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Tank 241-AN-105, Cores 152 and 153, Analytical Results for the 45 Day Report

Franciska H. Steen

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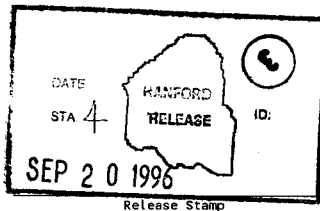
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ANALYTICAL SERVICES

**TANK 241-AN-105, CORES 152 AND 153,
ANALYTICAL RESULTS FOR THE 45 DAY REPORT**

Project Coordinator: FRANCISKA H. STEEN

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

by

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222-S ANALYTICAL SERVICES

TANK 241-AN-105, CORES 152 AND 153, ANALYTICAL RESULTS FOR THE 45 DAY REPORT

This document is the 45-day laboratory report for tank 241-AN-105 push mode core segments collected between June 10, 1996 and June 28, 1996. The segments were subsampled and analyzed in accordance with the *Tank 241-AN-105 Push Mode Core Sampling and Analysis Plan* (TSAP) (Eggers, 1996) and the *Safety Screening Data Quality Objective* (DQO) (Dukelow, et al., 1995). The analytical results are included in the data summary table (Table 1).

None of the samples submitted for Total Alpha Activity (AT) or Differential Scanning Calorimetry (DSC) analyses exceeded notification limits as stated in the Safety Screening DQO (Dukelow, et al., 1995). Statistical evaluation on results by calculating the 95% upper confidence limit is not performed by the 222-S Laboratory and is not considered in this report.

Primary safety screening results and the raw data from thermogravimetric analysis (TGA) and DSC analyses are included in this report.

Appearance and Sample Handling

Attachment 1 is a cross reference to relate the tank farm identification numbers to the 222-S Laboratory LabCore/LIMS sample numbers. The subsamples generated in the laboratory for analyses are identified in these diagrams with their sources shown. The diagram identifying the hydrostatic head fluid (HHF) blank is also included.

Core 152

Twenty-two push mode core segments were removed from tank 241-AN-105 riser 12A between June 10, 1996 and June 18, 1996. Segments were received by the 222-S Laboratory between June 11, 1996 and June 24, 1996. Table 2 summarizes the extrusion information.

Selected segments (15, 17, 19 and 21) were sampled using the Retained Gas Sampler (RGS) and extruded by the Process Chemistry and Statistical Analysis Group. The analytical results for these segments will be included in a revision to this document. Segment 14 was originally identified as a RGS sample. However since the integrity of the sample was compromised due to a leaking sampler seal it was extruded as a non-RGS sample.

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Core 153

Twenty-two push mode core segments were removed from tank 241-AN-105 riser 7B between June 25, 1996 and June 28, 1996. Segments were received by the 222-S Laboratory between June 28, 1996 and August 9, 1996. Table 3 summarizes the extrusion information.

Selected segments (4, 16, 18 and 20) were sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. The analytical results for these segments will be included in a revision to this document.

Field Blank

A field blank was provided to the 222-S laboratory with core 153. It underwent the same analysis as the drainable liquid as instructed by the TSAP (Eggers, 1996).

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Table 2. Sample Receipt and Extrusion Information for 241-AN-105, Core 152.

Core Sample ID	Date Sampled	Date Accepted	Drainage Schedule (h)	Drainage Schedule (g)	Sample Description
96-233	6/10/96	6/11/96	2.5	256.8-Drainable	The solids were light gray in color and resembled a salt slurry. The liquid was green in color and opaque. Collected 190 mL of liquid. No organic layer was observed.
96-234	6/10/96	6/11/96	0.0	426.3-Drainable	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 300 mL of liquid. No organic layer was observed.
96-255	6/11/96	6/18/96	0.0	406.2-Drainable	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 280 mL of liquid. No organic layer was observed.
96-256	6/11/96	6/12/96	0.0	429.3-Drainable	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 300 mL of liquid. No organic layer was observed.
96-257	6/11/96	6/12/96	0.0	435.8-Drainable	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 310 mL of liquid. No organic layer was observed.
96-258	6/11/96	6/12/96	0.0	429.3-Drainable	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 290 mL of liquid. No organic layer was observed.
96-259	6/11/96	6/12/96	0.0	433.3-Drainable	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 290 mL of liquid. No organic layer was observed.
96-260	6/12/96	6/27/96	0.0	429.3-Drainable	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 300 mL of liquid.
96-261	6/12/96	6/27/96	0.0	378.7-Drainable	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 250 mL of liquid. No organic layer was observed.
96-262	6/12/96	6/13/96	0.0	392.2-Drainable	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 250 mL of liquid. No organic layer was observed.

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Table 2. Sample Receipt and Extrusion Information for 241-AN-105, Core 152.

Chemical M. No.	Sample No.	Date Received	Date Analyzed	Drainable Volume	Color	Drainable Volume	Extrusion Description
96-263	11	6/13/96	6/27/96	0.0	431.4-Drainable	0.0	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 300 mL of liquid. No organic layer was observed.
96-264	12	6/12/96	6/27/96	0.0	380.0-Drainable	0.0	Extruded an unmeasurable amount of light gray solids and resembled a wet salt. The liquid was green in color and opaque. Collected 250 mL of liquid. No organic layer was observed.
96-265	13	6/13/96	6/27/96	0.0	383.8-Drainable	0.0	Extruded an unmeasurable amount of light gray solids and resembled a wet liquid. The liquid was green in color and opaque. Collected 250 mL of liquid. No organic layer was observed.
96-266	14	6/13/96	7/01/96	n/a	132.9-Drainable	188.7-Upper half 46.7-Lower half	Extruded an unmeasurable amount of light gray solids and resembled a salt slurry. The liquid was green in color and opaque. Collected 90 mL of liquid. No organic layer was observed.
96-267	15	6/13/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-268	16	6/13/96	7/01/96	18.0	0.0	166.5-Upper half 210.3-Lower half	The solids were gray in color and resembled a salt slurry.
96-269	17	6/14/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-270	18	6/14/96	7/08/96	19.0	0.0	188.0-Upper half 193.3-Lower half	The solids were gray in color and resembled a wet salt.
96-271	19	6/14/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-272	20	6/14/96	7/08/96	17.0	0.0	198.9-Upper half 198.0-Lower half	The solids were light to dark gray in color and resembled a wet salt and a salt slurry.
96-273	21	6/17/96	n/a	n/a	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.

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Table 2. Sample Receipt and Extrusion Information for 241-AN-105, Core 152.

Sample ID	Date Received	Date Analyzed	Sample Weight (g)	Extruder Temperature (°C)	Extruder Pressure (psi)	Extruder Speed (rpm)	Extruder Die Diameter (mm)	Extruder Die Length (mm)	Extruder Die Material	Extruder Die Description
96-274	22	6/18/96	6/24/96	7/01/96	13.0	0.0	195.7-L upper half	51.1-L lower half	The solids were light to dark gray in color and resembled a salt slurry.	

* Approximate Inches Extruded

Table 3. Sample Receipt and Extrusion Information for 241-AN-105, Core 153.

Core	Segment	Sample ID	Receipt Date	Receipt Time	Drainable (g)	Sample Description
96-275	1	6/25/96	8/09/96	8/14/96	0.0	256.8-Drainable Extruded an unmeasurable amount of light gray solids that resembled a salt slurry. The liquid was green in color and opaque. Collected 163 mL of liquid. No organic layer was observed.
96-276	2	6/25/96	7/30/96	8/05/96	0.0	422.8-Drainable Extruded an unmeasurable amount of light gray solids that resembled a salt slurry. The liquid was green in color and opaque. Collected 320 mL of liquid. No organic layer was observed.
96-277	3	6/26/96	8/09/96	8/14/96	0.0	367.0-Drainable Extruded an unmeasurable amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 259 mL of liquid. No organic layer was observed.
96-278	4	6/26/96	6/28/96	n/a	n/a	This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-279	5	6/26/96	8/07/96	8/12/96	0.0	406.1-Drainable Extruded an unmeasurable amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 310 mL of liquid. No organic layer was observed.
96-280	6	6/26/96	8/07/96	8/12/96	0.0	410.7-Drainable Extruded an unmeasurable amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 300 mL of liquid. No organic layer was observed.
96-281	7	6/26/96	8/06/96	8/12/96	0.0	402.6-Drainable Extruded an unmeasurable amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 295 mL of liquid. No organic layer was observed.
96-282	8	6/26/96	7/03/96	7/09/96	0.0	426.7-Drainable Extruded an unmeasurable amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 290 mL of liquid. No organic layer was observed.
96-283	9	6/26/96	7/02/96	7/08/96	0.0	428.8-Drainable Extruded an unmeasurable amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 300 mL of liquid. No organic layer was observed.
96-284	10	6/27/96	7/30/96	8/05/96	0.0	386.3-Drainable Extruded an unmeasurable amount of light gray solids that resembled a wet liquid. The liquid was green in color and opaque. Collected 299 mL of liquid. No organic layer was observed.

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Table 3. Sample Receipt and Extrusion Information for 241-AN-105, Core 153.

Container ID	Segment	Date Sampled	Date Received	Date Analyzed	Initial Extrusion	Final Extrusion	Uplift (meters)	Subject Area	Sample Description
96-285	11	6/27/96	7/02/96	7/08/96	0.0	420.0-Drainable	0.0	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 290 mL of liquid. No organic layer was observed.
96-286	12	6/27/96	7/02/96	7/08/96	0.0	407.2-Drainable	0.0	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 290 mL of liquid. No organic layer was observed.
96-287	13	6/27/96	7/03/96	7/09/96	0.0	431.4-Drainable	0.0	0.0	Extruded an unmeasurable amount of light gray solids that resembled a wet salt. The liquid was green in color and opaque. Collected 300 mL of liquid.
96-288	14	6/27/96	6/28/96	8/07/96	13.0	130.1-Drainable	248.6-Lower half		The solids were medium to dark gray in color and resembled a salt slurry. The liquid was green in color and opaque. Collected 100 mL of liquid. No organic layer was observed.
96-289	15	6/27/96	7/30/96	8/05/96	17.0	0.0	180.3-Upper half 199.1-Lower half		The solids were gray in color and resembled a salt slurry.
96-290	16	6/27/96	6/28/96	n/a	n/a	n/a	n/a		This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-291	17	6/28/96	8/09/96	8/14/96	19.0	0.0	204.2-Upper half 216.9-Lower half		The solids were blue-gray in color and resembled a wet salt.
96-292	18	6/28/96	6/28/96	n/a	n/a	n/a	n/a		This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-293	19	6/28/96	8/07/96	8/14/96	8.5	0.0	244.1-Lower half		The solids were dark gray in color and resembled a wet salt.
96-294	20	6/28/96	7/02/96	n/a	n/a	n/a	n/a		This segment was sampled using the Retained Gas Sampler and extruded by the Process Chemistry and Statistical Analysis Group. Extrusion information is not included in this report.
96-295	21	6/28/96	7/03/96	7/09/96	10.0	173.6-Drainable	202.5-Lower half		The solids were gray in color and resembled a salt slurry. The liquid was brown-gray in color and opaque. Collected 120 mL of liquid. No organic layer was observed.

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Table 3. Sample Receipt and Extrusion Information for 241-AN-105, Core 153.

Core ID	Segment	Date Sampled	Date Analyzed	Time Extruded	Time Sampled	Extruder No.	Extruder Temp. (°C)	Extruder Speed (g)	Extruder Temp. (°C)	Extruder Speed (g)	Notes
96-296	22	6/28/96	7/02/96	7:09:96	14.0	0.0	182.5-Upper half 74.8-Lower half	0.0			The upper ten inches of solids were gray color and resembled a salt slurry. The lower four inches of solids were black in color and resembled a sludge slurry.
Field Blank	FB	6/28/96	7/3/96	7:09:96	0.0	277.7-Drainable	0.0				The liquid was colorless and clear. Collected 290 mL of liquid

* Approximate inches Extruded

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Analytical Results Summary

Table 1 compiles the safety screening analytical results and applicable action limits associated with each subsample submitted.

Differential Scanning Calorimetry (DSC)

None of the samples submitted for DSC analysis exceeded notification limits as stated in the Safety Screening DQO (Dukelow, et al., 1995).

The DSC analyses were performed in duplicate on direct subsamples. The exothermic energy based on dry weight of subsample was calculated for all subsamples. The average of the TGA results for each subsample was used in the dry weight correction for that subsample. The standard recovery for this analysis was within the required limits.

The results for fifteen of the fifty-one subsamples were the sum of two or more exotherms. More information may be obtained by examining the raw data. The field blank result was 0.00 Joules/g.

Relative percent differences (RPD) greater than 20% were reported for nineteen of the fifty-one subsamples. The high RPDs can be attributed to the small exotherms and the heterogenous nature of the samples. Selected samples were reanalyzed. The results did not improve the quality control parameters. Thermograms for several samples showed small sharp peaks near 200°C which indicated an inhomogeneous distribution of a pure compound throughout the tank samples.

Thermogravimetric Analysis (TGA)

The TGA analyses were performed in duplicate on direct subsamples. The results for tank 241-U-106 were determined by summing the weight loss steps which occurred below 330°C; weight loss steps above this were not used to determine the result. More information may be obtained by examining the raw data.

