,
				P-D-01 ,	PB-D-01 ,	S-D-01 ,	SB-D-01 , SE-D-01 , SI-D-01 ,
				SM-D-01 ,	SR-D-01 ,	TI-D-01 ,	TL-D-01 , U-D-01 , V-D-01 ,
				ZN-D-01 ,	ZR-D-01		
17 DUP	S97T000836	0	D	@ICP-D01	LIQUID		
18 SERDIL	S97T000837	0	D	@ICP-D01	LIQUID		
19 SAMPLE	S97T000837	0	D	@ICP-D01	LIQUID	97000311	T-201
	Analytes Requested:			AG-D-01 ,	AL-D-01 ,	AS-D-01 ,	B-D-01 , BA-D-01 ,
				BE-D-01 ,	BI-D-01 ,	CA-D-01 ,	CD-D-01 , CE-D-01 , CO-D-01 ,
				CR-D-01 ,	CU-D-01 ,	FE-D-01 ,	K-D-01 , LA-D-01 , LI-D-01 ,
				MG-D-01 ,	MN-D-01 ,	MO-D-01 ,	NA-D-01 , ND-D-01 , NI-D-01 ,
				P-D-01 ,	PB-D-01 ,	S-D-01 ,	SB-D-01 , SE-D-01 , SI-D-01 ,
				SM-D-01 ,	SR-D-01 ,	TI-D-01 ,	TL-D-01 , U-D-01 , V-D-01 ,
				ZN-D-01 ,	ZR-D-01		
20 DUP	S97T000837	0	D	@ICP-D01	LIQUID		
21 SPK	S97T000837	0	D	@ICP-D01	LIQUID		
22 ICSA				@ICP-QC	QC		
23 ICSAB				@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18330

S Type	Sample#	R A	Test	Matrix	Group#	Project
24 CCV			@ICP-QC	QC		
25 CCB			@ICP-QC	QC		

Final page for worklist # 18330

JK *Q5-28-97*
Analyst Signature Date

Reviewed & Validated by:
Saul M. Lang *5/28/97*
Analyst Signature Date

5977000823 , 3-3 ml, DF 2
 5977000823-D 3-3 2
 5977000834 , 2-10 , DF 51
 5977000834-D 2-10 51
 5977000835 , 2-10 51
 5977000835-D 2-10 51
 5977000836 , 2-10 51
 5977000836-D 2-10 51
 5977000837-L , 2-10-2-8, DF 255
 5977000837 , 2-10 51
 5977000837-D 2-10 51
 5977000837-Q 2-10 51 , 2 ml sample + 2.04 ml SST5 + 7.96 ml HNO₃
 5977000837-X , 2-10-1-9, DF 510
 5977000837-QX 2-10-1-9 510 1 ml sample + 1 ml each XHNC 28 + 35 + 7 ml HNO₃

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

HNF-SD-WM-DP-254, REV. 0

HNF-SD-WM-DP-246, REV. 0

mte
7-14-97

Analysis Report

Summary

Wed 05-28-97 11:19:05 AM

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970528A	ICP2	05/28/97	08:51	DKS	Q	CONC
2	ICB	970528A	ICP2	05/28/97	08:54	DKS	Q	CONC
3	LLS	970528A	ICP2	05/28/97	08:57	DKS	Q	CONC
4	ICSA	970528A	ICP2	05/28/97	09:00	DKS	Q	CONC
5	ICSAB	970528A	ICP2	05/28/97	09:11	DKS	Q	CONC
6	S97T0000823	970528A	ICP2	05/28/97	09:16	DKS	S	CONC
7	S97T0000823_D	970528A	ICP2	05/28/97	09:21	DKS	S	CONC
8	CCV	970528A	ICP2	05/28/97	09:43	DKS	Q	CONC
9	CCB	970528A	ICP2	05/28/97	09:46	DKS	Q	CONC
10	S97T0000833-L	970528A	ICP2	05/28/97	09:59	DKS	S	CONC
11	S97T0000834	970528A	ICP2	05/28/97	10:08	DKS	S	CONC
12	S97T0000834_D	970528A	ICP2	05/28/97	10:11	DKS	S	CONC
13	S97T0000835	970528A	ICP2	05/28/97	10:14	DKS	S	CONC
14	CCV-1	970528A	ICP2	05/28/97	10:19	DKS	Q	CONC
15	CCB-1	970528A	ICP2	05/28/97	10:23	DKS	Q	CONC
16	S97T0000835_D	970528A	ICP2	05/28/97	10:27	DKS	S	CONC
17	S97T0000836	970528A	ICP2	05/28/97	10:30	DKS	S	CONC
18	S97T0000836_D	970528A	ICP2	05/28/97	10:32	DKS	S	CONC
19	S97T0000837-L	970528A	ICP2	05/28/97	10:37	DKS	S	CONC
20	S97T0000837	970528A	ICP2	05/28/97	10:40	DKS	S	CONC
21	S97T0000837_D	970528A	ICP2	05/28/97	10:43	DKS	S	CONC
22	S97T0000837-A	970528A	ICP2	05/28/97	10:47	DKS	S	CONC
23	S97T0000837-X	970528A	ICP2	05/28/97	10:51	DKS	S	CONC
24	S97T0000837-AX	970528A	ICP2	05/28/97	10:55	DKS	S	CONC
25	ICSA	970528A	ICP2	05/28/97	11:02	DKS	Q	CONC
26	ICSAB	970528A	ICP2	05/28/97	11:04	DKS	Q	CONC
27	CCV_2	970528A	ICP2	05/28/97	11:08	DKS	Q	CONC
28	CCB_2	970528A	ICP2	05/28/97	11:16	DKS	Q	CONC

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SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 29, 30, 31.

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.811	4.907	5.075	4.987	4.917	5.012
2	ICB	.0006	.0071	-.0123	.0105	.0001	.0001
3	LLS	.0218	.1066	.1919	.1052	.1005	.0106
4	ICSA	.0034	242.2	-.0513	.0025	.0004	.0003
5	ICSAB	.9565	248.4	-.0714	.0074	.4859	.4794
6	S97T0000823	.0011	.0286	-.0306	1.918	.0423	.0000
7	S97T000823_D	.0022	.0476	-.0014	1.941	.0432	.0008
8	CCV	4.845	4.940	5.060	5.001	5.013	5.040
9	CCB	.0004	-.0000	-.0153	.0035	.0000	.0002
10	S97T000833_L	1.856	.5631	-.4762	3.628	.1343	.0053
11	S97T000834_-	1.841	.9716	-.5283	2.745	.0266	.0179
12	S97T000834_D	1.836	.6913	-.8798	2.617	.0223	.0159
13	S97T000835_-	1.674	.9118	-.3703	3.228	.0205	.0091
14	CCV 1	4.868	4.985	5.137	5.058	4.991	5.108
15	CCB 1	-.0000	.0148	-.0063	.0050	-.0000	.0004
16	S97T000835_D	1.702	.9407	-.4060	3.202	.0009	.0226
17	S97T000836_-	1.769	.6152	.3801	3.812	.0113	.0202
18	S97T000836_D	1.778	-.4486	-.3796	4.219	.0114	-.0092
19	S97T000837_L	2.086	4.323	-.3224	4.190	.2275	.1358
20	S97T000837_A	1.825	1.073	-.2563	2.897	.0108	.0251
21	S97T000837_D	1.847	.5889	-.6622	2.694	.0136	.0113
22	S97T000837_X	28.28	50.82	52.40	52.67	50.29	50.32
23	S97T000837_X	2.073	5.205	-8.708	3.296	-.0358	.1822
24	S97T000837_AX	3288.	5091.	5081.	5121.	5155.	5131.
25	ICSA	.0459	247.0	-.0742	.0028	.0003	.0004
26	ICSAB	.9743	246.7	-.0770	.0004	.4806	.4797
27	CCV 2	4.834	4.982	5.116	5.053	5.014	5.094
28	CCB 2	.0071	.0114	-.0035	.0010	.0001	.0005

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	4.982	4.867	4.946	4.803	5.053	4.902
2	ICB	-.0158	-.0016	.0001	.0020	.0014	.0010
3	LLS	Q.1141	.2068	.0106	.1936	.0432	.0206
4	ICSA	-.0343	242.4	-.0005	.0226	.0001	-.0038
5	ICSAB	-.0581	244.5	.9278	.0062	.4652	.4627
6	S97T0000823	-.0141	17.69	-.0023	-.0037	-.0075	-.0003
7	S97T000823_D	.0074	17.97	.0018	.0074	.0034	.0048
8	CCV	4.924	4.922	4.937	4.897	5.057	4.920
9	CCB	-.0067	-.0024	-.0003	-.0004	.0013	-.0006
10	S97T000833_L	2.705	1.127	.0227	.0940	.0262	6.995
11	S97T000834_-	1.362	.4683	.0408	-.5414	.1146	6.817
12	S97T000834_D	.7924	-.0532	-.0115	-.0644	.0599	6.845
13	S97T000835_-	13.55	.9426	.0189	.2618	.0875	7.402
14	CCV 1	4.966	4.972	4.992	4.882	5.110	4.968
15	CCB 1	.0006	-.0036	.0001	-.0052	.0002	-.0001
16	S97T000835_D	3.275	-.1979	.0326	-.1844	.1140	6.368
17	S97T000836_-	8.883	.2146	-.0449	-.0574	.0677	8.122
18	S97T000836_D	3.720	.0422	-.0571	-.0569	-.0812	7.757
19	S97T000837_L	8.168	-1.540	.1633	1.287	.5711	4.757
20	S97T000837_-	3.419	.1752	-.0303	-.1445	.0257	4.650
21	S97T000837_D	5.860	.5023	-.0097	.1995	.0198	4.808

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#	Sample Name	Bi	Ca	Gd	Ce	Co	Cr
22	S97T000837_A	62.89	51.18	50.15	49.47	51.08	55.49
23	S97T000837-X	-15.10	-5.238	-0.0874	-8.519	.7295	5.094
24	S97T000837-AX	5140.	5001.	5000.	5080.	5017.	5020.
25	ICSA	-.0325	244.0	.0001	.0018	.0007	-.0029
26	ICSA B	-.0188	245.6	.9268	.0086	.4673	.4642
28	CCV 2	4.972	4.919	4.929	4.865	5.046	4.912
28	CCB_2	-.0344	-.0021	.0005	.0011	.0018	-.0009

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.300	-.0035	4.919	4.953	4.903	4.863
2	ICB	.0006	.0001	-.0010	1.427	.0005	.0000
3	LLS	.0189	.0005	.0973	.4796	.1018	.0213
4	ICSA	-.0104	-.0313	98.94	1.964	-.0043	.0021
5	ICSA B	.4886	-.0299	99.83	1.339	-.0045	1.014
6	S97T000837	.0076	.0133	.0008	.7502	.0001	.0003
7	S97T000823_D	.0108	.0129	.0004	.9181	.0027	.0013
8	CCV	5.375	-.0041	4.953	4.924	4.999	4.926
9	CCB	.0002	-.0007	-.0004	.0516	.0005	-.0006
10	S97T000833_L	.0720	-.0192	.3359	4.119	.4437	.1295
11	S97T000834-	.0475	-.0728	.0308	4.093	-.0305	-.0384
12	S97T000834_D	.0171	-.0648	-.0114	4136	-.0537	-.0382
13	S97T000835-	.0381	-.0344	1.193	3738	4.212	.0257
14	CCV 1	5.393	-.0040	5.004	4.953	4.979	4.954
15	CCB_1	.0005	-.0011	.0005	.0719	-.0008	-.0007
16	S97T000835_D	.0254	-.0783	.0933	3772.	.2904	-.0319
17	S97T000836-	.0616	-.0528	.6234	3920.	2.372	-.0001
18	S97T000836_D	-.0046	-.0323	.2321	3939.	1.049	.0127
19	S97T000837_L	.2837	-.2477	.1267	4059.	.8790	-.0953
20	S97T000837-	.0096	-.0521	.3442	4036.	.7508	-.0190
21	S97T000837_D	.0458	-.0417	.3446	4036.	1.118	.0385
22	S97T000837_A	54.01	-.0615	51.00	4081.	53.34	50.91
23	S97T000837-X	.2349	-.7835	2.145	4029.	.9023	-.4456
24	S97T000837-AX	5140.	-3.887	5045.	9034.	5094.	5194.
25	ICSA	-.0102	-.0322	99.79	.1462	-.0056	.0015
26	ICSA B	.4850	-.0336	99.81	.1233	-.0050	1.010
28	CCV 2	5.412	-.0040	4.953	4.886	4.971	5.004
28	CCB_2	-.0006	-.0011	.0000	.1618	.0002	-.0010

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.742	4.862	5.019	5.063	5.032	4.947
2	ICB	.0027	.0002	.0004	-.0039	.0048	.0053
3	LLS	.2040	.0201	.1015	.2039	.2059	Q.0538
4	ICSA	241.6	-.0056	-.0086	196.5	.0053	-.0042
5	ICSA B	244.6	.4445	-.0082	199.7	.0041	.9148
6	S97T000837	3.664	.0164	-.0050	4.303	-.0004	.0122
7	S97T000823_D	3.679	.0186	-.0004	4.312	.0027	.0091
8	CCV	4.774	4.863	5.034	5.142	5.125	4.941
9	CCB	-.0032	-.0003	-.0023	.0066	.0030	.0010
10	S97T000833_L	.3493	.5576	-.0010	25650.	.1099	.2773
11	S97T000834-	-.0433	.0139	.0494	25780.	.0232	.0266

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
12	S97T000834_D	-.3906	-.0128	-.0507	25970.	-.0257	-.0507
13	S97T000835-	.2890	3.939	-.0014	23170.	.1795	.1290
14	CCV 1	4.830	4.908	5.079	5.127	5.095	5.037
15	CCB-1	.0002	-.0003	-.0031	-.0083	-.0006	.0022
16	S97T000835_D	-.0696	.3579	.0866	23500.	.0026	-.1084
17	S97T000836-	.4662	2.425	.0199	24630.	.1780	.1484
18	S97T000836_D	.0229	1.084	-.1651	24750.	.1352	.1923
19	S97T000837-L	.3810	.8163	.2364	25830.	.7969	1.609
20	S97T000837-	-.1539	.9100	-.0025	25610.	.0088	.1686
21	S97T000837_D	.2856	1.255	-.0794	25410.	.1717	-.1218
22	S97T000837-A	47.24	51.82	51.62	25530.	51.86	50.14
23	S97T000837-X	-2.453	1.015	-5.132	26270.	1.093	1.298
24	S97T000837-AX	5096.	5018.	5036.	31400.	5094.	5024.
25	ICSA	244.4	-.0059	-.0088	199.5	.0064	.0062
26	ICSAB	244.0	.4439	-.0122	197.7	.0071	.9231
27	CCV 2	4.808	4.864	5.035	5.173	5.097	4.952
28	CCB-2	.0002	-.0004	-.0019	-.0123	.0017	.0037

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.955	4.794	5.007	4.703	4.818	4.987
2	ICB	.0052	-.0027	.0071	.0102	-.0059	.0115
3	LLS	.4135	.2023	.2064	.1023	.1866	.1361
4	ICSA	.0234	.0152	-.0438	-.0031	-.0223	.0095
5	ICSAB	.0114	.9524	-.0350	.0019	-.0494	.0016
6	S97T000823	.0256	-.0746	5.873	-.0026	-.0476	5.771
7	S97T000823_D	.0039	-.0361	5.787	-.0070	-.0236	5.813
8	CCV	4.963	4.788	4.975	4.736	4.757	4.992
9	CCB	.0044	-.0198	.0015	-.0063	-.0210	.0010
10	S97T000833-L	239.2	-.3698	40.74	-.0883	.7502	37.14
11	S97T000834-	241.5	.1645	41.03	.3729	1.743	55.88
12	S97T000834_D	239.9	.1424	40.08	-.3263	.1230	53.99
13	S97T000835-	202.0	-.3900	36.88	-.0173	.6938	58.36
14	CCV 1	5.015	4.870	5.054	4.784	4.874	5.048
15	CCB-1	.0003	-.0070	.0015	.0003	-.0020	.0083
16	S97T000835_D	200.0	.5601	35.99	.2301	.5362	58.66
17	S97T000836-	194.5	-.5334	37.04	.0176	1.916	62.50
18	S97T000836_D	199.3	-1.080	39.41	.0323	1.385	64.04
19	S97T000837-L	194.0	.9654	41.37	-.2032	.0743	35.74
20	S97T000837-	191.4	-.8888	39.29	-.0585	-.0388	38.51
21	S97T000837_D	191.4	-.7132	38.96	-.2838	.7697	45.76
22	S97T000837-A	243.7	48.44	91.41	48.86	54.05	100.4
23	S97T000837-X	195.8	-11.23	33.16	1.064	-3.383	34.64
24	S97T000837-AX	5212.	4983.	5091.	5068.	5172.	5294.
25	ICSA	.0235	.0130	-.0422	.0122	-.0074	.0140
26	ICSAB	.0196	.9723	-.0363	.0058	-.0006	.0114
27	CCV 2	4.954	4.783	5.007	4.761	4.891	4.988
28	CCB-2	-.0027	-.0081	-.0050	.0032	-.0041	-.0008

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.957	4.884	-.0010	4.836	4.817	9.948
2	ICB	-.0014	.0001	.0067	.0005	-.0049	-.0036
3	LLS	.2173	.0205	.0021	.0202	.4270	.5414
4	ICSA	.0004	.0022	-.0106	.0014	-.0052	.1241
5	ICSAB	-.0058	.0021	-.0126	.0017	.0021	.1178
6	S97T0000823	-.0291	.0895	.0087	-.0005	.0153	-.0435
7	S97T0000823_D	-.0180	.0910	.0116	.0000	.0329	-.0199
8	CCV	5.058	4.981	-.0041	4.900	4.821	10.13
9	CCB	-.0037	-.0001	.0028	.0003	.0040	-.0248
10	S97T0000833_L	-.0134	.0282	.1380	.0319	.1428	-.1409
11	S97T0000834	-.8042	.0579	.0040	.0374	-1.582	.8227
12	S97T0000834_D	-.5526	.0500	.1742	.0147	.2967	-3.545
13	S97T0000835	-.2026	.1023	.5375	.0287	-.1065	-1.834
14	CCV 1	5.032	4.973	.0012	4.927	4.880	10.12
15	CCB 1	-.0131	-.0001	.0074	.0003	-.0097	-.0548
16	S97T0000835_D	-.9420	.0223	.3100	.0271	-.2696	-2.430
17	S97T0000836	-.1598	.0634	.4335	.0399	-1.263	1.101
18	S97T0000836_D	-.0887	.0440	-.2083	.0240	-.2245	2.108
19	S97T0000837_L	-2.649	.0149	2.039	.0747	-.2232	-11.39
20	S97T0000837	-.5237	.0473	.5703	.0296	-.6954	-4.292
21	S97T0000837_D	-.2219	.0609	.4429	.0412	.2732	-1.626
22	S97T0000837_A	50.82	50.38	-.0348	49.89	48.40	103.7
23	S97T0000837_X	-8.591	-.0515	5.046	.2876	-4.466	-40.70
24	S97T0000837_AX	5113	5114	10.09	5108	5008	10260.
25	ICSA	-.0055	.0022	.0008	.0012	.0100	.0972
26	ICSAB	-.0052	.0021	-.0039	.0020	.0939	.0935
27	CCV 2	5.033	4.970	-.0020	4.909	4.801	10.11
28	CCB 2	-.0131	-.0001	.0084	.0003	-.0088	-.0547

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.037	.0046	5.089	4.920
2	ICB	-.0000	-.0001	.0006	-.0005
3	LLS	.1047	.0006	.0220	.0202
4	ICSA	-.0023	.0062	.0056	-.0030
5	ICSAB	.4685	.0059	.9741	-.0050
6	S97T0000823	-.0064	-.0009	.1210	-.0071
7	S97T0000823_D	-.0053	-.0008	.1223	-.0066
8	CCV	5.069	.0044	5.074	4.979
9	CCB	-.0015	-.0005	-.0005	-.0021
10	S97T0000833_L	-.0770	.0151	.4187	-.0245
11	S97T0000834	-.1923	-.0363	.2875	-.1554
12	S97T0000834_D	-.1847	-.0345	.1821	-.1646
13	S97T0000835	-.0714	-.0152	.5287	-.0773
14	CCV 1	5.112	.0046	5.145	4.990
15	CCB 1	-.0023	-.0006	.0004	-.0031
16	S97T0000835_D	-.1875	-.0429	.1756	-.1365
17	S97T0000836	-.0952	-.0284	.1400	-.1301
18	S97T0000836_D	-.0640	-.0089	.0187	-.0638
19	S97T0000837_L	-.5377	-.1351	.1389	-.7224
20	S97T0000837	-.1047	-.0341	.1464	-.1741
21	S97T0000837_D	-.0893	-.0233	.0866	-.1285

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#	Sample Name	V	Y	Zn	Zr
22	S97T000837 A	51.63	.0279	52.30	50.54
23	S97T000837 X	-1.747	-.4224	.0169	-2.079
24	S97T000837 AX	5053.	4.314	4995.	5063.
25	ICSA	-.0035	.0058	.0071	-.0058
26	ICSAB	.4678	.0060	.9797	-.0045
27	CCV 2	5.072	.0040	5.071	4.956
28	CCB_2	-.0023	-.0006	-.0003	-.0032

*DX 6/8**05-28-97*

HNF-SD-WM-DP-254, REV. 0

LABCORE Data Entry Template for Worklist# 18367

Analyst: D. SAND Instrument: ICP⁸²

Book# 66898

Method: LA-505-1517 Rev/Mod C-1
5-25-97

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T-201 (SOLID FUSION DIGEST)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	PREPELKTJA		@ICP-F01	SOLID		
7	SAMPLE	S97T000901 0 F	@ICP-F01	SOLID	970003111	T-201
Analytes Requested: AG-F-01 , AL-F-01 , AS-F-01 , B-F-01 , BA-F-01 , BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 , CR-F-01 , CU-F-01 , FE-F-01 , LA-F-01 , LI-F-01 , MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , P-F-01 , PB-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 , SR-F-01 , TI-F-01 , TL-F-01 , U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01						
8	DUP	S97T000901 0 F	@ICP-F01	SOLID		
9	SAMPLE	S97T000919 0 F	@ICP-F01	SOLID	970003111	T-201
Analytes Requested: AG-F-01 , AL-F-01 , AS-F-01 , B-F-01 , BA-F-01 , BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 , CR-F-01 , CU-F-01 , FE-F-01 , LA-F-01 , LI-F-01 , MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , P-F-01 , PB-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 , SR-F-01 , TI-F-01 , TL-F-01 , U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01						
10	DUP	S97T000919 0 F	@ICP-F01	SOLID		
11	SAMPLE	S97T000921 0 F	@ICP-F01	SOLID	970003111	T-201
Analytes Requested: AG-F-01 , AL-F-01 , AS-F-01 , B-F-01 , BA-F-01 , BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 , CR-F-01 , CU-F-01 , FE-F-01 , LA-F-01 , LI-F-01 , MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , P-F-01 , PB-F-01 ,						

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18367

S Type	Sample#	R A	Test	Matrix	Group#	Project
			S-F-01 ,	SB-F-01 ,	SE-F-01 ,	SI-F-01 , SM-F-01 , SR-F-01 ,
			TI-F-01 ,	TL-F-01 ,	U-F-01 ,	V-F-01 , ZN-F-01 , ZR-F-01
12 DUP	S97T000921	0 F	@ICP-F01	SOLID		
13 CCV			@ICP-QC	QC		
14 CCB			@ICP-QC	QC		
15 PREPBLKTJA			@ICP-F01	SOLID		
16 SERDIL	S97T000920	0 F	@ICP-F01	SOLID		
17 SAMPLE	S97T000920	0 F	@ICP-F01	SOLID	97000311	T-201
	Analytes Requested:		AG-F-01 ,	AL-F-01 ,	AS-F-01 ,	B-F-01 , BA-F-01 ,
			BE-F-01 ,	BI-F-01 ,	CA-F-01 ,	CD-F-01 , CE-F-01 , CO-F-01 ,
			CR-F-01 ,	CU-F-01 ,	FE-F-01 ,	LA-F-01 , LI-F-01 , MG-F-01 ,
			MN-F-01 ,	MO-F-01 ,	NA-F-01 ,	ND-F-01 , P-F-01 , PB-F-01 ,
			S-F-01 ,	SE-F-01 ,	SI-F-01 ,	SM-F-01 , SR-F-01 ,
			TI-F-01 ,	TL-F-01 ,	U-F-01 ,	V-F-01 , ZN-F-01 , ZR-F-01
18 DUP	S97T000920	0 F	@ICP-F01	SOLID		
19 SPK	S97T000920	0 F	@ICP-F01	SOLID		
20 CCV			@ICP-QC	QC		
21 CCB			@ICP-QC	QC		
22 SAMPLE	S97T000922	0 F	@ICP-F01	SOLID	97000311	T-201
	Analytes Requested:		AG-F-01 ,	AL-F-01 ,	AS-F-01 ,	B-F-01 , BA-F-01 ,
			BE-F-01 ,	BI-F-01 ,	CA-F-01 ,	CD-F-01 , CE-F-01 , CO-F-01 ,
			CR-F-01 ,	CU-F-01 ,	FE-F-01 ,	LA-F-01 , LI-F-01 , MG-F-01 ,
			MN-F-01 ,	MO-F-01 ,	NA-F-01 ,	ND-F-01 , P-F-01 , PB-F-01 ,
			S-F-01 ,	SE-F-01 ,	SI-F-01 ,	SM-F-01 , SR-F-01 ,
			TI-F-01 ,	TL-F-01 ,	U-F-01 ,	V-F-01 , ZN-F-01 , ZR-F-01
23 DUP	S97T000922	0 F	@ICP-F01	SOLID		
24 SAMPLE	S97T000923	0 F	@ICP-F01	SOLID	97000311	T-201
	Analytes Requested:		AG-F-01 ,	AL-F-01 ,	AS-F-01 ,	B-F-01 , BA-F-01 ,
			BE-F-01 ,	BI-F-01 ,	CA-F-01 ,	CD-F-01 , CE-F-01 , CO-F-01 ,
			CR-F-01 ,	CU-F-01 ,	FE-F-01 ,	LA-F-01 , LI-F-01 , MG-F-01 ,
			MN-F-01 ,	MO-F-01 ,	NA-F-01 ,	ND-F-01 , P-F-01 , PB-F-01 ,

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18367

S Type	Sample#	R A	Test	Matrix	Group#	Project
			S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 , SR-F-01 , TI-F-01 , TL-F-01 , U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01			
25 DUP	S97T000923	0 F	@ICP-F01	SOLID		
26 ICSA			@ICP-QC	QC		
27 IC SAB			@ICP-QC	QC		
28 CCV			@ICP-QC	QC		
29 CCB			@ICP-QC	QC		

HNF-SD-WM-DP-254, REV. 0

Final page for worklist # 18367

JK Lolo
Analyst Signature Date 05-19-97

*Revised by:
Saul H. Pang*
Analyst Signature Date 6/2/97

<i>PREPBLK TJA</i>	<i>.25-10</i>	<i>df.</i>
<i>S97T000801</i>	<i>.25-10</i>	<i>41</i>
<i>901-D</i>	<i>.25-10</i>	<i>41</i>
<i>S97T000819</i>	<i>.25-10</i>	<i>41</i>
<i>919-D</i>	<i>.25-10</i>	<i>41</i>
<i>S97T000821</i>	<i>.25-10</i>	<i>41</i>
<i>921-D</i>	<i>.25-10</i>	<i>41</i>
<i>PREPBLK TJA</i>	<i>.25-10</i>	<i>1</i>
<i>S97T000820-L</i>	<i>.25-10-1-8</i>	<i>205</i>
<i>820</i>	<i>.25-10</i>	<i>41</i>
<i>820-D</i>	<i>.25-10</i>	<i>41</i>
<i>820-A</i>	<i>.25-10</i>	<i>41</i>
<i>820-X</i>	<i>.25-10-1-8</i>	<i>410</i>
<i>820-AX</i>	<i>.25-10-1-8</i>	<i>410</i>
<i>S97T000822</i>	<i>.25-10</i>	<i>41</i>
<i>822-D</i>	<i>.25-10</i>	<i>41</i>
<i>S97T000823</i>	<i>.25-10</i>	<i>41</i>
<i>823-D</i>	<i>.25-10</i>	<i>41</i>

Data Entry Comments:

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Analysis Report

Summary

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HNF-SD-WM-DP-254, REV. 0

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970529B	ICP2	05/29/97	12:16	DKS	Q	CONC
2	ICB	970529B	ICP2	05/29/97	12:20	DKS	Q	CONC
3	LLS	970529B	ICP2	05/29/97	12:23	DKS	Q	CONC
4	ICSA	970529B	ICP2	05/29/97	12:26	DKS	Q	CONC
5	ICSAB	970529B	ICP2	05/29/97	12:28	DKS	Q	CONC
6	PREPBLKTJA	970529B	ICP2	05/29/97	12:32	DKS	Q	CONC
7	S97T000901	970529B	ICP2	05/29/97	12:38	DKS	S	CONC
8	S97T000901 D	970529B	ICP2	05/29/97	12:41	DKS	S	CONC
9	S97T000919	970529B	ICP2	05/29/97	12:46	DKS	S	CONC
10	S97T000919 D	970529B	ICP2	05/29/97	12:49	DKS	S	CONC
11	S97T000921	970529B	ICP2	05/29/97	12:52	DKS	S	CONC
12	S97T000921 D	970529B	ICP2	05/29/97	12:55	DKS	S	CONC
13	CCV	970529B	ICP2	05/29/97	13:04	DKS	Q	CONC
14	CCB	970529B	ICP2	05/29/97	13:08	DKS	Q	CONC
15	PREPBLKTJA	970529B	ICP2	05/29/97	13:11	DKS	Q	CONC
16	S97T000920 L	970529B	ICP2	05/29/97	13:15	DKS	S	CONC
17	S97T000920	970529B	ICP2	05/29/97	13:17	DKS	S	CONC
18	S97T000920 D	970529B	ICP2	05/29/97	13:20	DKS	S	CONC
19	S97T000920 A	970529B	ICP2	05/29/97	13:24	DKS	S	CONC
20	S97T000920 X	970529B	ICP2	05/29/97	13:32	DKS	S	CONC
21	S97T000920 AX	970529B	ICP2	05/29/97	13:35	DKS	S	CONC
22	CCV 1	970529B	ICP2	05/29/97	13:44	DKS	Q	CONC
23	CCB 1	970529B	ICP2	05/29/97	13:47	DKS	Q	CONC
24	S97T000922	970529B	ICP2	05/29/97	13:50	DKS	S	CONC
25	S97T000922 D	970529B	ICP2	05/29/97	13:53	DKS	S	CONC
26	S97T000923	970529B	ICP2	05/29/97	13:56	DKS	S	CONC
27	S97T000923 D	970529B	ICP2	05/29/97	13:59	DKS	S	CONC
28	ICSA	970529B	ICP2	05/29/97	14:04	DKS	Q	CONC
29	ICSAB	970529B	ICP2	05/29/97	14:07	DKS	Q	CONC
30	CCV 2	970529B	ICP2	05/29/97	14:10	DKS	Q	CONC
31	CCB 2	970529B	ICP2	05/29/97	14:14	DKS	Q	CONC

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05-29-97

T-201

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5977000923

5-29-97

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 205 TO 210

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Analysis Report

Averages

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HNF-SD-WM-DP-254, REV. 0

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.813	4.783	5.115	4.954	4.801	5.035
2	ICB	.0005	-.0109	.0120	.0010	-.0001	-.0002
3	LLS	.0210	.0831	.2188	.0995	.0988	.0104
4	ICSA	.0020	239.9	-.0038	-.0014	.0001	-.0003
5	ICSAB	.9625	240.7	.0356	.0047	.4687	.4776
6	PREPBLKTJA	.0007	-.0052	.0102	.0030	.0001	-.0000
7	S97T000901	.0355	-.5930	.5700	-.0139	.1227	-.0034
8	S97T000901_D	.0356	-.5803	-.4155	.1089	.1286	-.0126
9	S97T000919	.0169	-.3516	.2606	.0469	.0599	-.0107
10	S97T000919_D	.0105	.0500	-.0864	.1078	.0558	-.0034
11	S97T000921	-.0052	.0921	.5371	.1685	.0874	-.0016
12	S97T000921_D	-.0172	2.200	.0448	.0262	.0821	-.0089
13	CCV	4.919	4.900	5.256	5.063	4.993	5.153
14	CCB	.0000	-.0088	.0006	.0010	-.0001	-.0000
15	PREPBLKTJA	-.0003	-.0121	.0043	.0015	.0002	-.0002
16	S97T000920_L	.0656	-3.663	3.709	-.0991	.0868	-.0634
17	S97T000920	.0252	-.3695	.0161	.1250	.0892	-.0070
18	S97T000920_D	.0248	.0988	.3272	-.0996	.0853	.0022
19	S97T000920_A	37.03	39.46	43.84	40.18	39.57	40.93
20	S97T000920_X	-.0522	-5.767	1.564	.0046	.0784	-.1092
21	S97T000920_AX	3553.	3939.	4088.	4129.	4023.	4060.
22	CCV_1	4.890	4.859	5.218	5.028	4.931	5.098
23	CCB_1	.0026	-.0104	.0131	.0070	-.0001	.0000
24	S97T000922	.0501	.0223	.6686	.2092	.0853	-.0016
25	S97T000922_D	.0125	1.992	-.2555	.1048	.0877	-.0051
26	S97T000923	.0069	.0561	.2220	.2063	.0898	-.0161
27	S97T000923_D	.0003	-.4000	.2384	.1256	.0864	-.0125
28	ICSA	.0025	241.3	.0067	-.0058	.0001	-.0001
29	ICSAB	.9608	241.0	.0165	.0016	.4693	.4807
30	CCV_2	4.885	4.848	5.197	5.029	4.916	5.106
31	CCB_2	-.0001	-.0235	.0132	.0045	-.0001	-.0002