The field blank resulted in a mean of 99.77% moisture. Relative percent differences (RPD) greater than 20% were reported for one of the fifty-one subsamples, sample S96T003748. The rerun resulted in a RPD of 0.3%. Several thermograms showed small sharp peaks. These were the result of instrument vibration and were not used in the calculation for the result. The standard recoveries and RPDs for this analysis were within the required limits.

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Density

Bulk density was performed on the solid subsamples as required by the TSAP (Eggers, 1996). The results of the bulk density test ranged from 1.52 g/mL to 1.67 g/mL. The highest bulk density of 1.67 g/mL was used to calculate the solid total alpha activity action limit for the tank.

Total alpha results for liquids do not require correction for density. The specific gravity results for the liquid samples will be reported in a revision to this document.

Total Alpha (AT)

The total alpha (AT) analyses were performed in duplicate on direct subsamples for the liquids. Solid subsamples were prepared for analysis by performing a fusion digest in duplicate. The fusion digest is indicated with an "F" in the aliquot class (A#) column in Table 1.

All liquid AT results were below the total alpha activity action limit of 61.5 $\mu\text{Ci/mL}$. All solid AT results were below the total alpha activity limit of 36.8 $\mu\text{Ci/g}$ (based on a bulk density of 1.67 g/mL). The field blank result was less than 1.75e-5 $\mu\text{Ci/mL}$. A high RPD was reported for two of the forty subsamples submitted for analyses. The sample results were near the detection limit which decreased the precision of the analyses. No rerun was requested due to the low alpha activity in the samples. The standard recoveries for this analysis were within the required limits.

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Procedures

Table 4 lists the analytical procedures used for performing the sample analyses. Abbreviations for analyses are defined in the table notes.

Table 4. Analytical Procedures

Analysis	Sample Portion	Preparation Procedure +	Analysis Procedure
DSC	Solid/Liquid	N/A	LA-514-113, Rev. C-1 LA-514-114, Rev. C-1
TGA	Solid/Liquid	N/A	LA-514-114, Rev. C-1 LA-560-112, Rev. B-1
AT	Solid Liquid	LA-549-141, Rev. F-0 N/A	LA-508-101, Rev. D-2
Bulk Density	Solid	N/A	LO-160-103, Rev. B-0

Notes:

+ = preparation procedure is for fusion digest on solid

Abbreviations:

N/A = not applicable (these are direct samples)

DSC = differential scanning calorimetry

TGA = thermogravimetric analysis

AT = total alpha activity

References

Eggers, R. F., 1996, *Tank 241-AN-105 Push Mode Core Sampling and Analysis Plan*, WHC-SD-WM-TSAP-027, Rev. 1, Westinghouse Hanford Company, Richland, WA 99352.

Dukelow, G. T., J. W. Hunt, H. Babad, and J. E. Meacham, 1995, *Tank Safety Screening Data Quality Objective*, WHC-SD-WM-SP-004, Rev. 2, Westinghouse Hanford Company, Richland, WA 99352

WHC-SD-WM-DP-199, REV. 0

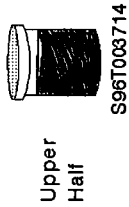
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SAMPLE BREAKDOWNS**

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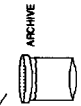
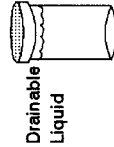
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Seg: 1
S96T003481

Attachment 1
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13

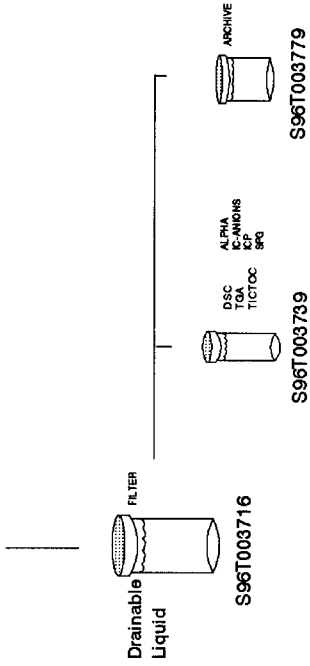


FILTER



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Seg: 2
S96T003482

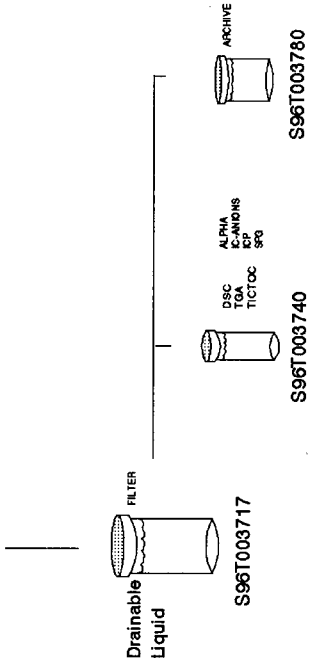
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WHC-SD-WM-DP-199, REV. 0

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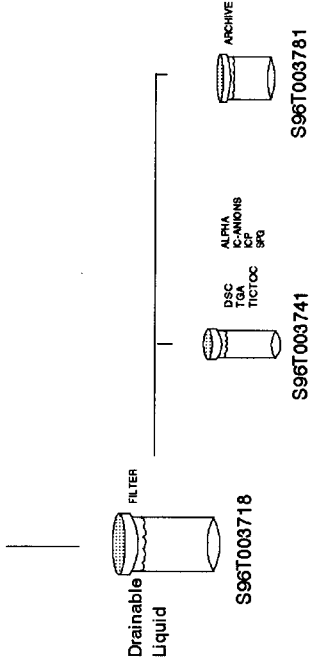
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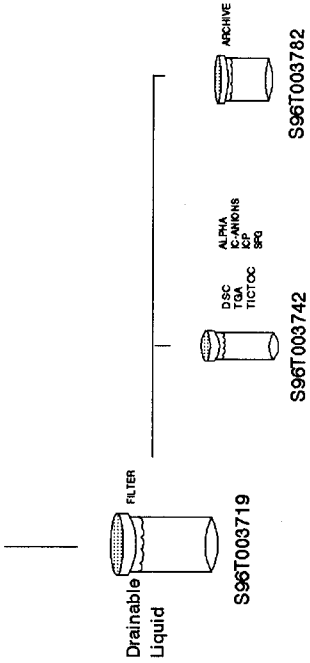
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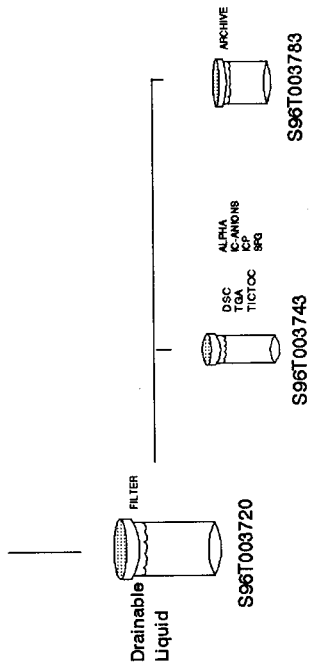
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S96T003492