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	4.969	5.004	4.936	4.777	5.026	4.906
2	ICB	.0035	.0067	-.0002	-.0007	.0011	-.0006
3	LLS	.1528	.2186	.0104	.1978	.0445	.0217
4	ICSA	-.0114	253.4	.0006	.0106	.0004	-.0033
5	ICSAB	-.0340	254.3	.9392	.0130	.4686	.4734
6	PREPBLKTJA	.0093	.0062	-.0003	-.0016	.0017	-.0003
7	S97T000901	222.4	2.339	.0032	-.1518	.0805	10.79
8	S97T000901_D	230.0	2.428	.0027	.0143	.0415	11.10
9	S97T000919	183.3	1.942	.0225	-.0473	.0527	10.08
10	S97T000919_D	195.8	2.047	.0512	.0997	.1676	10.11
11	S97T000921	169.6	1.469	-.0364	-.0589	.0788	7.442
12	S97T000921_D	169.1	1.691	.0025	-.1062	.0554	7.643
13	CCV	5.100	5.127	5.038	4.964	5.128	5.015
14	CCB	-.0166	.0054	.0005	.0013	.0007	.0007
15	PREPBLKTJA	.0058	.0018	-.0005	-.0044	-.0004	.0001
16	S97T000920_L	156.9	1.681	.0407	-.6074	.2091	5.841
17	S97T000920	157.6	1.711	.0021	-.0527	-.1047	5.779
18	S97T000920_D	152.9	1.237	.0428	-.0848	-.0210	5.812

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Analysis Report

Averages

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
19	S97T000920 A	199.9	43.04	40.89	39.14	41.41	46.50
20	S97T000920-X	144.4	.9274	.0441	1.011	-.2332	5.583
21	S97T000920-AX	4245.	4142.	4021.	4027.	4113	4049
22	CCV 1	5.050	5.091	4.985	4.862	5.090	4.973
23	CCB-1	-.0129	.0031	.0004	.0008	-.0007	.0005
24	S97T000922	209.4	2.268	-.0052	.0333	.1143	10.14
25	S97T000922 D	122.0	2.396	.0532	.0477	.1161	10.36
26	S97T000923	182.2	1.564	-.0059	.0739	.0783	5.594
27	S97T000923 D	172.8	1.324	-.0525	.1711	.0164	5.529
28	ICSA	-.0100	253.7	.0023	.0098	.0001	-.0022
29	ICSAB	.0070	252.5	.9381	-.0014	.4663	.4714
30	CCV 2	5.018	5.119	4.990	4.841	5.090	4.981
31	CCB-2	.0051	.0072	.0001	-.0007	.0022	-.0002

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.831	-.0010	4.610	4.894	4.855	4.757
2	ICB	-.0006	.0013	-.0020	-.1188	-.0007	.0013
3	LLS	-.0162	.0022	.0901	.4491	.1010	.0224
4	ICSA	-.0106	-.0505	93.76	.0094	-.0051	.0037
5	ICSAB	.4365	-.0495	93.93	.0880	-.0055	.9736
6	PREPBLKTJA	-.0001	.0014	.0019	Q331.0	-.0002	.0007
7	S97T000901	.0973	.0649	18.79	13330.	32.07	.0451
8	S97T000901 D	.0516	.0703	19.15	12530.	36.00	.0651
9	S97T000919	.2800	.0582	17.67	13530.	41.89	.0402
10	S97T000919 D	.0174	.0505	17.87	13760.	44.97	.0352
11	S97T000921	.0260	.0483	15.99	13850.	28.26	.0251
12	S97T000921 D	.0166	.0647	16.11	12890.	27.66	.0701
13	CCV	4.988	-.0022	4.724	4.694	5.038	4.919
14	CCB	-.0010	.0013	-.0012	-.1413	-.0002	.0010
15	PREPBLKTJA	.0001	.0016	.0026	Q577.1	-.0002	.0017
16	S97T000920 L	.0728	.1679	8.651	17910.	40.55	.1251
17	S97T000920	-.0521	.0471	8.523	17620.	40.09	.0252
18	S97T000920 D	.0171	.0406	8.009	16790.	39.22	.0152
19	S97T000920 A	39.80	.0399	46.78	17750.	80.72	38.90
20	S97T000920-X	-.0896	.2079	8.226	17730.	39.88	.1999
21	S97T000920-AX	3779.	-1.491	3790.	21760.	4059.	3971.
22	CCV 1	4.909	-.0013	4.680	4.961	4.938	4.854
23	CCB-1	-.0004	.0005	-.0015	-.0876	-.0012	.0005
24	S97T000922	.0113	.0437	16.17	14130.	42.88	.0202
25	S97T000922 D	.1151	.0699	9.694	20030.	39.78	.0602
26	S97T000923	.0279	.0745	7.891	20030.	30.14	.0602
27	S97T000923 D	-.0056	.0805	9.869	19890.	29.17	.0552
28	ICSA	-.0106	-.0508	94.14	.0077	-.0057	.0035
29	ICSAB	.4392	-.0460	93.79	.2257	-.0051	.9799
30	CCV 2	4.905	-.0007	4.669	4.777	4.929	4.838
31	CCB-2	-.0007	.0014	-.0015	.0025	-.0004	.0018

HNF-SD-WM-DP-246, REV. 0 *note* 7-15-97

Analysis Report

Averages

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HNF-SD-WM-DP-254, REV. 0

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.926	4.831	4.983	4.999	4.829	4.923
2	ICB	.0006	.0004	-.0001	.0142	-.0015	-.0022
3	LLS	.2045	.0207	.1008	.2115	.1988	.0390
4	ICSA	252.0	-.0055	-.0105	192.1	.0033	.0020
5	ICSAB	252.5	.4471	-.0091	192.5	.0018	.9210
6	PREPBLKTJA	-.0025	.0018	-.0029	.0780	-.0017	Q.5306
7	S97T000901	.5217	59.34	-.0091	54.37	.0213	34.76
8	S97T000901_D	.6029	61.52	-.0563	55.50	-.0395	76.48
9	S97T000919	.3398	65.09	-.1129	54.45	.0025	61.60
10	S97T000919_D	.6925	66.93	-.0576	55.41	.0072	51.70
11	S97T000921	.5700	46.98	-.0014	51.86	-.0296	78.77
12	S97T000921_D	.5170	45.93	-.0960	51.26	-.0769	42.11
13	CCV	5.049	4.944	5.106	5.135	5.012	4.992
14	CCB	-.0017	.0004	-.0001	.0147	-.0027	-.0050
15	PREPBLKTJA	.0006	.0036	.0009	Q.1651	-.0017	Q.2653
16	S97T000920_L	.4784	50.26	-.1397	58.13	.0824	38.90
17	S97T000920	.4763	49.15	-.0335	57.19	-.3520	37.85
18	S97T000920_D	.3765	48.52	-.0019	55.71	-.1310	36.25
19	S97T000920_A	40.25	91.69	41.46	98.75	40.04	79.08
20	S97T000920_X	-.8251	50.04	-.8724	56.72	-.0044	36.38
21	S97T000920_AX	4198	4084	4102	4040	3905	4051
22	CCV 1	5.010	4.906	5.058	5.085	4.916	4.991
23	CCB 1	.0037	.0006	-.0021	.0082	-.0005	-.0087
24	S97T000922	.6124	31.90	-.0734	52.72	.0204	19.04
25	S97T000922_D	.5356	13.72	-.0498	57.49	.0450	96.44
26	S97T000923	.3304	10.72	-.0573	56.72	.0669	26.96
27	S97T000923_D	.2666	19.05	-.0651	54.79	.0605	29.45
28	ICSA	253.4	-.0055	-.0111	193.6	.0002	.0027
29	ICSAB	253.2	.4446	-.0138	192.9	-.0014	.9269
30	CCV 2	4.979	4.900	5.050	5.073	4.906	4.974
31	CCB 2	.0062	.0006	-.0015	.0168	.0007	-.0049

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.039	4.830	4.932	4.740	4.671	4.951
2	ICB	-.0082	-.0036	-.0027	.0014	.0425	.0057
3	LLS	.3912	.2101	.2020	.1105	.2497	.1392
4	ICSA	.0142	.0146	-.0432	.0072	.0248	.0083
5	ICSAB	-.0040	1.005	-.0487	-.0154	.0091	.0118
6	PREPBLKTJA	-.0076	-.0193	-.0148	-.0014	.0450	.0230
7	S97T000901	6.931	-.1697	.0234	-.2677	2.309	1.780
8	S97T000901_D	8.090	-.2425	-.3757	-.1386	1.968	2.354
9	S97T000919	7.298	-.3961	-.3065	.0540	1.953	2.290
10	S97T000919_D	7.998	.2037	-.3891	.1939	1.733	3.160
11	S97T000921	5.616	-.4709	-.7395	.1469	2.264	1.797
12	S97T000921_D	5.583	-.3740	-.4491	-.2506	2.366	7.553
13	CCV	5.129	4.913	4.952	4.864	4.767	5.058
14	CCB	-.0052	.0036	.0049	.0075	.0630	.0053
15	PREPBLKTJA	-.0048	-.0095	-.0134	.0157	.0559	.0220
16	S97T000920_L	6.916	-.5908	-2.032	1.046	8.395	3.705
17	S97T000920	6.298	-.3785	-.2767	-.0932	1.707	2.486
18	S97T000920_D	5.666	.1032	-.3676	-.1307	2.111	2.484

HNF-SD-WM-DP-246, REV. 0 *note*

Analysis Report

Averages

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#	Sample Name	P	Pb	S	Sb	Se	Si
19	S97T000920_A	49.33	40.28	40.55	39.34	40.61	44.23
20	S97T000920_X	5.847	-7.477	-5.166	-1.014	20.92	3.073
21	S97T000920_AX	4178.	4048.	4058.	4138	3980	4236
22	CCV 1	5.106	4.894	4.985	4.794	4.757	5.029
23	CCB_1	- .0088	.0004	- .0038	.0010	.0598	.0034
24	S97T000922	7.853	- .4878	- .5022	.3378	1.825	2.150
25	S97T000922_D	8.019	- .4475	- .7472	.2551	2.677	7.718
26	S97T000923	6.460	- .5221	- .4754	- .1318	2.366	5.125
27	S97T000923_D	6.093	- .7695	- .4828	- .0708	2.694	2.331
28	ICSA	.0116	.0265	- .0529	- .0006	.0041	.0031
29	ICSAB	.0176	.9829	- .0576	.0011	.0065	.0082
30	CCV 2	5.102	4.869	4.997	4.789	4.765	5.027
31	CCB_2	.0074	- .0130	- .0129	- .0003	.0589	.0071

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.759	4.813	.0399	4.788	4.698	9.370
2	ICB	.0222	.0003	- .0033	- .0005	- .0184	.0716
3	LLS	.2282	.0205	- .0086	.0189	.3782	.5980
4	ICSA	.0254	.0020	- .0039	.0008	.0292	- .0104
5	ICSAB	.0172	.0020	- .0044	.0005	.0361	- .0109
6	PREPBLKTJA	.0184	.0003	.0036	- .0002	- .0309	- .0344
7	S97T000901	.6302	2.349	.0275	.0228	- 2.118	- 1.689
8	S97T000901_D	.8669	2.494	- .0237	.0329	- 1.546	- 7.320
9	S97T000919	.6066	1.609	.0893	.0232	- .3444	- 2.039
10	S97T000919_D	.3433	1.611	.0451	.0230	- .9340	- 2.828
11	S97T000921	.4688	1.633	.0725	.0334	- 1.395	- 2.210
12	S97T000921_D	.6521	1.558	- .1926	.0528	- 1.421	- .5971
13	CCV	4.949	4.986	.0361	4.947	4.861	9.706
14	CCB	.0181	.0002	.0004	- .0003	- .0471	.0640
15	PREPBLKTJA	.0204	.0004	- .0009	- .0004	- .0268	- .0828
16	S97T000920_L	2.596	1.618	- .0757	- .0489	- 5.127	.3372
17	S97T000920	.4515	1.576	.2020	- .0384	- 1.862	- 3.840
18	S97T000920_D	.2814	1.556	.2594	.1286	- .6309	- 3.527
19	S97T000920_A	39.79	41.30	.4648	39.82	37.55	74.14
20	S97T000920_X	3.133	1.606	- .0074	- .1029	- 21.56	5.816
21	S97T000920_AX	3895.	4001.	31.79	4107.	3949.	7798.
22	CCV 1	4.857	4.895	.0320	4.862	4.843	9.536
23	CCB_1	.0090	.0001	- .0015	- .0003	- .0103	.0341
24	S97T000922	.3066	1.864	.1474	.0023	- 1.141	- 2.534
25	S97T000922_D	.6652	1.928	.2753	.0453	- 1.051	- 2.929
26	S97T000923	.8611	1.477	.0894	.0236	- 1.093	- 2.066
27	S97T000923_D	1.066	1.413	.0299	.0026	- 1.507	- 1.804
28	ICSA	.0171	.0020	- .0071	.0005	.0061	- .0223
29	ICSAB	.0125	.0020	- .0024	.0008	.0563	- .0322
30	CCV 2	4.846	4.889	.0328	4.858	4.794	9.504
31	CCB_2	.0208	.0004	- .0052	- .0010	- .0256	.0796

HNF-SD-WM-DP-254, REV. 0

HNF-SD-WM-DP-246, REV. 0 ^{mtz} 7-15-97

Analysis Report

Averages

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HNF-SD-WM-DP-254, REV. 0

#	Sample Name	V	Y	Zn	Zr
1	ICV	4.989	.0056	4.791	4.836
2	ICB	.0044	.0009	-.0000	.0028
3	LLS	.1093	.0016	.0205	Q.0251
4	ICSA	.0045	.0075	.0040	.0004
5	ICSAB	.4712	.0074	.9316	-.0004
6	PREPBLKTJA	.0034	.0008	-.0040	.0013
7	S97T000901	.1647	.0361	-.2200	.0913
8	S97T000901_D	.1767	.0324	-.4649	.0942
9	S97T000919	.1429	.0266	-.2468	.0560
10	S97T000919_D	.1179	.0237	-.3249	.0601
11	S97T000921	.1361	.0266	-.4421	.0732
12	S97T000921_D	.1911	.0356	-.2136	.1070
13	CCV	5.116	.0054	4.856	4.989
14	CCB	.0034	.0008	.0006	.0022
15	PREPBLKTJA	.0049	.0009	-.0020	.0028
16	S97T000920_L	.3773	.1123	-.0822	.1581
17	S97T000920	.0840	.0177	.1624	.0500
18	S97T000920_D	.1082	.0208	.2269	.0298
19	S97T000920_A	41.41	.0713	40.03	40.09
20	S97T000920_X	.6935	.2224	-.2046	.1492
21	S97T000920_AX	4092.	4.075	3876.	4072.
22	CCV 1	5.057	.0054	4.850	4.911
23	CCB_1	.0021	.0005	-.0004	.0012
24	S97T000922	.0946	.0204	-.1079	.0368
25	S97T000922_D	.1795	.0366	-.6052	.0587
26	S97T000923	.1769	.0426	-.1752	.1028
27	S97T000923_D	.2174	.0425	-.1855	.1223
28	ICSA	.0036	.0074	.0044	-.0009
29	ICSAB	.4691	.0072	.9301	-.0013
30	CCV 2	5.057	.0056	4.855	4.908
31	CCB_2	.0042	.0009	-.0003	.0022

DK *AD*
05-19-97

LABCORE Data Entry Template for Worklist# 18589

Analyst: JL Se/0 Instrument: ICP01 Book# 66848BMethod: LA-505-151/461 Rev/Mod E-1Worklist Comment: ^{Ag 6-10-97} ICP T-201 (DIRECT)

HNF-SD-WM-DP-254, REV. 0

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	SERDIL	S97T001203	0	D	@ICP-D01	LIQUID		
7	SAMPLE	S97T001203	0	D	@ICP-D01	LIQUID	97000311	T-201
		Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PE-D-01 , S-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01						
8	DUP	S97T001203	0	D	@ICP-D01	LIQUID		
9	SPK	S97T001203	0	D	@ICP-D01	LIQUID		
10	ICSA	^{SPK} ^{Post-SPK ex (approx)} ^{Ag 6-10-97}						
					@ICP-QC	QC		
11	ICSAB				@ICP-QC	QC		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 18589

S Type Sample# R A Test Matrix Group# Project

Final page for worklist # 18589

JK [Signature]
Analyst Signature Date 06-10-97

Revised & Validated by:
Paul H. Pang 6/11/97
Analyst Signature Date

5977001203-L, .05-10-28, JF 1005
5977001203, .05-10, 201
5977001203-J, .05-10, 201
5977001203-Q, .05-10, 201, .05 ml sample + 2.01 ml SS75 + 7.99 ml H₂O₃
5977001203-X, .05-10-19, 2010
5977001203-QX, .05-10-19, 2010, 1 ml sample + 1 ml acid x 4Hc 28+35 + 7 ml H₂O₃.

HNF-SD-WM-DP-254, REV. 0

Post Spike:

$$Na = \frac{\left(\frac{46323.831}{2010} \right) - \left(\frac{27748.222}{2010} \right)}{10} \times 100 = 92.42 \%$$

$$K = \frac{\left(\frac{23961.339}{2010} \right) - \left(\frac{4179.485}{2010} \right)}{10} \times 100 = 98.43 \%$$

$$Ag = \frac{\left(\frac{18107.177}{2010} \right) - 0}{10} \times 100 = 90.08 \%$$

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

File #: 970610B.DGT

HNF-SD-WM-DP-246, REV. 0mtc
7-15-97

Identity 1: ICV

Identity 2: Quality Control

9:52 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

HNF-SD-WM-DP-254, REV. 0

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.885	4.887	4.979	4.851	4.828	4.925	5.187	4.866
S.D.	0.016	0.023	0.054	0.023	0.018	0.007	0.035	0.082
% R.S.D.	0.333	0.479	1.083	0.472	0.380	0.138	0.672	1.688

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Hd (ppm)	U (ppm)
Mean	4.986	4.811	4.903	4.832	4.783	4.721	5.213	9.855
S.D.	0.014	0.013	0.018	0.024	0.015	0.011	0.031	0.040
% R.S.D.	0.282	0.278	0.372	0.492	0.318	0.230	0.589	0.404

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.676	5.078	4.904	5.001	4.756	4.614	4.965	5.078
S.D.	0.022	0.025	0.027	0.060	0.016	0.005	0.006	0.078
% R.S.D.	0.466	0.499	0.548	1.194	0.327	0.114	0.111	1.545

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	4.889	4.952	4.801	4.795	4.841	5.008	4.882	4.824
S.D.	0.022	0.015	0.031	0.019	0.013	0.026	0.088	0.015
% R.S.D.	0.442	0.305	0.637	0.400	0.264	0.517	1.810	0.304

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.661	4.977	5.008	4.958
S.D.	0.037	0.016	0.018	0.004
% R.S.D.	0.794	0.314	0.357	0.083

KJA

06-10-97

GW-105 577001112

T-201 577001203

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 212 TO 227

HNF-SD-WM-DP-246, REV. 0 *note*

7-15-97

Identity 1: ICB Identity 2: Quality Control

9:59 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

HNF-SD-WM-DP-254, REV. 0

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.002	-0.000	0.022	0.007	-0.032	0.004	-0.001	-0.000
S.D.	0.001	0.000	0.005	0.002	0.007	0.002	0.000	0.000
% R.S.D.	34.677	19.245	23.341	28.402	22.691	43.152	24.688	39.692

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.000	0.005	0.002	0.004	0.004	-0.008	0.076
S.D.	0.000	0.001	0.000	0.001	0.000	0.001	0.010	0.008
% R.S.D.	35.420	355.500	0.071	26.260	0.897	14.284	114.609	10.811

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.030	0.012	-0.000	0.006	0.006	0.000	0.006	-0.005
S.D.	0.006	0.003	0.000	0.003	0.003	0.000	0.006	0.001
% R.S.D.	19.992	22.382	41.660	49.898	49.369	0.008	101.056	24.737

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.002	-0.002	0.002	0.001	0.001	-0.000	0.057	-0.001
S.D.	0.001	0.000	0.005	0.000	0.000	0.001	0.004	0.000
% R.S.D.	87.820	20.329	219.381	19.323	47.173	460.435	6.545	14.246

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.087	-0.001	-0.000	-0.007
S.D.	0.034	0.000	0.000	0.020
% R.S.D.	38.950	26.027	45.577	285.447

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HNF-SD-WM-DP-246, REV. 0

7-15-97

Identity 1: LLS Identity 2: Quality Control 10:01 AM June 10, 1997
 Task name : OPTIMA
 Sample Weight : 1.0000 Solution Volume : 1.00
 On-Peak Integrations : 3 Off-Peak Integrations : 1

HNF-SD-WM-DP-254, REV. 0

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.024	0.020	0.203	0.201	0.075	0.040	0.019	0.020
S.D.	0.001	0.000	0.006	0.002	0.004	0.002	0.000	0.000
% R.S.D.	2.353	0.187	3.061	0.788	4.689	4.693	1.005	0.769

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.022	0.043	0.109	0.100	0.212	0.021	0.191	0.548
S.D.	0.000	0.003	0.002	0.002	0.001	0.000	0.007	0.034
% R.S.D.	0.022	7.011	1.742	1.790	0.281	0.392	3.540	6.220

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.158	0.228	0.099	0.430	0.206	0.203	0.198	0.197
S.D.	0.009	0.006	0.000	0.010	0.006	0.001	0.003	0.001
% R.S.D.	5.505	2.484	0.278	2.253	2.874	0.264	1.716	0.634

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	0.097	0.023	0.180	0.021	0.010	0.106	0.591	0.019
S.D.	0.001	0.000	0.004	0.000	0.001	0.002	0.005	0.000
% R.S.D.	0.740	0.945	2.384	0.865	7.043	2.222	0.823	0.962

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.193	0.100	0.011	0.354
S.D.	0.041	0.001	0.000	0.015
% R.S.D.	21.261	1.217	2.610	4.191

HNF-SD-WM-DP-246, REV. 0 *mbe*
7-16-97

Identity 1: ICSA Identity 2: Quality Control

10:04 AM June 10, 1997

Task name: OPTIMA

HNF-SD-WM-DP-254, REV. 0

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.006	0.002	0.006	0.043	195.691	-0.002	-0.002	-0.000
S.D.	0.001	0.000	0.011	0.002	0.560	0.002	0.000	0.000
% R.S.D.	10.433	2.014	176.847	4.600	0.286	104.620	8.513	45.296

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.005	0.008	0.014	94.290	99.918	0.001	0.013	0.171
S.D.	0.000	0.001	0.001	0.066	0.096	0.001	0.003	0.027
% R.S.D.	3.744	8.259	5.110	0.070	0.096	164.156	20.083	15.625

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.027	0.068	0.001	0.012	-0.001	97.177	0.003	185.184
S.D.	0.004	0.005	0.000	0.010	0.008	0.117	0.003	0.859
% R.S.D.	16.303	7.154	4.804	88.204	674.548	0.121	108.803	0.464

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.000	0.000	-0.007	0.002	0.000	0.011	-0.053	-0.002
S.D.	0.001	0.000	0.013	0.000	0.000	0.001	0.017	0.000
% R.S.D.	360.642	116.280	176.923	9.283	243.087	8.413	32.744	9.082

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.054	-0.002	0.002	-0.004
S.D.	0.032	0.001	0.000	0.009
% R.S.D.	58.441	21.804	0.207	213.055

HNF-SD-WM-DP-246, REV. 0 ^{note} 7-15-97

Identity 1: ICSAB Identity 2: Quality Control

10:09 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

HNF-SD-WM-DP-254, REV. 0

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.003	0.002	-0.010	0.015	196.428	0.485	0.494	0.966
S.D.	0.002	0.000	0.003	0.002	0.828	0.005	0.003	0.005
% R.S.D.	57.536	7.282	25.211	16.100	0.421	1.084	0.509	0.527

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.962	0.944	0.001	93.002	98.780	0.481	0.006	-0.046
S.D.	0.003	0.004	0.001	0.070	0.392	0.001	0.004	0.064
% R.S.D.	0.273	0.403	57.168	0.075	0.397	0.180	64.784	139.294

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.026	0.020	0.498	0.051	0.001	96.191	-0.000	185.438
S.D.	0.018	0.015	0.002	0.004	0.011	0.389	0.007	1.055
% R.S.D.	71.861	72.669	0.498	7.917	1284.742	0.405	3700.009	0.569

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.004	1.010	0.927	-0.000	0.951	0.010	-0.060	0.474
S.D.	0.002	0.001	0.025	0.001	0.004	0.001	0.016	0.000
% R.S.D.	46.988	0.111	2.668	112.294	0.376	5.073	26.412	0.104

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.069	0.485	0.488	0.020
S.D.	0.033	0.001	0.002	0.050
% R.S.D.	48.478	0.180	0.440	244.277

t

~~HNF-SD-WM-DP-246, REV. 0~~mte
7-15-97

Identity 1: S97T001203_L Identity 2: acid dil.,.05-10-2-8

10:47 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1005.00

HNF-SD-WM-DP-254, REV. 0

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	2.154	-0.152	33.505	77.252	-26.472	8.716	-0.812	-0.217
S.D.	0.570	0.075	7.274	1.476	3.313	3.253	0.371	0.182
% R.S.D.	26.453	49.487	21.709	1.910	12.515	37.319	45.710	83.904

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.900	0.139	2.516	-4.694	0.489	7.452	-14.620	64.609
S.D.	0.208	2.208	1.437	0.532	0.039	0.466	0.841	20.927
% R.S.D.	23.055	1585.104	57.108	11.342	7.873	6.256	5.753	32.391

	Ce (ppm)	Sn (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-25.646	17.415	0.194	258.904	38.786	2.407	-2.004	27184.805
S.D.	7.026	5.558	0.154	3.578	3.476	0.000	1.927	156.484
% R.S.D.	27.397	31.914	79.373	1.382	8.962	0.002	96.124	0.576

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	2.093	0.188	-6.517	0.305	1.966	-0.183	4270.808	-1.559
S.D.	0.865	0.770	7.727	0.458	0.309	0.726	28.209	0.179
% R.S.D.	41.302	409.887	118.559	150.357	15.732	395.544	0.661	11.470

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	123.929	-1.716	-0.146	-52.039
S.D.	27.390	0.532	0.410	11.956
% R.S.D.	22.102	31.000	281.551	22.975

~~HNF-SD-WM-DP-246, REV. 0~~ ^{nte} _{15.97}

Identity 1: S97T001203 Identity 2: acid dil.,.05-10 ml

10:51 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 201.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

HNF-SD-WM-DP-254, REV. 0

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.443	-0.022	2.492	37.747	-5.919	7.039	-0.236	0.029
S.D.	0.099	0.000	0.364	0.484	0.587	0.354	0.032	0.017
% R.S.D.	22.440	0.000	14.600	1.283	9.925	5.028	13.345	57.713

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.391	0.022	0.985	-8.463	4.027	6.730	-3.066	-18.617
S.D.	0.032	0.408	0.144	0.070	0.013	0.076	1.605	4.339
% R.S.D.	8.083	1876.865	14.645	0.832	0.332	1.131	52.353	23.309

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-8.315	-3.066	0.039	243.719	37.340	0.575	1.592	26597.575
S.D.	1.517	0.929	0.015	3.316	0.726	0.020	0.479	121.750
% R.S.D.	18.241	30.294	39.686	1.361	1.944	3.535	30.115	0.458

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.104	-0.042	-2.989	-0.096	-0.016	2.019	4295.268	-0.292
S.D.	0.240	0.015	0.771	0.023	0.093	0.170	33.798	0.035
% R.S.D.	229.712	35.701	25.776	24.201	571.693	8.437	0.787	12.160

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	10.670	-0.571	-0.067	-8.234
S.D.	8.114	0.166	0.027	1.523
% R.S.D.	76.044	29.093	40.514	18.498

HNF-SD-WM-DP-246, REV. 0 *ME*
7-15-97

B
 Identity 1: S97T001203_D Identity 2: acid dil.,.05-10 ml
 Task name : OPTIMA
 Sample Weight : 1.0000 Solution Volume : 201.00
 On-Peak Integrations : 3 Off-Peak Integrations : 1

10:54 AM June 10, 1997

HNF-SD-WM-DP-254, REV. 0

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.130	0.022	4.761	44.221	-3.471	7.159	-0.077	0.135
S.D.	0.130	0.008	2.611	0.429	0.079	0.383	0.078	0.038
% R.S.D.	100.184	34.641	54.838	0.971	2.278	5.347	101.609	28.346

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.394	1.228	-0.248	-8.483	0.392	6.789	0.133	3.725
S.D.	0.035	0.319	0.287	0.474	0.015	0.141	1.280	0.504
% R.S.D.	8.861	25.985	115.732	5.592	3.937	2.074	963.961	13.522

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.078	0.919	0.126	246.958	36.969	0.458	-0.566	26173.706
S.D.	1.016	0.697	0.015	2.817	0.529	0.020	0.240	171.067
% R.S.D.	1301.206	75.835	12.211	1.141	1.431	4.440	42.399	0.654

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	0.042	0.293	1.998	0.141	0.377	2.385	4261.349	-0.352
S.D.	0.192	0.109	1.800	0.059	0.135	0.082	23.777	0.036
% R.S.D.	455.313	37.408	90.071	42.159	35.769	3.449	0.558	10.154

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	23.694	0.069	0.032	2.229
S.D.	9.387	0.126	0.055	2.589
% R.S.D.	39.620	181.517	170.613	116.156

HNF-SD-WM-DP-246, REV. 0 ^{mts} 7-15-97

Identity 1: S971001203_A Identity 2: acid dil., 05-10 ml

10:57 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 201.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

HNF-SD-WM-DP-254, REV. 0

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	199.662	199.979	205.933	261.644	191.036	209.337	209.324	190.876
S.D.	0.369	0.173	2.242	0.251	1.894	0.663	0.189	0.173
% R.S.D.	0.185	0.086	1.089	0.096	0.991	0.317	0.090	0.091

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	204.915	195.133	199.969	188.067	192.921	199.310	206.258	393.556
S.D.	0.361	1.138	1.141	1.204	0.299	0.227	1.819	3.922
% R.S.D.	0.176	0.583	0.571	0.640	0.155	0.114	0.882	0.997

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	192.031	204.842	198.340	453.204	234.213	188.315	207.348	25644.358
S.D.	1.865	0.555	0.248	2.230	1.694	0.128	2.945	42.676
% R.S.D.	0.971	0.271	0.125	0.492	0.723	0.068	1.421	0.166

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	200.667	86.587	191.397	194.654	196.203	203.228	4280.759	196.687
S.D.	0.980	0.554	3.583	0.144	0.326	0.556	9.436	0.342
% R.S.D.	0.488	0.640	1.872	0.074	0.166	0.274	0.220	0.174

	Sb (ppm)	V (ppm)	Se (ppm)	Tl (ppm)
Mean	214.922	203.386	199.931	198.800
S.D.	10.698	0.139	0.383	3.895
% R.S.D.	4.978	0.068	0.191	1.959

HNF-SD-WM-DP-246, REV. 0 *0015*
7-15-97

Identity 1: S97T001203_X Identity 2: acid dil., .05-10-1-9

11:01 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 2010.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

HNF-SD-WM-DP-254, REV. 0

	Zr (ppm)	Sr (ppm)	Bf (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	6.301	0.087	22.637	101.011	-47.950	8.894	-2.381	-0.290
S.D.	1.744	0.272	9.361	0.375	7.712	3.768	0.178	0.302
% R.S.D.	27.678	312.250	41.355	0.371	16.083	42.364	7.475	104.114

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.102	-2.901	14.216	-4.170	-3.693	2.848	-0.864	266.293
S.D.	0.806	4.889	3.780	4.884	0.204	2.269	10.793	39.009
% R.S.D.	788.481	168.538	26.593	117.122	5.521	79.673	1248.521	14.649

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-90.143	58.001	0.252	284.165	41.695	5.400	-5.197	27748.222
S.D.	7.123	9.968	0.341	17.864	4.875	0.203	13.144	24.771
% R.S.D.	7.901	17.187	135.218	6.286	11.692	3.765	252.905	0.089

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-1.884	3.181	8.297	2.716	-0.170	-1.037	4179.485	-2.095
S.D.	1.961	0.736	16.794	0.125	1.417	2.211	12.313	0.005
% R.S.D.	104.092	23.136	202.404	4.585	833.823	213.089	0.295	0.235

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	94.102	-3.261	0.208	-97.756
S.D.	12.434	1.829	0.007	36.753
% R.S.D.	13.213	56.089	3.526	37.597

HNF-SD-WM-DP-246, REV. 0 *me*

7-15-97

Identity 1: S97T001203_AX Identity 2: acid dil.,.05-10-1-9

11:04 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 2010.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

HNF-SD-WM-DP-254, REV. 0

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	19738.770	19785.170	19884.584	21161.322	19327.829	18834.089	19667.540	19671.113
S.D.	1.758	33.569	30.747	68.764	21.981	48.935	31.215	103.501
% R.S.D.	0.009	0.170	0.155	0.325	0.114	0.260	0.159	0.526

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	18817.293	19011.637	19985.633	19342.596	19763.678	18569.685	21204.958	40017.028
S.D.	10.488	14.054	18.694	52.925	15.616	28.532	50.961	63.724
% R.S.D.	0.056	0.074	0.094	0.274	0.079	0.154	0.240	0.159

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	19374.048	20643.349	19892.990	19657.158	18443.178	18723.123	19086.546	46323.831
S.D.	64.197	26.852	68.212	139.591	97.564	12.355	12.957	242.139
% R.S.D.	0.331	0.130	0.343	0.710	0.529	0.066	0.068	0.523

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	18796.361	18107.177	19555.631	19418.998	19054.141	19892.017	23961.339	19051.352
S.D.	12.815	40.619	104.273	8.600	32.000	23.569	56.676	39.033
% R.S.D.	0.068	0.224	0.533	0.044	0.168	0.118	0.237	0.205

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	19931.961	19376.486	19710.523	20557.741
S.D.	12.935	27.624	22.197	54.319
% R.S.D.	0.065	0.143	0.113	0.264

HNF-SD-WM-DP-246, REV. 0 *mte*

7-15-97

Identity 1: ICSA Identity 2: Quality Control

11:11 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

HNF-SD-WM-DP-254, REV. 0

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.005	0.002	-0.019	0.048	203.599	0.005	-0.001	0.001
S.D.	0.002	0.000	0.008	0.001	1.454	0.002	0.000	0.000
% R.S.D.	33.717	4.767	44.012	1.054	0.714	32.494	16.194	31.909
	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.006	0.006	0.007	96.037	98.997	0.005	0.011	0.123
S.D.	0.001	0.001	0.002	0.201	0.099	0.003	0.007	0.035
% R.S.D.	8.154	23.083	26.405	0.209	0.100	63.366	67.976	28.349
	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.000	0.061	0.002	0.026	0.004	95.996	0.018	181.075
S.D.	0.004	0.006	0.000	0.009	0.005	0.140	0.003	0.759
% R.S.D.	2043.024	9.690	8.445	34.758	135.189	0.146	18.777	0.419
	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	0.000	0.014	-0.023	0.001	0.002	0.015	0.065	-0.003
S.D.	0.001	0.001	0.008	0.000	0.001	0.001	0.016	0.000
% R.S.D.	528.507	4.432	32.684	19.239	40.110	3.720	24.970	7.187
	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)				
Mean	0.082	-0.001	0.003	-0.013				
S.D.	0.011	0.000	0.000	0.018				
% R.S.D.	13.649	37.010	4.520	144.898				

1

Identity 1: ICSAB Identity 2: Quality Control

11:14 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

HNF-SD-WM-DP-254, REV. 0

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.002	0.002	-0.004	0.045	207.279	0.477	0.495	0.923
S.D.	0.001	0.000	0.009	0.007	1.925	0.002	0.001	0.006
% R.S.D.	52.713	6.818	222.630	16.018	0.929	0.375	0.120	0.658

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.962	0.950	0.011	94.759	99.707	0.479	0.012	0.138
S.D.	0.006	0.006	0.001	0.183	0.105	0.005	0.011	0.044
% R.S.D.	0.619	0.679	13.243	0.193	0.105	0.965	92.327	31.860

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.029	0.065	0.498	0.028	-0.007	95.848	0.006	185.469
S.D.	0.008	0.010	0.001	0.011	0.010	0.377	0.009	1.252
% R.S.D.	28.924	14.521	0.150	39.658	146.407	0.393	148.867	0.675

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.003	1.017	0.931	0.001	0.952	0.014	-0.037	0.475
S.D.	0.001	0.003	0.031	0.000	0.008	0.000	0.012	0.001
% R.S.D.	30.679	0.249	3.334	17.929	0.792	2.286	33.203	0.281

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.077	0.482	0.490	-0.021
S.D.	0.005	0.000	0.000	0.015
% R.S.D.	6.751	0.098	0.053	70.629

HNF-SD-WM-DP-246, REV. 0

MTE
7-15-97

Identity 1: CCV Identity 2: Quality Control

11:18 AM June 10, 1997

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

HNF-SD-WM-DP-254, REV. 0

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.866	4.894	4.916	4.772	4.771	4.773	5.233	4.938
S.D.	0.008	0.008	0.021	0.013	0.008	0.014	0.005	0.026
% R.S.D.	0.171	0.163	0.420	0.268	0.167	0.283	0.090	0.535

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.833	4.701	4.908	4.802	4.816	4.568	5.366	10.050
S.D.	0.012	0.018	0.010	0.015	0.004	0.014	0.021	0.037
% R.S.D.	0.257	0.373	0.212	0.317	0.082	0.298	0.400	0.365

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.652	5.150	4.930	4.876	4.657	4.501	4.871	5.212
S.D.	0.026	0.004	0.005	0.030	0.031	0.015	0.016	0.017
% R.S.D.	0.560	0.083	0.108	0.606	0.660	0.341	0.338	0.333

	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	4.734	4.852	4.693	4.713	4.726	4.992	4.924	4.711
S.D.	0.015	0.008	0.011	0.011	0.009	0.014	0.024	0.008
% R.S.D.	0.311	0.166	0.230	0.225	0.189	0.286	0.497	0.166

	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.810	4.884	4.991	4.907
S.D.	0.038	0.014	0.007	0.023
% R.S.D.	0.782	0.287	0.145	0.464

HNF-SD-WM-DP-246, REV. 0

115-97

Identity 1: CCB Identity 2: Quality Control

11:26 AM June 10, 1997

HNF-SD-WM-DP-254, REV. 0

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 1.00

On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.004	-0.000	0.023	0.008	-0.035	0.002	-0.002	-0.001
S.D.	0.002	0.000	0.008	0.003	0.008	0.000	0.001	0.000
% R.S.D.	48.462	57.735	36.189	34.492	22.143	0.543	29.767	25.240
	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	0.001	0.004	-0.005	0.005	-0.000	-0.007	0.114
S.D.	0.000	0.002	0.002	0.002	0.000	0.003	0.005	0.063
% R.S.D.	844.028	175.886	50.622	43.351	1.376	685.514	75.495	55.481
	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.060	0.033	-0.001	0.029	0.003	0.001	-0.001	-0.001
S.D.	0.016	0.011	0.000	0.005	0.002	0.000	0.002	0.003
% R.S.D.	27.531	34.387	50.942	18.057	65.841	21.419	303.808	458.341
	Mo (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)	Mn (ppm)
Mean	-0.000	0.002	-0.001	0.001	-0.000	0.000	0.059	-0.002
S.D.	0.001	0.001	0.016	0.001	0.000	0.002	0.010	0.000
% R.S.D.	192.439	55.695	1878.975	38.314	88.193	690.620	17.112	10.018
	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)				
Mean	0.066	-0.004	-0.000	-0.031				
S.D.	0.029	0.001	0.000	0.036				
% R.S.D.	44.209	28.921	30.848	116.608				

JK
05-10-97

LABCORE Data Entry Template for Worklist# 19341

Analyst: JK 5/6 Instrument: ICP01-2 7-17-97 Book# 67888

Method: LA-505-451/161 Rev/Mod C-1

Worklist Comment: 7-17-97 ICP T-201 (SOLID ACID DIGEST)

S Type	Sample#	R A	Test	Matrix	Group#	Project
1	ICV		@ICP-QC	QC		
2	ICB		@ICP-QC	QC		
3	LLS		@ICP-QC	QC		
4	ICSA		@ICP-QC	QC		
5	ICSAB		@ICP-QC	QC		
6	PREPSTDITJA		@ICP-A01	SOLID		
7	PREPBLKTJA		@ICP-A01	SOLID		
8	SERDIL	S97T001250 0 A	@ICP-A01	SOLID		
9	SAMPLE	S97T001250 0 A	@ICP-A01	SOLID	97000311	T-201
Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01						
10	DUP	S97T001250 0 A	@ICP-A01	SOLID		
11	SPK-PREDIG	S97T001250 0 A	@ICP-A01	SOLID		
12	CCV	<u>Sample 6</u> <u>Post-SP (6.0x (10 ppb))</u> <u>7-17-97</u>	@ICP-QC	QC		
13	CCB		@ICP-QC	QC		
14	SERDIL	S97T001256 0 A	@ICP-A01	SOLID		
15	SAMPLE	S97T001256 0 A	@ICP-A01	SOLID	97000311	T-201
Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,						

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

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A-0004-1

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LABCORE Data Entry Template for Worklist# 19341

S Type	Sample#	R A	Test	Matrix	Group#	Project
			BE-A-01	BI-A-01	CA-A-01	CD-A-01
			CE-A-01	CO-A-01		
			CR-A-01	CU-A-01	FE-A-01	K-A-01
			LA-A-01	LI-A-01		
			MG-A-01	MN-A-01	MO-A-01	NA-A-01
			ND-A-01	NI-A-01		
			P-A-01	PB-A-01	S-A-01	SB-A-01
			SE-A-01	SI-A-01		
			SM-A-01	SR-A-01	TI-A-01	TL-A-01
			U-A-01	V-A-01		
			ZN-A-01	ZR-A-01		
16 DUP	S97T001256	0 A	@ICP-A01	SOLID		
17 SPK-PREDIG	S97T001256	0 A	@ICP-A01	SOLID		
18 ICSA			@ICP-QC	QC		
19 ICSAB			@ICP-QC	QC		
20 CCV			@ICP-QC	QC		
21 CCB			@ICP-QC	QC		

Final page for worklist # 19341

JK Ladd 07-16-97

Analyst Signature	Date
Prepsd LJA, direct, DF 1	
Prepbk LJA, direct, 1	
S97T001250-L, 2-6-2-8, DF 20	
S97T001250-2-6	4
S97T001250-2-6	4
S97T001250-5-2-6	4
S97T001250-X-2-6-1-9	40
S97T001250-6X-2-6-1-9	40, 1 ml sample + 1 ml each K ₂ H ₄ 28 + 35 + 7 ml H ₂ O ₃
S97T001254-L, 2-8, DF 5	
S97T001254-direct	1
S97T001254-direct	1
S97T001254-5-direct	1
S97T001254-X-1-9	10
S97T001254-6X-1-9	10, 1 ml sample + 1 ml each K ₂ H ₄ 28 + 35 + 7 ml H ₂ O ₃

Reviewed + Validated by:
Paul R. Pung 7/16/97

Analyst Signature	Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Post Spike :

HNF-SD-WM-DP-254, REV. 0

S97T001250

S97T001256

$$Bi = \frac{\left(\frac{1089}{40}\right) - \left(\frac{699.8}{40}\right)}{10} \times 100 = 97.3\%$$

$$Bi = \frac{\left(\frac{209.0}{10}\right) - \left(\frac{110.4}{10}\right)}{10} \times 100 = 98.6\%$$

$$Ca = \frac{\left(\frac{420.1}{40}\right) - \left(\frac{7.204}{40}\right)}{10} \times 100 = 103.2\%$$

$$Ca = \frac{\left(\frac{108.4}{10}\right) - \left(\frac{8.719}{10}\right)}{10} \times 100 = 99.7\%$$

$$Cr = \frac{\left(\frac{433.9}{40}\right) - \left(\frac{30.65}{40}\right)}{10} \times 100 = 100.8\%$$

$$Fe = \frac{\left(\frac{104.4}{10}\right) - \left(\frac{11.10}{10}\right)}{10} \times 100 = 93.3\%$$

$$Fe = \frac{\left(\frac{432.8}{40}\right) - \left(\frac{56.37}{40}\right)}{10} \times 100 = 94.1\%$$

$$K = \frac{\left(\frac{120.8}{10}\right) - \left(\frac{21.20}{10}\right)}{10} \times 100 = 99.6\%$$

$$K = \frac{\left(\frac{424.0}{40}\right) - \left(\frac{21.94}{40}\right)}{10} \times 100 = 100.5\%$$

$$La = \frac{\left(\frac{552.5}{40}\right) - \left(\frac{146.4}{40}\right)}{10} \times 100 = 101.5\%$$

$$La = \frac{\left(\frac{132.2}{10}\right) - \left(\frac{32.18}{10}\right)}{10} \times 100 = 100.0\%$$

$$Mn = \frac{\left(\frac{632.8}{40}\right) - \left(\frac{223.0}{40}\right)}{10} \times 100 = 102.5\%$$

$$Mn = \frac{\left(\frac{135.2}{10}\right) - \left(\frac{34.98}{10}\right)}{10} \times 100 = 100.2\%$$

$$P = \frac{\left(\frac{424.5}{40}\right) - \left(\frac{28.34}{40}\right)}{10} \times 100 = 99.8\%$$

$$Na = \frac{\left(\frac{233.6}{10}\right) - \left(\frac{136.7}{10}\right)}{10} \times 100 = 96.9\%$$

$$Si = \frac{\left(\frac{416.5}{40}\right) - \left(\frac{10.58}{40}\right)}{10} \times 100 = 101.5\%$$

$$Sr = \frac{\left(\frac{398.8}{40}\right) - (0)}{10} \times 100 = 99.7\%$$

$$Na = \frac{\left(\frac{583.6}{40}\right) - \left(\frac{181.1}{40}\right)}{10} \times 100 = 100.6\%$$

HNF-SD-WM-DP-254, REV. 0

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Analysis Report

Summary

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	970716A	ICP2	07/16/97	09:05	DKS	Q	CONC.
2	ICB	970716A	ICP2	07/16/97	09:10	DKS	Q	CONC
3	LLS	970716A	ICP2	07/16/97	09:13	DKS	Q	CONC
4	ICSA	970716A	ICP2	07/16/97	09:16	DKS	Q	CONC
5	ICSAB	970716A	ICP2	07/16/97	09:19	DKS	Q	CONC
6	PREPSTDTJA	970716A	ICP2	07/16/97	09:24	DKS	Q	CONC
7	PREPBLKTJA	970716A	ICP2	07/16/97	09:30	DKS	Q	CONC
8	S97T001250 L	970716A	ICP2	07/16/97	09:45	DKS	S	CONC
9	S97T001250	970716A	ICP2	07/16/97	09:49	DKS	S	CONC
10	S97T001250 D	970716A	ICP2	07/16/97	09:52	DKS	S	CONC
11	S97T001250 S	970716A	ICP2	07/16/97	09:55	DKS	S	CONC
12	S97T001250 X	970716A	ICP2	07/16/97	09:58	DKS	S	CONC
13	S97T001250 AX	970716A	ICP2	07/16/97	10:02	DKS	S	CONC
14	CCV	970716A	ICP2	07/16/97	10:08	DKS	Q	CONC
15	CCB	970716A	ICP2	07/16/97	10:13	DKS	Q	CONC
16	S97T001256 L	970716A	ICP2	07/16/97	10:16	DKS	S	CONC
17	S97T001256	970716A	ICP2	07/16/97	10:19	DKS	S	CONC
18	S97T001256 D	970716A	ICP2	07/16/97	10:23	DKS	S	CONC
19	S97T001256 S	970716A	ICP2	07/16/97	10:27	DKS	S	CONC
20	S97T001256 X	970716A	ICP2	07/16/97	10:36	DKS	S	CONC
21	S97T001256 AX	970716A	ICP2	07/16/97	10:39	DKS	S	CONC
22	S97T001256	970716A	ICP2	07/16/97	10:44	DKS	Q	CONC
23	ICSA	970716A	ICP2	07/16/97	10:47	DKS	Q	CONC
24	ICSAB	970716A	ICP2	07/16/97	10:51	DKS	Q	CONC
25	CCV 1	970716A	ICP2	07/16/97	11:00	DKS	Q	CONC
26	CCB 2	970716A	ICP2	07/16/97				



07-16-97

T-201

S97T001250

S97T001256

7-16-97

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 221 TO 225

HNF-SD-WM-DP-254, REV. 0

Analysis Report

Averages

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.055	4.942	5.239	5.049	5.050	5.206
2	ICB	.0001	.0095	-.0157	.0000	.0001	.0002
3	LLS	.0230	.1074	-.1812	.1030	.1013	.0108
4	ICSA	.0020	244.4	-.0385	-.0046	.0001	.0005
5	IC SAB	.9703	244.5	-.0598	-.0056	.4827	.4874
6	PREPSTD TJA	.6002	4.825	5.038	4.961	4.901	5.038
7	PREPBLKTJA	-.0001	Q.1422	-.0050	Q.7257	.0011	.0008
8	S97T001250 L	.0246	.6927	-.3893	.8219	.3252	.0080
9	S97T001250-	.0338	.5470	.0301	.8579	.3185	.0003
10	S97T001250 D	.0296	.5039	.0389	.9330	.2700	.0014
11	S97T001250 S	.5892	5.510	5.202	5.995	5.236	4.970
12	S97T001250 X	.0069	.7880	-.1849	.9130	.3233	.0160
13	S97T001250-AX	382.5	397.7	407.3	404.8	413.4	403.1
14	CCV	5.124	5.048	5.307	5.124	5.232	5.297
15	CCB	.0007	-.0034	-.0196	-.0015	-.0001	.0001
16	S97T001256 L	.0157	.4525	-.0861	.4655	.1053	.0013
17	S97T001256-	.0117	.4148	-.0156	.4521	.1017	.0003
18	S97T001256 D	.0116	.3969	-.0115	.6121	.1062	.0001
19	S97T001256 S	.5801	4.906	4.851	5.538	4.756	4.803
20	S97T001256 X	.0011	.0477	-.0170	.0542	.0108	.0002
21	S97T001256 X	.0036	.5214	-.2505	.4452	.1053	.0044
22	S97T001256-AX	87.36	98.60	101.2	100.5	102.7	100.6
23	ICSA	.0381	248.2	-.0370	-.0025	.0001	.0005
24	IC SAB	.9869	245.9	-.0185	-.0027	.4888	.4902
25	CCV_1	5.130	5.052	5.337	5.154	5.275	5.330
26	CCB_2	.0004	.0073	-.0150	-.0046	.0000	.0002

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.159	5.132	5.109	5.034	5.070	5.139
2	ICB	-.0039	.0015	.0002	.0053	.0059	.0015
3	LLS	.2081	.1980	.0102	.2123	.0461	.0237
4	ICSA	.0207	254.5	.0017	.0068	.0027	-.0013
5	IC SAB	-.0107	253.5	.9438	.0081	.4767	.4729
6	PREPSTD TJA	4.837	5.004	4.762	5.025	4.955	4.839
7	PREPBLKTJA	.0127	Q.1266	.0005	-.0001	.0032	.0078
8	S97T001250 L	.694.2	7.235	.0196	.4370	.1211	30.42
9	S97T001250-	.669.2	7.082	.0104	.4804	.0449	29.44
10	S97T001250 D	.577.9	5.883	.0123	.3804	.0520	26.42
11	S97T001250 S	.883.7	13.96	4.840	5.615	5.033	44.01
12	S97T001250 X	.699.8	7.204	.0356	.0877	.2170	30.65
13	S97T001250-AX	1089	420.1	402.1	412.1	402.5	433.9
14	CCV	5.272	5.226	5.155	5.178	5.133	5.201
15	CCB	.0019	-.0014	.0001	-.0080	.0023	.0002
16	S97T001256 L	.109.4	1.602	.0016	.0773	.0250	8.590
17	S97T001256-	.102.0	1.523	.0017	.1012	.0102	8.091
18	S97T001256 D	.107.4	1.596	.0050	.1071	.0121	8.511
19	S97T001256 S	.91.68	6.052	4.505	4.842	4.670	11.50
20	S97T001256 X	.11.14	.1613	-.0020	.0085	.0037	.8816
21	S97T001256 X	.110.4	1.592	-.0062	.0491	.0168	8.719
22	S97T001256-AX	209.0	103.1	99.33	101.5	99.63	108.4
23	ICSA	-.0160	260.1	.0029	.0082	.0060	-.0020

HNF-SD-WM-DP-254, REV. 0

Analysis Report

Averages

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
24	ICSA B	- .0095	257.9	.9503	.0153	.4802	.4802
25	CCV 1	5.240	5.251	5.150	5.204	5.123	5.210
26	CCB 2	.0086	-.0008	-.0008	.0003	.0039	.0021

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.856	.0024	4.769	5.003	5.113	5.079
2	ICB	.0004	.0007	-.0003	.2008	.0010	.0039
3	LLS	.0182	.0009	.0944	Q.6438	.1039	.0205
4	ICSA	-.0082	-.0151	93.96	.3306	-.0047	.0018
5	ICSA B	.4483	-.0107	93.77	.0168	-.0036	1.022
6	PREPSTD TJ A	4.404	.0019	4.560	4.995	5.044	4.976
7	PREPBLKTJ A	Q.0116	-.0009	.0390	.1366	.0016	-.0011
8	S97T001250 L	.0077	.0550	56.08	27.74	146.1	-.0118
9	S97T001250	.0003	.0637	54.30	26.11	143.5	-.0005
10	S97T001250 D	-.0021	.0499	48.79	24.06	116.1	.0000
11	S97T001250 S	4.388	.0845	75.89	40.55	189.5	4.935
12	S97T001250 X	.0254	.0421	56.37	21.94	146.4	-.0188
13	S97T001250 AX	370.0	.2534	432.8	424.0	552.5	404.2
14	CCV	4.995	.0019	4.852	5.161	5.249	5.232
15	CCB	.0003	-.0002	-.0009	.0189	-.0019	-.0007
16	S97T001256 L	-.0071	.0110	10.91	22.49	31.58	-.0041
17	S97T001256	-.0066	.0121	10.33	21.12	30.64	-.0013
18	S97T001256 D	-.0098	.0132	10.85	20.54	31.95	-.0009
19	S97T001256 S	4.184	.0132	13.02	24.61	30.86	4.756
20	S97T001256 X	.0006	.0014	1.114	2.326	3.187	-.0004
21	S97T001256 X	-.0064	.0021	11.10	21.20	32.18	-.0106
22	S97T001256 AX	91.83	.0549	104.4	120.8	132.2	100.1
23	ICSA	-.0084	-.0207	95.55	.0654	-.0047	.0020
24	ICSA B	.4491	-.0168	94.66	.2118	-.0032	1.011
25	CCV 1	5.023	.0022	4.857	4.974	5.282	5.256
26	CCB 2	.0012	-.0002	-.0009	-.0045	-.0005	-.0001

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	5.154	4.994	5.054	4.936	5.125	5.109
2	ICB	.0104	.0005	.0015	.0033	.0002	.0051
3	LLS	.2128	.0205	.1036	.1891	.2066	.0376
4	ICSA	253.3	-.0057	-.0108	157.5	.0019	-.0079
5	ICSA B	252.7	.4491	-.0095	199.9	.0002	.9355
6	ICSA	4.828	4.738	4.791	5.068	4.952	4.954
7	PREPSTD TJ A	.0209	.0031	.0023	Q1.016	.0007	.0015
8	S97T001250 L	1.517	222.8	-.0421	180.4	.0135	3.525
9	S97T001250	1.820	253.0	-.0534	176.5	.0497	3.442
10	S97T001250 D	1.548	209.6	-.0435	160.9	.0481	3.136
11	S97T001250 S	7.427	364.9	4.959	246.6	4.978	9.575
12	S97T001250 X	1.232	223.0	-.0538	181.1	.0517	3.520
13	S97T001250 AX	422.6	632.8	401.8	583.6	398.9	407.1
14	CCV	5.271	5.083	5.128	5.061	5.257	5.108
15	CCB	-.0079	.0000	.0008	.0111	-.0006	.0015
16	S97T001256 L	.2821	34.87	-.0058	133.7	.0034	.7380
17	S97T001256	.3184	36.10	-.0080	129.0	.0087	.6312

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Analysis Report

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
18	S97T001256 D	3190	38.33	-.0084	124.3	.0103	.6729
19	S97T001256 S	4.829	35.92	4.787	128.9	4.698	5.204
20	S97T001256 X	.0221	3.553	-.0006	13.48	.0041	.0648
21	S97T001256 X	.2653	34.98	-.0231	136.7	-.0170	.6786
22	S97T001256 AX	104.4	135.2	99.57	233.6	98.45	100.2
23	ICSA	257.6	-.0059	-.0110	200.2	.0003	.0053
24	ICSAB	255.1	.4520	-.0103	199.3	.0026	.9390
25	CCV 1	5.280	5.050	5.134	5.299	5.279	5.157
26	CCB 2	.0000	-.0000	.0000	.0004	.0033	-.0076

7-14-97

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.038	5.121	4.937	4.812	4.921	4.897
2	ICB	-.0166	.0338	.0146	.0043	.0217	.0058
3	LLS	.3989	.2155	.2061	.1036	.2263	.1628
4	ICSA	.0303	.0364	-.0518	.0105	.0566	.0036
5	ICSAB	.0031	1.018	-.0472	.0120	.0242	-.0007
6	PREPSTD TJJA	4.679	4.689	4.827	4.733	4.523	6.584
7	PREPBLKTJJA	.0021	.0115	Q.0858	.0120	.0419	Q2.011
8	S97T001250 L	26.35	.7722	.8489	-.2450	.6463	10.44
9	S97T001250	26.27	.6538	.5496	-.3336	.2486	10.29
10	S97T001250 D	21.30	1.564	.4155	-.2712	.2284	9.095
11	S97T001250 S	38.36	5.640	5.401	4.648	4.892	19.89
12	S97T001250 X	25.34	.6814	.1073	-.2326	1.210	10.58
13	S97T001250 AX	424.5	407.4	386.6	406.8	392.3	416.5
14	CCV	5.022	5.191	4.957	4.871	4.987	4.961
15	CCB	-.0110	-.0030	-.0046	-.0026	.0194	.0016
16	S97T001256 L	6.898	1.590	.3205	-.0384	.1298	7.897
17	S97T001256	6.735	1.496	.2999	-.0412	.0441	7.450
18	S97T001256 D	6.964	1.573	.2874	-.0296	.0549	6.397
19	S97T001256 S	10.60	5.768	5.003	4.726	4.385	12.18
20	S97T001256 X	.7075	.1730	.0347	.0069	.0340	.8137
21	S97T001256 X	6.880	1.627	.4431	.0117	.3968	7.946
22	S97T001256 AX	105.7	101.5	96.75	100.9	97.36	108.7
23	ICSA	.0149	.0443	-.0556	.0086	.0487	.0068
24	ICSAB	-.0149	1.013	-.0392	.0103	.0471	.0018
25	CCV 1	5.072	5.177	4.973	4.919	5.029	4.963
26	CCB 2	-.0103	.0211	.0030	.0052	.0357	-.0004

7-14-97

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.943	4.990	.1044	4.890	4.814	9.606
2	ICB	.0062	.0001	.0036	.0000	-.0213	.0257
3	LLS	.2048	.0207	.0030	.0209	.4106	.5266
4	ICSA	-.0137	.0019	-.0075	.0009	.0547	.0719
5	ICSAB	-.0230	.0018	-.0003	.0007	.0623	.0518
6	PREPSTD TJJA	4.864	4.878	.1011	4.456	4.558	9.526
7	PREPBLKTJJA	-.0161	.0009	.0057	.0012	.0138	-.0459
8	S97T001250 L	-.2159	6.594	.1609	.0581	-.3889	-.2380
9	S97T001250	-.0992	6.460	.0624	.0529	-.1735	.1032
10	S97T001250 D	-.0841	5.232	.0602	.0510	-.1211	.0712
11	S97T001250 S	4.745	13.19	.1607	4.722	4.250	9.699

HNF-SD-WM-DP-254, REV. 0

Analysis Report

Averages

Wed 07-16-97 11:03:41 AM

page 5

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
12	S97T001250 X	-.4419	6.591	.0423	.0671	-.9288	-.5608
13	S97T001250_AX	398.8	414.1	9.353	405.6	394.6	776.9
14	CCV	5.084	5.128	.1185	5.019	4.886	9.871
15	CCB	-.0035	-.0000	-.0036	-.0003	.0290	-.0060
16	S97T001256 L	-.0673	.5962	.0225	.0205	-.1491	-.1270
17	S97T001256	-.0326	.5792	.0115	.0173	-.0547	-.0422
18	S97T001256 D	-.0285	.6042	.0245	.0217	-.0275	-.0325
19	S97T001256 S	4.612	5.126	.1089	4.468	4.306	9.082
20	S97T001256 X	-.0031	.0603	.0039	.0024	.0027	.0037
21	S97T001256	-.1947	.6067	.0360	.0146	.2336	-.5571
22	S97T001256_AX	98.51	101.6	2.259	100.4	97.42	192.7
23	ICSA	-.0161	.0018	-.0098	.0009	.0744	.0190
24	ICCSAB	-.0184	.0018	.0025	.0014	.0322	.0150
25	CCV 1	5.118	5.166	.1213	5.042	4.963	9.929
26	CCB_2	-.0048	-.0000	.0049	.0003	-.0121	-.0043

7-14-97

#	Sample Name	V	Y	Zn	Zr
1	ICV	4.961	.0067	4.862	4.934
2	ICB	.0014	.0003	.0009	.0004
3	LLS	.1053	.0008	.0209	.0217
4	ICSA	-.0017	.0067	.0063	-.0031
5	ICCSAB	.4671	.0063	.9384	-.0044
6	PREPSTD TJA	4.812	.0054	4.460	4.887
7	PREPBLKTJA	-.0026	-.0007	Q.0311	.0014
8	S97T001250 L	.0273	-.0015	.6023	-.0074
9	S97T001250	.0433	.0018	.5465	.0176
10	S97T001250 D	.0377	.0012	.4392	.0056
11	S97T001250 X	4.865	.0097	5.122	5.095
12	S97T001250 S	.0053	-.0060	.6342	-.0050
13	S97T001250_AX	.401.3	.4722	378.3	403.2
14	CCV	5.038	.0065	4.886	5.048
15	CCB	-.0005	-.0001	-.0003	-.0001
16	S97T001256 L	.0006	-.0011	.3726	.0066
17	S97T001256	.0057	-.0001	.3438	.0115
18	S97T001256 D	.0073	.0001	.3563	.0126
19	S97T001256 S	4.574	.0058	4.509	4.903
20	S97T001256 X	.0010	.0000	.0369	.0014
21	S97T001256 X	-.0243	-.0076	.3799	-.0060
22	S97T001256_AX	99.42	.1163	93.54	99.70
23	ICSA	-.0014	.0068	.0073	-.0034
24	ICCSAB	.4728	.0067	.9466	-.0047
25	CCV 1	5.057	.0066	4.883	5.067
26	CCB_2	-.0006	-.0001	-.0007	-.0007

7-14-97

LABCORE Completed Worklist Report for Worklist# 18896

Analyst: jds Instrument: CARB2

Book# 25N12A
26N12A

Method: LA3A2-100 Rev/Mod E-O

Worklist Comment: T-201 TIC/TOC. RCJ

Seq	Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	BLNK	0		@TICTOC1 TIC-02	SOLID	1	4.00E-1	0.400	ug/g
1	BLNK	0		@TICTOC1 TOC-02	SOLID	1	6.10E+0	6.100	ug/g
2	STD	0		@TICTOC1 TIC-02	SOLID	6.02E+02	5.47E+2	90.864 %	Recovery
2	STD	0		@TICTOC1 TOC-02	SOLID	3.00E+03	2.84E+3	94.667 %	Recovery
3	SAMPLE	S97T001246	0	@TICTOC1 TIC-02	SOLID	N/A	8.28E+02	5.000	ug/g
3	SAMPLE	S97T001246	0	@TICTOC1 TOC-02	SOLID	N/A	3.03E+02	40.000	ug/g
4	DUP	S97T001246	0	@TICTOC1 TIC-02	SOLID	8.28E+2	7.91E+2	4.571	RPD
4	DUP	S97T001246	0	@TICTOC1 TOC-02	SOLID	3.03E+2	3.04E+2	0.329	RPD
5	SPK	S97T001246	0	@TICTOC1 TIC-02	SOLID	1.00E+02	8.30E+01	89.000 %	Recovery
5	SPK	S97T001246	0	@TICTOC1 TOC-02	SOLID	1.00E+02	7.99E+01	79.900 %	Recovery
6	SAMPLE	S97T001253	0	@TICTOC1 TIC-02	SOLID	N/A	1.80E+01	5.000	ug/g
6	SAMPLE	S97T001253	0	@TICTOC1 TOC-02	SOLID	N/A	1.56E+02	40.000	ug/g
7	DUP	S97T001253	0	@TICTOC1 TIC-02	SOLID	1.80E+3	1.86E+3	3.279	RPD
7	DUP	S97T001253	0	@TICTOC1 TOC-02	SOLID	1.56E+2	1.10E+2	34.586	RPD
8	SPK	S97T001253	0	@TICTOC1 TIC-02	SOLID	1.00E+02	1.03E+02	103.000 %	Recovery
8	SPK	S97T001253	0	@TICTOC1 TOC-02	SOLID	1.00E+02	1.06E+02	106.000 %	Recovery

Final page for worklist# 18896

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Paul Schoolden 7/14/97
Reviewer Signature Date

LABCORE Data Entry Template for Worklist# 18896

Analyst: Jds Instrument: CARB2 Book# 25N12A/26N12A

Method: LA-342-100 Rev/Mod _____

Worklist Comment: T-201 TICTOC. RCJ

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 BLNK			@TICTOC1	SOLID		
2 STD			@TICTOC1	SOLID		
3 SAMPLE	S97T001246 0		@TICTOC1	SOLID	97000311	T-201
	Analytes Requested: TIC-02 , TOC-02					
4 DUP	S97T001246 0		@TICTOC1	SOLID		
5 SPK	S97T001246 0		@TICTOC1	SOLID		
6 SAMPLE	S97T001253 0		@TICTOC1	SOLID	97000311	T-201
	Analytes Requested: TIC-02 , TOC-02					
7 DUP	S97T001253 0		@TICTOC1	SOLID		
8 SPK	S97T001253 0		@TICTOC1	SOLID		

Final page for worklist # 18896

Jds 7-2-97
Analyst Signature Date

Jim Mark 7-9-97
Analyst Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: BLANK1

TIC/TOC : LA-342-100 (E-0)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.0000	0.0000
BLNK	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	10.2	36.4
18896	µg of Carbon from Baseline (C2)	9.8	30.3

Test Code
@TICTOC1
Matrix
SOLID
Batch Number
97002975
Rerun
0
Sample Prep
N/A
Sample #
Instrument Code
CARB1
Prepared By
LCM
Chemist
RWS
Analyst
JDS
Date Complete
07/09/97
Analysis Date
07/02/97
Analysis Time
05:00 PM
Sample Point
T-201