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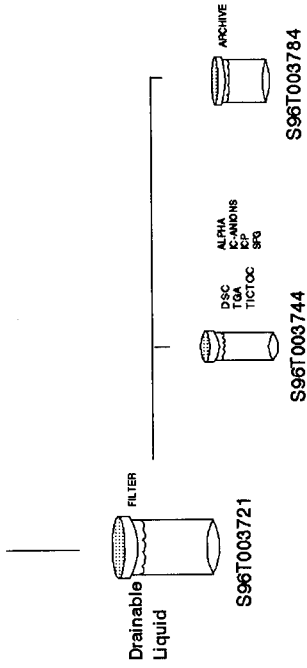
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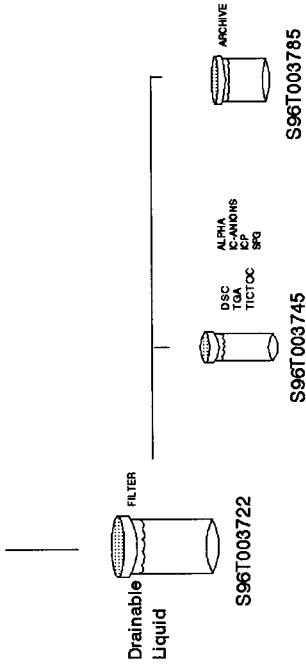
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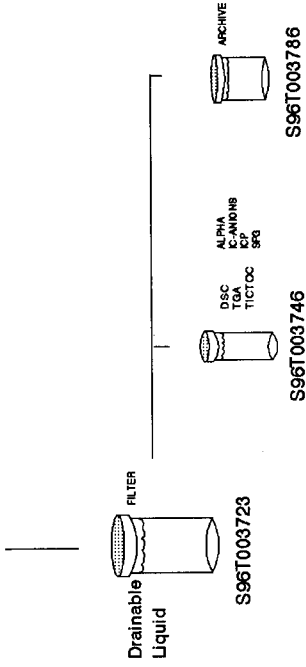
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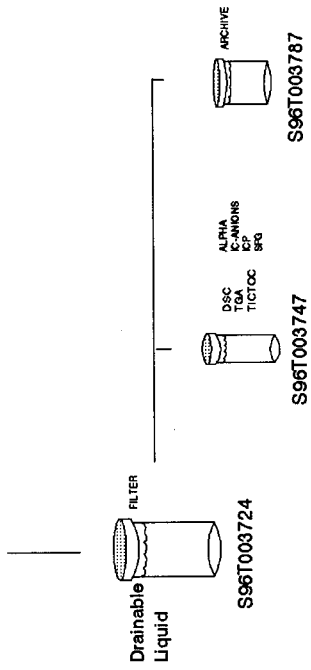
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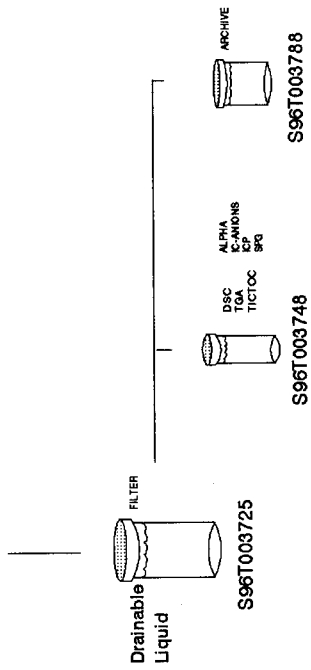
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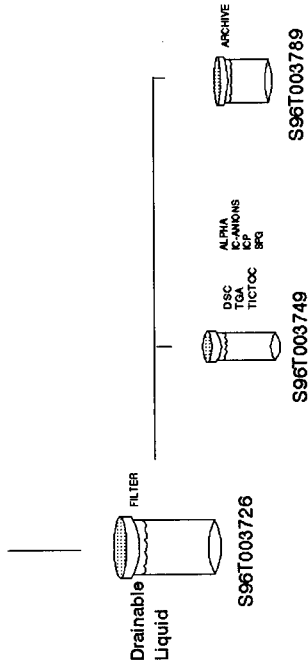
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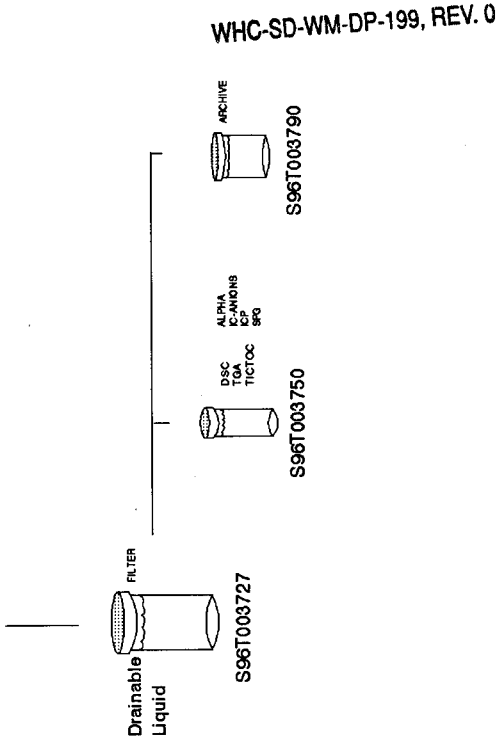
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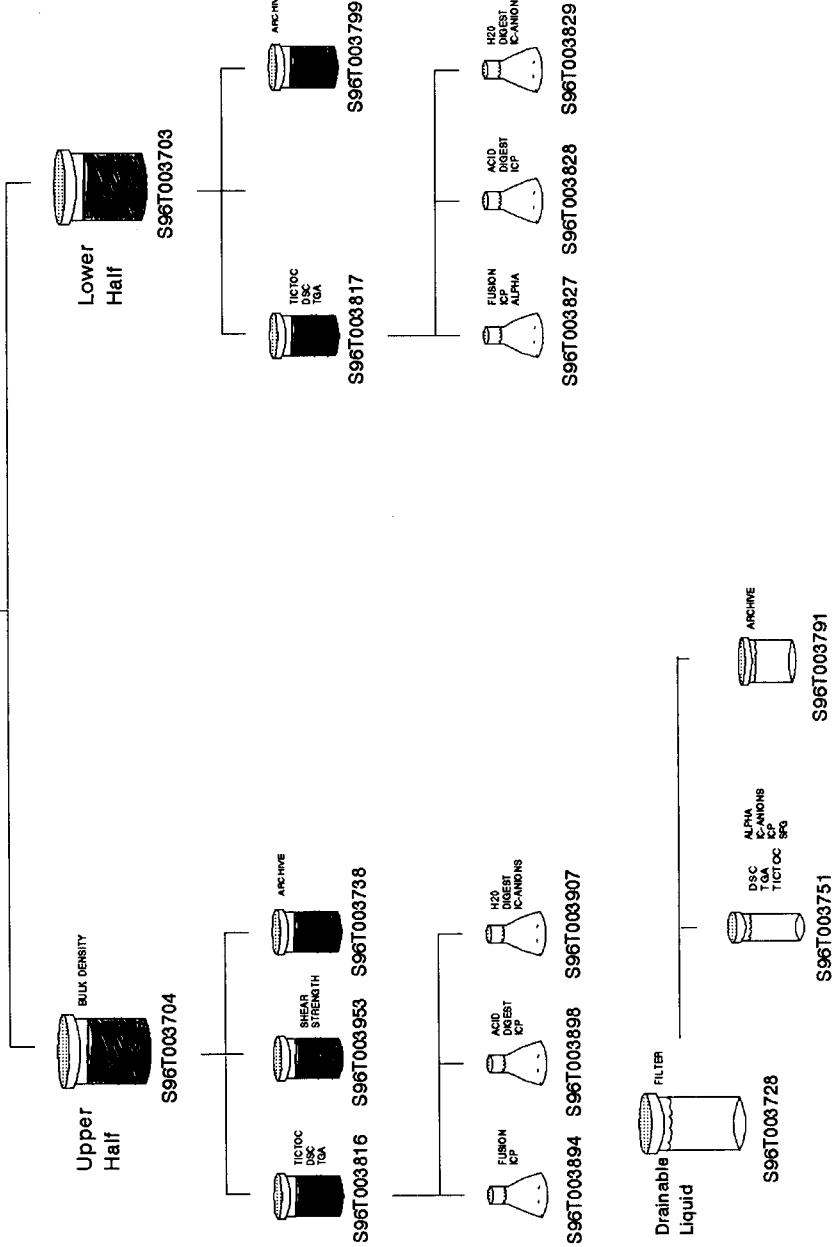
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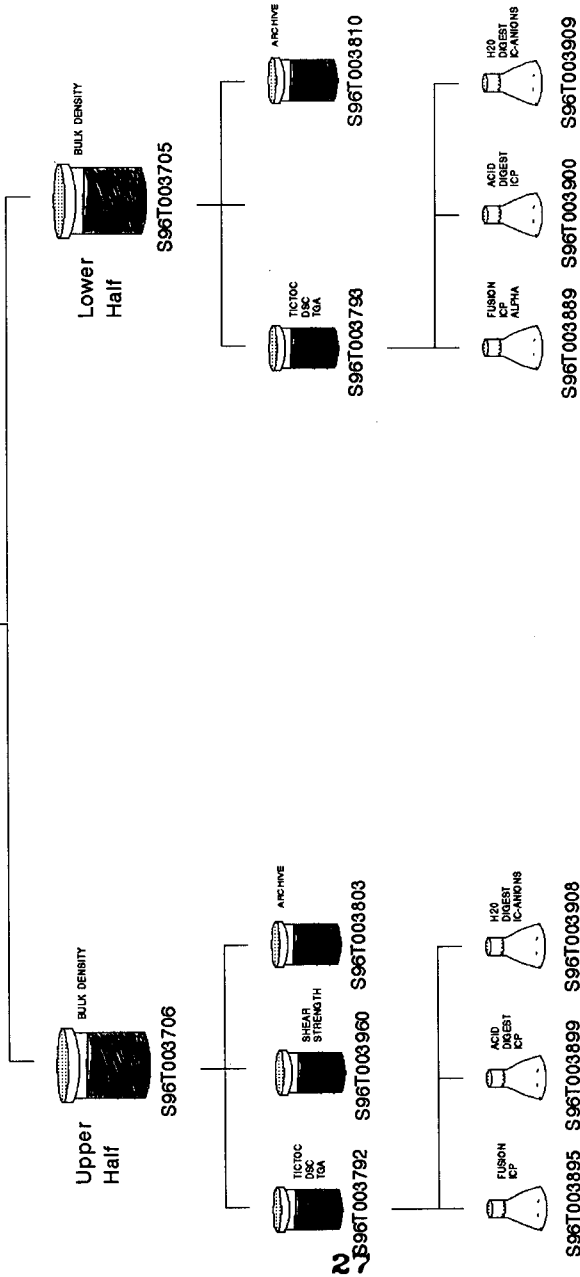
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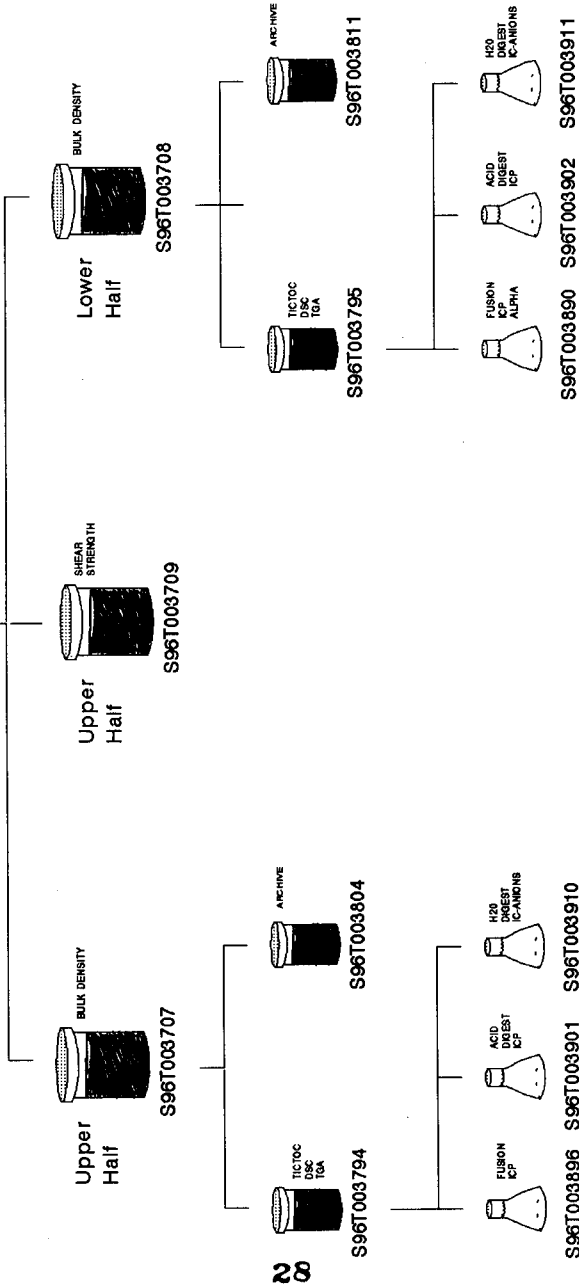
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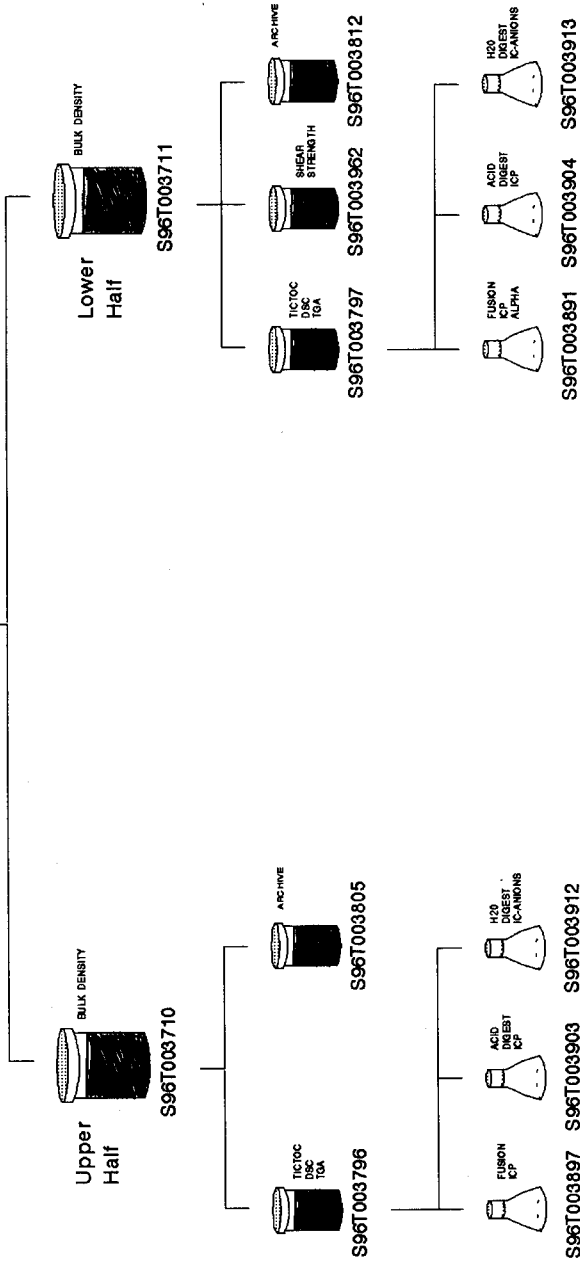