µg of Carbon = |C1-C2|

		TIC	TOC
Analysis Time	Method Detection Limit in ug/g	5	40
Sample Point	µg of Carbon	4.00E-01	6.10E+00

Data Entered By:	LCM	Date:	07/09/97
Signature of Chemist:	<i>RWS</i>	Date:	7/14/97

BLANK.WB1 REV 1.0

342100ML

WORKBOOK PAGE: STD2

TIC/TOC : LA-342-100 (E-0)

LIQUIDS

TIC/TOC : LA-342-100 (E-0)		LIQUIDS		TIC	TOC
Type	Sample Size in mL	(SS)		1.0000	0.2000
STD	Dilution Factor	(DF)		1	1
Work List	Final Coulometer Reading in µg	(C1)		557.1	598.3
18896	µg of Carbon from Baseline	(C2)		9.8	30.3
Test Code	Standard Book Number			25N12A	26N12A
@TICTOC1	Standard Value (µg/ml)			602	3000
Matrix	QC Actual in µg/mL = Standard Value (µg/mL) QC Found in µg/mL = (C1 - C2) * DF / SS QC Found in µg/mL for TIC = 5 if C1 < C2 QC Found in µg/mL for TOC = 40 if C1 < C2 % Recovery = QC Found / QC Actual * 100				
LIQUID					
Batch Number					
97002975					
Rerun					
0					
Sample Prep					
N/A					
Sample #					
Instrument Code	% Recovery = QC Found / QC Actual * 100				
CARB1					
Prepared By					
LCM					
Chemist					
RWS					
Analyst					
JDS					
Date Complete					
07/09/97					
Analysis Date					
07/02/97					
Analysis Time	Method Detection Limit in µg/mL			TIC	TOC
05:00 PM	QC Actual in µg/mL			5	40
Sample Point	QC Found in µg/mL			6.02E+02	3.00E+03
T-201	Percent Standard Recovery			5.47E+02	2.84E+03
				90.9	94.7

Data Entered By:

Signature of Chemist:

STANDARD.WB1 REV 1.0

342100ML

LCM

Date: 07/09/97

Date: 7/14/97

WORKBOOK PAGE: SAM3

TIC/TOC : LA-342-100 (E-0)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.0623	0.0623
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	61.4	49.2
18896	µg of Carbon from Baseline (C2)	9.8	30.3
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
97002975			
Rerun	µg of Carbon/g = (C1-C2) * DF / SS		
0	µg of Carbon/g for TIC = 5 if C1 < C2		
Sample Prep	µg of Carbon/g for TOC = 40 if C1 < C2		
N/A			
Sample #			
S97T001246			
Instrument Code			
CARB1			
Prepared By			
LCM			
Chemist			
RWS			
Analyst			
JDS			
Date Complete			
07/09/97			
Analysis Date			
07/02/97			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
05:00 PM		5	40
Sample Point	µg of Carbon/g	8.28E+02	3.03E+02
T-201			

Data Entered By:	LCM	Date:	07/09/97
Signature of Chemist:	<i>RWS</i>	Date:	7/14/97

SAMPLE.WB1 REV 1.0

342100ML

340

WORKBOOK PAGE: DUP4

TIC/TOC : LA-342-100 (E-0)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.3051	0.3051
DUP	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	251.1	123
18896	µg of Carbon from Baseline (C2)	9.8	30.3
Test Code	Known µg of C from Original Sample	8.28E+2	3.03E+2
@TICTOC1			
Matrix			
SOLID			
Batch Number			
97002975			
Rerun	µg of Carbon/g = (C1-C2) * DF / SS		
0	µg of Carbon/g for TIC = 5 if C1 < C2		
Sample Prep	µg of Carbon/g for TOC = 40 if C1 < C2		
N/A			
Sample #			
S97T001246			
Instrument Code			
CARB1			
Prepared By			
LCM			
Chemist			
RWS			
Analyst			
JDS			
Date Complete			
07/09/97			
Analysis Date			
07/02/97			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
05:00 PM		5	40
Sample Point	µg of Carbon/g	7.91E+02	3.04E+02
T-201			

Data Entered By:	LCM	Date:	07/09/97
Signature of Chemist:	<i>RWS</i>	Date:	7/14/97

WORKBOOK PAGE: SPIKE5

TIC/TOC : LA-342-100 (E-0)

SOLIDS

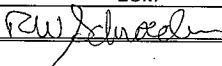
Type	Sample Vial Data	TIC	TOC
SPK	Sample Size in g (SS)	0.0623	0.0623
Work List	Final Coulometer Reading in μg (C1)	61.4	49.2
18896	Spiked Vial Data		
Test Code	Sample Size in g (SPK SS)	0.3067	0.3067
@TICTOC1	Amount of Spike Std. in mL (SPK VOL)	0.500	0.100
Matrix	Final Coulometer Reading in μg (C2)	570.2	482
SOLID	Spike Book Number	25N12A	26N12A
Batch Number	Spike Standard Value in $\mu\text{g/mL}$ (SPK CONC)	602	3000
97002975			
Rerun			
0			
Sample Prep			
N/A			
Sample #	Percent Spike Recovery = $(C2 - C1 * (\text{SPK SS}) / \text{SS}) / ((\text{SPK CONC}) * (\text{SPK VOL})) * 1$		
S97T001246			
Instrument Code	QC Actual in $\mu\text{g/mL}$ = Spike Value ($\mu\text{g/mL}$)		
CARB1	QC Found in $\mu\text{g/mL}$ = (Percent Spike Recovery)*(QC Actual) / 100		
Prepared By			
LCM			
Chemist			
RWS			
Analyst			
JDS			
Date Complete			
07/09/97			
Analysis Date			
07/02/97			
Analysis Time			
05:00 PM	QC Actual in $\mu\text{g/mL}$	6.02E+02	3.00E+03
Sample Point	QC Found in $\mu\text{g/mL}$	5.36E+02	2.40E+03
T-201	Percent Spike Recovery	89.0	79.9

Data Entered By:

LCM

Date: 07/09/97

Signature of Chemist:



Date: 7/14/97

SPIKE.WB1 REV 1.1

342100ML

WORKBOOK PAGE: SAM6

TIC/TOC : LA-342-100 (E-0)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.3295	0.3295
SAMPLE	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	603.1	81.8
18896	µg of Carbon from Baseline (C2)	9.8	30.3
Test Code			
@TICTOC1			
Matrix			
SOLID			
Batch Number			
97002975			
Rerun	µg of Carbon/g = (C1-C2) * DF / SS		
0	µg of Carbon/g for TIC = 5 if C1 < C2		
Sample Prep	µg of Carbon/g for TOC = 40 if C1 < C2		
N/A			
Sample #			
S97T001253			
Instrument Code			
CARB1			
Prepared By			
LCM			
Chemist			
RWS			
Analyst			
JDS			
Date Complete			
07/09/97			
Analysis Date			
07/02/97			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
05:00 PM		5	40
Sample Point	µg of Carbon/g	1.80E+03	1.56E+02
T-201			

Data Entered By:	LCM	Date:	07/09/97
Signature of Chemist:	<i>RWS</i>	Date:	7/14/97

SAMPLE.WB1 REV 1.0.

342100ML

WORKBOOK PAGE: DUP7

TIC/TOC : LA-342-100 (E-0)

SOLIDS

		TIC	TOC
Type	Sample Size in g (SS)	0.3117	0.3117
DUP	Dilution Factor (DF)	1	1
Work List	µg of Carbon in Sample (C1)	589.8	64.7
18896	µg of Carbon from Baseline (C2)	9.8	30.3
Test Code	Known µg of C from Original Sample	1.80E+3	1.56E+2
@TICTOC1			
Matrix			
SOLID			
Batch Number			
97002975			
Rerun	µg of Carbon/g = (C1-C2) * DF / SS		
0	µg of Carbon/g for TIC = 5 if C1 < C2		
Sample Prep	µg of Carbon/g for TOC = 40 if C1 < C2		
N/A			
Sample #			
S97T001253			
Instrument Code			
CARB1			
Prepared By			
LCM			
Chemist			
RWS			
Analyst			
JDS			
Date Complete			
07/09/97			
Analysis Date			
07/02/97			
Analysis Time	Method Detection Limit in ug/g	TIC	TOC
05:00 PM		5	40
Sample Point	µg of Carbon/g	1.86E+03	1.10E+02
T-201			

Data Entered By:	LCM	Date:	07/09/97
Signature of Chemist:	<i>RWS</i>	Date:	7/14/97

SAMPLE.WB1 REV 1.0

342100ML

WORKBOOK PAGE: SPIKE8

TIC/TOC : LA-342-100 (E-0)

SOLIDS

Type	Sample Vial Data	TIC	TOC
SPK	Sample Size in g (SS)	0.3295	0.3295
Work List	Final Coulometer Reading in µg (C1)	603.1	81.8
18896	Spiked Vial Data		
Test Code	Sample Size in g (SPK SS)	0.2364	0.2364
@TICTOC1	Amount of Spike Std. in mL (SPK VOL)	0.500	0.100
Matrix	Final Coulometer Reading in µg (C2)	742.3	375.2
SOLID	Spike Book Number	25N12A	26N12A
Batch Number	Spike Standard Value in µg/mL (SPK CONC)	602	3000
97002975			
Rerun			
0			
Sample Prep			
N/A			
Sample #	Percent Spike Recovery = $(C2 - C1 * (SPK SS) / SS) / ((SPK CONC) * (SPK VOL)) * 1$		
S97T001253			
Instrument Code	QC Actual in µg/mL = Spike Value (µg/mL)		
CARB1	QC Found in µg/mL = (Percent Spike Recovery)*(QC Actual) / 100		
Prepared By			
LCM			
Chemist			
RWS			
Analyst			
JDS			
Date Complete			
07/09/97			
Analysis Date			
07/02/97			
Analysis Time		TIC	TOC
05:00 PM	QC Actual in µg/mL	6.02E+02	3.00E+03
Sample Point	QC Found in µg/mL	6.19E+02	3.17E+03
T-201	Percent Spike Recovery	102.9	105.5

Data Entered By:

LCM

Date: 07/09/97

Signature of Chemist:

R. Schneider

Date: 7/14/97

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT

TICTOC REV 2.0.

<<< BLANK ANALYSIS >>>

Sample: BASE

Date: 07/02/97

Time: 07:53:43

Sample Size = 1 uL

Dil Factor = 1

Blank ID # = BASE

Blank Value = N/A

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	0.60	0.00
2	1.01	1.20	50.00
3	1.50	1.80	33.33
4	2.00	2.40	25.00
5	2.50	2.80	14.29
6	3.00	2.90	3.45
7	3.50	3.40	14.71
8	4.00	3.70	8.11
9	4.50	4.20	11.90
10	5.00	4.60	8.70
11	5.50	5.00	8.00
12	6.00	5.50	9.09
13	6.50	5.80	5.17
14	7.00	6.30	7.94
15	7.50	6.90	8.70
16	8.00	7.30	5.48
17	8.50	7.80	6.41
18	9.00	8.20	4.88
19	9.50	8.60	4.65
20	10.00	9.00	4.44
21	10.50	9.40	4.26
22	11.00	9.80	4.08

BLANK VALUE = 9.8 micrograms carbon

BLANK FACTOR = 9.8 / 10.99799 =

+8.9E-01 ug/min Carbon

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 346 TO 366

Sample Run By:

JD Spellman 7/14/97
 JD SPELLMAN for JD Spellman
 11111

HNF-SD-WM-DP-254, REV. 0

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT

TICTOC REV 2.0

<<< BLANK ANALYSIS >>>

Sample: BASE

Date: 07/02/97

Time: 08:37:59

Sample Size = 1 uL

Dil Factor = 1

Blank ID # = BASE

Blank Value = N/A

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	1.70	0.00
2	1.01	3.70	54.05
3	1.51	8.30	55.42
4	2.00	14.00	40.71
5	2.50	17.60	20.45
6	3.00	20.00	12.00
7	3.50	21.20	5.66
8	4.00	22.50	5.78
9	4.50	23.40	3.85
10	5.00	24.00	2.50
11	5.50	24.40	1.64
12	6.00	25.00	2.40
13	6.50	25.60	2.34
14	7.00	26.00	1.54
15	7.50	26.40	1.52
16	8.00	27.40	3.65
17	8.50	27.90	1.79
18	9.00	28.40	1.76
19	9.50	28.90	1.73
20	10.00	29.40	1.70
21	10.50	29.90	1.67
22	11.00	30.30	1.32

BLANK VALUE = 30.3 micrograms carbon

BLANK FACTOR = 30.3 / 10.99799 = +2.76E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

11111

HNF-SD-WM-DP-254, REV. 0

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT TICTOC REV 2.0

Sample: STD

Date: 07/02/97

Time: 08:51:00

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	Analysis Time ==	Coulometer ==	% Difference ==
1	0.51	0.60	0.00
2	1.01	9.40	93.62
3	1.51	109.90	91.45
4	2.00	265.80	58.65
5	2.50	406.50	34.61
6	3.00	481.30	15.54
7	3.50	521.60	7.73
8	4.00	539.40	3.30
9	4.50	546.00	1.21
10	5.00	548.50	0.46
11	5.50	549.80	0.24
12	6.00	550.80	0.18
13	6.50	551.70	0.16
14	7.00	552.30	0.11
15	7.50	553.00	0.13
16	8.00	553.70	0.13
17	8.50	554.30	0.11
18	9.00	555.10	0.14
19	9.50	555.50	0.07
20	10.00	556.00	0.09
21	10.50	556.60	0.11
22	11.00	557.10	0.09

USER INPUT BLANK VALUE

BLANK VALUE = 9.788207 micrograms carbon

BLANK FACTOR = 9.788207 / 10.99799 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(557.1 - 9.789022) (1)/(1) = +5.473E+02 g/L Carbon
 (557.1 - 9.789022) (1)/(1) (12) = +4.561E+01 Molar Carbon

Sample Run By:

JD SPELLMAN

11111

HNF-SD-WM-DP-254, REV.0
 TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
 TICTOC REV 2.0

Sample: STD

Date: 07/02/97

Time: 09:11:12

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.76 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	1.70	0.00
2	1.01	14.10	87.94
3	1.51	197.50	92.86
4	2.00	458.20	56.90
5	2.50	545.40	15.99
6	3.00	573.90	4.97
7	3.50	583.20	1.59
8	4.00	587.00	0.65
9	4.50	588.80	0.31
10	5.00	589.70	0.15
11	5.50	590.80	0.19
12	6.00	591.90	0.19
13	6.50	592.50	0.10
14	7.00	593.50	0.17
15	7.50	594.30	0.13
16	8.00	594.80	0.08
17	8.50	595.50	0.12
18	9.00	596.00	0.08
19	9.50	596.70	0.12
20	10.00	597.20	0.08
21	10.50	597.70	0.08
22	11.00	598.30	0.10

USER INPUT BLANK VALUE

BLANK VALUE = 30.35444 micrograms carbon

BLANK FACTOR = 30.35444 / 10.99799 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

(598.3 - 30.3568) (1)/(1) = +5.679E+02 g/L Carbon
 (598.3 - 30.3568) (1)/(1) (12) = +4.733E+01 Molar Carbon
 <<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>

Sample Run By:

JD SPELLMAN

11111

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK

Date: 07/02/97

Time: 09:29:04

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference
1	0.51	0.60	0.00
2	1.01	0.90	33.33
3	1.51	1.40	35.71
4	2.04	1.90	26.32
5	2.54	2.30	17.39
6	3.04	2.70	14.81
7	3.54	3.30	18.18
8	4.04	3.80	13.16
9	4.54	4.20	9.52
10	5.04	4.70	10.64
11	5.54	5.20	9.62
12	6.04	5.60	7.14
13	6.54	6.10	8.20
14	7.03	6.50	6.15
15	7.53	7.10	8.45
16	8.03	7.60	6.58
17	8.53	7.90	3.80
18	9.03	8.40	5.95
19	9.53	8.80	4.55
20	10.03	9.30	5.38
21	10.53	9.80	5.10
22	11.03	10.20	3.92

USER INPUT BLANK VALUE

BLANK VALUE = 9.788207 micrograms carbon

BLANK FACTOR = 9.788207 / 10.99799 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(10.2 - 9.818301) (1)/(1)	=	+3.82E-01	g/L Carbon
(10.2 - 9.818301) (1)/(1) (12)	=	+3.18E-02	Molar Carbon

Sample Run By:

JD SPELLMAN

11111

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLK

Date: 07/02/97

Time: 09:43:34

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.76 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

```

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==
  1          0.51          0.50          0.00
  2          1.01          1.00          50.00
  3          1.51          1.30          23.08
  4          2.00          5.90          77.97
  5          2.50         14.10          58.16
  6          3.00         20.20          30.20
  7          3.50         23.10          12.55
  8          4.00         25.00           7.60
  9          4.50         27.00           7.41
 10          5.00         28.20           4.26
 11          5.50         29.20           3.42
 12          6.00         30.10           2.99
 13          6.50         31.20           3.53
 14          7.00         31.60           1.27
 15          7.50         32.30           2.17
 16          8.00         32.90           1.82
 17          8.50         33.80           2.66
 18          9.00         34.20           1.17
 19          9.50         34.90           2.01
 20         10.00         35.40           1.41
 21         10.50         36.10           1.94
 22         11.00         36.40           0.82

```

USER INPUT BLANK VALUE

BLANK VALUE = 30.35444 micrograms carbon

BLANK FACTOR = 30.35444 / 10.99799 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

```

( 36.4 - 30.35444 ) (1)/(1) = +6.05E+00 g/L Carbon
( 36.4 - 30.35444 ) (1)/(1) (12) = +5.04E-01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

```

Sample Run By:

JD SPELLMAN

11111

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97S97T001246

Date: 07/02/97

Time: 10:58:48

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	0.60	0.00
2	1.01	1.50	60.00
3	1.50	5.70	73.68
4	2.00	16.40	65.24
5	2.50	28.90	43.25
6	3.00	39.00	25.90
7	3.50	44.70	12.75
8	4.00	48.50	7.84
9	4.50	51.20	5.27
10	5.00	52.70	2.85
11	5.50	54.10	2.59
12	6.00	55.00	1.64
13	6.50	55.90	1.61
14	7.00	56.60	1.24
15	7.50	57.40	1.39
16	8.00	58.20	1.37
17	8.50	58.60	0.68
18	9.00	59.20	1.01
19	9.50	59.70	0.84
20	10.00	60.40	1.16
21	10.50	60.90	0.82
22	11.00	61.40	0.81

USER INPUT BLANK VALUE

BLANK VALUE = 9.788207 micrograms carbon

BLANK FACTOR = 9.788207 / 10.99799 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(61.4 - 9.788968) (1)/(1)	=	+5.16E+01	g/L Carbon
(61.4 - 9.788968) (1)/(1) (12)	=	+4.30E+00	Molar Carbon

Sample Run By:

JD SPELLMAN

11111

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001246

Date: 07/02/97

Time: 11:19:33

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.76 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	0.20	0.00
2	1.01	3.90	94.87
3	1.51	13.00	70.00
4	2.00	24.20	46.28
5	2.50	30.10	19.60
6	3.00	33.60	10.42
7	3.50	36.20	7.18
8	4.00	38.00	4.74
9	4.50	39.30	3.31
10	5.00	40.60	3.20
11	5.50	42.00	3.33
12	6.00	42.60	1.41
13	6.50	43.60	2.29
14	7.00	44.50	2.02
15	7.50	45.10	1.33
16	8.00	45.70	1.31
17	8.50	46.40	1.51
18	9.00	47.40	2.11
19	9.50	47.40	0.00
20	10.00	48.10	1.46
21	10.50	48.60	1.03
22	11.00	49.20	1.22

USER INPUT BLANK VALUE

BLANK VALUE = 30.35444 micrograms carbon

BLANK FACTOR = 30.35444 / 10.99799 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

(49.2 - 30.35175) (1)/(1) = +1.88E+01 g/L Carbon
 (49.2 - 30.35175) (1)/(1) (12) = +1.57E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

11111

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001246DUP

Date: 07/02/97

Time: 11:32:43

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

```

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==
 1          0.51          0.80          0.00
 2          1.01          1.50         46.67
 3          1.50          5.00         70.00
 4          2.00         18.80         73.40
 5          2.50         49.30         61.87
 6          3.00         96.70         49.02
 7          3.50        149.90         35.49
 8          4.00        189.70         20.98
 9          4.50        218.70         13.26
10          5.00        233.10          6.18
11          5.50        239.50          2.67
12          6.00        242.10          1.07
13          6.50        244.10          0.82
14          7.00        245.20          0.45
15          7.50        246.00          0.33
16          8.00        246.90          0.36
17          8.50        247.90          0.40
18          9.00        248.30          0.16
19          9.50        249.10          0.32
20         10.00        249.90          0.32
21         10.50        250.60          0.28
22         11.00        251.10          0.20

```

USER INPUT BLANK VALUE

BLANK VALUE = 9.788207 micrograms carbon

BLANK FACTOR = 9.788207 / 10.99799 =

+8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(251.1 - 9.788098) (1)/(1) =

+2.413E+02 g/L Carbon

(251.1 - 9.788098) (1)/(1) (12) =

+2.011E+01 Molar Carbon

Sample Run By:

JD SPELLMAN

11111

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001246DUP

Date: 07/02/97

Time: 11:48:38

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.76 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	0.50	0.00
2	1.01	6.50	92.31
3	1.51	17.00	61.76
4	2.00	42.90	60.37
5	2.50	64.30	33.28
6	3.00	78.20	17.77
7	3.50	87.00	10.11
8	4.00	93.20	6.65
9	4.50	98.60	5.48
10	5.00	103.00	4.27
11	5.50	106.10	2.92
12	6.00	109.30	2.93
13	6.50	111.90	2.32
14	7.00	114.20	2.01
15	7.50	116.60	2.06
16	8.00	117.60	0.85
17	8.50	118.50	0.76
18	9.00	119.50	0.84
19	9.50	120.40	0.75
20	10.00	121.20	0.66
21	10.50	122.20	0.82
22	11.00	123.00	0.65

USER INPUT BLANK VALUE

BLANK VALUE = 30.35444 micrograms carbon

BLANK FACTOR = 30.35444 / 10.99799 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

(123 - 30.35175) (1)/(1) = +9.265E+01 g/L Carbon
 (123 - 30.35175) (1)/(1) (12) = +7.721E+00 Molar Carbon
 <<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

11111

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001246SPK

Date: 07/02/97

Time: 13:44:04

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	== Analysis Time ==	== Coulometer ==	== % Difference ==
1	0.51	1.70	0.00
2	1.01	21.70	92.17
3	1.51	109.50	80.18
4	2.00	220.70	50.39
5	2.50	320.30	31.10
6	3.00	399.60	19.84
7	3.50	462.30	13.56
8	4.00	505.80	8.60
9	4.50	534.70	5.40
10	5.00	548.60	2.53
11	5.50	554.90	1.14
12	6.00	558.40	0.63
13	6.50	560.60	0.39
14	7.00	562.10	0.27
15	7.50	563.50	0.25
16	8.00	564.80	0.23
17	8.50	565.90	0.19
18	9.00	566.80	0.16
19	9.50	567.70	0.16
20	10.00	568.90	0.21
21	10.50	569.40	0.09
22	11.00	570.20	0.14

USER INPUT BLANK VALUE

BLANK VALUE = 9.788207 micrograms carbon

BLANK FACTOR = 9.788207 / 10.99799 =

+8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(570.2 - 9.788968) (1)/(1) =

+5.604E+02 g/L Carbon

(570.2 - 9.788968) (1)/(1) (12) =

+4.670E+01 Molar Carbon

Sample Run By:

JD SPELLMAN

11111

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001246SPK

Date: 07/02/97

Time: 13:57:04

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.76 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	1.60	0.00
2	1.01	39.20	95.92
3	1.51	122.00	67.87
4	2.00	256.90	52.51
5	2.50	339.10	24.24
6	3.00	373.40	9.19
7	3.50	391.60	4.65
8	4.00	405.00	3.31
9	4.50	416.10	2.67
10	5.00	425.10	2.12
11	5.50	432.40	1.69
12	6.00	439.80	1.68
13	6.50	446.00	1.39
14	7.00	451.80	1.28
15	7.50	456.70	1.07
16	8.00	461.30	1.00
17	8.50	466.00	1.01
18	9.00	470.10	0.87
19	9.50	474.10	0.84
20	10.00	477.10	0.63
21	10.50	479.60	0.52
22	11.00	482.00	0.50

USER INPUT BLANK VALUE

BLANK VALUE = 30.35444 micrograms carbon

BLANK FACTOR = 30.35444 / 10.99799 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

(482 - 30.3568) (1)/(1) = +4.516E+02 g/L Carbon
 (482 - 30.3568) (1)/(1) (12) = +3.764E+01 Molar Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

Sample Run By:

JD SPELLMAN

11111

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001253

Date: 07/02/97

Time: 14:09:30

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==

1	0.51	1.10	0.00
2	1.01	2.50	56.00
3	1.51	15.60	83.97
4	2.00	94.40	83.47
5	2.50	243.40	61.22
6	3.00	384.20	36.65
7	3.50	484.20	20.65
8	4.00	541.20	10.53
9	4.50	569.40	4.95
10	5.00	582.70	2.28
11	5.50	588.50	0.99
12	6.00	591.80	0.56
13	6.50	594.10	0.39
14	7.04	595.70	0.27
15	7.54	596.90	0.20
16	8.04	598.10	0.20
17	8.54	599.10	0.17
18	9.04	600.00	0.15
19	9.53	600.60	0.10
20	10.03	601.50	0.15
21	10.53	602.20	0.12
22	11.03	603.10	0.15

USER INPUT BLANK VALUE

BLANK VALUE = 9.788207 micrograms carbon

BLANK FACTOR = 9.788207 / 10.99799 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(603.1 - 9.819931) (1)/(1) = +5.933E+02 g/L Carbon
 (603.1 - 9.819931) (1)/(1) (12) = +4.944E+01 Molar Carbon

Sample Run By:

JD SPELLMAN

11111

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001253

Date: 07/02/97

Time: 14:23:41

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.76 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

```

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==
 1          0.51          0.40          0.00
 2          1.01          2.70         85.19
 3          1.50          9.30         70.97
 4          2.00         20.20         53.96
 5          2.50         35.70         43.42
 6          3.00         47.70         25.16
 7          3.50         55.50         14.05
 8          4.00         60.60          8.42
 9          4.50         64.40          5.90
10          5.00         66.50          3.16
11          5.50         69.00          3.62
12          6.00         70.80          2.54
13          6.50         72.40          2.21
14          7.00         73.70          1.76
15          7.50         75.40          2.25
16          8.00         76.30          1.18
17          8.50         77.30          1.29
18          9.00         78.40          1.40
19          9.50         79.30          1.13
20         10.00         80.40          1.37
21         10.50         81.00          0.74
22         11.00         81.80          0.98

```

USER INPUT BLANK VALUE

BLANK VALUE = 30.35444 micrograms carbon

BLANK FACTOR = 30.35444 / 10.99799 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

```

( 81.8 - 30.35175 ) (1)/(1) = +5.14E+01 g/L Carbon
( 81.8 - 30.35175 ) (1)/(1) (12) = +4.29E+00 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

```

Sample Run By:

JD SPELLMAN

11111

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001253DUP

Date: 07/02/97

Time: 15:29:26

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

== Reading ==	==== Analysis Time ==	==== Coulometer ==	==== % Difference ==
1	0.51	0.60	0.00
2	1.01	1.40	57.14
3	1.51	16.40	91.46
4	2.00	96.40	82.99
5	2.50	230.90	58.25
6	3.00	374.20	38.30
7	3.50	472.70	20.84
8	4.00	531.60	11.08
9	4.50	560.50	5.16
10	5.00	572.60	2.11
11	5.50	577.40	0.83
12	6.00	580.00	0.45
13	6.50	581.90	0.33
14	7.00	583.10	0.21
15	7.50	584.30	0.21
16	8.00	585.10	0.14
17	8.50	586.00	0.15
18	9.00	586.80	0.14
19	9.50	587.50	0.12
20	10.00	588.30	0.14
21	10.50	589.00	0.12
22	11.00	589.80	0.14

USER INPUT BLANK VALUE

BLANK VALUE = 9.788207 micrograms carbon

BLANK FACTOR = 9.788207 / 10.99799 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

(589.8 - 9.788968) (1)/(1)	=	+5.800E+02	g/L Carbon
(589.8 - 9.788968) (1)/(1) (12)	=	+4.833E+01	Molar Carbon

Sample Run By:

JD SPELLMAN

11111

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001253DUP

Date: 07/02/97

Time: 15:43:17

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = 2.76 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

```

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==
 1          0.51          0.70          0.00
 2          1.01          1.20         41.67
 3          1.51          3.60         66.67
 4          2.00         12.10         70.25
 5          2.50         24.80         51.21
 6          3.00         34.30         27.70
 7          3.50         39.20         12.50
 8          4.00         43.70         10.30
 9          4.50         46.30          5.62
10          5.00         50.40          8.13
11          5.50         53.10          5.08
12          6.00         54.20          2.03
13          6.50         55.80          2.87
14          7.00         56.80          1.76
15          7.50         58.30          2.57
16          8.00         59.20          1.52
17          8.50         60.20          1.66
18          9.00         61.20          1.63
19          9.50         62.30          1.77
20         10.00         62.90          0.95
21         10.50         63.90          1.56
22         11.00         64.70          1.24

```

USER INPUT BLANK VALUE

BLANK VALUE = 30.35444 micrograms carbon

BLANK FACTOR = 30.35444 / 10.99799 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

```

( 64.7 - 30.35697 ) (1)/(1) = +3.43E+01 g/L Carbon
( 64.7 - 30.35697 ) (1)/(1) (12) = +2.86E+00 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>>

```

Sample Run By:

JD SPELLMAN

11111

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001253SPK

Date: 07/02/97

Time: 15:57:37

Sample Size = 1 uL

Dil Factor = 1

Blank ID # =

Blank Value = .89 ug/minute C

Analyst : JD SPELLMAN

Min Readings = 22

Max Readings = 22

% Difference = 10

```

== Reading ==== Analysis Time ==== Coulometer ==== % Difference ==
  1           0.51           83.30           0.00
  2           1.01          340.90          75.56
  3           1.51          560.90          39.22
  4           2.00          670.00          16.28
  5           2.50          708.10           5.38
  6           3.00          720.50           1.72
  7           3.50          724.90           0.61
  8           4.00          726.70           0.25
  9           4.50          728.00           0.18
 10           5.00          729.70           0.23
 11           5.50          730.90           0.16
 12           6.00          732.20           0.18
 13           6.50          732.90           0.10
 14           7.00          734.30           0.19
 15           7.50          735.30           0.14
 16           8.00          736.40           0.15
 17           8.50          737.40           0.14
 18           9.00          738.40           0.14
 19           9.50          739.40           0.14
 20          10.00          740.40           0.14
 21          10.50          741.50           0.15
 22          11.00          742.30           0.11

```

USER INPUT BLANK VALUE

BLANK VALUE = 9.788207 micrograms carbon

BLANK FACTOR = 9.788207 / 10.99799 = +8.9E-01 ug/min Carbon

SAMPLE RESULTS:

```

( 742.3 - 9.788098 ) (1)/(1) = +7.325E+02 g/L Carbon
( 742.3 - 9.788098 ) (1)/(1) (12) = +6.104E+01 Molar Carbon

```

Sample Run By:

JD SPELLMAN

11111

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T001253SPK Date: 07/02/97 Time: 16:10:53

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.76 ug/minute C

Analyst : JD SPELLMAN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading ==	Analysis Time	Coulometer	% Difference
1	0.51	37.20	0.00
2	1.01	118.10	68.50
3	1.50	246.40	52.07
4	2.00	316.70	22.20
5	2.50	340.60	7.02
6	3.00	348.60	2.29
7	3.50	352.80	1.19
8	4.00	356.20	0.95
9	4.50	358.40	0.61
10	5.00	360.30	0.53
11	5.50	362.00	0.47
12	6.00	363.60	0.44
13	6.50	365.10	0.41
14	7.00	366.40	0.35
15	7.50	367.70	0.35
16	8.00	369.00	0.35
17	8.50	369.60	0.16
18	9.00	370.80	0.32
19	9.50	371.80	0.27
20	10.00	372.80	0.27
21	10.50	374.00	0.32
22	11.00	375.20	0.32

USER INPUT BLANK VALUE

BLANK VALUE = 30.35444 micrograms carbon

BLANK FACTOR = 30.35444 / 10.99799 = +2.8E+00 ug/min Carbon

SAMPLE RESULTS:

(375.2 - 30.35394) (1)/(1) = +3.448E+02 g/L Carbon
 (375.2 - 30.35394) (1)/(1) (12) = +2.874E+01 Molar Carbon
 <<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!>>>

Sample Run By:

JD SPELLMAN

11111

HNH-SD-WM-DP-254, REV. 0

RADIOCHEMICAL ANALYSES

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LABCORE Completed RadChem Report for Worklist#: 18267

Analyst: dpb

Instrument: AB16

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T201, @ALPHA01, S.S. by Ludlum. Std=1.0mL skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	0	0ALPHA01 ALPHA01	LIQUID	2.00E-04	1.65E-4	82.500	% Recovery
1 STD	0	0	0ALPHA01 ALPHA01E	LIQUID	1.00	3.66E+00	3.660	% Ct. Error
2 BLNK	0	0	0ALPHA01 ALPHA01	LIQUID	1	7.69E-5	76.900E-006	uCi/mL
2 BLNK	0	0	0ALPHA01 ALPHA01E	LIQUID	1.00	1.03E+02	103.000	uCi/mL
3 BLNK/BKG	0	0	0ALPHA01 ALPHA01	LIQUID	1.00E+00	2.97E+00	2.970	BLNK/BKG
4 SAMPLE	S97T000836	0	0ALPHA01 ALPHA01	LIQUID	N/A <	3.46E-05	847.0E-007	uCi/mL
4 SAMPLE	S97T000836	0	0ALPHA01 ALPHA01E	LIQUID	N/A	5.00E+02	0.0E+000	% Ct. Error
5 DUP	S97T000836	0	0ALPHA01 ALPHA01	LIQUID	<3.46E-5	<6.26E-5		RPD
5 DUP	S97T000836	0	0ALPHA01 ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Error
6 SAMPLE	S97T000837	0	0ALPHA01 ALPHA01	LIQUID	N/A <	5.59E-05	847.0E-007	uCi/mL
6 SAMPLE	S97T000837	0	0ALPHA01 ALPHA01E	LIQUID	N/A	5.00E+02	0.0E+000	% Ct. Error
7 DUP	S97T000837	0	0ALPHA01 ALPHA01	LIQUID	<5.59E-5	<7.61E-5		RPD
7 DUP	S97T000837	0	0ALPHA01 ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Error

Final page for worklist# 18267

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____

Date 5/27/97

Units shown for QC (BLK/BKG) may not reflect the actual units.