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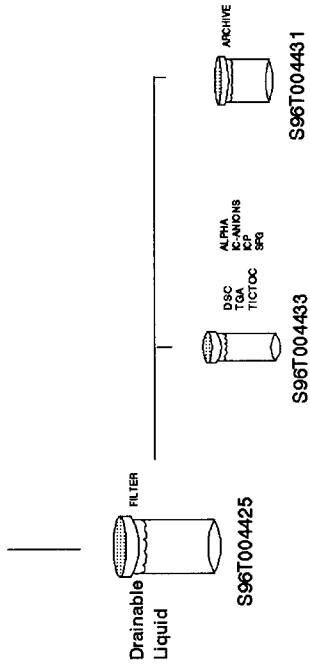
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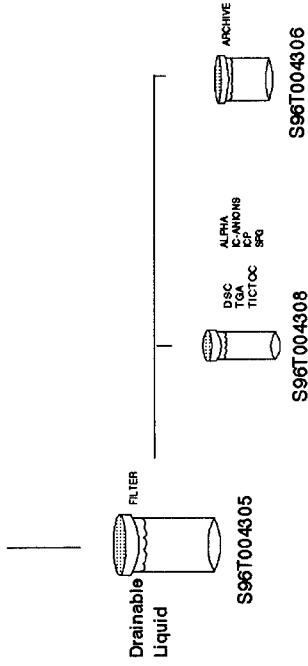
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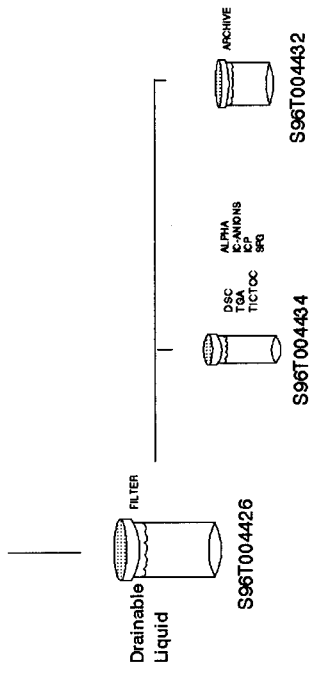
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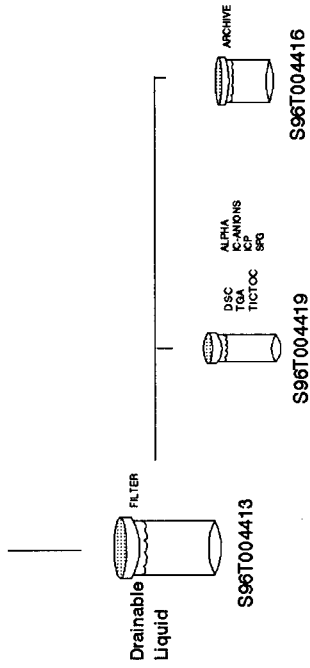
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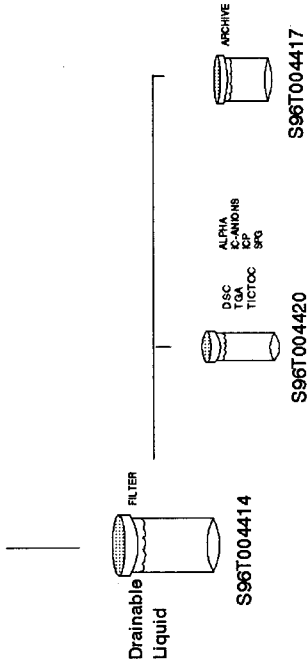
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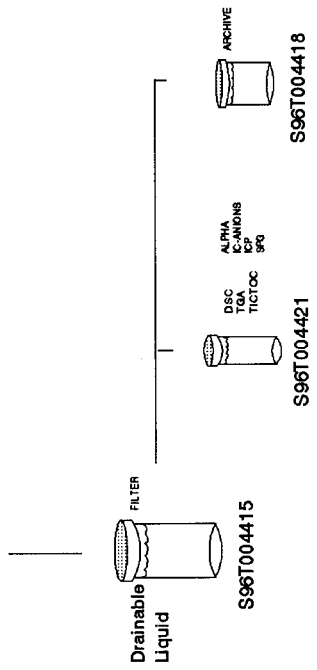
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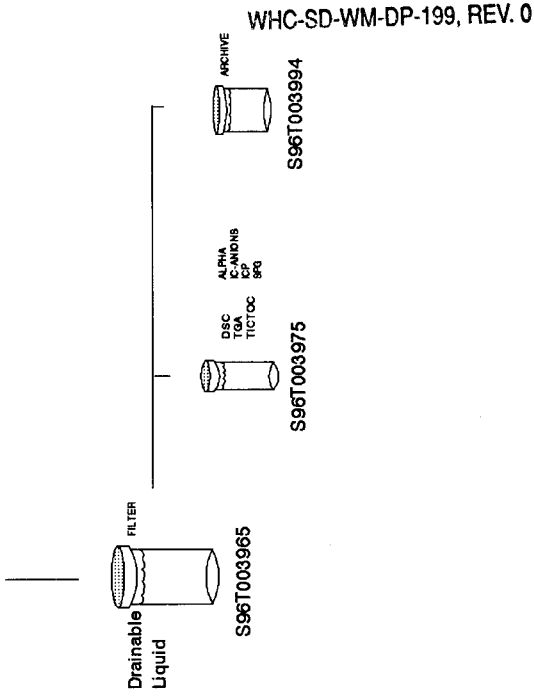
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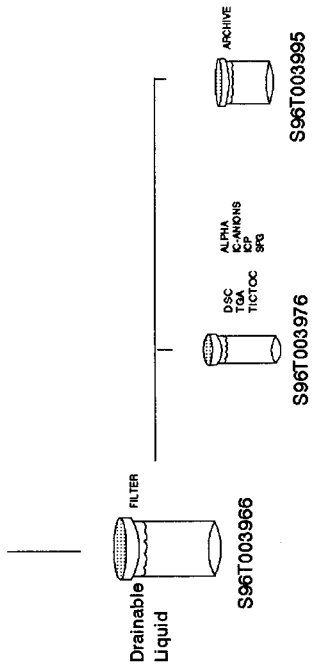
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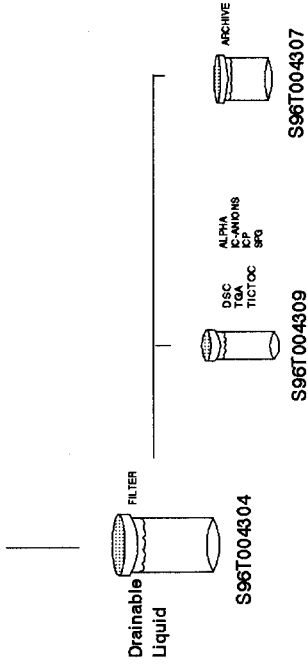
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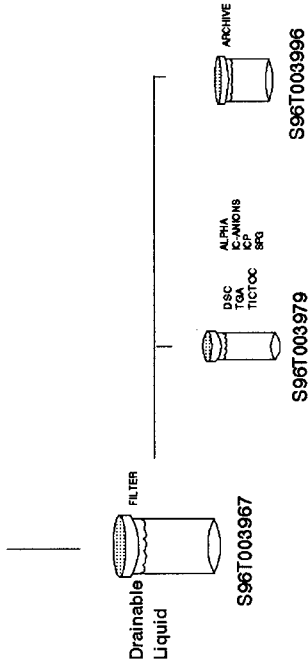
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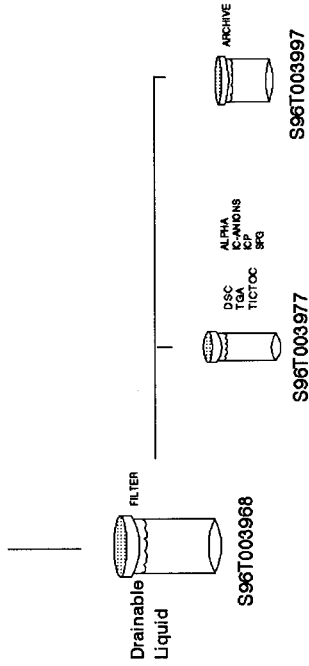
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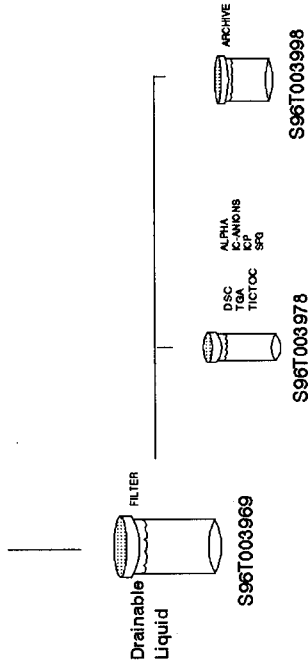
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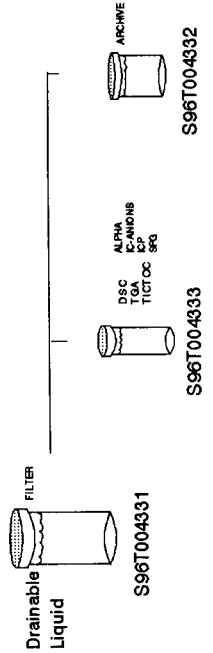
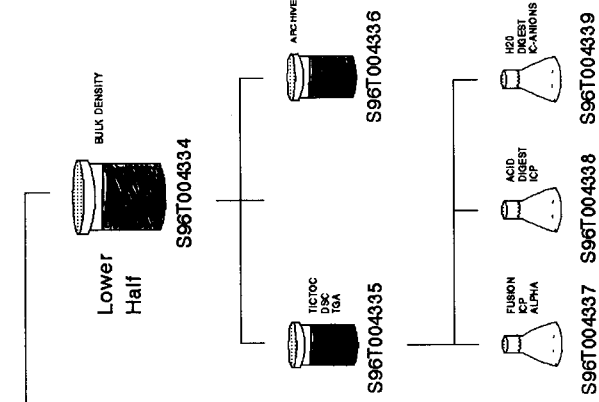
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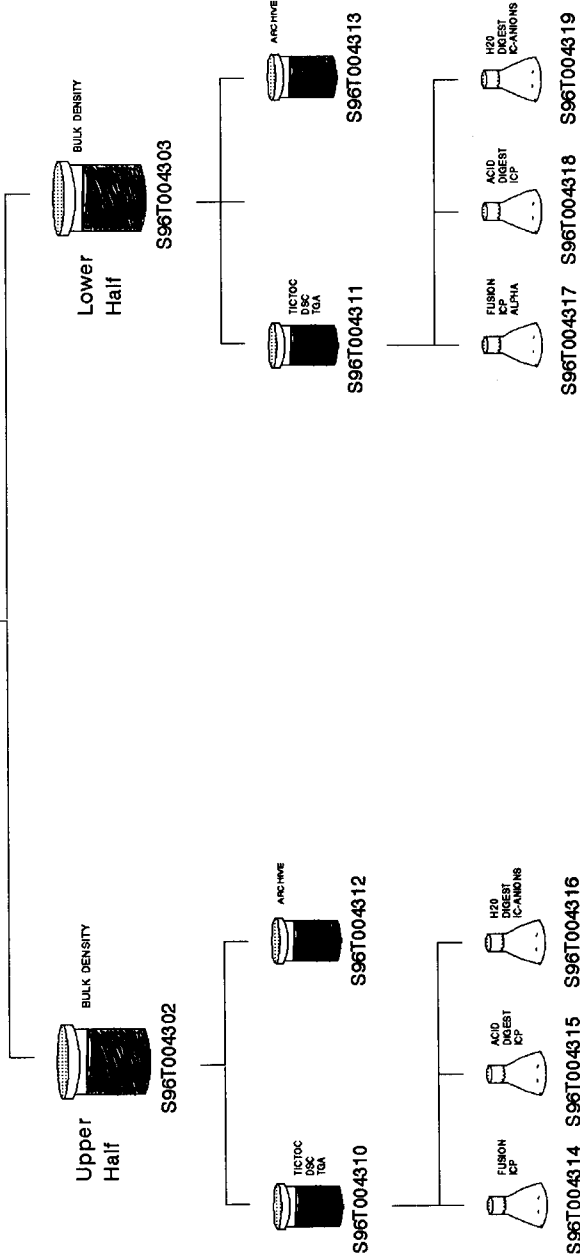


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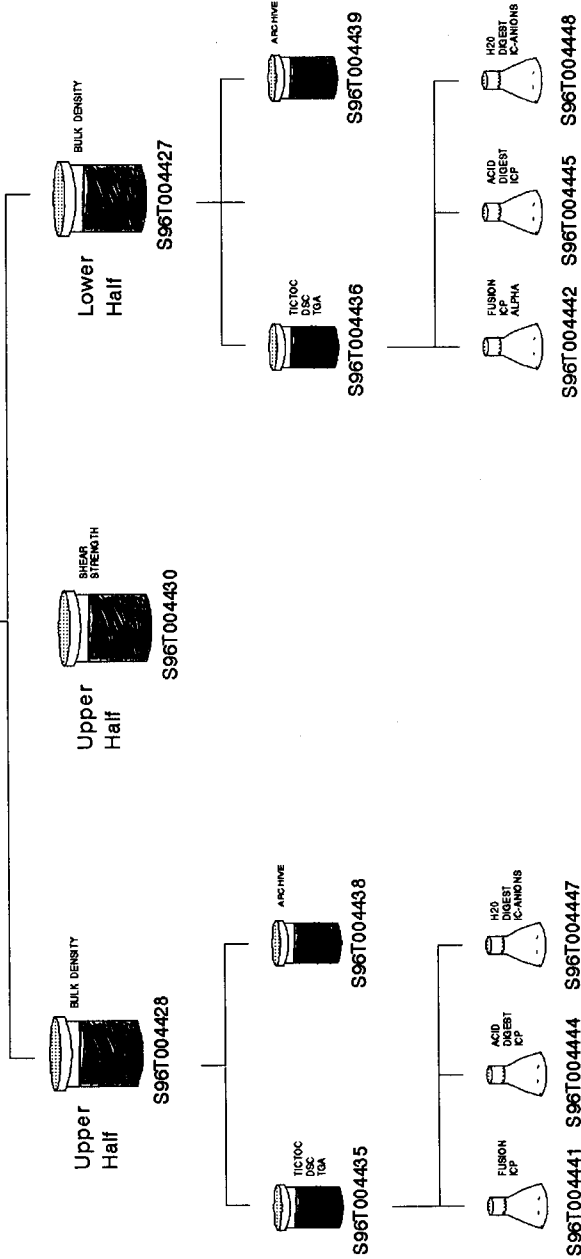




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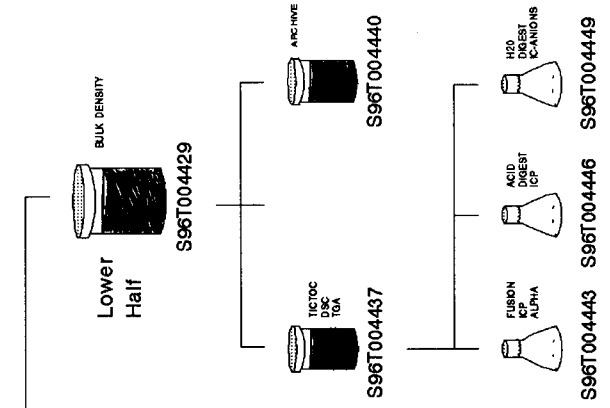
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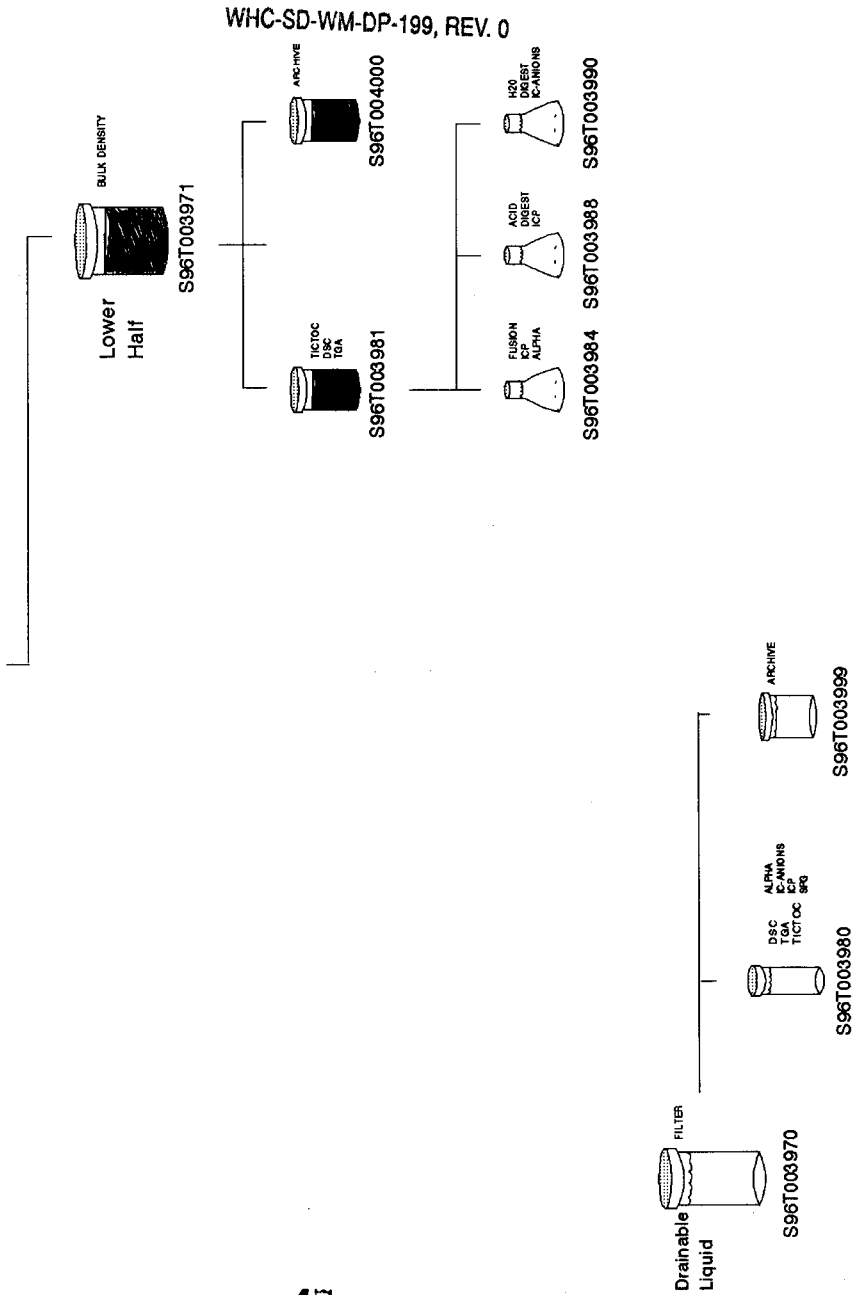