05/23/97 07:18
A-0004-1~~HNF-SD-WM-DP-246, REV. 0~~ ^{WTE} ₇₋₁₅₋₉₇

Page: 1

LABCORE Data Entry Template for Worklist# 18267

Analyst: DPB Instrument: AB00 #16 Book# 79B56Method: LA-508-101 Rev/Mod G-0

Worklist Comment: T201, @ALPHA01, S.S. by Ludlum. Std=1.0mL skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@ALPHA01	LIQUID		
2 BLNK			@ALPHA01	LIQUID		
3 BLNK/BKG			@ALPHA01	LIQUID		
4 SAMPLE	S97T000836 0		@ALPHA01	LIQUID	97000311	T-201
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000836 0		@ALPHA01	LIQUID		
6 SAMPLE	S97T000837 0		@ALPHA01	LIQUID	97000311	T-201
	Analytes Requested: ALPHA01 , ALPHA01E					
7 DUP	S97T000837 0		@ALPHA01	LIQUID		

Final page for worklist # 18267

Daniel P. Bromley / 5/26/97 0440
Analyst Signature Date

Joe E. Hogan 5:26P
Analyst Signature Date
H/CB --- 5/27/97

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1)

LA-508-113 (B-0) STANDARD

WORKBOOK PAGE: STD1		STANDARD		REPLICATE	
AT : LA-508-101 (E-1)		LA-508-113 (B-0) STANDARD			
Type	DETECTOR NUMBER		16		16
STD	DISH SIZE (1, 2, or 5)	(MS)	2		2
Worklist	GROSS COUNTS	(GC)	3018		2889
18267	COUNT TIME in MINUTES	(CT)	30		30
Ator 1B?	BACKGROUND in cpm	(BKG)	0.23		0.23
AT	SAMPLE SIZE in mL	(SS)	1.000		1.000
Test Code	DILUTION FACTOR	(DF)	1		1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	79B56		79B56
Matrix	EFFICIENCY FACTOR	(EFF)	0.2683		0.2683
LIQUID	Lc, Rmax, or Rs (SAMPLE RATE) as APPROPRIATE		100.370		96.070
Batch Number	Standard Value in $\mu\text{Ci/mL}$		2.00E-04		
97002299	Concentration in $\mu\text{Ci/L}$	=	1.69E-01		
Run	Replicate Concentration in $\mu\text{Ci/L}$	=	1.61E-01		
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$	=	1.6490E-01		
Sample Prep	Rs (Sample Count Rate) = $(TC / CT) - BKG$				
N/A	$Rs \text{ (Sample Count Rate)} = (TC / CT) - BKG$				
Sample	$ALPHA \text{ TOTAL } \mu\text{Ci/L} = Rs * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$				
WL18267	$ALPHA \text{ TOTAL } \mu\text{Ci/mL} = ALPHA \text{ TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$				
Instrument Code	$Relative \text{ Counting Error} = [(The \text{ Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96$				
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				
Prepared By					
SEH					
Chemist					
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$		=	1.65E-04	
Analyst					
DPB					
Date Complete					
05/26/97	RELATIVE COUNTING ERROR		=	3.7%	
Analysis Date					
05/26/97					
Analysis time					
04:40 AM					
Sample Point					
T-201					

Analyst:	SEH	Date: 26-May-97
Signature of Chemist:	SLF	Date: 5/27/97

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1) LIQUIDS

	BLNK	REPLICATE
Type	DETECTOR NUMBER	16
BLNK	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	26
18267	COUNT TIME in MINUTES (CT)	30
Blank 1 B7	BACKGROUND in cpm (BKG)	0.23
AT	SAMPLE SIZE in mL (SS)	1.000
Test Code	DILUTION FACTOR (DF)	101
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2683
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.603
Batch Number		
97002299	Blank Concentration in $\mu\text{Ci/L}$	1.02E-01
ReRun	Replicate Concentration in $\mu\text{Ci/L}$	5.14E-02
0	Average Concentration in $\mu\text{Ci/L}$	7.6872E-02
Sample Prep		
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$	
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$	
WL18267	$\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$	
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$	
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
SEH		
Chemist		
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average) =	7.69E-05
Analyst		
DPB		
Date Complete		
05/26/97	RELATIVE COUNTING ERROR	103.1%
Analysis Date		
05/26/97		
Analysis Time		
04:40 AM		
Sample Point		
T-201		

HNF-SD-WM-DP-254, REV. 0

Analyst:	DPB	Date: 26-May-97
Signature of Chemist:	SLF	Date: 5/27/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	16	16
SAMPLE	DISH SIZE (1, 2, or 5)	(MS)	2
Work List	GROSS COUNTS	(GC)	4
18267	COUNT TIME In MINUTES	(CT)	30
AT	BACKGROUND In cpm	(BKG)	0.23
AT	SAMPLE SIZE In mL	(SS)	1.000
Test Code	DILUTION FACTOR	(DF)	101
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1
Mathx	EFFICIENCY FACTOR	(EFF)	0.2683
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	0.204	0.204
Batch Number			
87002299	Blank Concentration In $\mu\text{Ci/L}$	< 3.46E-02	
Rerun	Replicate Concentration In $\mu\text{Ci/L}$	< 3.46E-02	
0	Maximum Concentration In $\mu\text{Ci/L}$	< 3.4646E-02	

Sample Prep	
N/A	
Sample #	
S97T00836	
Instrument Code	
WB27808	
Prepared By	
SEH	
Chemist	
SLF	
Analyst	
DPB	
Date Complete	
05/26/97	
Analysis Date	
05/26/97	
Analysis Time	
04:40 AM	
Sample Point	
1-201	

R_s (Sample Count Rate) = $(TC / CT) - BKG$
 $\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$
 $\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$
 $\text{Relative Counting Error} = [(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
 Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 3.46E-05	DETECTION LEVEL
LESS Than Value was Determined from Lc.		8.47E-05 $\mu\text{Ci/mL}$
RELATIVE COUNTING ERROR	500.0%	

(/ system;exit)y es~

Analyst:	DPB	Date: 26-May-97
Signature of Chemist:	SLF	Date: 5/22/97
SAMPLE.WB1 Rev. 1.0	508101ML	

mte
7-15-97

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1) LIQUIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	16	16
DUP	DISH SIZE (1, 2, or 5)	(MS) 2	2
Work List	GROSS COUNTS	(GC) 11	4
18267	COUNT TIME in MINUTES	(CT) 30	30
A. W. R. T. E. T.	BACKGROUND in cpm	(BKG) 0.23	0.23
AT	SAMPLE SIZE in mL	(SS) 1.000	1.000
Test Code	DILUTION FACTOR	(DF) 101	101
@ALPHA01	DIGEST DILUTION FACTOR	(DDF) 1	1
Matrix	EFFICIENCY FACTOR	(EFF) 0.2683	0.2683
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.369	0.204
Batch Number			
97002299	Blank Concentration in $\mu\text{Ci/L}$	< 6.26E-02	
Re-run	Replicate Concentration in $\mu\text{Ci/L}$	< 3.46E-02	
0	Maximum Concentration in $\mu\text{Ci/L}$	< 6.2633E-02	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S977000836	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SEH			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 6.26E-05	DETECTION LEVEL
Analyst	LESS THAN Value was Determined from Rmax.		
DPB			8.47E-05
Date Complete	RELATIVE COUNTING ERROR	500.0%	$\mu\text{Ci/mL}$
05/26/97			
Analysis Date			
05/26/97			
Analysis Time			
04:40 AM			
Sample Point			
T-201			

(/ system;exit)yes~

Analyst:	DPB	Date: 26-May-97
Signature of Chemist:	SLF	Date: 5/22/97
SAMPLE WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM6

AT : LA-508-101 (E-1) LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	16	16
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Worklist	GROSS COUNTS (GC)	10	7
18267	COUNT TIME in MINUTES (CT)	30	30
AT or B	BACKGROUND in cpm (BKG)	0.23	0.23
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	101	101
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
LIQUID	Lc, Rmax, or Rs (SAMPLE RATE) as APPROPRIATE	0.329	0.208
Batch Number			
97002299	Blank Concentration in $\mu\text{Ci/L}$	< 5.59E-02	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	< 3.53E-02	
0	Maximum Concentration in $\mu\text{Ci/L}$	< 5.5862E-02	
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S977000837	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SEH			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 5.59E-05	DETECTION LEVEL
Analyst	LESS THAN Value was Determined from Rmax.		
DPB			
Date Complete	RELATIVE COUNTING ERROR	500.0%	8.47E-05 $\mu\text{Ci/mL}$
05/26/97			
Analysis Date			
05/26/97			
Analysis Time			
04:40 AM			
Sample Point			
T-201			

(/ system;exit)yes~

Analyst:	DPB	Date: 26-May-97
Signature of Chemist:	SLF	Date: 5/27/97
SAMPLE.WB1 Rev. 1.0	508101ML	

HNF-SD-WM-DP-254, REV. 0

WORKBOOK PAGE: DUP7

AT : LA-508-101 (E-1)

LIQUIDS

		DUP	REPLICATE
	DETECTOR NUMBER	16	16
DUP	DISH SIZE (1, 2, or 6) (MS)	2	2
	GROSS COUNTS (GC)	5	13
16267	COUNT TIME in MINUTES (CT)	30	30
	BACKGROUND in cpm (BKG)	0.23	0.23
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
	DILUTION FACTOR (DF)	101	101
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
	EFFICIENCY FACTOR (EFF)	0.2683	0.2683
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.204	0.449
97002299	Blank Concentration in $\mu\text{Ci/L}$	< 3.48E-02	
	Replicate Concentration in $\mu\text{Ci/L}$	< 7.61E-02	
0	Maximum Concentration in $\mu\text{Ci/L}$	< 7.6083E-02	
N/A	$R_s \text{ (Sample Count Rate)} = (TC / CT) - BKG$ $\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000837	$\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$ $\text{Relative Counting Error} = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
SEH			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 7.61E-05	DETECTION LEVEL
DPB	LESS Than Value was Determined from Lc.		
05/26/97	RELATIVE COUNTING ERROR	500.0%	8.47E-05 $\mu\text{Ci/mL}$
05/26/97			
04:40 AM			
T-201			

(/ system:exit)yes-

Analyst:	DPB	Date: 26-May-97
Signature of Chemist:	SLF	Date: 5/27/97
SAMPLE.WB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 18294

Analyst: scl

Instrument: AB15

Book# _____

Method: _____ Rev/Mod _____

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @ALPHA01 Deter s.s. by Ludlum. Std= 1.0mL skm

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD	0			@ALPHA01 ALPHA01	SOLID	2.00E-04	2.02E-4	101.000	% Recovery
1	STD	0			@ALPHA01 ALPHA01E	SOLID	1.00	3.29E+00	3.290	% Ct. Error
2	BLNK-PREP	0			@ALPHA01 ALPHA01	SOLID	1	<4.64E-3		uCi/g
2	BLNK-PREP	0			@ALPHA01 ALPHA01E	SOLID	1.00	3.59E+02	359.000	uCi/g
3	BLNK/BKG	0			@ALPHA01 ALPHA01	SOLID	1.00E+00	1.76E+00	1.760	BLNK/BKG
4	SAMPLE	S97T000901	0	F	@ALPHA01 ALPHA01	SOLID	N/A	6.32E-01	806.0e-005	uCi/g
4	SAMPLE	S97T000901	0	F	@ALPHA01 ALPHA01E	SOLID	N/A	6.21E+00	0.0e+000	% Ct. Error
5	DUP	S97T000901	0	F	@ALPHA01 ALPHA01	SOLID	6.32E-1	6.28E-1	0.635	RPD
5	DUP	S97T000901	0	F	@ALPHA01 ALPHA01E	SOLID	1.00	6.10E+00	6.100	% Ct. Error
6	SAMPLE	S97T000919	0	F	@ALPHA01 ALPHA01	SOLID	N/A	5.98E-01	822.0e-005	uCi/g
6	SAMPLE	S97T000919	0	F	@ALPHA01 ALPHA01E	SOLID	N/A	6.42E+00	0.0e+000	% Ct. Error
7	DUP	S97T000919	0	F	@ALPHA01 ALPHA01	SOLID	5.98E-1	5.65E-1	5.675	RPD
7	DUP	S97T000919	0	F	@ALPHA01 ALPHA01E	SOLID	1.00	6.55E+00	6.550	% Ct. Error

Final page for worklist# 18294

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____

Date 5/29/97

Units shown for QC (BLK/BKG) may not reflect the actual units.

05/27/97 08:08
A-0004-1

HNF-SD-WM-DP-246, REV. 0

7-597
164 #3

Page: 1

LABCORE Data Entry Template for Worklist# 18294

Analyst: S.L. Instrument: AB00 15 Book# 79856

Method: LA-508-101 Rev/Mod G-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @ALPHA01 Deter s.s. by Ludlum. Std= 1.0mL skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@ALPHA01	SOLID		
2 BLNK-PREP			@ALPHA01	SOLID		
3 BLNK/BKG			@ALPHA01	SOLID		
4 SAMPLE	S97T000901 0 F		@ALPHA01	SOLID	97000311	T-201
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000901 0 F		@ALPHA01	SOLID		
6 SAMPLE	S97T000919 0 F		@ALPHA01	SOLID	97000311	T-201
	Analytes Requested: ALPHA01 , ALPHA01E					
7 DUP	S97T000919 0 F		@ALPHA01	SOLID		

Final page for worklist # 18294

Sue C. Lai 5-28-97
Analyst Signature Date

[Signature] 5/29/97
Analyst Signature Date
Sylvia Z Chiam 5/28/97

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1)

LA-508-113 (B-0) STANDARD

	STANDARD	REPLICATE
WPC	DETECTOR NUMBER	15
STD	DISH SIZE (1, 2, or 5)	2
WORKLIST	GROSS COUNTS (GC)	3697
18294	COUNT TIME in MINUTES (CT)	30
ANALYST	BACKGROUND in cpm (BKG)	0.17
AT	SAMPLE SIZE in mL (SS)	1.000
DATE	DILUTION FACTOR (DF)	1
LAB CODE	STANDARD BOOK NUMBER (Std BN)	79B56
@ALPHA01	EFFICIENCY FACTOR (EFF)	0.2701
MATRIX	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	123.063
LIQUID	Standard Value in $\mu\text{Ci/mL}$	2.00E-04
BATCH NUMBER	Concentration in $\mu\text{Ci/L}$	2.05E-01
97002333	Replicate Concentration in $\mu\text{Ci/L}$	1.98E-01
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$	2.0170E-01
Sample Prep		
N/A	Rs (Sample Count Rate) = $(TC / CT) - BKG$	
Sample	ALPHA TOTAL $\mu\text{Ci/L}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$	
WL18294	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$	
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$	
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
MCB		
Chemist		
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	2.02E-04
Analyst		
SCL		
Data Complete		
05/29/97	RELATIVE COUNTING ERROR =	3.3%
Analysis Date		
05/28/97		
Analysis Time		
11:40 AM		
Sample Point		
T-201		

Analyst:	MCB	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

SOLIDS

		BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	15	15
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	2	2
World List	GROSS COUNTS (GC)	11	7
18294	COUNT TIME in MINUTES (CT)	30	30
Account ID	BACKGROUND in cpm (BKG)	0.17	0.17
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0122	2.0122
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.197	0.255
Batch Number			
97002333	Blank Concentration in $\mu\text{Ci/g}$	3.59E-03	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	< 4.64E-03	
0	Maximum Concentration in $\mu\text{Ci/g}$	< 4.6432E-03	
Sample Prep			
N/A	$R_s \text{ (Sample Count Rate)} = (TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
WL18294			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Maximum) =	< 4.64E-03	DETECTION LEVEL
Analyst	LESS THAN Value was Determined from Rs.		
SCL			
Date Complete	RELATIVE COUNTING ERROR	358.8%	8.06E-03 $\mu\text{Ci/g}$
05/29/97			
Analysis Date			
05/28/97			
Analysis Time			
11:40 AM			
Sample Point			
T-201			

Analyst:	SCL	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Worklist	GROSS COUNTS (GC)	1078	1012
18294	COUNT TIME in MINUTES (CT)	30	30
Worklist	BACKGROUND in cpm (BKG)	0.17	0.17
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0122	2.0122
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	35.763	33.563
Batch Number			
97002333	Blank Concentration in $\mu\text{Ci/g}$	6.52E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	6.12E-01	
0	Average Concentration in $\mu\text{Ci/g}$	6.3204E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000901			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	6.32E-01	DETECTION LEVEL
Analyst			
SCL			8.06E-03
Date Complete	RELATIVE COUNTING ERROR	6.2%	$\mu\text{Ci/g}$
05/29/97			
Analysis Date			
05/28/97			
Analysis Time			
11:40 AM			
Sample Point			
T-201			

Analyst:	SCL	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	16	16
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	1048	1076
18294	COUNT TIME in MINUTES (CT)	30	30
Work List?	BACKGROUND in cpm (BKG)	0.17	0.17
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0584	2.0584
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE	34.763	35.697
Batch Number			
97002333	Blank Concentration In $\mu\text{Ci/g}$	6.20E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	6.36E-01	
0	Average Concentration in $\mu\text{Ci/g}$	6.2795E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample	$\text{ALPHA TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000901			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	6.28E-01	DETECTION LEVEL
Analyst			
SCL			7.88E-03
Date Complete	RELATIVE COUNTING ERROR	6.1%	$\mu\text{Ci/g}$
05/29/97			
Analysis Date			
05/28/97			
Analysis Time			
11:40 AM			
Sample Point			
T-201			

Analyst:	SCL	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM6

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	946	993
18294	COUNT TIME in MINUTES (CT)	30	30
Analysis By	BACKGROUND in cpm (BKG)	0.17	0.17
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	1.9728	1.9728
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	31.363	32.930
Batch Number			
97002333	Blank Concentration in $\mu\text{Ci/g}$	5.83E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	6.12E-01	
0	Average Concentration in $\mu\text{Ci/g}$	5.9786E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$ALPHA\ TOTAL\ \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000919			
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
MCB			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	5.98E-01	DETECTION LEVEL
Analyst			
SCL			
Date Complete	RELATIVE COUNTING ERROR	6.4%	8.22E-03 $\mu\text{Ci/g}$
05/29/97			
Analysis Date			
05/28/97			
Analysis time			
11:40 AM			
Sample Point			
T-201			

Analyst:	SCL	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97
SAMPLE/WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP7

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
DUP	DETECTOR NUMBER	16	16
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
	GROSS COUNTS (GC)	961	910
18294	COUNT TIME in MINUTES (CT)	30	30
	BACKGROUND in cpm (BKG)	0.17	0.17
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0132	2.0132
	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	31.863	30.163
97002333	Blank Concentration in $\mu\text{Ci/g}$	5.81E-01	
	Replicate Concentration in $\mu\text{Ci/g}$	5.50E-01	
0	Average Concentration in $\mu\text{Ci/g}$	5.6521E-01	
FUSION01	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
S97T000919	ALPHA TOTAL $\mu\text{Ci/g}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
WB26872	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
MCB			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average)	=	5.65E-01
SCL			DETECTION LEVEL
05/29/97	RELATIVE COUNTING ERROR		8.05E-03 $\mu\text{Ci/g}$
05/28/97			
11:40 AM			
T-201			

Analyst:	SCL	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97
SAMPLE WB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 18295

Analyst: scl Instrument: AB14 Book# _____
Method: _____ Rev/Mod _____ HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @ALPHA01 S.S. by Ludlum. Std=1.0mL, Spk=0.1mL skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01 SOLID		2.00E-04	1.88E-4	94.000	% Recovery
1 STD	0		@ALPHA01 ALPHA01E SOLID		1.00	3.41E+00	3.410	% Ct. Error
2 BLNK-PREP	0		@ALPHA01 ALPHA01 SOLID		1	3.45E-3	34.500e-004	uCi/g
2 BLNK-PREP	0		@ALPHA01 ALPHA01E SOLID		1.00	1.38E+02	138.000	uCi/g
3 BLNK/BKG	0		@ALPHA01 ALPHA01 SOLID		1.00E+00	2.44E+00	2.440	BLNK/BKG
4 SAMPLE	S97T000920	0 F	@ALPHA01 ALPHA01 SOLID		N/A	1.15E+00	735.0e-005	uCi/g
4 SAMPLE	S97T000920	0 F	@ALPHA01 ALPHA01E SOLID		N/A	4.60E+00	0.0e+000	% Ct. Error
5 DUP	S97T000920	0 F	@ALPHA01 ALPHA01 SOLID		1.15E+0	9.66E-1	17.391	RPD
5 DUP	S97T000920	0 F	@ALPHA01 ALPHA01E SOLID		1.00	4.96E+00	4.960	% Ct. Error
6 SPK	S97T000920	0 F	@ALPHA01 ALPHA01 SOLID		2.63E-02	2.12E-02	80.608	% Recovery

Final page for worklist# 18295

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

Reviewer Signature _____

Date 5/29/97

LABCORE Data Entry Template for Worklist# 18295

Analyst: S. Li Instrument: AB00 14 Book# 79 B 56

Method: LA-508-101 Rev/Mod GT-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: T201, @ALPHA01 S.S. by Ludlum. Std=1.0mL, Spk=0.1mL skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@ALPHA01	SOLID		
2 BLNK-PREP			@ALPHA01	SOLID		
3 BLNK/BKG			@ALPHA01	SOLID		
4 SAMPLE	S97T000920 0 F		@ALPHA01	SOLID	97000311	T-201
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000920 0 F		@ALPHA01	SOLID		
6 SPK	S97T000920 0 F		@ALPHA01	SOLID		

Final page for worklist # 18295

Sue Li 5-28-97
Analyst Signature Date

Sue E. Cochran 5/29/97
Analyst Signature Date
Sue E. Hogan 5-29-97

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1) LA-508-113 (B-0) STANDARD

	STANDARD	REPLICATE
Type	DETECTOR NUMBER	14
STD	DISH SIZE (1, 2, or 5) (MS)	2
Work List	GROSS COUNTS (GC)	3456
18295	COUNT TIME in MINUTES (CT)	30
AT for Bk	BACKGROUND in cpm (BKG)	0.13
AT	SAMPLE SIZE in mL (SS)	1.000
Test Code	DILUTION FACTOR (DF)	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	79B56
Matrix	EFFICIENCY FACTOR (EFF)	0.2692
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	115.070
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.00E-04
97002334	Concentration in $\mu\text{Ci/L}$ =	1.93E-01
Rarun	Replicate Concentration in $\mu\text{Ci/L}$ =	1.84E-01
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	1.8845E-01
Sample Prep		
N/A	Rs (Sample Count Rate) = $(TC / CT) - BKG$	
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$	
WL18295	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L}$ / 1000mL/L	
Instrument Code	Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$	
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
SZC		
Chemist		
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	1.88E-04
Analyst		
SCL		
Date Complete		
05/29/97	RELATIVE COUNTING ERROR =	3.4%
Analysis Date		
05/28/97		
Analysis time		
02:30 PM		
Sample Point		
T-201		

Analyst:	SZC	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97
STANDARD.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

SOLIDS

		BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER	14	14
BLNK-PREP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	10	9
18295	COUNT TIME in MINUTES (CT)	30	30
AT not TB	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	1.9924	1.9924
Matrix	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.203	0.170
Batch Number			
97002334	Blank Concentration in $\mu\text{Ci/g}$	3.76E-03	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	3.14E-03	
0	Average Concentration in $\mu\text{Ci/g}$	3.4489E-03	
Sample Prep			
N/A	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$		
Sample	ALPHA TOTAL $\mu\text{Ci/g}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} / (\text{EFF} * \text{SS} * \text{Dg/L} * 2220000\text{dpm}/\mu\text{Ci})$		
WL18295			
Instrument Code	Relative Counting Error = $[(\text{The Square Root of TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average)	3.45E-03	DETECTION LEVEL
Analyst			
SCL			
Date Complete			7.35E-03 $\mu\text{Ci/g}$
05/29/97	RELATIVE COUNTING ERROR	138.0%	
Analysis Date			
05/28/97			
Analysis Time			
02:30 PM			
Sample Point			
T-201			

Analyst:	SCL	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1)

SOLIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	14	14
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	1824	1924
18295	COUNT TIME in MINUTES (CT)	30	30
A for TBW	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	1.9924	1.9924
Matrix	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
SOLID	Lc, Rmax, or Rs (SAMPLE RATE) as APPROPRIATE	60.670	64.003
Batch Number			
97002334	Blank Concentration in $\mu\text{Ci/g}$	1.12E+00	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	1.18E+00	
0	Average Concentration in $\mu\text{Ci/g}$	1.1518E+00	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$ALPHA \text{ TOTAL } \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000920			
Instrument Code	Relative Counting Error = $[(The \text{ Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	1.15E+00	DETECTION LEVEL
Analyst			
SCL			
Date Complete			7.35E-03 $\mu\text{Ci/g}$
05/29/97	RELATIVE COUNTING ERROR	4.6%	
Analysis Date			
05/28/97			
Analysis Time			
02:30 PM			
Sample Point			
T-201			

Analyst:	SCL	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97
SAMPLE.WB1 Rev. 1.	508101ML	

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

SOLIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	14	14
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Worklist	GROSS COUNTS (GC)	1615	1575
18295	COUNT TIME in MINUTES (CT)	30	30
Alpha/Beta	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	2.0212	2.0212
Matrix	EFFICIENCY FACTOR (EFF)	0.2692	0.2692
SOLID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	53.703	52.370
Batch Number			
97002334	Blank Concentration in $\mu\text{Ci/g}$	9.78E-01	
Rerun	Replicate Concentration in $\mu\text{Ci/g}$	9.54E-01	
0	Average Concentration in $\mu\text{Ci/g}$	9.6597E-01	
Sample Prep			
FUSION01	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	$ALPHA\ TOTAL\ \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / (EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci})$		
S97T000920			
Instrument Code	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB27807	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SZC			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/g}$ (Average) =	9.66E-01	DETECTION LEVEL 7.25E-03 $\mu\text{Ci/g}$
Analyst			
SCL			
Date Complete	RELATIVE COUNTING ERROR	5.0%	
05/29/97			
Analysis Date			
05/28/97			
Analysis Time			
02:30 PM			
Sample Point			
T-201			

Analyst:	 SCL	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97
SAMPLE.WB1 Rev. 1.	508101ML	

mtc
7-15-97

WORKBOOK PAGE: SPK6

AT : LA-508-101 (E-1) LA-508-113 (B-0) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	14	14
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	39587	40087
18295	COUNT TIME in MINUTES (CT)	30	30
AT or TB?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L (Dg/L)	1.9924	1.9924
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	131B43	131B43
97002334	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	2.6293E-02	2.6293E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.2692	0.2692
0	SAMPLE + SPIKE $\mu\text{Ci/g}$ (S+S)	2.44E+01	2.47E+01
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/g}$ in SAMPLE	1.1518E+00	
FUSION01			
Sample #			
S97T000920	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Instrument Code	$SAMPLE + SPIKE \mu\text{Ci/g} = R_s * 1000\text{mL/L} * DF / ((EFF * SS * Dg/L * 2220000\text{dpm}/\mu\text{Ci}))$		
WB27807	QC ACTUAL = SVal		
Prepared By	QC FOUND = $((S+S \mu\text{Ci/g} - SAMPLE \mu\text{Ci/g}) * ((SDF/(SVol*1000))/(DF/SS/Dg/L))))$		
SZC	PERCENT SPIKE RECOVERY = $(QC \text{ FOUND} / QC \text{ ACTUAL}) * 100$		
Chemist			
SLF			
Analyst			
SCL			
Date Complete			
05/29/97			
Analysis Date			
05/28/97	QC ACTUAL =	2.63E-02	
Analysis Time	QC FOUND =	2.12E-02	
02:30 PM	AVG. PERCENT SPIKE RECOVERY =	80.5%	
Sample Point			
T-201			

Analyst:	SZC	Date: 29-May-97
Signature of Chemist:	SLF	Date: 5/29/97
SPIKE.WB1 Rev. 1.0	508101ML	

LABCORE Completed Worklist Report for Worklist# 18364

Analyst: dpb Instrument: AB15 Book# _____

Method: _____ Rev/Mod _____ HNF-SD-WM-DP-254, REV. 0

Worklist Comment: Use .500 mL sample size. Rerun #2. SLF

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@ALPHA01 ALPHA01 LIQUID		2.00E-04	1.91E-4	95.500 % Recovery	
1 STD	0		@ALPHA01 ALPHA01B LIQUID		1.00	3.39E+00	3.390 % Ct. Error	
2 BLNK	0		@ALPHA01 ALPHA01 LIQUID		1	<8.11E-7	uCi/mL	
2 BLNK	0		@ALPHA01 ALPHA01B LIQUID		1.00	5.00E+02	500.000 uCi/mL	
3 BLNK/BKG	0		@ALPHA01 ALPHA01 LIQUID		1.00E+00	1.15E+00	1.150 BLNK/BKG	
4 SAMPLE	S97T000834	0	@ALPHA01 ALPHA01 LIQUID		N/A	7.96E-06	1.33E-006 uCi/mL	
4 SAMPLE	S97T000834	0	@ALPHA01 ALPHA01B LIQUID		N/A	2.55E+01	% Ct. Error	
5 DUP	S97T000834	0	@ALPHA01 ALPHA01 LIQUID		7.96E-6	9.41E-6	16.695 RPD	
5 DUP	S97T000834	0	@ALPHA01 ALPHA01B LIQUID		1.00	2.33E+01	23.300 % Ct. Error	
8 SAMPLE	S97T001203	0	@ALPHA01 ALPHA01 LIQUID		N/A	1.05E-05	1.33E-006 uCi/mL	
8 SAMPLE	S97T001203	0	@ALPHA01 ALPHA01B LIQUID		N/A	2.29E+01	% Ct. Error	
9 DUP	S97T001203	0	@ALPHA01 ALPHA01 LIQUID		1.05E-5	8.96E-6	15.827 RPD	
9 DUP	S97T001203	0	@ALPHA01 ALPHA01B LIQUID		1.00	2.33E+01	23.300 % Ct. Error	
10 SPK	S97T001203	0	@ALPHA01 ALPHA01 LIQUID		2.63E-02	1.64E-02	62.357 % Recovery	

Final page for worklist# 18364

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

[Signature]
Reviewer Signature _____ Date 6/15/97

The spk recovery is consistent with the 1st run (as sample #833). This indicates the low recovery is due to matrix interference. No further reruns requested.

[Signature]
6/15/97

LABCORE Data Entry Template for Worklist# 18364

Analyst: DPB Instrument: AB00 15 Book# _____

Method: LA-508-101 Rev/Mod G-0 HNF-SD-WM-DP-254, REV. 0

Worklist Comment: Use .500 mL sample size. Rerun #2. SLF

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@ALPHA01	LIQUID		
2 BLNK			@ALPHA01	LIQUID		
3 BLNK/BKG			@ALPHA01	LIQUID		
4 SAMPLE	S97T000834 0		@ALPHA01	LIQUID	97000311	T-201
Analytes Requested: ALPHA01 , ALPHA01E						
5 DUP	S97T000834 0		@ALPHA01	LIQUID		
8 SAMPLE	S97T001203 0		@ALPHA01	LIQUID	97000311	T-201
Analytes Requested: ALPHA01 , ALPHA01E						
9 DUP	S97T001203 0		@ALPHA01	LIQUID		
10 SPK	S97T001203 0		@ALPHA01	LIQUID		

Final page for worklist # 18364

Analyst Signature _____ Date _____
See attached worklist for
analyst signature.

DPB
6/4/97

See E. Begam 6-4-97
Analyst Signature _____ Date _____
C.J. O'Brien 6/4/97

Data Entry Comments:

LABCORE Data Entry Template for Worklist# 18364

Analyst: DPB Instrument: AB00 15 Book# 79B56Method: LA-508-101 Rev/Mod G-0

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: Use .500 mL sample size. Rerun #2. SLF

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@ALPHA01	LIQUID		
2 BLNK			@ALPHA01	LIQUID		
3 BLNK/BKG			@ALPHA01	LIQUID		
4 SAMPLE	S97T000834 0		@ALPHA01	LIQUID	97000311	T-201
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T000834 0		@ALPHA01	LIQUID		
6 SAMPLE	S97T000835 0		@ALPHA01	LIQUID	97000311	T-201
	Analytes Requested: ALPHA01 , ALPHA01E					
7 DUP	S97T000835 0		@ALPHA01	LIQUID		
8 SAMPLE	S97T001203 0		@ALPHA01	LIQUID	97000311	T-201
	Analytes Requested: ALPHA01 , ALPHA01E					
9 DUP	S97T001203 0		@ALPHA01	LIQUID		
10 SPK	S97T001203 0		@ALPHA01	LIQUID		

removed from
worklist. SLF
6/4/97

Final page for worklist # 18364

Daniel P. Bromley 6/4/97 0130
Analyst Signature DateSho E. Negan 6-8-97
Analyst Signature Date

Data Entry Comments:

There was insufficient sample to run a
duplicate on S97T000835.

Sample 835 removed from worklist and run on worklist 18444 as sample

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code. See updated worklist attached.

H. J. H.
6/4/97

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1) LA-508-113 (B-0) STANDARD

		STANDARD	REPLICATE
Type	DETECTOR NUMBER	15	15
STD	DISH SIZE (1, 2, or 5) (MS)	2	2
Worklist	GROSS COUNTS (GC)	3360	3504
18364	COUNT TIME in MINUTES (CT)	30	30
Alt on TB?	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE SIZE in mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	79B56	79B56
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
LIQUID	Lc, Rmax, or Rs (SAMPLE RATE) as APPROPRIATE	111.870	116.670
Batch Number	Standard Value in $\mu\text{Ci/mL}$	2.00E-04	
97002408	Concentration in $\mu\text{Ci/L}$ =	1.87E-01	
Repur	Replicate Concentration in $\mu\text{Ci/L}$ =	1.95E-01	
0	AVERAGE CONCENTRATION in $\mu\text{Ci/L}$ =	1.9057E-01	
Sample Prep			
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/ μCi)		
WL18364	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L}$ / 1000mL/L		
Instrument Code	Relative Counting Error = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
SEH			
Chemist			
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	1.91E-04	DETECTION LEVEL
Analyst			
DPB			
Date Complete			6.64E-07 $\mu\text{Ci/mL}$
06/04/97	RELATIVE COUNTING ERROR =	3.4%	
Analysis Date			
06/04/97			
Analysis Time			
01:30 AM			
Sample Point			
T-201			

Analyst:	SEH	Date: 04-Jun-97
Signature of Chemist:	SLF	Date: 6/5/97
STANDARD.WB1 Rev. 1.0 508101ML		

AT : LA-508-101 (E-1) LIQUIDS

	BLNK	REPLICATE
DETECTOR NUMBER	15	15
BLNK		
DISH SIZE (1, 2, or 5)	(MS)	2
GROSS COUNTS	(GC)	6
COUNT TIME in MINUTES	(CT)	30
BACKGROUND in cpm	(BKG)	0.13
SAMPLE SIZE in mL	(SS)	0.500
DILUTION FACTOR	(DF)	1
DIGEST DILUTION FACTOR	(DDF)	1
EFFICIENCY FACTOR	(EFF)	0.2701
Lc, Rmax, or Rs (SAMPLE RATE) as APPROPRIATE	0.243	0.154

Batch Number	
97002408	Blank Concentration in $\mu\text{Ci/L}$ < 8.11E-04
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ < 5.12E-04
0	Maximum Concentration in $\mu\text{Ci/L}$ < 8.1069E-04

Sample Prep	N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	WL18364	$\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$
Instrument Code	WB26872	$\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$
Prepared By	SEH	$\text{Relative Counting Error} = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
Chemist		Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 8.11E-07	DETECTION LEVEL
Analyst	DPB	LESS THAN Value was Determined from Rmax.	
Date Complete	06/04/97	RELATIVE COUNTING ERROR	500.0%
Analysis Date	06/04/97		1.33E-06 $\mu\text{Ci/mL}$
Analysis Time	01:30 AM		
Sample Point	T-201		

Analyst:	DPB	Date: 04-Jun-97
Signature of Chemist:	SLF	Date: 6/5/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1) LIQUIDS

	DETECTOR NUMBER	SAMPLE	REPLICATE
TYPE		16	15
SAMPLE	DISH SIZE (1, 2, or 5)	(MS)	2
Work List	GROSS COUNTS	(GC)	81
18364	COUNT TIME in MINUTES	(CT)	30
ANALYST	BACKGROUND in cpm	(BKG)	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500
Test Code	DILUTION FACTOR	(DF)	1
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE		2.570
Batch Number			2.203
97002408	Blank Concentration in $\mu\text{Ci/L}$	8.57E-03	
Re run	Replicate Concentration in $\mu\text{Ci/L}$	7.35E-03	
0	Average Concentration in $\mu\text{Ci/L}$	7.9606E-03	

Sample Prep

N/A

R_s (Sample Count Rate) = $(TC / CT) - BKG$

Sample #

S97T000834

ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$

Instrument Code

WB26872

ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L}$ / 1000mL/L

Prepared By

SEH

Relative Counting Error = $[(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$

Chemist

SEH

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLF

Analyst

DPB

ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average) = 7.96E-06

DETECTION
LEVEL

Date Complete

06/04/97

RELATIVE COUNTING ERROR 25.5%

1.33E-06
 $\mu\text{Ci/mL}$

Analysis Date

06/04/97

Analysis Time

01:30 AM

Sample Point

T-201

(/ system;exit)yes-

Analyst:	DPB	Date: 04-Jun-97
Signature of Chemist:	SLF	Date: 6/5/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1) LIQUIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	15	15
DUP	DISH SIZE (1, 2, or 5)	(MS)	2
Work List	GROSS COUNTS	(GC)	96
18364	COUNT TIME in MINUTES	(CT)	30
ALPHA B	BACKGROUND in cpm	(BKG)	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500
Test Code	DILUTION FACTOR	(DF)	1
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	3.037	2.603
Batch Number			
97002408	Blank Concentration in $\mu\text{Ci/L}$	1.01E-02	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	8.68E-03	
0	Average Concentration in $\mu\text{Ci/L}$	9.4059E-03	

Sample Prep	N/A	$R_s \text{ (Sample Count Rate)} = (TC / CT) - BKG$
Sample	S97T000834	$\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$
Instrument Code	WB26872	$\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$
Prepared By	SEH	$\text{Relative Counting Error} = [(The Square Root of TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
Chemist	SLF	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average)	=	9.41E-06	DETECTION LEVEL
Analyst	DPB			
Date Complete	06/04/97			1.33E-06 $\mu\text{Ci/mL}$
Analysis Date	06/04/97			
Analysis Time	01:30 AM			
Sample Point	T-201			

{/ system.exit}yes-

Analyst:	DPB	Date: 04-Jun-97
Signature of Chemist:	SLF	Date: 6/5/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM6

AT : LA-508-101 (E-1)

LIQUIDS

TYPE	DETECTOR NUMBER	SAMPLE	REPLICATE
SAMPLE	DISH SIZE (1, 2, or 5)	(MS)	16
Work List	GROSS COUNTS	(GC)	2
18364	COUNT TIME in MINUTES	(CT)	113
At for IB7	BACKGROUND in cpm	(BKG)	84
AT	SAMPLE SIZE in mL	(SS)	30
Test Code	DILUTION FACTOR	(DF)	0.13
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	0.500
Matrix	EFFICIENCY FACTOR	(EFF)	1
LIQUID	Lc, Rmax, or Rs (SAMPLE RATE) as APPROPRIATE		1
Batch Number			0.2701
97002408	Blank Concentration in $\mu\text{Ci/L}$		0.2701
Retun	Replicate Concentration in $\mu\text{Ci/L}$		0.2701
0	Average Concentration in $\mu\text{Ci/L}$		0.2701
Sample Prep			0.2701
N/A			0.2701
Sample			0.2701
S97T001203			0.2701
Instrument Code			0.2701
WB26872			0.2701
Prepared By			0.2701
SEH			0.2701
Chemist			0.2701
SLF			0.2701
Analyst			0.2701
DPB			0.2701
Date Complete			0.2701
06/04/97			0.2701
Analysis Date			0.2701
06/04/97			0.2701
Analysis Time			0.2701
01:30 AM			0.2701
Sample Point			0.2701
T-201			0.2701

Rs (Sample Count Rate) = $(TC / CT) - BKG$ ALPHA TOTAL $\mu\text{Ci/L}$ = $Rs * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$ ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$ Relative Counting Error = $[|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100$

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average)	=	1.05E-05	DETECTION LEVEL
Analyst				
DPB				
Date Complete				1.33E-06
06/04/97	RELATIVE COUNTING ERROR		22.9%	$\mu\text{Ci/mL}$
Analysis Date				
06/04/97				
Analysis Time				
01:30 AM				
Sample Point				
T-201				

(/ system;exit)yes~

Analyst:	DPB	Date: 04-Jun-97
Signature of Chemist:	SLF	Date: 6/5/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: DUP7

AT : LA-508-101 (E-1) LIQUIDS

		DUP	REPLICATE
DETECTOR NUMBER		15	15
DUP	DISH SIZE (1, 2, or 5)	(MS)	2
Work List	GROSS COUNTS	(GC)	87
18364	COUNT TIME in MINUTES	(CT)	30
AT Form B	BACKGROUND in cpm	(BKG)	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500
Test Code	DILUTION FACTOR	(DF)	1
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2701
LIQUID	Lc, Rmax, or Rs (SAMPLE RATE) as APPROPRIATE	2.770	2.603
Batch Number			
97002408	Blank Concentration in $\mu\text{Ci/L}$	9.24E-03	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	8.68E-03	
0	Average Concentration in $\mu\text{Ci/L}$	8.9612E-03	
Sample Prep			

N/A
Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$
Sample #
S971001203
ALPHA TOTAL $\mu\text{Ci/L}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} * \text{DDF} / (\text{EFF} * \text{SS} * 2220000\text{dpm}/\mu\text{Ci})$
ALPHA TOTAL $\mu\text{Ci/mL}$ = $\text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$
Instrument Code
WB26872
Relative Counting Error = $[(\text{The Square Root of } \text{TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})] * 1.96 * 100$
Prepared By
SEH
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average)	=	8.96E-06
Analyst			DETECTION LEVEL
DPB			
Date Complete			1.33E-06
06/04/97	RELATIVE COUNTING ERROR	23.3%	$\mu\text{Ci/mL}$
Analysis Date			
06/04/97			
Analysis Time			
01:30 AM			
Sample Point			
T-201			

/ system;exit;yes-

Analyst:	DPB	Date: 04-Jun-97
Signature of Chemist:	SLF	Date: 6/5/97
SAMPLE.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SPK8

AT : LA-508-101 (E-1) LA-508-113 (B-0) SPIKED SAMPLE

		SPIKE	REPLICATE
Type	DETECTOR NUMBER	15	15
SPK	DISH SIZE 1, 2, or 5 (MS)	2	2
Work List	TOTAL COUNTS (TC)	27606	31714
18364	COUNT TIME in MINUTES (CT)	30	30
Alpha B	BACKGROUND in cpm (BKG)	0.13	0.13
AT	SAMPLE VOLUME in mL (Spiked Vial) (SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial) (DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	SPIKE VOLUME in mL (SVol)	0.100	0.100
LIQUID	SPIKE DILUTION FACTOR (SDF)	1	1
Batch Number	SPIKE BOOK NUMBER (Spk BN)	131B43	131B43
97002408	SPIKE VALUE in $\mu\text{Ci/mL}$ (SVal)	2.6292E-02	2.6292E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR (EFF)	0.2701	0.2701
0	SAMPLE + SPIKE $\mu\text{Ci/mL}$ (S+S)	3.07E-03	3.53E-03
Sample Prep	AVERAGE or MAXIMUM $\mu\text{Ci/mL}$ in SAMPLE	1.2853E-05	
NIA			
Sample			
S97T001203			
Instrument Code	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
WB26872	SAMPLE + SPIKE $\mu\text{Ci/mL}$ = $Rs * DF * DDF / (EFF * SS * 2220000 \text{ dpm}/\mu\text{Ci})$		
Prepared By	QC ACTUAL = SVal		
SEH	QC FOUND = $((S+S \mu\text{Ci/mL} - \text{SAMPLE } \mu\text{Ci/mL}) * ((SDF/SVol)/(DF*DDF/SS)))$		
Chemist	PERCENT SPIKE RECOVERY = $(QC \text{ FOUND} / QC \text{ ACTUAL}) * 100$		
SLF			
Analyst			
DPB			
Date Complete			
06/04/97			
Analysis Date			
06/04/97	QC ACTUAL =	2.63E-02	
Analysis Time	QC FOUND =	1.64E-02	
01:30 AM	AVG. PERCENT SPIKE RECOVERY =	62.5%	
Sample Point			
T-201			

Analyst:	SEH	Date: 04-Jun-97
Signature of Chemist:	SLF	Date: 6/5/97
SPIKE.WB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 18444

Analyst: slh

Instrument: AB15

Book#
HNF-SD-WM-DP-254, REV. 0

Method: _____ Rev/Mod _____

Worklist Comment: Use .500 mL sample size. Rerun #2. SLF

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	0	@ALPHA01 ALPHA01 LIQUID		2.00E-04	1.87E-4	93.500	% Recovery
1 STD	0	0	@ALPHA01 ALPHA01E LIQUID		1.00	3.41E+00	3.410	% Ct. Error
2 BLNK	0	0	@ALPHA01 ALPHA01 LIQUID		1	<7.11E-7		uCi/mL
2 BLNK	0	0	@ALPHA01 ALPHA01E LIQUID		1.00	5.00E+02	500.000	uCi/mL
3 BLNK/BKG	0	0	@ALPHA01 ALPHA01 LIQUID		1.00E+00	1.08E+00	1.080	BLNK/BKG
4 SAMPLE	S97T001242	0	@ALPHA01 ALPHA01 LIQUID		N/A	1.21E-06	147.0e-008	uCi/mL
4 SAMPLE	S97T001242	0	@ALPHA01 ALPHA01E LIQUID		N/A	9.62E+01	0.0e+000	% Ct. Error
5 DUP	S97T001242	0	@ALPHA01 ALPHA01 LIQUID		1.21E-6	<6.56E-7		RPD
5 DUP	S97T001242	0	@ALPHA01 ALPHA01E LIQUID		1.00	5.00E+02	500.000	% Ct. Error
6 SAMPLE	S97T001259	0	@ALPHA01 ALPHA01 LIQUID		N/A	8.49E-06	147.0e-008	uCi/mL
6 SAMPLE	S97T001259	0	@ALPHA01 ALPHA01E LIQUID		N/A	2.41E+01	0.0e+000	% Ct. Error
7 DUP	S97T001259	0	@ALPHA01 ALPHA01 LIQUID		8.49E-6	8.33E-6	1.902	RPD
7 DUP	S97T001259	0	@ALPHA01 ALPHA01E LIQUID		1.00	2.51E+01	25.100	% Ct. Error

Final page for worklist# 18444

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____


Reviewer Signature

6/11/97
Date

LABCORE Data Entry Template for Worklist# 18444

Analyst: SLH Instrument: AB00 15 Book# 79856

Method: LA-508-101 Rev/Mod G-0

HNF-SD-WM-DP-254, REV. 0

Worklist Comment: Use .500 mL sample size. Rerun #2. SLF

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@ALPHA01	LIQUID		
2 BLNK			@ALPHA01	LIQUID		
3 BLNK/BKG			@ALPHA01	LIQUID		
4 SAMPLE	S97T001242 0		@ALPHA01	LIQUID	97000311	T-201
	Analytes Requested: ALPHA01 , ALPHA01E					
5 DUP	S97T001242 0		@ALPHA01	LIQUID		
6 SAMPLE	S97T001259 0		@ALPHA01	LIQUID	97000311	T-201
	Analytes Requested: ALPHA01 , ALPHA01E					
7 DUP	S97T001259 0		@ALPHA01	LIQUID		

Final page for worklist # 18444

Sandra L. Hood Boettig
Analyst Signature Date
6-10-97

C. J. Quinn 6/11/97
Analyst Signature Date
Sue E. Hogan 6-11-97

Data Entry Comments:

WORKBOOK PAGE: STD1

AT : LA-508-101 (E-1) LA-508-113 (B-0) STANDARD

		STANDARD	REPLICATE
Type	DETECTOR NUMBER	15	15
STD	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	3310	3424
18444	COUNT TIME IN MINUTES (CT)	30	30
AT or TB ?	BACKGROUND In cpm (BKG)	0.17	0.17
AT	SAMPLE SIZE In mL (SS)	1.000	1.000
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER (Std BN)	79B56	79B56
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	110.163	113.963
Batch Number	Standard Value In $\mu\text{Ci/mL}$	2.00E-04	
97002491	Concentration in $\mu\text{Ci/L}$ =	1.84E-01	
Refun	Replicate Concentration in $\mu\text{Ci/L}$ =	1.90E-01	
0	AVERAGE CONCENTRATION In $\mu\text{Ci/L}$ =	1.8689E-01	
Sample Prep			
N/A			
Sample #	Rs (Sample Count Rate) = $(TC / CT) - BKG$		
WL18444	ALPHA TOTAL $\mu\text{Ci/L}$ = $Rs * 1000\text{mL/L} * DF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
Instrument Code	ALPHA TOTAL $\mu\text{Ci/mL}$ = $ALPHA\ TOTAL\ \mu\text{Ci/L} / 1000\text{mL/L}$		
WB26872	Relative Counting Error = $[(The\ Square\ Root\ of\ TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
Prepared By	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
CJO			
Chemist			
SLF	ALPHA TOTAL CONCENTRATION in $\mu\text{Ci/mL}$ =	1.87E-04	DETECTION LEVEL
Analyst			
SLH			
Date Complete			
06/11/97	RELATIVE COUNTING ERROR =	3.4%	7.37E-07 $\mu\text{Ci/mL}$
Analysis Date			
06/11/97			
Analysis Time			
12:30 AM			
Sample Point			
T-201			

Analyst:

CJO

Date: 11-Jun-97

Signature of Chemist:

SLF

Date: 6/11/97

STANDARD.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (E-1)

LIQUIDS

		BLNK	REPLICATE
Type	DETECTOR NUMBER	15	15
BLNK	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	5	6
18444	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.17	0.17
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.176	0.213
Batch Number			
97002491	Blank Concentration in $\mu\text{Ci/L}$	<	5.86E-04
Refun	Replicate Concentration in $\mu\text{Ci/L}$	<	7.11E-04
0	Maximum Concentration in $\mu\text{Ci/L}$	<	7.1125E-04
Sample Prep			
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$		
WL18444	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
CJO			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 7.11E-07	DETECTION LEVEL
Analyst	LESS Than Value was Determined from Lc.		
SLH			
Date Complete			1.47E-06
06/11/97	RELATIVE COUNTING ERROR	500.0%	$\mu\text{Ci/mL}$
Analysis Date			
06/11/97			
Analysis Time			
12:30 AM			
Sample Point			
T-201			

Analyst:	SLH	Date: 11-Jun-97
Signature of Chemist:	SLF	Date: 6/11/97
BLANK.WB1 Rev. 1.0	508101ML	

WORKBOOK PAGE: SAM4

AT : LA-508-101 (E-1) LIQUIDS

	DETECTOR NUMBER	15	15
Type	DISH SIZE (1, 2, or 5)	(MS)	2
SAMPLE	GROSS COUNTS	(GC)	18
Work List	COUNT TIME in MINUTES	(CT)	30
18444	BACKGROUND in cpm	(BKG)	0.17
AT or TB ?	SAMPLE SIZE in mL	(SS)	0.500
AT	DILUTION FACTOR	(DF)	1
Test Code	DIGEST DILUTION FACTOR	(DDF)	1
@ALPHA01	EFFICIENCY FACTOR	(EFF)	0.2701
Matrix	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE		0.430
LIQUID			0.297
Batch Number			
97002491	Blank Concentration in $\mu\text{Ci/L}$	1.43E-03	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	9.90E-04	
0	Average Concentration in $\mu\text{Ci/L}$	1.2119E-03	
Sample Prep			
N/A	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} * \text{DDF} / (\text{EFF} * \text{SS} * 2220000\text{dpm}/\mu\text{Ci})$		
S97T001242	ALPHA TOTAL $\mu\text{Ci/mL}$ = $\text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
CJO			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average) =	1.21E-06	DETECTION LEVEL
Analyst			
SLH			1.47E-06
Date Complete	RELATIVE COUNTING ERROR	96.2%	$\mu\text{Ci/mL}$
06/11/97			
Analysis Date			
06/11/97			
Analysis Time			
12:30 AM			
Sample Point			
T-201			

Analyst:	SLH	Date: 11-Jun-97
Signature of Chemist:	SLF	Date: 6/11/97
SAMPLE.WB1 Rev. 1.0	508101ML	

7-15-97

WORKBOOK PAGE: DUP5

AT : LA-508-101 (E-1)

LIQUIDS

	DUP	REPLICATE
Type	DETECTOR NUMBER	15
DUP	DISH SIZE (1, 2, or 5)	2
Work List	GROSS COUNTS	2
18444	COUNT TIME in MINUTES	30
AT or TB ?	BACKGROUND in cpm	0.17
AT	SAMPLE SIZE in mL	0.500
Test Code	DILUTION FACTOR	1
@ALPHA01	DIGEST DILUTION FACTOR	1
Matrix	EFFICIENCY FACTOR	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	0.176
Batch Number		
97002491	Blank Concentration in $\mu\text{Ci/L}$	< 5.86E-04
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	6.56E-04
0	Maximum Concentration in $\mu\text{Ci/L}$	< 6.5597E-04
Sample Prep		
N/A	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$	
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} * \text{DDF} / (\text{EFF} * \text{SS} * 2220000\text{dpm}/\mu\text{Ci})$	
S97T001242	ALPHA TOTAL $\mu\text{Ci/mL}$ = ALPHA TOTAL $\mu\text{Ci/L} / 1000\text{mL/L}$	
Instrument Code	Relative Counting Error = $[(\text{The Square Root of TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})]^2 * 1.96 * 100$	
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.	
Prepared By		
CJO		
Chemist	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Maximum) =	< 6.56E-07
SLF		
Analyst	LESS Than Value was Determined from Lc.	
SLH		
Date Complete	RELATIVE COUNTING ERROR	500.0%
06/11/97		
Analysis Date		
06/11/97		
Analysis Time		
12:30 AM		
Sample Point		
T-201		

Analyst:	SLH	Date: 11-Jun-97
Signature of Chemist:	SLF	Date: 6/11/97

SAMPLE.WB1 Rev. 1.0

508101ML

WORKBOOK PAGE: SAM6

AT : LA-508-101 (E-1)

LIQUIDS

		SAMPLE	REPLICATE
Type	DETECTOR NUMBER	15	15
SAMPLE	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	80	83
18444	COUNT TIME in MINUTES (CT)	30	30
AT or TB ?	BACKGROUND in cpm (BKG)	0.17	0.17
AT	SAMPLE SIZE in mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	2.497	2.597

Batch Number	
97002491	Blank Concentration in $\mu\text{Ci/L}$ 8.33E-03
Rerun	Replicate Concentration in $\mu\text{Ci/L}$ 8.66E-03
0	Average Concentration in $\mu\text{Ci/L}$ 8.4942E-03

Sample Prep	
N/A	R_s (Sample Count Rate) = $(TC / CT) - BKG$
Sample #	$\text{ALPHA TOTAL } \mu\text{Ci/L} = R_s * 1000\text{mL/L} * DF * DDF / (EFF * SS * 2220000\text{dpm}/\mu\text{Ci})$
S97T001259	$\text{ALPHA TOTAL } \mu\text{Ci/mL} = \text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$
Instrument Code	Relative Counting Error = $[(\text{The Square Root of } TC + BKG * CT) / (TC - BKG * CT)] * 1.96 * 100$
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By	
CJO	
Chemist	
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average) = 8.49E-06
Analyst	
SLH	
Date Complete	
05/11/97	RELATIVE COUNTING ERROR 24.1%
Analysis Date	
06/11/97	
Analysis Time	
12:30 AM	
Sample Point	
T-201	

Analyst:	SLH	Date: 11-Jun-97
Signature of Chemist:	SLF	Date: 6/11/97
SAMPLE.VB1 Rev. 1.0	508101ML	

7-15-97

WORKBOOK PAGE: DUP7

AT : LA-508-101 (E-1)

LIQUIDS

		DUP	REPLICATE
Type	DETECTOR NUMBER	15	15
DUP	DISH SIZE (1, 2, or 5) (MS)	2	2
Work List	GROSS COUNTS (GC)	86	76
18444	COUNT TIME In MINUTES (CT)	30	30
AT or TB ?	BACKGROUND In cpm (BKG)	0.17	0.17
AT	SAMPLE SIZE In mL (SS)	0.500	0.500
Test Code	DILUTION FACTOR (DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR (DDF)	1	1
Matrix	EFFICIENCY FACTOR (EFF)	0.2701	0.2701
LIQUID	Lc, Rmax, or Rs, (SAMPLE RATE) as APPROPRIATE	2.663	2.330
Batch Number			
97002491	Blank Concentration in $\mu\text{Ci/L}$	8.88E-03	
Rerun	Replicate Concentration in $\mu\text{Ci/L}$	7.77E-03	
0	Average Concentration in $\mu\text{Ci/L}$	8.3275E-03	
Sample Prep			
N/A	Rs (Sample Count Rate) = $(\text{TC} / \text{CT}) - \text{BKG}$		
Sample #	ALPHA TOTAL $\mu\text{Ci/L}$ = $\text{Rs} * 1000\text{mL/L} * \text{DF} * \text{DDF} / (\text{EFF} * \text{SS} * 2220000\text{dpm}/\mu\text{Ci})$		
S97T001269	ALPHA TOTAL $\mu\text{Ci/mL}$ = $\text{ALPHA TOTAL } \mu\text{Ci/L} / 1000\text{mL/L}$		
Instrument Code	Relative Counting Error = $[(\text{The Square Root of TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})] * 1.96 * 100$		
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.		
Prepared By			
CJO			
Chemist			
SLF	ALPHA TOTAL in $\mu\text{Ci/mL}$ (Average) =	8.33E-06	DETECTION LEVEL
Analyst			
SLH			
Date Complete			
06/11/97	RELATIVE COUNTING ERROR	25.1%	1.47E-06 $\mu\text{Ci/mL}$
Analysis Date			
06/11/97			
Analysis Time			
12:30 AM			
Sample Point			
T-201			

Analyst:	SLH	Date: 11-Jun-97
Signature of Chemist:	SLF	Date: 6/11/97
SAMPLE.VB1 Rev. 1.0	508101ML	

LABCORE Completed RadChem Report for Worklist#: 19373

Analyst: rdm Instrument: GEA04 Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T201, @GEA-02, STD: 1.0mL, SAM SIZE: see traveler skm

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	@GEA-02 C060-02 SOLID		6.289e-03	6.21e-03	98.744	% Recovery
1 STD	0	@GEA-02 C060-02H SOLID		1	0.740	0.740	% Ct Error
1 STD	0	@GEA-02 CS13702 SOLID		5.779e-03	5.98e-03	103.478	% Recovery
1 STD	0	@GEA-02 CS13702H SOLID		1	0.950	0.950	% Ct Error
2 BLNK-PREP	0	@GEA-02 C060-02 SOLID		1	<6.21e-3		uCi/g
2 BLNK-PREP	0	@GEA-02 CS13702 SOLID		1	<1.03e-2		uCi/g
2 BLNK-PREP	0	@GEA-02 EU15402 SOLID		1	<1.70e-2		uCi/g
2 BLNK-PREP	0	@GEA-02 EU15502 SOLID		1	<1.44e-2		uCi/g
2 BLNK-PREP	0	@GEA-02 AM24102 SOLID		1	<2.71e-2		uCi/g
3 SAMPLE	S97T001753 0 F	@GEA-02 C060-02 SOLID		N/A	< 6.343e-03	634.3e-005	uCi/g
3 SAMPLE	S97T001753 0 F	@GEA-02 C060-02H SOLID		N/A	n/a	0.0e+000	% Ct Error
3 SAMPLE	S97T001753 0 F	@GEA-02 CS13702 SOLID		N/A	4.807e-02	0.0e+000	uCi/g
3 SAMPLE	S97T001753 0 F	@GEA-02 CS13702H SOLID		N/A	18.6	0.0e+000	% Ct Error
3 SAMPLE	S97T001753 0 F	@GEA-02 EU15402 SOLID		N/A	< 1.815e-02	181.5e-004	uCi/g
3 SAMPLE	S97T001753 0 F	@GEA-02 EU15402H SOLID		N/A	n/a	0.0e+000	% Ct Error
3 SAMPLE	S97T001753 0 F	@GEA-02 EU15502 SOLID		N/A	< 1.464e-02	146.4e-004	uCi/g
3 SAMPLE	S97T001753 0 F	@GEA-02 EU15502H SOLID		N/A	n/a	0.0e+000	% Ct Error
3 SAMPLE	S97T001753 0 F	@GEA-02 AM24102 SOLID		N/A	< 3.457e-02	345.7e-004	uCi/g
3 SAMPLE	S97T001753 0 F	@GEA-02 AM24102H SOLID		N/A	n/a	0.0e+000	% Ct Error
4 DUP	S97T001753 0 F	@GEA-02 C060-02 SOLID		<6.34e-3	<5.66e-3		RPD
4 DUP	S97T001753 0 F	@GEA-02 C060-02H SOLID		1	n/a		% Ct Error
4 DUP	S97T001753 0 F	@GEA-02 CS13702 SOLID		4.81e-02	4.33e-02	10.503	RPD
4 DUP	S97T001753 0 F	@GEA-02 CS13702H SOLID		1	20.1	20.100	% Ct Error
4 DUP	S97T001753 0 F	@GEA-02 EU15402 SOLID		<1.81e-2	<1.86e-2		RPD
4 DUP	S97T001753 0 F	@GEA-02 EU15402H SOLID		1	n/a		% Ct Error
4 DUP	S97T001753 0 F	@GEA-02 EU15502 SOLID		<1.46e-2	<1.39e-2		RPD
4 DUP	S97T001753 0 F	@GEA-02 EU15502H SOLID		1	n/a		% Ct Error
4 DUP	S97T001753 0 F	@GEA-02 AM24102 SOLID		<3.46e-2	<2.93e-2		RPD
4 DUP	S97T001753 0 F	@GEA-02 AM24102H SOLID		1	n/a		% Ct Error
5 SAMPLE	S97T001754 0 F	@GEA-02 C060-02 SOLID		N/A	< 4.519e-03	451.9e-005	uCi/g
5 SAMPLE	S97T001754 0 F	@GEA-02 C060-02H SOLID		N/A	n/a	0.0e+000	% Ct Error
5 SAMPLE	S97T001754 0 F	@GEA-02 CS13702 SOLID		N/A	< 8.471e-03	847.1e-005	uCi/g
5 SAMPLE	S97T001754 0 F	@GEA-02 CS13702H SOLID		N/A	n/a	0.0e+000	% Ct Error
5 SAMPLE	S97T001754 0 F	@GEA-02 EU15402 SOLID		N/A	< 1.354e-02	135.4e-004	uCi/g
5 SAMPLE	S97T001754 0 F	@GEA-02 EU15402H SOLID		N/A	n/a	0.0e+000	% Ct Error
5 SAMPLE	S97T001754 0 F	@GEA-02 EU15502 SOLID		N/A	< 1.069e-02	106.9e-004	uCi/g
5 SAMPLE	S97T001754 0 F	@GEA-02 EU15502H SOLID		N/A	n/a	0.0e+000	% Ct Error
5 SAMPLE	S97T001754 0 F	@GEA-02 AM24102 SOLID		N/A	< 2.050e-02	205.0e-004	uCi/g
5 SAMPLE	S97T001754 0 F	@GEA-02 AM24102H SOLID		N/A	n/a	0.0e+000	% Ct Error
6 DUP	S97T001754 0 F	@GEA-02 C060-02 SOLID		<4.52e-3	<4.37e-3		RPD
6 DUP	S97T001754 0 F	@GEA-02 C060-02H SOLID		1	n/a		% Ct Error

Units shown for QC (BLK/BKG) may not reflect the actual units.

HNF-SD-WM-DP-254, REV. 0

LABCORE Completed RadChem Report for Worklist#: 19373

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
6 DUP	S97T001754 O F @GEA-02	CS13702	SOLID	<8.47e-3	1.23e-02		RPD
6 DUP	S97T001754 O F @GEA-02	CS13702R	SOLID	1	48.6	48.600	% Ct Error
6 DUP	S97T001754 O F @GEA-02	HU15402	SOLID	<1.35e-2	<1.44e-2		RPD
6 DUP	S97T001754 O F @GEA-02	HU15402R	SOLID	1	n/a		% Ct Error
6 DUP	S97T001754 O F @GEA-02	HU15502	SOLID	<1.07e-2	<1.04e-2		RPD
6 DUP	S97T001754 O F @GEA-02	HU15502R	SOLID	1	n/a		% Ct Error
6 DUP	S97T001754 O F @GEA-02	AM24102	SOLID	<2.05e-2	<2.07e-2		RPD
6 DUP	S97T001754 O F @GEA-02	AM24102R	SOLID	1	n/a		% Ct Error

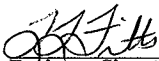
Comments Section:

Comments for sample# S97T001753 and test @GEA-02 .
DL==0 => n/a.