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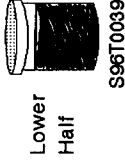
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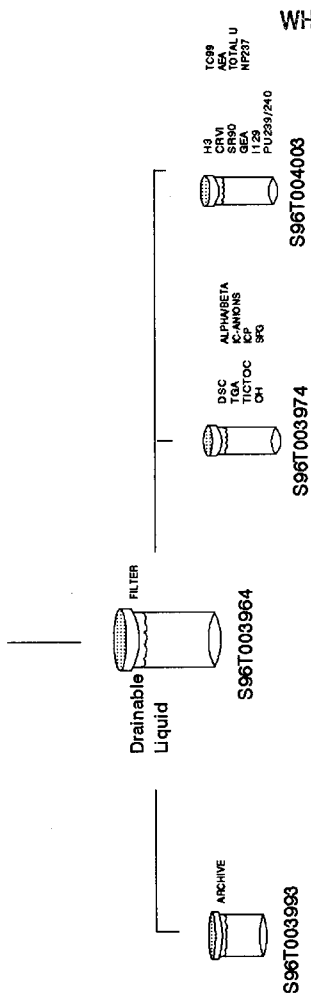
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Seg: 22
S96T003630

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AN-105
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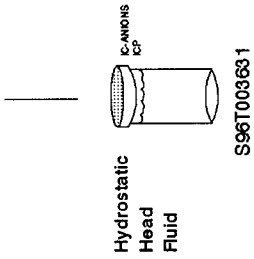


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Seg: HHF
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Attachment 1
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WHC-SD-WM-DP-199, REV. 0



WHC-SD-WM-DP-199, REV. 0

SAMPLE DATA SUMMARY

WHC-SD-WM-DP-199, REV. 0

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INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 1

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S961003714		Bulk Density of Sample	g/mL	None	None	n/a	1.520	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S961003731		DSC Exotherm using Mettler	Joules/g	-1.0e+03	84.38	n/a	5.000	7.300	6.150	37.4	n/a	n/a	n/a	n/a
S961003731		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	84.38	n/a	8.894	13.000	10.95	37.6	n/a	n/a	n/a	n/a
S961003731		% Water by IGA using Mettler	%	None	None	n/a	46.268	40.81	43.75	13.4	n/a	n/a	n/a	n/a
S961003693	F	Alpha of Digested Solid	uCi/g	-1.0e+03	84.38	<1.46e-02	<1.42e-02	<2.28E-2	n/a	n/a	74.65	3.70e-02	5.00E+02	

Drainable Liquids: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S961003732		DSC Exotherm using Mettler	Joules/g	-1.0e+03	98.77	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003732		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	98.77	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003732		% Water by IGA using Mettler	%	None	98.77	n/a	49.57	51.74	50.66	4.28	n/a	n/a	n/a	n/a
S961003732		Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.58	112.5	<2.28e-02	2.23e-02	n/a	n/a	103.1	2.70e-02	1.55E+02	

=> Limit Violated
=> Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 2

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
SS61003739		DSC Exotherm using Mettler	Joules/g	-1.0e+03	98.77	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
SS61003739		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
SS61003739		% Water by IGA using Mettler	%	None	99.73	n/a	50.20	50.57	50.39	0.73	n/a	n/a	n/a	n/a
SS61003739		Alpha in Liquid Samples	uCi/mL	-1.0e+03	112.5	<1.75e-02	<2.47e-02	<2.72E-2	n/a	n/a	n/a	2.70e-02	2.77E+02	n/a

=> Limit violated
=> Selected Limit

INTERIM

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 3

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyse	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S961003740		DSC Exotherm using Mettler	Joules/g	-1.0e+03	250.3	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003740		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	430.3	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003740		% Water by IGA on Perkin Elmer:	%	None	99.27	n/a	50.43	49.69	50.06	1.48	n/a	n/a	n/a	n/a
S961003740		Alpha in Liquid Samples	uCi/mL	-1.0e+03	83.58	<1.73e-02	<1.65e+02	4.33e-02	n/a	n/a	n/a	2.70e-02	2.77E+02	

⇒ Limit violated
⇒ Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 4

SEGMENT PORTION: Drainable Liquid

Sample#	RI#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det Limit	Count	Err%
				Lower	Upper								
S96T003741		DSC Exotherm using Mettler	Joules/g	-1.0e+03	80.88	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S96T003741		DSC Exotherm DRY Calculated	Joules/g DRY	-1.0e+03	80.88	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a
S96T003741		% Water by TGA on Perkin Elmer	%	None	None	n/a	50.12	50.83	50.47	n/a	n/a	n/a	n/a
S96T003741		Alpha In Liquid Samples	uCi/mL	-1.0e+03	81.58	112.5	<2.28e-02	<2.47E-2	n/a	n/a	n/a	2.70e-02	5.00E+02

=> Limit violated
=> Selected limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 5

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S961003742		DSC Exotherm using Mettler	Joules/g	-1.0e+03	282.3	97.01	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003742		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	482.8	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003742		% Water by TGA using Mettler	%	None	None	99.76	n/a	50.50	50.85	50.67	0.69	n/a	n/a	n/a	n/a
S961003742		Alpha in Liquid Samples	UCI/mL	-1.0e+03	51.58	112.5	<1.73e-02	<1.65e-02	<2.28E-2	n/a	n/a	n/a	2.70e-02	5.00E+02	5.00E+02

=> Limit Violated
=> Selected Limit

WHC-SD-WM-DP-199, REV. U

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 6

SEGMENT PORTION: Drainable Liquid

Sample#	R #/# Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
			Lower	Upper										
S961003743	DSC Exotherm using Mettler	Joules/g	-1.0e+03	432.0	97.01	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003743	DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	432.0	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003743	% Water by IGA using Mettler	%	None	None	99.76	n/a	50.07	50.40	50.23	0.66	n/a	n/a	n/a	n/a
S961003743	Alpha in Liquid Samples	UG/ML	-1.0e+03	61.30	100.0	<3.04e-02	<2.44e-02	<4.23E-2	n/a	n/a	86.35	3.70e-02	5.00E+02	5.00E+02

⇒ Limit violated
⇒ Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 7

SEGMENT PORTION: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det. Limit	Count Err%
				Lower	Upper									
S961003744		DSC Exotherm using Mettler	Joules/g	-1.0e+03	438.8	97.72	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S961003744		DSC Exotherm Dry Calculated	Joules/g DTY	-1.0e+03	438.8	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S961003744		% Water by TGA using Mettler	%	None	None	99.78	n/a	50.91	50.37	50.64	1.07	n/a	n/a	n/a
S961003744		Alpha In Liquid Samples	UCI/mL	-1.0e+03	438.8	100.0	<3.04e-02	1.76e-02	<2.15E-2	n/a	n/a	n/a	3.70e-02	1.26E+02

⇒ Limit violated
⇒ Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AH-105

CORE NUMBER: 152
SEGMENT #: 8

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyse	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper								
S961003745		DSC Exotherm using Mettler	Joules/g	-1.0e+03	418.38	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S961003745		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	418.38	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S961003745		% Water by IGA Using Mettler	%	None	99.78	n/a	50.42	52.16	51.29	3.39	n/a	n/a	n/a
S961003745		Alpha in Liquid Samples	uCi/mL	-1.0e+03	41.508	<3.04e-02	<2.44e-02	<2.74E-2	n/a	n/a	n/a	3.70e-02	5.00E+02

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-199, REV. 0

CORE NUMBER: 152
SEGMENT #: 9

Table 1. Data Summary Results
AN-105

Sample#		R. # Analyte		Unit		Action Limits		Standard %		Blank		Result		Duplicate		Average		RPD %		Spk Rec %		Det Limit		Count Err%	
				Joules/g		Lower Upper																			
S961003746		DSC Exotherm using Mettler				-1.0e+03	2.0e+03	94.20	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S961003746		DSC Exotherm Dry	Calculated	Joules/g	Dry	-1.0e+03	2.0e+03	n/a	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S961003746		% Water by TGA on Perkin Elmer		%		None	None	99.51	n/a	n/a	50.80	50.80	50.03	50.03	50.41	50.41	1.53	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S961003746		Alpha In. Liquid Samples		uCi/mL		-1.0e+03	2.0e+03	100.0	<3.04e-02	<2.74e-02	<2.74e-02	<2.74e-02	<2.74E-2	<2.74E-2	<2.74E-2	<2.74E-2	n/a	n/a	n/a	n/a	n/a	3.70e-02	5.00E+02	5.00E+02	5.00E+02

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 10

SEGMENT PORTION: Drainable Liquid

Sample#	R. #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
				Lower	Upper									
S261003747		DSC Exotherm using Mettler	Joules/g	-1.0e+03	200.00	94.20	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S261003747		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	400.00	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a
S261003747		% Water by TGA on Perkin Elmer	%	None	None	99.51	n/a	50.12	49.66	49.89	0.92	n/a	n/a	n/a
S261003747		Alpha in Liquid Samples	uCi/mL	-1.0e+03	3.33E-02	100.01	<3.04e-02	<3.33e-02	<1.52E-2	n/a	n/a	n/a	3.70e-02	5.00E+02

⇒ Limit violated
⇒ Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 11

SEGMENT PORTION: Drainable Liquid

Sample#	R#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD, %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S961003748		DSC Exotherm using Mettler	Joules/g	-1.0e+03	2.5E+3	100.9	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003748		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	3.0E+3	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003748		% Water by IGA using Mettler	%	None	None	98.90	n/a	49.75	30.12	39.94	49.2	n/a	n/a	n/a	n/a
S961003748	1	% Water by IGA using Mettler	%	None	None	98.09	n/a	50.33	50.65	50.58	0.30	n/a	n/a	n/a	n/a
S961003748		Alpha in Liquid Samples	UCI/mL	-1.0e+03	2.5E+3	95.75	<5.59e-02	<5.59e-02	<8.27E-2	n/a	n/a	122.3	9.70e-02	5.00E+02	5.00E+02

⇒ Limit violated
⇒ Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

INTERIM

Table 1. Data Summary Report
AN-105

CORE NUMBER: 152
SEGMENT #: 12

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S96T003749	1	DSC Exotherm DRY	Joules/g DRY	-1.0e+03	41.8	n/a	85.70	131.0	108.3	41.8	n/a	n/a	n/a	
S96T003749		DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	41.8	n/a	42.60	64.90	53.75	41.5	n/a	n/a	n/a	
S96T003749		% Water by IGA using Mettler	%	None	None	n/a	50.07	50.46	50.27	0.78	n/a	n/a	n/a	
S96T003749		Alpha in Liquid Samples	uCi/mL	-1.0e+03	41.8	<5.59E-02	<5.59E-02	<5.59E-2	n/a	n/a	n/a	9.70E-02	5.00E+02	

⇒ Limit violated
⇒ Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 13

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD, %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S961003750		DSC Exotherm using Mettler	Joules/g	-1.0e+03	482.33	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003750		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	482.33	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003750		% Water by IGA on Perkin Elmer	%	None	None	n/a	48.76	50.22	49.49	2.95	n/a	n/a	n/a	n/a
S961003750		Alpha in Liquid Samples	uCi/mL	-1.0e+03	87.333	<5.39E-02	<3.85E-02	<4.68E-2	n/a	n/a	n/a	9.70E-02	5.00E+02	

⇒ Limit violated
⇒ Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 14

SEGMENT PORTION: U Upper Half of Segment

Sample#	R/A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk. Rec. %	Det Limit	Count	Err% Count
				Lower	Upper										
S96T003704		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.530	n/a	n/a	n/a	5.00e-01	n/a	n/a	
S96T003816		DSC Exotherm using Mettler	Joules/g	-1.0e+03	439.3	98.77	n/a	28.40	24.20	26.30	16.0	n/a	n/a	n/a	
S96T003816		DSC Exotherm Dry, Calculated	Joules/g	-1.0e+03	439.3	n/a	n/a	53.50	45.60	49.55	15.9	n/a	n/a	n/a	
S96T003816		% Water by TGA using Mettler	%	None	None	99.51	n/a	47.82	46.02	46.92	3.84	n/a	n/a	n/a	

L Lower Half of Segment: L Lower Half of Segment

Sample#	R/A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk. Rec. %	Det Limit	Count	Err% Count
				Lower	Upper										
S96T003817		DSC Exotherm using Mettler	Joules/g	-1.0e+03	439.3	96.31	n/a	16.19	7.600	11.85	71.7	n/a	n/a	n/a	
S96T003817		DSC Exotherm Dry, Calculated	Joules/g	-1.0e+03	439.3	n/a	n/a	28.99	13.70	21.30	71.4	n/a	n/a	n/a	
S96T003817		% Water by TGA using Mettler	%	None	None	99.48	n/a	44.82	43.89	44.36	2.10	n/a	n/a	n/a	
S96T003827	F	Alpha of Digested Solid	uCi/g	-1.0e+03	1.008	86.38	<1.46e-02	<2.67e-02	<1.52E-2	n/a	n/a	n/a	3.70e-02	5.00E+02	

Drainable Liquid: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk. Rec. %	Det Limit	Count	Err% Count
				Lower	Upper										
S96T003751		DSC Exotherm using Mettler	Joules/g	-1.0e+03	439.3	102.65	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	
S96T003751		DSC Exotherm Dry, Calculated	Joules/g	-1.0e+03	439.3	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	
S96T003751		% Water by TGA on Perkin Elmer	%	None	None	99.31	n/a	51.31	50.95	51.13	0.70	n/a	n/a	n/a	
S96T003751		Alpha in Liquid Samples	uCi/mL	-3.0e+03	83.36	98.75	<5.59e-02	<7.97e-02	<6.49E-2	n/a	n/a	n/a	9.70e-02	5.00E+02	

=> Limit Violated
=> Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 16

SEGMENT PORTION: U Upper Half of Segment

Sample#	R.#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD, % Spk Rec. %	Det Limit	Count Err%
				Lower	Upper							
S961003706		Bulk Density of Sample	g/ml	None	None	n/a	1.590	n/a	n/a	n/a	5.00e-01	n/a
S961003709		DSC Exotherm using Mettler	Joules/g	-1.0e+03	438.38	n/a	24.30	37.70	31.00	43.2	n/a	n/a
S961003792		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	438.38	n/a	43.40	67.30	55.35	43.2	n/a	n/a
S961003792		% Water By TGA using Mettler	%	None	None	n/a	44.33	43.63	43.97	1.55	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R.#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD, % Spk Rec. %	Det Limit	Count Err%
				Lower	Upper							
S961003705		Bulk Density of Sample	g/ml	None	None	n/a	1.580	n/a	n/a	n/a	5.00e-01	n/a
S961003792		DSC Exotherm using Mettler	Joules/g	-1.0e+03	438.38	n/a	27.20	28.00	27.60	2.90	n/a	n/a
S961003792		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	438.38	n/a	48.00	49.40	48.70	2.87	n/a	n/a
S961003793		% Water By TGA using Mettler	%	None	None	n/a	42.04	44.58	43.31	5.86	n/a	n/a
S961003889	F	Alpha of Digested Solid	uc1/g	-1.0e+03	43.88	37.65	<3.18e-02	<2.43E-2	n/a	n/a	85.24	4.70e-02

⇒ Limit violated
⇒ Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

18-sep-1996 11:56:57
A-0002-3

CORE NUMBER: 152
SEGMENT #: 18

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S961003707		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.660	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S961003794		DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.38	104.4	n/a	26.50	24.30	25.40	8.66	n/a	n/a	n/a	n/a
S961003794		DSC Exotherm DRY Calculated	Joules/g DRY	-1.0e+03	486.38	n/a	n/a	46.90	43.00	44.95	8.68	n/a	n/a	n/a	n/a
S961003794		% Water by TGA using Mettler	%	None	None	100.9	n/a	42.44	44.41	43.44	4.49	n/a	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S961003708		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.448	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S961003795		DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.38	104.4	n/a	30.76	32.70	31.70	6.31	n/a	n/a	n/a	n/a
S961003795		DSC Exotherm DRY Calculated	Joules/g DRY	-1.0e+03	486.38	n/a	n/a	55.48	59.00	57.20	6.29	n/a	n/a	n/a	n/a
S961003795		% Water by TGA using Mettler	%	None	None	100.9	n/a	43.23	45.83	44.53	5.84	n/a	n/a	n/a	n/a
S961003890	F	Alpha of Digested Solid	uCi/g	-1.0e+03	21.808	97.66	±2.72e-02	<-1.99e-02	<-1.92E-2	n/a	n/a	n/a	4.80e-02	5.00E+02	5.00E+02

⇒ Limit Violated
⇒ Selected Limit

WHC-SD-WM-DP-199, REV. 0

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 20

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S96T003710		Bulk Density of Sample	g/mL	None	None	n/a	1.580	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T003796		DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.38	n/a	38.50	39.70	39.10	3.07	n/a	n/a	n/a	n/a
S96T003796		DSC Exotherm DRY Calculated	Joules/g DRY	-1.0e+03	486.38	n/a	70.88	73.00	71.90	3.06	n/a	n/a	n/a	n/a
S96T003796		% Water by TGA using Mettler	%	None	None	n/a	45.33	46.04	45.59	1.95	n/a	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S96T003711		Bulk Density of Sample	g/mL	None	None	n/a	3.208	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T003797		DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.38	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T003797		DSC Exotherm DRY Calculated	Joules/g DRY	-1.0e+03	486.38	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T003797		% Water by TGA using Mettler	%	None	None	n/a	36.14	39.33	37.73	8.45	n/a	n/a	n/a	n/a
S96T003891	F	Alpha of Digested Solid	uCi/g	-1.0e+03	41.08	31.80e-03	7.22e-03	7.75e-03	7.49e-03	7.08	84.12	4.00e-03	5.54E+01	n/a

=> Limit violated
=> Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 152
SEGMENT #: 22

SEGMENT PORTION: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det. Limit	Count	Err%
				Lower	Upper										
S961003712		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.840	n/a	n/a	n/a	n/a	5.00e-01	n/a	n/a
S961003798		DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.8	98.77	n/a	59.00	73.00	66.00	21.2	n/a	n/a	n/a	n/a
S961003798		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	486.8	n/a	n/a	98.10	121.0	109.5	20.9	n/a	n/a	n/a	n/a
S961003798		% Water by IGA using Mettler	%	None	None	99.51	n/a	33.88	40.86	39.87	4.97	n/a	n/a	n/a	n/a
S961003892	F	Alpha of Digested Solid	UC1/g	-1.0e+03	308	110.2	<1.80e-03	1.40e+02	1.14e-02	1.27e-02	20.5	n/a	5.00e-03	3.65E+01	

=> Limit violated
=> Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 1

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det. Limit	Count Err%
				Lower	Upper							
S961004433		DSC Exotherm Dry	Joules/g Dry	-1.0e+03	486.38	n/a	25.20	51.50	28.35	n/a	n/a	n/a
S961004433		DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	486.38	n/a	12.70	15.90	14.30	n/a	n/a	n/a
S961004433		% Water by TGA on Perkin Elmer	%	None	99.11	n/a	49.73	49.30	49.50	n/a	n/a	n/a
S961004433		Alpha Tin Liquid Samples	UCI/mL	-1.0e+03	81.388	<2.20e-02	<2.53e+02	<2.86E-2	n/a	n/a	3.80e-02	5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

18-sep-1996 11:58:06
A-0002-3

CORE NUMBER: 153
SEGMENT #: 2

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD % Spk Rec %	Det. Limit	Count	Err%
				Lower	Upper									
S961004308		DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.38	94.55	n/a	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961004308		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	486.38	n/a	n/a	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961004308		% Water by IGA using Mettler	%	None	41.388	98.72	n/a	50.38	50.23	50.30	n/a	n/a	n/a	n/a
S961004308		Alpha In Liquid Samples	UCI/mL	-1.0e+03	41.388	95.31	1.10e-02	<1.36e-02	<7.10E-3	n/a	87.74	1.80e-02	5.00E+02	n/a

=> Limit Violated
=> Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

18-sep-1996 11:58:08
A-0002-3

CORE NUMBER: 153
SEGMENT #: 3

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det. Limit	Count	Err%
				Lower	Upper									
S96T004434		DSC Exotherm using Mettler	Joules/g	-1.0e+03	888.38	n/a	16.80	19.90	18.35	16.9	n/a	n/a	n/a	n/a
S96T004434		DSC Exotherm DRY Calculated	Joules/g DRY	-1.0e+03	888.38	n/a	34.50	40.80	37.65	16.7	n/a	n/a	n/a	n/a
S96T004434		% Water by TGA using Mettler	%	None	None	n/a	51.0%	51.41	51.24	0.66	n/a	n/a	n/a	n/a
S96T004434		Alpha In Liquid Samples	uCi/mL	-1.0e+03	81.38	<2.20e-02	<1.54e+02	<1.87E-2	n/a	n/a	n/a	3.80e-02	5.00E+02	n/a

=> Limit Violated
=> Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 5

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	Rpb %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S96T004419		DSC Exotherm using Mettler	Jouless/g	-1.0e+03	58.33	n/a	18.00	205.2	111.6	168	n/a	n/a	n/a	n/a
S96T004419		DSC Exotherm DRY Calculated	Jouless/g Dry	-1.0e+03	58.33	n/a	36.40	414.0	225.2	168	n/a	n/a	n/a	n/a
S96T004419	1	DSC Exotherm DRY Calculated	Jouless/g Dry	-1.0e+03	58.33	n/a	0.00e+00	29.30	16.65	200	n/a	n/a	n/a	n/a
S96T004419	1	DSC Exotherm on Perkin Elmer	Jouless/g	-1.0e+03	58.33	n/a	0.00e+00	14.53	7.265	200	n/a	n/a	n/a	n/a
S96T004419		% Water by TGA using Mettler	%	None	None	n/a	58.41	50.54	50.47	0.26	n/a	n/a	n/a	n/a
S96T004419		Alpha in Liquid Samples	uCi/mL	-1.0e+03	81.58	<2.20e-02	<1.54e-02	31.87E-2	n/a	n/a	n/a	3.80e-02	5	5.00e+02

⇒ Limit Violated
⇒ Selected Limit

Table 1. Data Summary Results
AM-105

CORE NUMBER: 153
SEGMENT #: 6

SEGMENT PORTION: Drainable Liquid

Sample#	R A#	Analyte	Unit	Action Limits		Upper Standard %	Blank	Result	Duplicate	Average	Rpb % Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S96T004420		DSC Exotherm using Mettler	Joules/g	-1.0e-03	99.47	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T004420		DSC Exotherm DRY Calculated	Joules/g Dry	-1.0e-03	100.0	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T004420		% Water by TGA using Mettler	%	None	91.41	<2.20e-02	50.10	51.00	50.55	1.78	n/a	n/a	n/a	n/a
S96T004420		Alpha in Liquid Samples	UCI/mL	-1.0e-03	91.41	<2.20e-02	<1.54e-02	<1.54E-2	<1.54E-2	n/a	n/a	3.80e-02	5	5.00E+02

⇒ Limit violated
⇒ Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 7

SEGMENT PORTION: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det. Limit	Count Err%
				Lower	Upper									
S96T094421		DSC Exotherm Dry, Calculated	Joules/g Dry	-1.0e+03	498.38	n/a	n/a	0.00e+00	69.00	34.50	200	n/a	n/a	
S96T094421		DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	438.38	98.49	n/a	0.00e+00	34.34	17.27	200	n/a	n/a	
S96T094421		% Water by TGA on Perkin Elmer	%	None	49.93	99.11	n/a	49.93	49.97	49.95	0.08	n/a	n/a	
S96T094421		Alpha in Liquid Samples	uCi/mL	-1.0e+03	43.98	80.47	<1.42e-02	<1.42e-02	<1.42E-2	n/a	n/a	77.44	3.60e-02	5.00E+02

=> Limit Violated
=> Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 8

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S96T003975		DSC Exotherm using Mettler	Joules/g	-1.0e+03	433.38	96.31	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T003975		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	433.38	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T003975		% Water by TGA using Mettler	%	None	None	99.48	n/a	49.99	50.16	50.08	0.34	n/a	n/a	n/a	n/a
S96T003975		Alpha in Liquid Samples	UCI/mL	-1.0e+03	433.38	93.75	<2.94e-02	<2.94e+02	<1.45E-1	n/a	n/a	90.25	3.90e-02	2.45E+02	

=> Limit Violated
=> Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 9

SEGMENT PORTION: Drainable Liquid

Sample#	R #/F	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S961003976		DSC Exotherm using Mettler	Joules/g	-1.0e+03	488.38	n/a	2.200	0.00e+00	1.100	200	n/a	n/a	n/a	n/a
S961003976		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	488.38	n/a	4.440	0.00e+00	2.220	200	n/a	n/a	n/a	n/a
S961003976		% Water by TGA using Mettler	%	None	99.53	n/a	50.53	50.33	50.42	0.36	n/a	n/a	n/a	n/a
S961003976		Alpha in Liquid Samples	LCI/mL	-1.0e+03	81.38	<2.94e-02	4.48e-02	<2.94E-2	D/a	D/a	n/a	n/a	3.90e-02	8.26E+01