Final page for worklist# 19373

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

 23 Jul 97
Reviewer Signature _____ Date _____

07/17/97 13:56
A-0004-1

Page: 1

LABCORE Data Entry Template for Worklist# 19373

Analyst: ROM Instrument: GEA00 Book# 75B56Method: LA-548-121 Rev/Mod F-0

Worklist Comment: T201, @GEA-02, STD: 1.0mL, SAM SIZE: see traveler skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@GEA-02	SOLID		
2 BLNK-PREP			@GEA-02	SOLID		
3 SAMPLE	S97T001753 0 F	@GEA-02	SOLID		97000311 T-201	
Analytes Requested: AM24102 , AM24102E, CO60-02 , CO60-02E, CS13702 , CS13702E, EU15402 , EU15402E, EU15502 , EU15502E						
4 DUP	S97T001753 0 F	@GEA-02	SOLID			
5 SAMPLE	S97T001754 0 F	@GEA-02	SOLID		97000311 T-201	
Analytes Requested: AM24102 , AM24102E, CO60-02 , CO60-02E, CS13702 , CS13702E, EU15402 , EU15402E, EU15502 , EU15502E						
6 DUP	S97T001754 0 F	@GEA-02	SOLID			

Final page for worklist # 19373

ROM 7/18/97
Analyst Signature Date

Joe Hogan 7-23-97
Analyst Signature Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

 * 222-S Laboratory Counting Room 18-JUL-1997 16:42:53.60

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 19373
 Sample ID: WL19373-STD
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.00000E+00

HNF-SD-WM-DP-254, REV. 0

Removed by:

Ray L. Hatt

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA4
 File Number: dka300:[spec.GEA4]4g4487.cnf
 Geometry: 41
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:29.72 sec
 Dead Time: 0.3%

Verified by:

Ray L. Hatt 21 Jul 97

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 18-JUL-1997 14:11:48.86
 Decayed to: 18-JUL-1997 14:11:48.86
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: GL
 Background Subtract: DKA300:[SPEC.GEA4]4GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 10-DEC-1996 08:01:41.61
 Date of last efficiency calibration: 10-DEC-1996 08:21:14.07

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	59.46	330	1.03	119.22	117	7	61.6		AM-241	0.100
0	661.55*	57917	1.43	1323.24	1315	16	1.0		CS-137	5.98
0	1173.12*	44452	1.77	2346.34	2337	19	1.1		CO-60	6.19
0	1332.40	40489	1.85	2664.88	2655	19	1.0		CO-60	6.23
0	1730.31	44	1.14	3460.74	3456	9	57.9			

Total number of lines in spectrum 5
Number of unidentified lines 1
Number of lines tentatively identified by NID 4 80.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean	Wtd Mean	Decay Corr	2-Sigma	Flags
			Uncorrected	Decay Corr			
			uCi/L	uCi/L	2-Sigma Error	%Error	
CO-60	5.27Y	1.00	6.212E+00	6.212E+00	0.046E+00	0.74	
CS-137	30.00Y	1.00	5.984E+00	5.984E+00	0.057E+00	0.95	
AM-241	432.20Y	1.00	1.001E-01	1.001E-01	0.616E-01	61.60	887
Total Activity :			1.230E+01	1.230E+01			7/21/97

Grand Total Activity : 1.230E+01 1.230E+01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	3273.	477.59	1.7002E-01
NA-22	360.	1274.53	1.3514E-02
NA-24	150.	1368.55	9.9343E-03
K-40	2578.	1460.75	3.7118E-01
CR-51	3467.	320.08	1.2223E-01
MN-54	2149.	834.83	2.3320E-02
CO-56	2155.	846.76	2.3639E-02
CO-57	3589.	122.06	9.2912E-03
CO-58	1965.	810.78	2.1919E-02
FE-59	2187.	1099.25	5.1623E-02
SE-75	3932.	264.66	1.8844E-02
SR-85	2697.	514.01	1.7848E-02
Y-88	69.	1836.06	8.5163E-03
NB-94	2232.	871.09	2.4595E-02
ZRNB-95	1808.	724.18	4.3629E-02
RU-103	2802.	497.08	1.8603E-02
RURH-106	2027.	621.93	3.5658E-01
AG-108m	1766.	722.94	2.0712E-02
CD-109	3383.	88.03	2.9730E-01
AG-110M	2540.	657.76	2.1951E-02
SN-113	3419.	391.69	2.3200E-02
TE-123m	3792.	159.00	9.5267E-03
SB-124	2006.	602.73	1.7509E-02
SB-125	3501.	427.89	5.5653E-02
TE-125m	3329.	109.27	2.9177E+00
I-131	3302.	364.48	1.6830E-02
CS-134	2063.	604.70	1.7831E-02
BA-140	2324.	537.31	6.8170E-02
LA-140	109.	1596.21	9.8085E-03
CEPR-144	3686.	133.51	1.4167E-01
EU-152	165.	1408.01	4.8062E-02
EU-154	360.	1274.51	3.9250E-02
EU-155	3396.	105.31	3.9342E-02
HG-203	3765.	279.20	1.3886E-02
TL-208	3860.	277.36	1.8031E-01
BI-212	1867.	727.18	2.9213E-01
PB-212	4612.	238.63	2.5126E-02
BI-214	2425.	609.31	4.2361E-02
PB-214	3754.	351.92	1.5555E-01
RA-224	4376.	240.99	2.7365E-01
RA-226	4462.	186.10	2.6206E-01
AC-228	2980.	911.21	1.1041E-01
TH-228	3614.	84.37	9.4241E-01
TH-229	3342.	88.47	4.2842E-02
PA-233	3587.	312.17	3.1707E-02
UTH-233	4254.	245.34	1.0055E+01
PA-234M	2176.	1001.03	4.5839E-02
TH-234	3125.	63.29	5.1205E-01
U-235	4427.	185.71	1.5873E-02
NP-237	3541.	86.48	9.1200E-02
NP-239	3438.	106.12	3.7995E-02

Minimum Detectable Activity Report (continued)

Sample ID : WL19373-STD

Acquisition date : 18-JUL-1997 14:11:48

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PU-239	3711.	129.30	1.2399E+02
AM-243	3541.	74.67	2.5465E-02

 * 222-S Laboratory Counting Room 18-JUL-1997 19:18:34.71

>>>>>>> SAMPLE INFORMATION <<<<<<<<< HNF-SD-WM-DP-254, REV. 0

Worklist #: 19373
 Sample ID: WL19373-BLK
 Sample Size: 7.50000E-04 L
 Dilution Factor: 1.00000E+00

Removed by:

Sue Hogan

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA4
 File Number: dka300:[spec.GEA4]4g4488.cnf
 Geometry: 41
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:06.58 sec
 Dead Time: 0.1%

Verified by:

BBH 21Jul97

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 18-JUL-1997 16:47:52.61
 Decayed to: 18-JUL-1997 16:47:52.61
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: GL
 Background Subtract: DKA300:[SPEC.GEA4]4GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 10-DEC-1996 08:01:41.61
 Date of last efficiency calibration: 10-DEC-1996 08:21:14.07

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	661.58*	145	1.31	1323.30	1318	11	74.6		CS-137	1.996E-02
0	934.34	68	1.50	1868.78	1864	10	81.3			
0	969.08*	75	1.55	1938.27	1933	11	105.9			
0	1595.44	101	8.51	3191.00	3181	24	51.9			
0	1730.48	51	1.83	3461.09	3452	19	73.0			

Total number of lines in spectrum 5
Number of unidentified lines 2
Number of lines tentatively identified by NID 3 60.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.00	1.996E-02	1.996E-02	1.490E-02	74.64	AKJ
Total Activity :			1.996E-02	1.996E-02			7/21/97

Grand Total Activity : 1.996E-02 1.996E-02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Minimum Detectable Activity Report

Sample ID : WL19373-BLK

Acquisition date : 18-JUL-1997 16:47:52

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	450.	477.59	8.5502E-02
NA-22	140.	1274.53	1.1427E-02
NA-24	106.	1368.55	1.1217E-02
K-40	2625.	1460.75	4.9929E-01
CR-51	797.	320.08	7.8971E-02
MN-54	291.	834.83	1.1679E-02
CO-56	291.	846.76	1.1836E-02
CO-57	975.	122.06	6.5145E-03
CO-58	259.	810.78	1.0851E-02
FE-59	233.	1099.25	2.3047E-02
CO-60	146.	1332.50	1.2083E-02
SE-75	958.	264.66	1.2521E-02
SR-85	677.	514.01	1.2055E-02
Y-88	47.	1836.06	9.4623E-03
NB-94	228.	871.09	1.0748E-02
ZRNB-95	304.	724.18	2.4322E-02
RU-103	483.	497.08	1.0454E-02
RURH-106	366.	621.93	2.0560E-01
AG-108m	299.	722.94	1.1580E-02
CD-109	1010.	88.03	2.1833E-01
AG-110M	322.	657.76	1.0634E-02
SN-113	665.	391.69	1.3810E-02
TE-123m	1086.	159.00	6.8535E-03
SB-124	377.	602.73	1.0288E-02
SB-125	653.	427.89	3.2462E-02
TE-125m	955.	109.27	2.1015E+00
I-131	683.	364.48	1.0331E-02
CS-134	366.	604.70	1.0188E-02
BA-140	425.	537.31	3.9505E-02
LA-140	70.	1596.21	1.0647E-02
CEPR-144	1054.	133.51	1.0183E-01
EU-152	121.	1408.01	5.5401E-02
EU-154	139.	1274.51	3.3140E-02
EU-155	954.	105.31	2.8045E-02
HG-203	973.	279.20	9.4965E-03
TL-208	916.	277.36	1.1827E-01
BI-212	388.	727.18	1.8037E-01
PB-212	1341.	238.63	1.8198E-02
BI-214	886.	609.31	3.4399E-02
PB-214	1097.	351.92	1.1275E-01
RA-224	1133.	240.99	1.8722E-01
RA-226	1273.	186.10	1.8804E-01
AC-228	552.	911.21	6.4235E-02
TH-228	1150.	84.37	7.1395E-01
TH-229	1000.	88.47	3.1503E-02
PA-233	828.	312.17	2.0520E-02
UTH-233	1023.	245.34	6.6344E+00
PA-234M	225.	1001.03	2.0174E-02
TH-234	862.	63.29	3.6197E-01
U-235	1265.	185.71	1.1399E-02
NP-237	1084.	86.48	6.7813E-02

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
NP-239	987.	106.12	2.7366E-02
PU-239	1081.	129.30	8.9939E+01
AM-241	757.	59.54	5.2791E-02
AM-243	1142.	74.67	1.9422E-02

 * 222-S Laboratory Counting Room 18-JUL-1997 22:13:35.96

>>>>>>> SAMPLE INFORMATION <<<<<<<<<
 Worklist #: 19373
 Sample ID: S9700T1753-SAM
 Sample Size: 7.50000E-04 L
 Dilution Factor: 1.00000E+00

HNF-SD-WM-DP-254, REV. 0

Removed by:

[Signature]

>>>>>>> COUNT INFORMATION <<<<<<<<<
 Detector ID: GEA4
 File Number: dka300:[spec.GEA4]4g4489.cnf
 Geometry: 41
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:06.66 sec
 Dead Time: 0.1%

Verified by:

[Signature] 21 Jul 97

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<
 Sample Count Time: 18-JUL-1997 19:42:53.03
 Decayed to: 18-JUL-1997 19:42:53.03
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: SEH
 Background Subtract: DKA300:[SPEC.GEA4]4GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<
 Date of last energy calibration: 10-DEC-1996 08:01:41.61
 Date of last efficiency calibration: 10-DEC-1996 08:21:14.07

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	59.21	167	1.48	118.73	115	8	70.2		AM-241	6.731E-02
0	661.60*	680	1.38	1323.35	1318	12	18.6		CS-137	9.362E-02
0	727.07*	84	1.69	1454.26	1449	10	103.1			
0	1630.42	26	0.95	3260.96	3257	9	79.6			
0	1729.58	46	0.75	3459.28	3454	10	47.0			

Total number of lines in spectrum 5
Number of unidentified lines 2
Number of lines tentatively identified by NID 3 60.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean		Decay Corr	2-Sigma Error	2-Sigma	Flags
			Uncorrected uCi/L	Decay Corr uCi/L				
CS-137	30.00Y	1.00	9.362E-02	9.362E-02	1.741E-02	18.60		
AM-241	432.20Y	1.00	6.731E-02	6.731E-02	4.724E-02	70.19		
Total Activity :			1.609E-01	1.609E-01				

ATJ
7/21/97

Grand Total Activity : 1.609E-01 1.609E-01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	553.	477.59	9.4485E-02
NA-22	160.	1274.53	1.2174E-02
NA-24	96.	1368.55	1.0710E-02
K-40	2564.	1460.75	4.9353E-01
CR-51	832.	320.08	8.0663E-02
MN-54	287.	834.83	1.1603E-02
CO-56	268.	846.76	1.1366E-02
CO-57	992.	122.06	6.5702E-03
CO-58	234.	810.78	1.0333E-02
FE-59	225.	1099.25	2.2645E-02
CO-60	153.	1332.50	1.2349E-02
SE-75	970.	264.66	1.2594E-02
SR-85	689.	514.01	1.2162E-02
Y-88	51.	1836.06	9.8555E-03
NB-94	232.	871.09	1.0840E-02
ZRNB-95	331.	724.18	2.5324E-02
RU-103	483.	497.08	1.0460E-02
RURH-106	328.	621.93	1.9496E-01
AG-108m	312.	722.94	1.1831E-02
CD-109	1025.	88.03	2.2000E-01
AG-110M	358.	657.76	1.1202E-02
SN-113	623.	391.69	1.3376E-02
TE-123m	1097.	159.00	6.8864E-03
SB-124	380.	602.73	1.0328E-02
SB-125	585.	427.89	3.0756E-02
TE-125m	969.	109.27	2.1168E+00
I-131	642.	364.48	1.0017E-02
CS-134	378.	604.70	1.0343E-02
BA-140	412.	537.31	3.8911E-02
LA-140	60.	1596.21	9.9105E-03
CEPR-144	1054.	133.51	1.0186E-01
EU-152	128.	1408.01	5.6837E-02
EU-154	159.	1274.51	3.5344E-02
EU-155	986.	105.31	2.8507E-02
HG-203	937.	279.20	9.3242E-03
TL-208	1003.	277.36	1.2361E-01
BI-212	402.	727.18	1.8348E-01
PB-212	1385.	238.63	1.8487E-02
BI-214	865.	609.31	3.4002E-02
PB-214	1141.	351.92	1.1496E-01
RA-224	1233.	240.99	1.9515E-01
RA-226	1290.	186.10	1.8924E-01
AC-228	499.	911.21	6.1171E-02
TH-228	1194.	84.37	7.2747E-01
TH-229	1023.	88.47	3.1858E-02
PA-233	908.	312.17	2.1472E-02
UTH-233	1084.	245.34	6.8250E+00
PA-234M	255.	1001.03	2.1434E-02
TH-234	936.	63.29	3.7687E-01
U-235	1287.	185.71	1.1495E-02
NP-237	1136.	86.48	6.9390E-02

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
NP-239	1011.	106.12	2.7701E-02
PU-239	1043.	129.30	8.8360E+01
AM-243	1209.	74.67	1.9977E-02

 * 222-S Laboratory Counting Room 19-JUL-1997 00:50:16.58

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 19373
 Sample ID: S97T001753-DUP
 Sample Size: 7.50000E-04 L
 Dilution Factor: 1.00000E+00

Removed by:

M. C. E.

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA4
 File Number: dka300:[spec.GEA4]4g4491.cnf
 Geometry: 41
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:06.64 sec
 Dead Time: 0.1%

Verified by:

ABH 21 Jun 97

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 18-JUL-1997 22:19:32.55
 Decayed to: 18-JUL-1997 22:19:32.55
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: SEH
 Background Subtract: DKA300:[SPEC.GEA4]4GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 10-DEC-1996 08:01:41.61
 Date of last efficiency calibration: 10-DEC-1996 08:21:14.07

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	185.47*	160	1.49	371.20	368	7	78.3		RA-226	0.178
0	661.51*	626	1.40	1323.17	1318	13	20.1		CS-137	8.630E-02
0	969.31*	95	1.64	1938.73	1933	14	91.7			
0	1592.66	58	1.58	3185.42	3181	10	48.5			
0	1729.94	66	2.02	3460.02	3452	19	56.1			

Total number of lines in spectrum 5
Number of unidentified lines 2
Number of lines tentatively identified by NID 3 60.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.00	8.630E-02	8.630E-02	1.737E-02	20.12	
RA-226	1600.00Y	1.00	1.784E-01	1.784E-01	1.398E-01	78.35	7/21/97
Total Activity :			2.647E-01	2.647E-01			

Grand Total Activity : 2.647E-01 2.647E-01

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	554.	477.59	9.4623E-02
NA-22	175.	1274.53	1.2727E-02
NA-24	109.	1368.55	1.1370E-02
K-40	2525.	1460.75	4.8982E-01
CR-51	832.	320.08	8.0631E-02
MN-54	289.	834.83	1.1645E-02
CO-56	225.	846.76	1.0445E-02
CO-57	1057.	122.06	6.7767E-03
CO-58	234.	810.78	1.0337E-02
FE-59	202.	1099.25	2.1481E-02
CO-60	126.	1332.50	1.1269E-02
SE-75	983.	264.66	1.2678E-02
SR-85	707.	514.01	1.2310E-02
Y-88	49.	1836.06	9.6387E-03
NB-94	225.	871.09	1.0691E-02
ZRNB-95	316.	724.18	2.4778E-02
RU-103	464.	497.08	1.0252E-02
RURH-106	341.	621.93	1.9859E-01
AG-108m	299.	722.94	1.1577E-02
CD-109	1026.	88.03	2.2004E-01
AG-110M	357.	657.76	1.1176E-02
SN-113	633.	391.69	1.3488E-02
TE-123m	1058.	159.00	6.7648E-03
SB-124	375.	602.73	1.0268E-02
SB-125	584.	427.89	3.0728E-02
TE-125m	1013.	109.27	2.1636E+00
I-131	698.	364.48	1.0438E-02
CS-134	373.	604.70	1.0277E-02
BA-140	412.	537.31	3.8887E-02
LA-140	56.	1596.21	9.6095E-03
CEPR-144	1042.	133.51	1.0130E-01
EU-152	117.	1408.01	5.4550E-02
EU-154	175.	1274.51	3.6988E-02
EU-155	929.	105.31	2.7686E-02
HG-203	957.	279.20	9.4225E-03
TL-208	931.	277.36	1.1920E-01
BI-212	378.	727.18	1.7821E-01
PB-212	1388.	238.63	1.8508E-02
BI-214	877.	609.31	3.4231E-02
PB-214	1093.	351.92	1.1255E-01
RA-224	1195.	240.99	1.9219E-01
AC-228	552.	911.21	6.4224E-02
TH-228	1195.	84.37	7.2772E-01
TH-229	1007.	88.47	3.1619E-02
PA-233	882.	312.17	2.1168E-02
UTH-233	992.	245.34	6.5342E+00
PA-234M	230.	1001.03	2.0394E-02
TH-234	911.	63.29	3.7196E-01
U-235	1245.	185.71	1.1309E-02
NP-237	1097.	86.48	6.8192E-02
NP-239	957.	106.12	2.6957E-02

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
PU-239	1031.	129.30	8.7868E+01
AM-241	931.	59.54	5.8422E-02
AM-243	1197.	74.67	1.9873E-02

 * 222-S Laboratory Counting Room 19-JUL-1997 03:34:31.91

>>>>>>> SAMPLE INFORMATION <<<<<<<<<<
 Worklist #: 19373
 Sample ID: S97T1754-SAM
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.00000E+00

HNF-SD-WM-DP-254, REV. 0

Removed by:

[Signature]

>>>>>>> COUNT INFORMATION <<<<<<<<<<
 Detector ID: GEA4
 File Number: dka300:[spec.GEA4]4g4492.cnf
 Geometry: 41
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:06.57 sec
 Dead Time: 0.1%

Verified by:

[Signature] 21 Jul 97

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<<
 Sample Count Time: 19-JUL-1997 01:03:50.87
 Decayed to: 19-JUL-1997 01:03:50.87
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: MB
 Background Subtract: DKA300:[SPEC.GEA4]4GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<<
 Date of last energy calibration: 10-DEC-1996 08:01:41.61
 Date of last efficiency calibration: 10-DEC-1996 08:21:14.07

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	62.90	131	1.47	126.09	123	7	76.8			
0	661.68*	163	1.46	1323.51	1317	12	68.5			
0	1378.21*	59	1.50	2756.51	2750	15	99.6		CS-137	1.679E-02
0	1509.24	39	1.61	3018.58	3013	10	78.7			
0	1729.10	54	1.87	3458.33	3452	13	47.6			

Summary of Nuclide Activity
Sample ID : S97T1754-SAM

Page : 2

Acquisition date : 19-JUL-1997 01:03:50

Total number of lines in spectrum 5
Number of unidentified lines 3
Number of lines tentatively identified by NID 2 40.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.00	1.679E-02	1.679E-02	1.149E-02	68.46	8/3
Total Activity :			1.679E-02	1.679E-02			7/21/97

Grand Total Activity : 1.679E-02 1.679E-02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	503.	477.59	6.7675E-02
NA-22	164.	1274.53	9.2393E-03
NA-24	112.	1368.55	8.6365E-03
K-40	2456.	1460.75	3.6241E-01
CR-51	838.	320.08	6.0711E-02
MN-54	312.	834.83	9.0657E-03
CO-56	292.	846.76	8.8892E-03
CO-57	1035.	122.06	5.0307E-03
CO-58	258.	810.78	8.1177E-03
FE-59	221.	1099.25	1.6844E-02
CO-60	142.	1332.50	8.9566E-03
SE-75	932.	264.66	9.2632E-03
SR-85	643.	514.01	8.8152E-03
Y-88	51.	1836.06	7.3827E-03
NB-94	248.	871.09	8.4009E-03
ZRNB-95	348.	724.18	1.9474E-02
RU-103	463.	497.08	7.6831E-03
RURH-106	350.	621.93	1.5085E-01
AG-108m	338.	722.94	9.2142E-03
CD-109	969.	88.03	1.6051E-01
AG-110M	347.	657.76	8.2672E-03
SN-113	627.	391.69	1.0068E-02
TE-123m	1080.	159.00	5.1255E-03
SB-124	377.	602.73	7.7211E-03
SB-125	577.	427.89	2.2916E-02
TE-125m	939.	109.27	1.5634E+00
I-131	668.	364.48	7.6603E-03
CS-134	380.	604.70	7.7812E-03
BA-140	351.	537.31	2.6982E-02
LA-140	80.	1596.21	8.5120E-03
CEPR-144	1029.	133.51	7.5475E-02
EU-152	110.	1408.01	3.9642E-02
EU-154	164.	1274.51	2.6845E-02
EU-155	968.	105.31	2.1187E-02
HG-203	932.	279.20	6.9738E-03
TL-208	906.	277.36	8.8235E-02
BI-212	390.	727.18	1.3566E-01
PB-212	1397.	238.63	1.3924E-02
BI-214	900.	609.31	2.6004E-02
PB-214	1115.	351.92	8.5239E-02
RA-224	1204.	240.99	1.4465E-01
RA-226	1255.	186.10	1.4003E-01
AC-228	553.	911.21	4.8208E-02
TH-228	1099.	84.37	5.2383E-01
TH-229	938.	88.47	2.2897E-02
PA-233	851.	312.17	1.5601E-02
UTH-233	1034.	245.34	5.0009E+00
PA-234M	247.	1001.03	1.5803E-02
TH-234	858.	63.29	2.7080E-01
U-235	1256.	185.71	8.5195E-03
NP-237	1085.	86.48	5.0866E-02

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
NP-239	981.	106.12	2.0467E-02
PU-239	1034.	129.30	6.6004E+01
AM-241	798.	59.54	4.0625E-02
AM-243	1182.	74.67	1.4817E-02

 * 222-S Laboratory Counting Room 19-JUL-1997 09:06:34.73

>>>>>>> SAMPLE INFORMATION <<<<<<<<<

Worklist #: 19373
 Sample ID: S97T001754-DUP
 Sample Size: 1.00000E-03 L
 Dilution Factor: 1.00000E+00

Removed by:

A. L. Platt

>>>>>>> COUNT INFORMATION <<<<<<<<<

Detector ID: GEA4
 File Number: dka300:[spec.GEA4]4g4495.cnf
 Geometry: 41
 Count Time: 0 02:30:00.00 sec
 Real Time: 0 02:30:06.63 sec
 Dead Time: 0.1%

Verified by:

SLH 21 Jul 97

>>>>>>> ANALYSIS INFORMATION <<<<<<<<<

Sample Count Time: 19-JUL-1997 06:35:51.83
 Decayed to: 19-JUL-1997 06:35:51.83
 Standard Deviations: 2
 Analysis Library: ENVGEA
 Analyst: GL
 Background Subtract: DKA300:[SPEC.GEA4]4GBACK

>>>>>>> CALIBRATION INFORMATION <<<<<<<<<

Date of last energy calibration: 10-DEC-1996 08:01:41.61
 Date of last efficiency calibration: 10-DEC-1996 08:21:14.07

Post-NID Peak Search Report

It	Energy	Area	FWHM	Channel	Left	Pw	%Err	Fit	Nuclides	Activity uCi/L
0	558.31	78	1.35	1116.78	1114	6	67.4			
0	661.67*	236	1.54	1323.48	1318	11	48.6			
0	964.74	80	1.87	1929.58	1925	9	64.9			
0	1764.49*	51	2.24	3529.12	3518	20	104.4			
									CS-137	2.437E-02

Total number of lines in spectrum 4
Number of unidentified lines 1
Number of lines tentatively identified by NID 3 75.00%

Nuclide Type :

Nuclide	Hlife	Decay	Wtd Mean Uncorrected uCi/L	Wtd Mean Decay Corr uCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.00Y	1.00	2.437E-02	2.437E-02	1.186E-02	48.65	
Total Activity :			2.437E-02	2.437E-02			

Grand Total Activity : 2.437E-02 2.437E-02

Flags: "K" = Keyline not found
"E" = Manually edited

"M" = Manually accepted
"A" = Nuclide specific abn. limit

Nuclide	Bckgnd Sum	Energy (keV)	MDA (uCi/L)
BE-7	487.	477.59	6.6616E-02
NA-22	187.	1274.53	9.8401E-03
NA-24	118.	1368.55	8.8516E-03
K-40	2576.	1460.75	3.7100E-01
CR-51	819.	320.08	6.0035E-02
MN-54	291.	834.83	8.7645E-03
CO-56	231.	846.76	7.9389E-03
CO-57	1037.	122.06	5.0357E-03
CO-58	226.	810.78	7.6251E-03
FE-59	203.	1099.25	1.6163E-02
CO-60	133.	1332.50	8.6609E-03
SE-75	948.	264.66	9.3403E-03
SR-85	702.	514.01	9.2010E-03
Y-88	61.	1836.06	8.0403E-03
NB-94	253.	871.09	8.4841E-03
ZRNB-95	329.	724.18	1.8938E-02
RU-103	489.	497.08	7.8917E-03
RURH-106	354.	621.93	1.5159E-01
AG-108m	326.	722.94	9.0557E-03
CD-109	964.	88.03	1.6006E-01
AG-110M	338.	657.76	8.1644E-03
SN-113	616.	391.69	9.9762E-03
TE-123m	1089.	159.00	5.1472E-03
SB-124	418.	602.73	8.1168E-03
SB-125	586.	427.89	2.3096E-02
TE-125m	1003.	109.27	1.6149E+00
I-131	700.	364.48	7.8385E-03
CS-134	418.	604.70	8.1547E-03
BA-140	457.	537.31	3.0684E-02
LA-140	63.	1596.21	7.5861E-03
CEPR-144	1083.	133.51	7.7423E-02
EU-152	134.	1408.01	4.3624E-02
EU-154	187.	1274.51	2.8614E-02
EU-155	919.	105.31	2.0646E-02
HG-203	927.	279.20	6.9552E-03
TH-208	928.	277.36	8.9252E-02
BI-212	383.	727.18	1.3447E-01
PB-212	1368.	238.63	1.3781E-02
BI-214	918.	609.31	2.6253E-02
PB-214	1155.	351.92	8.6734E-02
RA-224	1157.	240.99	1.4183E-01
RA-226	1301.	186.10	1.4254E-01
AC-228	546.	911.21	4.7903E-02
TH-228	1172.	84.37	5.4045E-01
TH-229	956.	88.47	2.3108E-02
PA-233	856.	312.17	1.5641E-02
UTH-233	1019.	245.34	4.9656E+00
PA-234M	241.	1001.03	1.5627E-02
TH-234	898.	63.29	2.7698E-01
U-235	1300.	185.71	8.6650E-03
NP-237	1090.	86.48	5.1002E-02

Nuclide	Bckgnd Sam	Energy (keV)	MDA (uCi/L)
NP-239	924.	106.12	1.9879E-02
PU-239	1096.	129.30	6.7906E+01
AM-241	818.	59.54	4.1116E-02
AM-243	1177.	74.67	1.4782E-02

LABCORE Completed RadChem Report for Worklist#: 19370

Analyst: scl Instrument: AB12 Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: T201, @SR90-01 S.S. by Ludlum. Std:1.0ml, Spk:1.0mL skm

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@SR90-01 SR90-01 SOLID		2.19E-03	2.19E-3	100.000	% Recovery
1 STD	0		@SR90-01 SR90-01C SOLID		100	8.88E+01	88.800	% Recovery
1 STD	0		@SR90-01 SR90-01E SOLID		1.00	1.38E+00	1.380	% Ct. Err
2 BLNK-PREP	0		@SR90-01 SR90-01 SOLID		1	<9.95E-4		uCi/g
2 BLNK-PREP	0		@SR90-01 SR90-01C SOLID		100	8.89E+01	88.900	% Recovery
2 BLNK-PREP	0		@SR90-01 SR90-01E SOLID		1.00	3.30E+02	330.000	uCi/g
3 BLNK/BKG	0		@SR90-01 SR90-01 SOLID		1	1.15E+00	1.150	BLNK/BKG
4 SAMPLE	S97T001753	0 F	@SR90-01 SR90-01 SOLID		N/A	1.37E-01	135.0e+005	uCi/g
4 SAMPLE	S97T001753	0 F	@SR90-01 SR90-01C SOLID		N/A	8.94E+01	0.0e+000	% Recovery
4 SAMPLE	S97T001753	0 F	@SR90-01 SR90-01E SOLID		N/A	4.14E+00	0.0e+000	% Ct. Error
5 DUP	S97T001753	0 F	@SR90-01 SR90-01 SOLID		1.37E-1	1.45E-1	5.674	RPD
5 DUP	S97T001753	0 F	@SR90-01 SR90-01C SOLID		100	9.02E+01	90.200	% Recovery
5 DUP	S97T001753	0 F	@SR90-01 SR90-01E SOLID		1.00	3.93E+00	3.930	% Ct. Err
6 SPK	S97T001753	0 F	@SR90-01 SR90-01 SOLID		2.39E-03	2.42E-03	101.255	% Recovery
7 SAMPLE	S97T001754	0 F	@SR90-01 SR90-01 SOLID		N/A	4.63E-02	129.0e+005	uCi/g
7 SAMPLE	S97T001754	0 F	@SR90-01 SR90-01C SOLID		N/A	9.03E+01	0.0e+000	% Recovery
7 SAMPLE	S97T001754	0 F	@SR90-01 SR90-01E SOLID		N/A	7.11E+00	0.0e+000	% Ct. Error
8 DUP	S97T001754	0 F	@SR90-01 SR90-01 SOLID		4.63E-2	1.07E-2	124.912	RPD
8 DUP	S97T001754	0 F	@SR90-01 SR90-01C SOLID		100	9.56E+01	95.600	% Recovery
8 DUP	S97T001754	0 F	@SR90-01 SR90-01E SOLID		1.00	1.59E+01	15.900	% Ct. Err
9 SPK	S97T001754	0 F	@SR90-01 SR90-01 SOLID		2.39E-03	2.44E-03	102.092	% Recovery

Final page for worklist# 19370

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

[Signature]
Reviewer Signature *23 July 97*
Date

Sample S97T001754 will be rerun due to RPD. see

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 19370

Analyst: S. L Instrument: AB00 12 Book# 86856

Method: LA-220-101 Rev/Mod E-1

Worklist Comment: T201, @SR90-01 S.S. by Ludlum. Std:1.0ml, Spk:1.0mL skm

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			@SR90-01	SOLID		
2 BLNK-PREP			@SR90-01	SOLID		
3 BLNK/BKG			@SR90-01	SOLID		
4 SAMPLE	S97T001753	0 F	@SR90-01	SOLID	97000311	T-201
	Analytes Requested: SR90-01 , SR90-01C, SR90-01E					
5 DUP	S97T001753	0 F	@SR90-01	SOLID		
6 SPK	S97T001753	0 F	@SR90-01	SOLID		
7 SAMPLE	S97T001754	0 F	@SR90-01	SOLID	97000311	T-201
	Analytes Requested: SR90-01 , SR90-01C, SR90-01E					
8 DUP	S97T001754	0 F	@SR90-01	SOLID		
9 SPK	S97T001754	0 F	@SR90-01	SOLID		

Final page for worklist # 19370

S. L 7-22-97
Analyst Signature Date

Lucy E. Hogan 7-23-97
Analyst Signature Date
M. B. 7/23/97

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1) LIQUIDS

				STANDARD
Type	DETECTOR NUMBER	12	CARRIER ADDED in mL (CVA)	1.000
STD	TOTAL COUNTS (TC)	20334	GROSS WEIGHT (W2)	7.6645
Work List	COUNT TIME in MINUTES (CT)	10	TARE WEIGHT (W1)	7.5757
19370	BACKGROUND in cpm (BKG)	3.3	NET WEIGHT (W3)	0.0888
Test Code	SAMPLE VOLUME in mL (SS)	1.000	DELTA TIME (HOURS) (DT)	2.62
@SR90-01	DILUTION FACTOR (DF)	1		
Matrix	DIGEST DILUTION FACTOR DDF	1		
LIQUID	SAMPLE COUNT RATE (Rs)	2030.10	Sr-90 EFFICIENCY FACTO (C1)	0.4180
Batch Number	CRITICAL LEVEL (Lc)	1.09	Y-90 EFFICIENCY FACTOR (C2)	0.4660
97003494	TIME OF SEPARATION (ST)	13:18	Rmax	N/A
Rever	DATE OF SEPARATION (SD)	07/22/97	DETECTION LIMIT (Ld)	2.28
0	TIME OF COUNT (TOC)	15:55	Sr-89/90 CONC. in $\mu\text{Ci/L}$	2.3894E+00
Sample Prep	DATE OF COUNT (DOC)	07/22/97		
N/A	STANDARD BOOK #	86B56		
Sample #	STANDARD VALUE in $\mu\text{Ci/mL}$	2.3895E-03		
WL19370				
Instrument Code				
WB27811	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)			
Prepared By	Sr-89/90 CONC in $\mu\text{Ci/mL}$ REPLACE RS WITH RMAX IF RS<=Lc AND RS>=0 OR REPLACE RS WITH Lc IF RS<0			
SEH	RS*DF*DDF*1000/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT))))*SS*REC*2220000)			
Chemist	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))			
SAC	Relative Counting Error = The Square Root of ((TC + BKG * CT) / (TC - BKG * CT)*1.96)			
Analyst	Percent Carrier Recovery = (Net Weight / Expected weight) * 100			
SCL	NOTE: Expected weight = CVA * 0.1			
Date Complete	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			
07/23/97	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100			
Analysis Date	Sr-89/90 CONCENTRATION			DETECTION LEVEL 2.68E-06 $\mu\text{Ci/L}$
07/22/97	2.39E-03 $\mu\text{Ci/mL}$			
Analysis Time				
03:20 PM	RELATIVE COUNTING ERROR			
Sample Point	PERCENT CARRIER RECOVERY			
T-201	88.8%			