=> Limit violated
=> Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 10

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper									
S961004309		DSC Exotherm DRY	Joules/g DRY	-1.0e+03	488.38	n/a	26.50	58.20	32.35	36.2	n/a	n/a	n/a	n/a
S961004309		DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	488.38	n/a	13.55	19.54	16.55	36.2	n/a	n/a	n/a	n/a
S961004309		% Water by TGA on Perkin Elmer	%	None	8.38	n/a	48.12	49.52	48.82	2.87	n/a	n/a	n/a	n/a
S961004309		Alpha in Liquid Samples	UCI/mL	-1.0e+03	8.38	1.10e-02	<7.10e-03	<7.10E-3	n/a	n/a	n/a	1.80e-02	5.00E+02	5.00E+02

=> Limit violated
=> Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 11

SEGMENT PORTION: Drainable Liquid

Sample#	R#	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	SPK	Rec %	Det Limit	Count	Err%
				Lower	Upper										
S96T003979		DSC Exotherm Dry	Joules/g Dry	-1.0e+03	387.8	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a	n/a
S96T003979		DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	387.8	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a	n/a
S96T003979		% Water by TGA on Perkin Elmer	%	None	99.34	n/a	50.03	50.06	50.05	0.06	n/a	n/a	n/a	n/a	n/a
S96T003979		Alpha in Liquid Samples	UC1/mL	-1.0e+03	3.365	93.75	<2.94e-02	<3.29E-2	n/a	n/a	n/a	n/a	3.90e-02	5.00E+02	5.00E+02

⇒ Limit violated
⇒ Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 12

SEGMENT PORTION: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det. Limit	Count	Err%
				Lower	Upper									
S961003977		DSC Exotherm using Mettler	Joules/g	-1.0e+03	446.8	n/a	0.00e+00	52.40	26.20	200	n/a	n/a	n/a	n/a
S961003977		DSC Exotherm Dry	Joules/g Dry	-1.0e+03	446.8	n/a	0.00e+00	105.0	52.50	200	n/a	n/a	n/a	n/a
S961003977		% Water by TGA using Mettler	%	None	None	n/a	49.68	50.25	49.97	1.14	n/a	n/a	n/a	n/a
S961003977		Alpha in Liquid Samples	LC/ML	-1.0e+03	61.303	<2.94e-02	<2.30e+02	<3.29E-2	n/a	n/a	n/a	n/a	3.90e-02	3.59E+02

⇒ Limit violated
⇒ Selected Limit

WHC-SD-WM-DP-199, REV. 0

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 13

SEGMENT PORTION: Drainable Liquid

Sample#	R/A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S96T003978		DSC Exotherm Dry	Joules/g Dry	-1.0e+03	2.0e+03	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T003978		DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	2.0e+03	104.4	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S96T003978		% Water by TGA on Perkin Elmer	%	None	None	99.34	n/a	49.43	50.44	49.92	2.06	n/a	n/a	n/a	n/a
S96T003978		Alpha in Liquid Samples	UC17/mL	-1.0e+03	2.0e+03	93.75	<2.94e-02	<2.58e-02	<1.86E-2	n/a	n/a	n/a	3.90e-02	5	0.00E+02

=> Limit Violated
=> Selected Limit

WHC-SD-WM-DF-199, REV. 0

INTERIM

Table 1. Data Summary Results
AH-105

CORE NUMBER: 153
SEGMENT #: 14

SEGMENT PORTION: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S96T004334		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.560	n/a	n/a	n/a	5.00e-01		n/a	
S96T004335		DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.38	93.85	n/a	31.00	39.00	35.00	22.9	n/a		n/a	
S96T004335		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	486.38	n/a	n/a	57.80	72.70	65.25	22.8	n/a		n/a	
S96T004335		% Water by IGA using Mettler	%	None	None	98.28	n/a	46.87	45.88	46.38	2.13	n/a		n/a	
S96T004337		F Alpha of Digested Solid	uCi/g	-1.0e+03	4.808	107.01	<3.04e-03	<3.84e-03	4.09e-03	n/a	n/a	84.12	5.00e-03	2.02E+02	

Drainable Liquid: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S96T004333		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	286.38	n/a	n/a	69.10	115.0	92.05	49.9	n/a		n/a	
S96T004333		DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	286.38	96.59	n/a	34.86	57.70	46.25	49.5	n/a		n/a	
S96T004333		% Water by IGA on Perkin Elmer	%	None	None	98.09	n/a	49.62	49.65	49.63	0.06	n/a		n/a	
S96T004333		Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.98	95.31	3.10e-02	<7.19e-03	1.40e-02	n/a	n/a	n/a	1.80e-02	5.00E+02	

=> Limit violated
=> Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 15

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S961004302		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.520	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S961004310		DSC Exotherm using Mettler	Joules/g	-1.0e+03	430.3	105.1	n/a	40.40	23.90	32.15	51.3	n/a	n/a	n/a	n/a
S961004310		DSC Exotherm DRY Calculated	Joules/g DRY	-1.0e+03	430.3	n/a	n/a	77.40	45.80	61.60	51.3	n/a	n/a	n/a	n/a
S961004310		% Water by TGA using Mettler	%	None	None	98.31	n/a	47.35	48.04	47.80	1.03	n/a	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S961004303		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.568	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S961004311		DSC Exotherm using Mettler	Joules/g	-1.0e+03	230.3	105.1	n/a	36.79	57.10	45.90	48.8	n/a	n/a	n/a	n/a
S961004311		DSC Exotherm DRY Calculated	Joules/g DRY	-1.0e+03	230.3	n/a	n/a	71.58	118.0	94.75	49.1	n/a	n/a	n/a	n/a
S961004311		% Water by TGA using Mettler	%	None	None	98.31	n/a	52.82	50.12	51.47	5.25	n/a	n/a	n/a	n/a
S961004317	F	Alpha of Digested Solid	uCi/g	-1.0e+03	71.00	107.0	3.04e-03	23.77e-03	5.35e-03	n/a	n/a	84.68	5.00e-03	1	1.67E+02

⇒ Limit violated
⇒ Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 17

SEGMENT PORTION: U_Upper Half of Segment

Sample #	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD, %	Spk Rec, %	Det Limit	Count	Err%
				Lower	Upper									
S961004428		Bulk Density of Sample	g/ml	None	None	n/a	1.520	n/a	n/a	n/a	5.00e-01	n/a	n/a	
S961004435		DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.38	n/a	48.70	94.10	71.40	63.6	n/a	n/a	n/a	
S961004435		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	486.38	n/a	83.20	161.0	122.1	63.7	n/a	n/a	n/a	
S961004435		% Water by TGA using Mettler	%	None	None	n/a	44.70	38.20	41.45	15.7	n/a	n/a	n/a	

L_Lower Half of Segment

Sample #	R #	Analyte	Unit	Action Limits		Blank	Result	Duplicate	Average	RPD, %	Spk Rec, %	Det Limit	Count	Err%
				Lower	Upper									
S961004427		Bulk Density of Sample	g/ml	None	None	n/a	1.538	n/a	n/a	n/a	5.00e-01	n/a	n/a	
S961004436		DSC Exotherm using Mettler	Joules/g	-1.0e+03	486.38	n/a	15.80	19.60	17.70	21.5	n/a	n/a	n/a	
S961004436		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	486.38	n/a	28.08	34.70	31.35	21.4	n/a	n/a	n/a	
S961004436		% Water by TGA using Mettler	%	None	None	n/a	44.54	42.57	43.55	4.52	n/a	n/a	n/a	
S961004442	F	A Pba of Digested Solid	uc1/g	-1.0e+03	41.88	103.1	7.15e-03	6.93e-03	7.04e-03	3.12	82.73	3.00e-03	5.15E+01	

=> Limit violated
=> Selected Limit

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 19

SEGMENT PORTION: L Lower Half of Segment

Sample#	R/A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD % Spk Rec. %	Det Limit	Count	Err%
				Lower	Upper									
S96T004429		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.560	n/a	n/a	n/a	5.00e-01	n/a	n/a
S96T004437		DSC Exotherm using Mettler	Joules/g	-1.0e+03	430.88	103.7	n/a	22.90	44.40	33.65	63.9	n/a	n/a	n/a
S96T004437		DSC Exotherm DRY Calculated	Joules/g Dry	-1.0e+03	430.88	n/a	n/a	41.90	81.30	61.60	64.0	n/a	n/a	n/a
S96T004437		% Water by TGA using Mettler	%	None	430.88	98.19	n/a	46.78	44.59	45.38	3.46	n/a	n/a	n/a
S96T004443	F	Alpha of Digested Solid	UCI/g	-1.0e+03	430.88	103.1	<1.72e-03	1.76e-02	1.13e-02	1.45e-02	43.6	n/a	3.00e-03	4.46E+01

=> Limit Violated
=> Selected Limit

INTERIM

Table 1. Data Summary Results
AH-105

CORE NUMBER: 153
SEGMENT #: 21

SEGMENT PORTION: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S961003971		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.570	n/a	n/a	n/a	5.00e-01	n/a	n/a	n/a
S961003981		DSC Exotherm using Mettler	Joules/g	-1.0e+03	436.3	102.6	n/a	21.00	18.20	19.60	14.3	n/a	n/a	n/a	n/a
S961003981		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	436.3	n/a	n/a	38.40	35.30	35.85	14.2	n/a	n/a	n/a	n/a
S961003981		% Water by IGA using Mettler	%	None	None	99.53	n/a	44.98	45.60	45.30	1.35	n/a	n/a	n/a	n/a
S961003984	F	Alpha of Digested Solid	uCi/g	-1.0e+03	8.208	102.3	<3.15e-03	8.48e-03	7.42e-03	7.95e-03	13.3	75.77	4.00e-03	5.04E+01	

Drainable Liquids: Drainable Liquid

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Results	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S961003980		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	436.3	n/a	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003980		DSC Exotherm on Perkin Elmer	Joules/g	-1.0e+03	436.3	104.4	n/a	0.00e+00	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a
S961003980		% Water by IGA on Perkin Elmer	%	None	None	99.34	n/a	53.90	54.21	54.05	0.57	n/a	n/a	n/a	n/a
S961003980		Alpha in Liquid Samples	uCi/mL	-1.0e+03	61.58	95.75	<2.94e-02	<1.86e-02	<2.22E-2	n/a	n/a	n/a	3.90e-02	5.00E+02	

=> Limit violated
=> Selected Limit

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: 22

SEGMENT PORTION: U Upper Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S96T003973		Bulk Density of Sample	g/mL	None	None	n/a	n/a	1.580	n/a	n/a	n/a	5.00e-01	n/a	n/a	n/a
S96T003983		DSC Exotherm using Mettler	Joules/g	-1.0e+03	430.33	102.6	n/a	39.10	48.60	43.85	21.7	n/a	n/a	n/a	n/a
S96T003983		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	430.33	n/a	n/a	69.40	86.30	77.85	21.7	n/a	n/a	n/a	n/a
S96T003983		% Water by IGA using Mettler	%	None	None	99.53	n/a	44.37	43.15	43.66	2.34	n/a	n/a	n/a	n/a

L Lower Half of Segment: L Lower Half of Segment

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
				Lower	Upper										
S96T003972		Bulk Density of Sample	g/mL	None	None	n/a	n/a	3.608	n/a	n/a	n/a	5.00e-01	n/a	n/a	n/a
S96T003982		DSC Exotherm using Mettler	Joules/g	-1.0e+03	480.33	102.6	n/a	57.53	94.80	76.15	49.0	n/a	n/a	n/a	n/a
S96T003982		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	480.33	n/a	n/a	1.06e+02	174.0	140.0	48.6	n/a	n/a	n/a	n/a
S96T003982		% Water by IGA using Mettler	%	None	None	99.53	n/a	45.87	45.21	45.54	1.45	n/a	n/a	n/a	n/a
S96T003985	F	Alpha of Digested Solid	uCi/g	-1.0e+03	41.808	36.88	-2.95e-03	1.33e-01	1.16e-01	1.24e-01	13.7	88.86	4.00e-03	1.08E+01	1.08E+01

⇒ Limit Violated
⇒ Selected Limit

INTERIM

Table 1. Data Summary Results
AN-105

CORE NUMBER: 153
SEGMENT #: FB

SEGMENT PORTION: Field Blank

Sample#	R #	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD, %	Spk Rec. %	Det Limit	Count	Err%
				Lower	Upper										
S961003574		DSC Exotherm using Mettler	Joules/g	-1.0e+03	243.33	96.31	n/a	0.00e+00	0.00e+00	0.00	n/a	n/a	n/a	n/a	n/a
S961003574		DSC Exotherm Dry Calculated	Joules/g Dry	-1.0e+03	316.33	D/a	n/a	0.00e+00	0.00e+00	0.00e+00	n/a	n/a	n/a	n/a	n/a
S961003574		% Water by IGA using Mettler	%	None	None	99.48	n/a	99.77	99.77	99.77	0.01	n/a	n/a	n/a	n/a
S961003574		Alpha in Liquid Samples	uCi/mL	None	None	99.22	<1.35e-05	<1.73e+08	<1.15E-5	n/a	n/a	105.3	1.88e-05	5.00E+02	5.00E+02

⇒ Limit violated
⇒ Selected Limit

WHC-SD-WM-DP-199, REV. 0

WHC-SD-WM-DP-199, REV. 0

CHAIN OF CUSTODY

WHC-SD-WM-DP-199, REV. 0

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COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-17 (2) Sample Number 96-253 (3) Supervisor [Signature]
 (4) Tank AN105 (5) Riser 12A (6) Segment 1 (7) Core 15A (8) Cast Serial Number 51023