Analyst:	SCL	Date:	23-Jul-97
Signature of Chemist:	SAC	Date:	23 Jul 97

STANDARD.WB1 REV 2.0

22010NML

WORKBOOK PAGE: BLANK2

LA-220-101 / D-1 Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

					BLNK-PREP
Type	DETECTOR NUMBER	12	CARRIER ADDED in mL	(CVA)	1.000
BLNK-PREP	TOTAL COUNTS (TC)	38	GROSS WEIGHT	(W2)	7.6011
Work List	COUNT TIME in MINUTES (CT)	10	TARE WEIGHT	(W1)	7.8122
19370	BACKGROUND in cpm (BKG)	3.3	NET WEIGHT	(W3)	0.0889
Test Code	SAMPLE VOLUME in mL (SS)	1.000	DELTA TIME (HOURS)	(DT)	3.03
@SR90-01	DILUTION FACTOR (DF)	1			
Matrix	DIGEST FACTOR (g/L) (D g/L)	1.947			
SOLID	SAMPLE COUNT RATE (Rs)	0.50	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
Batch Number	CRITICAL LEVEL (Lc)	1.09	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
97003494	TIME OF SEPARATION (ST)	13:18	Rmax		1.66
ReRun	DATE OF SEPARATION (SD)	07/22/97	DETECTION LIMIT	(Ld)	2.28
0	TIME OF COUNT (TOC)	16:20	Sr-89/90 CONC in µCi/g	<	9.9466E-04
Sample Prep	DATE OF COUNT (DOC)	07/22/97			
N/A					
Sample #					
WL19370					
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)				
WB27811	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0				
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*(Dg/L)*REC*2220000)				
SEH	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))				
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96				
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100				
Analyst	NOTE: Expected weight = CVA * 0.1				
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100				
07/23/97					
Analysis Date					
07/22/97	Sr-89/90 CONCENTRATION	< 9.95E-04	µCi/g	DETECTION LEVEL 1.37E-03 µCi/g	
Analysis Time	LESS THAN Value was Determined from Rmax.				
03:20 PM	RELATIVE COUNTING ERROR	330.3%			
Sample Point					
T-201	PERCENT CARRIER RECOVERY	88.9%			

Analyst:	SCL	Date:	23-Jul-97
Signature of Chemist:	SAC	Date:	23 July 97

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22010NML

WORKBOOK PAGE: SAM4

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	SAMPLE
SAMPLE	TOTAL COUNTS (TC)		2340	GROSS WEIGHT	(W2)	7.6113
Work List	COUNT TIME in MINUTES (CT)		10	TARE WEIGHT	(W1)	7.5219
19370	BACKGROUND in cpm (BKG)		3.3	NET WEIGHT	(W3)	0.0894
Test Code	SAMPLE VOLUME in mL (SS)		1.000	DELTA TIME (HOURS)	(DT)	3.78
@SR90-01	DILUTION FACTOR (DF)		1			
Matrix	DIGEST FACTOR (g/L) (D g/L)		1.947			
SOLID	SAMPLE COUNT RATE (Rs)		230.70	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
Batch Number	CRITICAL LEVEL (Lc)		1.09	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
97003494	TIME OF SEPARATION (ST)		13:18	Rmax		N/A
ReRun	DATE OF SEPARATION (SD)		07/22/97	DETECTION LIMIT	(Ld)	2.28
0	TIME OF COUNT (TOC)		17:05	Sr-89/90 CONC in µCi/g		1.3673E-01
Sample Prep	DATE OF COUNT (DOC)		07/22/97			
FUSION01						
Sample #						
S97T001753						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0					
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*(Dg/L)*REC*2220000)					
SEH	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
07/23/97						
Analysis Date						DETECTION LEVEL 1.35E-03 µCi/g
07/22/97	Sr-89/90 CONCENTRATION		1.37E-01		µCi/g	
Analysis Time	RELATIVE COUNTING ERROR		4.1%			
03:20 PM						
Sample Point						
T-201	PERCENT CARRIER RECOVERY		89.4%			

Analyst:	SCL	Date:	23-Jul-97
Signature of Chemist:	SAC	Date:	23 July 97

SAMPLE.WB1 REV 2.0

22010NML

WORKBOOK PAGE: DUP5

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	1.000
DUP	TOTAL COUNTS	(TC)	2584	GROSS WEIGHT	(W2)	7.6914
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.6012
19370	BACKGROUND in cpm	(BKG)	3.3	NET WEIGHT	(W3)	0.0902
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT)	4.90
@SR90-01	DILUTION FACTOR	DF	1			
Matrix	DIGEST FACTOR (g/L)	(D g/L)	1.991			
SOLID	SAMPLE COUNT RATE	(Rs)	255.10	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
Batch Number	CRITICAL LEVEL	(Lc)	1.09	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
97003494	TIME OF SEPARATION	(ST)	13:18	Rmax		N/A
ReRun	DATE OF SEPARATION	(SD)	07/22/97	DETECTION LIMIT	(Ld)	2.28
0	TIME OF COUNT	(TOC)	18:12	Sr-89/90 CONC in µCi/g		1.4476E-01
Sample Prep	DATE OF COUNT	(DOC)	07/22/97			
FUSION01						
Sample #						
S97T001753						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0					
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT))) * SS*(Dg/L)*REC*2220000)					
SEH	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT)) * 1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
07/23/97						
Analysis Date						
07/22/97	Sr-89/90 CONCENTRATION	1.45E-01				DETECTION LEVEL 1.29E-03 µCi/g
Analysis Time						
03:20 PM	RELATIVE COUNTING ERROR	3.9%				
Sample Point						
T-201	PERCENT CARRIER RECOVERY	90.2%				

Analyst:	SCL	Date:	23-Jul-97
Signature of Chemist:	SAC	Date:	23 July 97

SAMPLE.WB1 REV 2.0

22010NML

WORKBOOK PAGE: SPIKE#

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 103 (E-2), 104 (D-1)

Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	SPIKE
SPK	TOTAL COUNTS	(TC)	24004			1.000
Worklist	COUNT TIME in MINUTES	(CT)	10	GROSS WEIGHT	(W2)	7.6947
19370	BACKGROUND in cpm	(BKG)	3.3	TARE WEIGHT	(W1)	7.6045
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	NET WEIGHT	(W3)	0.0902
@SR90-01	DILUTION FACTOR	DF	1	% CARRIER RECOVERY	(Rec)	90.2%
Matrix	DIGEST FACTOR (g/L)	(D g/L)	1.947	SPIKE VOLUME in mL	(Spk Vol)	1.000
SOLID	TIME OF SEPARATION	(ST)	13:23	SPIKE DILUTION FACTOR	(Spk DF)	1
Batch Number	DATE OF SEPARATION	(SD)	07/22/97	SPIKE BOOK NUMBER	(Spk BN)	86B56
97003494	TIME OF COUNT	(TOC)	18:55	SPIKE VALUE in $\mu\text{Ci/mL}$	(Spk Val)	2.3895E-03
Rerun	DATE OF COUNT	(DOC)	07/22/97	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
0	DELTA TIME (hours)	(DT)	5.53	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
Sample Prep				Sr $\mu\text{Ci/g}$ IN SAMPLE	(Sr1)	1.37E-1
FUSION01				Sr-89/90 CONC. in $\mu\text{Ci/g}$	(Sr2)	1.3816E+00
Sample #	(Note: If there is not enough sample for an analysis type INS in the Count Time result cell.)					
S97T001753						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	Sr-89/90 CONC. in $\mu\text{Ci/g}$					
Prepared By	$RS * DF / ((C1 + C2 * (1 - e^{-(\text{natural log } 2) / (64.2 * DT))}) * SS * Dg / L * (1L / 1000mL) * (REC / 100) * 2220000)$					
SEH	QC Actual in $\mu\text{Ci/mL}$ = Spk Val					
Chemist	QC Found in $\mu\text{Ci/mL}$ = $(Sr2 - Sr1) * ((Spk DF / Spk Vol * 1000 \text{ mL/L}) / (DF / SS / (Dg / L)))$					
SAC	Percent Carrier Recovery = (Net Weight / Expected Weight) * 100					
Analyst	Spk val = value taken from RCTABLE and then decayed using a 1/2 life of 29.1 years					
SCL	NOTE: 64.2 = Half Life for Y-90					
Date Complete	NOTE: Expected Weight = CVA * 0.1					
07/23/97	Percent Spike Recovery = (QC Found / QC Actual) * 100					
Analysis Date	Delta Time (hours) = $((DOC - SD) * 24) + (TOC - ST) / 100$					
07/22/97						
Analysis Time						
03:20 PM	QC Actual in $\mu\text{Ci/mL}$	=		2.39E-03		
Sample Point	QC Found in $\mu\text{Ci/mL}$	=		2.42E-03		
T-201	Percent Spike Recovery	=		101.4%		

Analyst:	SCL	Date:	23-Jul-97
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24 Collins

03 July 97

WORKBOOK PAGE: SAM7

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	SAMPLE
SAMPLE	TOTAL COUNTS (TC)		853	GROSS WEIGHT	(W2)	1.000
Work List	COUNT TIME in MINUTES (CT)		10	TARE WEIGHT	(W1)	7.5902
19370	BACKGROUND in cpm (BKG)		3.3	NET WEIGHT	(W3)	0.0903
Test Code	SAMPLE VOLUME in mL (SS)		1.000	DELTA TIME (HOURS)	(DT)	5.73
@SR90-01	DILUTION FACTOR (DF)		1			
Matrix	DIGEST FACTOR (g/L) (D g/L)		1.982			
SOLID	SAMPLE COUNT RATE (Rs)		82.00	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
Batch Number	CRITICAL LEVEL (Lc)		1.09	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
97003494	TIME OF SEPARATION (ST)		13:23	Rmax		N/A
ReRun	DATE OF SEPARATION (SD)		07/22/97	DETECTION LIMIT	(Ld)	2.28
0	TIME OF COUNT (TOC)		19:07	Sr-89/90 CONC in µCi/g		4.6277E-02
Sample Prep	DATE OF COUNT (DOC)		07/22/97			
FUSION01						
Sample #						
S97T001754						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0					
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/(64.2*DT))))*SS*(Dg/L)*REC*2220000)					
SEH	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
07/23/97						
Analysis Date						
07/22/97	Sr-89/90 CONCENTRATION		4.63E-02	µCi/g	DETECTION LEVEL	
Analysis time						
03:20 PM	RELATIVE COUNTING ERROR		7.1%	1.29E-03		
Sample Point						µCi/g
T-201	PERCENT CARRIER RECOVERY		90.3%			

Analyst:	SCL	Date:	23-Jul-97
Signature of Chemist:	SAC	Date:	23 July 97

SAMPLE:WB1 REV 2.0

22010NML

WORKBOOK PAGE: DUP8

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	DUP
DUP	TOTAL COUNTS	(TC)	234	GROSS WEIGHT	(W2)	7.6386
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.5430
19370	BACKGROUND in cpm	(BKG)	3.3	NET WEIGHT	(W3)	0.0956
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	DELTA TIME (HOURS)	(DT)	6.08
@SR90-01	DILUTION FACTOR	DF	1			
Matrix	DIGEST FACTOR (g/L)	(D g/L)	1.984			
SOLID	SAMPLE COUNT RATE	(Rs)	20.10	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
Batch Number	CRITICAL LEVEL	(Lc)	1.09	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
97003494	TIME OF SEPARATION	(ST)	13:23	Rmax		N/A
Re-run	DATE OF SEPARATION	(SD)	07/22/97	DETECTION LIMIT	(Ld)	2.28
0	TIME OF COUNT	(TOC)	19:28	Sr-89/90 CONC in $\mu\text{Ci/g}$		1.0664E-02
Sample Prep	DATE OF COUNT	(DOC)	07/22/97			
FUSION01						
Sample #						
S97T001754						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	Sr-89/90 CONC in $\mu\text{Ci/g}$ Replace RS with RMAX if $RS \leq Lc$ and $RS \geq 0$ or Replace RS with Lc if $RS < 0$					
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*(Dg/L)*REC*2220000)					
SEH	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
SCL	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
07/23/97						
Analysis Date						DETECTION LEVEL 1.21E-03 $\mu\text{Ci/g}$
07/22/97	Sr-89/90 CONCENTRATION	1.07E-02		$\mu\text{Ci/g}$		
Analysis Time						
03:20 PM	RELATIVE COUNTING ERROR	15.9%				
Sample Point						
T-201	PERCENT CARRIER RECOVERY	95.6%				

Analyst:	SCL	Date:	23-Jul-97
Signature of Chemist:	SAC	Date:	23 Jul 97

SAMPLE.WB1 REV 2.0

22010NML

WORKBOOK PAGE: SPIKE9

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 103 (E-2), 104 (D-1)

Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	1.000
SPK	TOTAL COUNTS	(TC)	22998			
WorkList	COUNT TIME in MINUTES	(CT)	10	GROSS WEIGHT	(W2)	7.7366
19370	BACKGROUND in cpm	(BKG)	3.3	TARE WEIGHT	(W1)	7.6469
Test Code	SAMPLE VOLUME in mL	(SS)	1.000	NET WEIGHT	(W3)	0.0897
@SR90-01	DILUTION FACTOR	DF	1	% CARRIER RECOVERY	(Rec)	89.7%
Matrix	DIGEST FACTOR (g/L)	(D g/L)	1.982	SPIKE VOLUME in mL	(Spk Vol)	1.000
SOLID	TIME OF SEPARATION	(ST)	13:23	SPIKE DILUTION FACTOR	(Spk DF)	1
Batch Number	DATE OF SEPARATION	(SD)	07/22/97	SPIKE BOOK NUMBER	(Spk BN)	86B56
97003494	TIME OF COUNT	(TOC)	21:20	SPIKE VALUE in $\mu\text{Ci/mL}$	(Spk Val)	2.3895E-03
Rerun	DATE OF COUNT	(DOC)	07/22/97	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
0	DELTA TIME (hours)	(DT)	7.95	Y-90 EFFICIENCY FACTOR	(C2)	0.4860
Sample Prep				Sr $\mu\text{Ci/g}$ IN SAMPLE	(Sr1)	4.63E-2
FUSION01				Sr-89/90 CONC. in $\mu\text{Ci/g}$	(Sr2)	1.2751E+00
Sample #	(Note: If there is not enough sample for an analysis type INS in the Count Time result cell.)					
S97T001754						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	Sr-89/90 CONC. in $\mu\text{Ci/g}$					
Prepared By	$RS * DF / ((C1 + C2 * (1 - e^{-(\ln(2) * DT / 64.2)}))) * SS * Dg / L * (1 / 1000 \text{ mL}) * (REC / 100) * 2220000$					
SEH	QC Actual in $\mu\text{Ci/mL}$ = Spk Val					
Chemist	QC Found in $\mu\text{Ci/mL}$ = $(Sr2 - Sr1) * ((Spk DF / Spk Vol * 1000 \text{ mL/L}) / (DF / SS * (Dg / L)))$					
SAC	Percent Carrier Recovery = (Net Weight / Expected Weight) * 100					
Analyst	Spk val = value taken from RCTABLE and then decayed using a 1/2 life of 29.1 years					
SCL	NOTE: 64.2 = Half Life for Y-90					
Date Complete	NOTE: Expected Weight = CVA * 0.1					
07/23/97	Percent Spike Recovery = (QC Found / QC Actual) * 100					
Analysis Date	Delta Time (hours) = $((DOC - SD) * 24) + (TOC - ST) / 100$					
07/22/97						
Analysis Time						
03:20 PM	QC Actual in $\mu\text{Ci/mL}$	=		2.39E-03		
Sample Point	QC Found in $\mu\text{Ci/mL}$	=		2.44E-03		
T-201	Percent Spike Recovery	=		101.9%		

Analyst:	SCL	Date:	23-Jul-97
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SA Carlson

23 July 97

LABCORE Completed Worklist Report for Worklist# 19554

Analyst: dpb

Instrument: AB12

Book# _____

Method: _____ Rev/Mod _____

Worklist Comment: RR#2 T201 Use 5mL sample. Use 1mL STD as spike. sac

Seq Type	Sample#	R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0		@SR90-01 SR90-01 SOLID		2.39E-03	2.52E-3	105.439 % Recovery	
1 STD	0		@SR90-01 SR90-01C SOLID		100	9.09E+01	90.900 % Recovery	
1 STD	0		@SR90-01 SR90-01E SOLID		1.00	1.24E+00	1.240 % Ct. Err	
2 BLNK-PREP	0		@SR90-01 SR90-01 SOLID		1	6.73E-4	0.001 uCi/g	
2 BLNK-PREP	0		@SR90-01 SR90-01C SOLID		100	8.92E+01	89.200 % Recovery	
2 BLNK-PREP	0		@SR90-01 SR90-01E SOLID		1.00	3.69E+01	36.900 uCi/g	
3 BLNK/BKG	0		@SR90-01 SR90-01 SOLID		1	2.50E+00	2.500 BLNK/BKG	
4 SAMPLE	S97T001754	0 F	@SR90-01 SR90-01 SOLID	N/A	4.95E-02	2.63E-004	uCi/g	
4 SAMPLE	S97T001754	0 F	@SR90-01 SR90-01C SOLID	N/A	8.96E+01		% Recovery	
4 SAMPLE	S97T001754	0 F	@SR90-01 SR90-01E SOLID	N/A	2.82E+00		% Ct. Error	
5 DUP	S97T001754	0 F	@SR90-01 SR90-01 SOLID		4.95E-2	1.17E-2	121.523 RPD	
5 DUP	S97T001754	0 F	@SR90-01 SR90-01C SOLID		100	8.94E+01	89.400 % Recovery	
5 DUP	S97T001754	0 F	@SR90-01 SR90-01E SOLID		1.00	5.97E+00	5.970 % Cnt Err	
6 SPK	S97T001754	0 F	@SR90-01 SR90-01 SOLID		2.39E-03	2.48E-03	103.766 % Recovery	

Final page for worklist# 19554

Analyst Signature _____ Date _____

Analyst Signature _____ Date _____

[Signature] 1 Aug 97
Reviewer Signature _____ Date _____

RPD is high, however, activity levels are similar to the previous results. Results will be accepted, *sac*

07/28/97 15:44
A-0004-1

Page: 1

LABCORE Data Entry Template for Worklist# 19554Analyst: DPB Instrument: AB00 12 Book# 86B56

Method: LA-220-101 Rev/Mod _____

Worklist Comment: RR#2 T201 Use 5mL sample. Use 1mL STD as spike. sac

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@SR90-01	SOLID		
2	BLNK-PREP				@SR90-01	SOLID		
3	BLNK/BKG				@SR90-01	SOLID		
4	SAMPLE	S97T001754	0	F	@SR90-01	SOLID	97000311	T-201
Analytes Requested: SR90-01, SR90-01C, SR90-01E								
5	DUP	S97T001754	0	F	@SR90-01	SOLID		
6	SPK	S97T001754	0	F	@SR90-01	SOLID		

Final page for worklist # 19554

Analyst Signature

Date

Analyst Signature

Date

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1) LIQUIDS

				STANDARD
Type	DETECTOR NUMBER	12	CARRIER ADDED in mL (CVA)	1.000
STD	TOTAL COUNTS (TC)	25216	GROSS WEIGHT (W2)	7.5970
Work List	COUNT TIME in MINUTES (CT)	10	TARE WEIGHT (W1)	7.5061
19554	BACKGROUND in cpm (BKG)	4.4	NET WEIGHT (W3)	0.0909
Test Code	SAMPLE VOLUME in mL (SS)	1.000	DELTA TIME (HOURS) (DT)	16.80
@SR90-01	DILUTION FACTOR (DF)	1		
Matrix	DIGEST DILUTION FACTOR DDF	1		
LIQUID	SAMPLE COUNT RATE (Rs)	2517.20	SR-90 EFFICIENCY FACTO (C1)	0.4180
Batch Number	CRITICAL LEVEL (Lc)	1.26	Y-90 EFFICIENCY FACTOR (C2)	0.4660
97003680	TIME OF SEPARATION (ST)	22:50	Rmax	N/A
Re-run	DATE OF SEPARATION (SD)	07/29/97	DETECTION LIMIT (Ld)	2.62
0	TIME OF COUNT (TOC)	15:38	Sr-89/90 CONC. in µCi/L 2.5184E+00	
Sample Prep	DATE OF COUNT (DOC)	07/30/97		
N/A	STANDARD BOOK #	86B56		
Sample	STANDARD VALUE in µCi/mL	2.3883E-03		
WL19554				
Instrument Code				
WB27811	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)			
Prepared By	Sr-89/90 CONC in µCi/mL REPLACE RS WITH RMAX IF RS<Lc AND RS>=0 OR REPLACE RS WITH Lc IF RS<0			
SEH	RS*DF*DDF*1000/((C1+C2*(1-e to the power of ((-natural log 2)/(64.2*DT))))*SS*REC*2220000)			
Chemist	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))			
SAC	Relative Counting Error = The Square Root of ((TC + BKG * CT) / (TC - BKG * CT)*1.96)			
Analyst	Percent Carrier Recovery = (Net Weight / Expected weight) * 100			
DPB	NOTE: Expected weight = CVA * 0.1			
Date Complete	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			
07/31/97	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100			
Analysis Date	Sr-89/90 CONCENTRATION 2.52E-03 µCi/mL			DETECTION LEVEL 2.62E-06 µCi/L
07/30/97				
Analysis Time	RELATIVE COUNTING ERROR 1.2%			
05:00 AM				
Sample Point				
T-201	PERCENT CARRIER RECOVERY 90.9%			

Analyst:	DPB	Date:	31-Jul-97
Signature of Chemist:	SAC	Date:	1 Aug 97

STANDARD.WB1 REV 2.0

22010NML

WORKBOOK PAGE: BLANK2

LA-220-101 / D-1 Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

BLNK-PREP

Type	DETECTOR NUMBER	12	CARRIER ADDED in mL	(CVA)	1.000
BLNK-PREP	TOTAL COUNTS (TC)	110	GROSS WEIGHT	(W2)	7.6098
Worksheet	COUNT TIME in MINUTES (CT)	10	TARE WEIGHT	(W1)	7.5206
19554	BACKGROUND in cpm (BKG)	4.4	NET WEIGHT	(W3)	0.0892
Test Code	SAMPLE VOLUME in mL (SS)	5.000	DELTA TIME (HOURS)	(DT)	17.92
@SR90-01	DILUTION FACTOR (DF)	1			
Matrix	DIGEST FACTOR (g/L) (D g/L)	1.982			
SOLID	SAMPLE COUNT RATE (Rs)	6.60	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
Batch Number	CRITICAL LEVEL (Lc)	1.26	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
97003680	TIME OF SEPARATION (ST)	22:50	Rmax		N/A
Refurn	DATE OF SEPARATION (SD)	07/29/97	DETECTION LIMIT	(Ld)	2.62
0	TIME OF COUNT (TOC)	16:45	Sr-89/90 CONC in $\mu\text{Ci/g}$		6.7269E-04
Sample Prep	DATE OF COUNT (DOC)	07/30/97			
N/A					
Sample					
WL19554					
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)				
WB27811	Sr-89/90 CONC in $\mu\text{Ci/g}$ Replace RS with RMAX if $\text{RS} \leq \text{Lc}$ and $\text{RS} \geq 0$ or Replace RS with Lc if $\text{RS} < 0$				
Prepared By	$\text{RS} * 1000 * \text{DF} / ((\text{C1} + \text{C2} * (1 - e \text{ to the power of } ((-\text{natural log } 2) / (64.2 * \text{DT})))) * \text{SS} * (\text{Dg/L}) * \text{REC} * 2220000)$				
SEH	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery $((\text{W2} - \text{W1}) / (\text{CVA} * 0.1000))$				
Chemist	Relative Counting Error = (The Square Root of $(\text{TC} + \text{BKG} * \text{CT}) / (\text{TC} - \text{BKG} * \text{CT})$) * 1.96				
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100				
Analysis	NOTE: Expected weight = $\text{CVA} * 0.1$				
DPB	Detection Levels and Less Than Values are determined from Procedure LA-508-002.				
Date/Complete	Delta Time (hours) = $((\text{DOC} - \text{SD}) * 24) + (\text{TOC} - \text{ST}) / 100$				
07/31/97					
Analysis Date					
07/30/97	Sr-89/90 CONCENTRATION	6.73E-04	$\mu\text{Ci/g}$	DETECTION LEVEL 2.67E-04 $\mu\text{Ci/g}$	
Analysis Time					
05:00 AM	RELATIVE COUNTING ERROR	36.9%			
Sample Point					
T-201	PERCENT CARRIER RECOVERY	89.2%			

Analyst:	DPB	Date:	31-Jul-97
Signature of Chemist:	SAC	Date:	1 Aug 97

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WORKBOOK PAGE: SAM4

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

					SAMPLE	
Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	1.000
SAMPLE	TOTAL COUNTS (TC)	4961	GROSS WEIGHT	(W2)	7.6167	
Work List	COUNT TIME in MINUTES (CT)	10	TARE WEIGHT	(W1)	7.5271	
19554	BACKGROUND in cpm (BKG)	4.4	NET WEIGHT	(W3)	0.0896	
Test Code	SAMPLE VOLUME in mL (SS)	5.000	DELTA TIME (HOURS)	(DT)	19.00	
@SR90-01	DILUTION FACTOR (DF)	1				
Matrix	DIGEST FACTOR (g/L) (D g/L)	1.982				
SOLID	SAMPLE COUNT RATE (Rs)	491.70	SR-90 EFFICIENCY FACTOR	(C1)	0.4180	
Batch Number	CRITICAL LEVEL (Lc)	1.26	Y-90 EFFICIENCY FACTOR	(C2)	0.4660	
97003680	TIME OF SEPARATION (ST)	22:50	Rmax		N/A	
Recur	DATE OF SEPARATION (SD)	07/29/97	DETECTION LIMIT	(Ld)	2.62	
2	TIME OF COUNT (TOC)	17:50	Sr-89/90 CONC in µCi/g		4.9450E-02	
Sample Prep	DATE OF COUNT (DOC)	07/30/97				
FUSION01						
Sample #						
S97T001754						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0					
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*(Dg/L)*REC*2220000)					
SEH	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
DPB	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
07/31/97						
Analysis Date						DETECTION LEVEL 2.63E-04 µCi/g
07/30/97	Sr-89/90 CONCENTRATION	4.95E-02	µCi/g			
Analysis Time						
05:00 AM	RELATIVE COUNTING ERROR	2.8%				
Sample Point						
T-201	PERCENT CARRIER RECOVERY	89.6%				

Analyst:	DPB	Date:	31-Jul-97
Signature of Chemist:	SAC	Date:	1 Aug 97
SAMPLE.WB1 REV 2.0		22010NML	

WORKBOOK PAGE: DUP5

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 104 (D-1)

						DUP
Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	1.000
DUP	TOTAL COUNTS	(TC)	1205	GROSS WEIGHT	(W2)	7.6864
Work List	COUNT TIME in MINUTES	(CT)	10	TARE WEIGHT	(W1)	7.5970
19554	BACKGROUND in cpm	(BKG)	4.4	NET WEIGHT	(W3)	0.0894
Test Code	SAMPLE VOLUME in mL	(SS)	5.000	DELTA TIME (HOURS)	(DT)	19.17
@SR90-01	DILUTION FACTOR	DF	1			
Matrix	DIGEST FACTOR (g/L)	(D g/L)	1.984			
SOLID	SAMPLE COUNT RATE	(Rs)	116.10	SR-90 EFFICIENCY FACTOR	(C1)	0.4180
Batch Number	CRITICAL LEVEL	(Le)	1.26	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
97003680	TIME OF SEPARATION	(ST)	22:50	Rmax		N/A
ReRun	DATE OF SEPARATION	(SD)	07/29/97	DETECTION LIMIT	(Ld)	2.62
2	TIME OF COUNT	(TOC)	18:00	Sr-89/90 CONC in µCi/g		1.1675E-02
Sample Prep	DATE OF COUNT	(DOC)	07/30/97			
FUSION01						
Sample #						
S97T001754						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	Sr-89/90 CONC in µCi/g Replace RS with RMAX if RS<=Lc and RS>=0 or Replace RS with Lc if RS<0					
Prepared By	RS*1000*DF/((C1+C2*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*(Dg/L)*REC*2220000)					
SEH	NOTE: 64.2 = Half Life for Y-90 and Rec. = Fractional Carrier Recovery ((W2-W1) / (CVA * 0.1000))					
Chemist	Relative Counting Error = (The Square Root of (TC + BKG * CT) / (TC - BKG * CT))*1.96					
SAC	Percent Carrier Recovery = (Net Weight / Expected weight) * 100					
Analyst	NOTE: Expected weight = CVA * 0.1					
DPB	Detection Levels and Less Than Values are determined from Procedure LA-508-002.					
Date Complete	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
07/31/97						
Analysis Date						
07/30/97	Sr-89/90 CONCENTRATION	1.17E-02			µCi/g	DETECTION LEVEL 2.63E-04 µCi/g
Analysis Time						
05:00 AM	RELATIVE COUNTING ERROR	6.0%				
Sample Point						
T-201	PERCENT CARRIER RECOVERY	89.4%				

Analyst:	DPB	Date:	31-Jul-97
Signature of Chemist:	SAC	Date:	1 Aug 97

SAMPLE.WB1 REV 2.0

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WORKBOOK PAGE: SPIKES

Sr-89/90 : LA-220-101 (D-1), 102 (E-3), 103 (E-2), 104 (D-1)

					SPIKE	
Type	DETECTOR NUMBER		12	CARRIER ADDED in mL	(CVA)	1.000
SPK	TOTAL COUNTS	(TC)	29525			
Worklist	COUNT TIME in MINUTES	(CT)	10	GROSS WEIGHT	(W2)	7.6794
19554	BACKGROUND in cpm	(BKG)	4.4	TARE WEIGHT	(W1)	7.591
Test Code	SAMPLE VOLUME in mL	(SS)	5.000	NET WEIGHT	(W3)	0.0884
@SR90-01	DILUTION FACTOR	DF	1	% CARRIER RECOVERY	(Rec)	88.4%
Matrix	DIGEST FACTOR (g/L)	(D g/L)	1.982	SPIKE VOLUME in mL	(Spk Vol)	1.000
SOLID	TIME OF SEPARATION	(ST)	22:50	SPIKE DILUTION FACTOR	(Spk DF)	1
Batch Number	DATE OF SEPARATION	(SD)	07/29/97	SPIKE BOOK NUMBER	(Spk BN)	86B56
97003680	TIME OF COUNT	(TOC)	18:10	SPIKE VALUE in µCi/mL	(Spk Val)	2.3883E-03
Rerun	DATE OF COUNT	(DOC)	07/30/97	Sr-90 EFFICIENCY FACTOR	(C1)	0.4180
2	DELTA TIME (hours)	(DT)	19.33	Y-90 EFFICIENCY FACTOR	(C2)	0.4660
Sample Prep				Sr µCi/g IN SAMPLE	(Sr1)	4.95E-2
FUSION01				Sr-89/90 CONC. in µCi/g	(Sr2)	2.9970E-01
Sample #	(Note: If there is not enough sample for an analysis type INS in the Count Time result cell.)					
S97T001754						
Instrument Code	Sample Count Rate (Rs) = (Total Counts (TC) / Count Time (CT)) - Background in cpm (BKG)					
WB27811	Sr-89/90 CONC. in µCi/g					
Prepared By	RS*DF/((C1+C2)*(1-e to the power of ((-natural log 2)/64.2*DT)))*SS*Dg/L*(1L/1000mL)*(REC/100)*2220000)					
SEH	QC Actual in µCi/mL = Spk Val					
Chemist	QC Found in µCi/mL = (Sr2 - Sr1) * ((Spk DF/Spk Vol* 1000 mL/L) / (DF/SS/(Dg/L)))					
SAC	Percent Carrier Recovery = (Net Weight / Expected Weight) * 100					
Analyst	Spk val = value taken from RCTABLE and then decayed using a ½ life of 29.1 years					
DPB	NOTE: 64.2 = Half Life for Y-90					
Date Complete	NOTE: Expected Weight = CVA * 0.1					
07/31/97	Percent Spike Recovery = (QC Found / QC Actual) * 100					
Analysis Date	Delta Time (hours) = ((DOC - SD) * 24) + (TOC - ST) / 100					
07/30/97						
Analysis time						
05:00 AM	QC Actual in µCi/mL	=	2.39E-03			
Sample Point	QC Found in µCi/mL	=	2.48E-03			
T-201	Percent Spike Recovery	=	103.8%			

Analyst:	DPB	Date:	31-Jul-97
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SAC

1 Aug 97

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