(9) FIELD

(10) Shipment Description

(11) LABORATORY

(12) RADIATION SURVEY DATA

Over Top Dose Rate 1
 Side Dose Rate 33
 Bottom Dose Rate 20
 Smearable Contamination 25 (Alpha)
11K (Beta-Gamma)
 RCT* [Signature] (HPT) RCT* [Signature] (HPT)

(13) WORK PACKAGE NUMBER ES-96-00270
 (14) CASK SEAL NUMBER 11299
 (15) SAMPLER SERIAL NUMBER 95-0953
 (16) DATE AND TIME SAMPLER UNSEATED 6/10/96 2046
 (17) EXPECTED LIQUID CONTENT 100g
 (18) EXPECTED SOLID CONTENT 900g
 (19) DOSE RATE THROUGH DRILL STRING 2.3 R/hr
 (20) EXPECTED SAMPLE LENGTH 190

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

WHC-SD-WM-DP-199, REV. 0

(12) Field Comments

(13) Laboratory Comments

(14) Destination 200S
 (15) Sender Name (Sign and PRINT) [Signature]
 (16) Date/Time 6/19/05
 (17) Sender Comments

(18) Requisitioned By (Sign and PRINT) [Signature]
 (19) Date/Time 6-11-96/2020
 (20) Received By (Sign and PRINT) [Signature]
 (21) Date/Time 6-11-96/2020
 (22) Receiver Comments

(23) Requisitioned By (Sign and PRINT) [Signature]
 (24) Received By (Sign and PRINT) [Signature]
 (25) Date/Time 6/15/05
 (26) Receiver Comments

(27) Requisitioned By (Sign and PRINT) [Signature]
 (28) Received By (Sign and PRINT) [Signature]
 (29) Date/Time [Signature]
 (30) Receiver Comments

(31) Seal Intact Upon Receipt? Yes No
 (32) Seal Date Consistent with this Record? Yes No

Shipment No. Yes No
 Cast Seal No. Yes No

(18) Seal Intact Upon Release? Yes No
 (19) Seal Intact Upon Receipt? Yes No
 (20) Seal Date Consistent with this Record? Yes No

Sample No. Yes No

BC-6000-303 01/79

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 96-254 (3) Supervisor Danver (8) Cask Serial Number 56
(4) Tank AW 105 (5) Riser 12A (6) Segment 2 (7) Core 152

Radiation Survey Data:

(9) FIELD

Over Top Dose Rate 21 (10) LABORATORY

Side Dose Rate 33 1 mv/hr

Bottom Dose Rate 20 50 mv/hr

Smearable Contamination LD < 20 dpm/gross
(Alpha)

LLK < 1000 dpm/gross
(Beta-Gamma) (Alpha)

RCT* (HPT) [Signature] RCT* (HPT) [Signature]

(11) Shipment Description

A. Work Package Number ES-96-00270

B. Cask Seal Number 11298

C. Sampler Serial Number 95-1153

D. Date and Time Sampler Unseated 6-10-96 2:155

E. Expected Liquid Content 107g

F. Expected Solid Content 909g

G. Dose Rate Through Drill String 2.3 R / HR

H. Expected Sample Length 19"

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

(12) Field Comments

(13) Point of Origin AW 105 (14) Destination 2225

(15) Sender Name (Sign and PRINT) [Signature] Patrick for D. LaPerr (16) Date/Time 6-11-96/1015

(17) Sender Comments

(18) Released By (Sign and PRINT) [Signature] K. Penick (20) Received By (Sign and PRINT) [Signature] J. M. Dunnington

(21) Date/Time 6-11-96/1020 (22) Receiver Comments

(23) Released By (Sign and PRINT) [Signature] J. M. Dunnington (25) Date/Time 6-11-96/115 (26) Receiver Comments

(24) Released By (Sign and PRINT) [Signature] J. E. Decker (29) Date/Time [Signature] (30) Receiver Comments

(27) Redesignated By (Sign and PRINT)

(28) Received By (Sign and PRINT)

(31) Seal Intact Upon Receipt? Yes No

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

(34) Laboratory Comments

Shipment No. 200 No Yes

Cask Seal No. 152 No Yes

Sampler No. 11298 No Yes

WHC-SD-WM-DR-199, REV. 0

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COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200WDXIF (2) Sample Number 96-255 (3) Supervisor M. C. Jones (8) Cask Serial Number C-1040
(4) Tank AW-105 (5) Riser 12A (6) Segment 3 (7) Core 15Z

Radiation Survey Data:

(9) FIELD

Over Top Dose Rate 1 m/hr

Side Dose Rate 4 m/hr

Bottom Dose Rate 2.0 m/hr

Smearable Contamination < 20 dpm/gms
(Alpha) < 20 dpm/gms
(Beta Gamma) < 20 dpm/gms
(Signature) [Signature]

(10) Shipment Description

A. Work Package Number ES-96-00270

B. Cask Seal Number 10439

C. Sampler Serial Number 95-098S

D. Date and Time Sampler Unseated 6-11-96/0227

E. Expected Liquid Content 3090

F. Expected Solid Content 7090

G. Dose Rate Through Drill String 2.5 R/HR

H. Expected Sample Length 19'

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

(12) Field Comments
Li Br WAS MOVED TO DRILL STRING FOR ANALYSIS

(13) Point of Origin AW-105 (14) Destination 222-S
(15) Transmitted By (Sign and PRINT) [Signature]
(16) Date/Time 6/19/96/015
(17) Sender Comments

(18) Received By (Sign and PRINT) [Signature] (19) Sender Name (Sign and PRINT) [Signature]
(20) Received By (Sign and PRINT) [Signature] (21) Date/Time 6-24-96
(22) Receiver Comments
(23) Transmitted By (Sign and PRINT) [Signature] (24) Received By (Sign and PRINT) [Signature]
(25) Date/Time 6-11-96/115 (26) Receiver Comments
(27) Transmitted By (Sign and PRINT) [Signature] (28) Received By (Sign and PRINT) [Signature]
(29) Date/Time

(30) Receiver Comments

(31) Seal Intact Upon Receipt? Yes No
(32) Seal Data Consistent with this Record? Yes No
Cask Seal No. Yes No
Sample No. Yes No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S-6-95 Goldwood - Tank Farm Operations, S-4-43
WHC-SD-WM-DP-199, REV. 0
64
12:51
06/11/96
509 373 1432
004

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 20001-08-17 (2) Sample Number 96-256 (3) Supervisor M.C. Jones
 (4) Tank 105 AN (5) Riser 12A (6) Segment 4 (7) Core 152 (8) Cask Serial Number SN-58

(9) FIELD (10) SHIPMENT DESCRIPTION

Over Top Dose Rate	<u>1 uR/hr</u>	A. Work Package Number	<u>FS-96-00270</u>
Side Dose Rate	<u>42 uR/hr</u>	B. Cask Seal Number	<u>10140</u>
Bottom Dose Rate	<u>20 uR/hr</u>	C. Sampler Serial Number	<u>95-1005</u>
Smearable Contamination	<u>< 20 dpm/100 cm²</u>	D. Date and Time Sampler Unseated	<u>8-11-96 / 0336</u>
	<u>< 15 dpm/100 cm²</u>	E. Expected Liquid Content	<u>30%</u>
	<u>< 100 dpm/100 cm²</u>	F. Expected Solid Content	<u>70%</u>
		G. Dose Rate Through Drill String	<u>2.3 R/HR</u>
		H. Expected Sample Length	<u>19"</u>

(11) LABORATORY

(12) FIELD

Over Top Dose Rate: 1 uR/hr

Side Dose Rate: 40 uR/hr

Bottom Dose Rate: 17 uR/hr

Smearable Contamination: 270 dpm/100 cm² (Alpha)

< 15 dpm/100 cm² (Beta-Gamma)

< 100 dpm/100 cm² (Beta-Gamma)

RCT* (HPT): R (Signature)

RCT* (HPT): W (Signature)

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

55

(12) Field Comments

LIBR WAS ADDED TO DRILL STRING FOR HEAD FINAL

(13) Point of Origin: AN-105

(14) Destination: 222-5

(15) Shipper Name (Sign and PRINT): Steve Z. Pawlik Jr M Jones

(16) Date/Time: 6-2-96 / 1045

(17) Sender Comments:

(18) Received By (Sign and PRINT): James K. White James K. Edwards

(19) Date/Time: 6-2-96 / 1058

(20) Receiver Comments:

(21) Date/Time: 6-2-96 / 1058

(22) Receiver Comments:

(23) Requisitioned By (Sign and PRINT): James K. White James K. Edwards

(24) Received By (Sign and PRINT): N LAPIERS

(25) Date/Time: 6-2-96 / 1137

(26) Receiver Comments:

(27) Requisitioned 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

WHC-SD-WM-DP-199, REV. 0

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 20-W-08-TF (2) Sample Number 96-257 (3) Supervisor M.C. Jones (B) Cask Serial Number C-2010
 (4) Tank 105 AN (5) Riser 130 (6) Segment 5 (7) Core 152

(10) Shipment Description

A. Work Package Number	<u>ES-96-00270</u>
B. Cask Seal Number	<u>10442</u>
C. Sampler Serial Number	<u>95-0775</u>
D. Date and Time Sampler Unseated	<u>6-11-96/0930</u>
E. Expected Liquid Content	<u>30%</u>
F. Expected Solid Content	<u>70%</u>
G. Dose Rate Through Drill String	<u>1.5 R/HR</u>
H. Expected Sample Length	<u>19"</u>

(9) FIELD (10) LABORATORY

Radiation Survey Data:

Over Top Dose Rate 4.5 mR/hr (Signature) [Signature]
 Side Dose Rate 45 mR/hr (Signature) [Signature]
 Bottom Dose Rate 20 mR/hr (Signature) [Signature]
 Measurable Contamination 520 dpm/100cm² (Alpha) [Signature]
510 dpm/100cm² (Beta-Gamma) [Signature]
100 dpm/100cm² (Signature) [Signature]

RCT* (HPT) [Signature] RCT (HPT) [Signature]

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

96

(12) Field Comments
Libc moved to drill string for head fluid.

(13) Point of Origin AN-405 (14) Destination 232-S
 (15) Sender Name (Sign and Print) Richard P. Parnell for M.C. Jones
 (16) Date/Time 6-12-96/1000
 (17) Sender Comments

(18) Seal Intact Upon Release? Yes No
 (19) Requisitioned By (Sign and Print) [Signature] (20) Received By (Sign and Print) [Signature]
 (21) Date/Time 6-12-96/1000 (22) Receiver Comments
 (23) Requisitioned By (Sign and Print) [Signature] (24) Received By (Sign and Print) [Signature]
 (25) Date/Time 6-12-96/1000 (26) Receiver Comments
 (27) Requisitioned By (Sign and Print) [Signature] (28) Received By (Sign and Print) [Signature]
 (29) Date/Time 6-12-96/1000 (30) Receiver Comments

(31) Seal Intact Upon Receipt? Yes No
 (32) Seal Data Consistent with this Record? Yes No
 (33) Shipment No. Yes No
 Cask Seal No. Yes No

Sample No. Yes No

WHC-SD-WM-DP-199, REV. 0

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 2001U-0X-1P (2) Sample Number 96-258 (3) Supervisor M. C. Jones (8) Cask Serial Number 16-6
 (4) Tank AN-105 (5) Riser 752 12A (6) Segment 6 (7) Core 152

(9) FIELD (33) LABORATORY
 Over Top Dose Rate 1 mR/hr 6.5 mR/hr
 Side Dose Rate 600 mR/hr 100 mR/hr
 Bottom Dose Rate 25 mR/hr 14 mR/hr
 Measurable Contamination < 20 dpm/100cm² < 20 dpm/100cm² (Alpha)
< 1 Kcpm/100cm² < 1000 ppcr/gross smear (Beta/Gamma)
 RCT* (HPT) [Signature] RCT* (HPT) [Signature]

(10) Shipment Description
 A. Work Package Number FS-96-00270
 B. Cask Seal Number 10472
 C. Sampler Serial Number 95-175
 D. Date and Time Sampler Unseated 6-11-96/10:46
 E. Expected Liquid Content 30%
 F. Expected Solid Content 70%
 G. Dose Rate Through Drill String 2.0 A/HR
 H. Expected Sample Length 19"

WHC-SD-WM-DP-199, REV. (1)

69

(34) Laboratory Comments

LIBS ADDED TO DRILL STRING FOR HEAD FIELDS

(13) Point of Origin <u>ANGOS</u>	(14) Destination <u>222-5</u>	(15) Supplier Name (Sign and PRINT) <u>Robert R. Penzink for M.C. Jones</u>	(16) Date/Time <u>6-12-96/10:50</u>	(17) Sender Comments
(15) Reacquainted By (Sign and PRINT) <u>[Signature]</u>	(20) Received By (Sign and PRINT) <u>[Signature]</u>	(24) Received By (Sign and PRINT) <u>[Signature]</u>	(21) Date/Time <u>6-12-96/10:50</u>	(22) Receiver Comments
(23) Reacquainted By (Sign and PRINT) <u>[Signature]</u>	(27) Reacquainted By (Sign and PRINT) <u>[Signature]</u>	(28) Received By (Sign and PRINT) <u>[Signature]</u>	(25) Date/Time <u>6-12-96/10:50</u>	(28) Receiver Comments
(27) Reacquainted By (Sign and PRINT) <u>[Signature]</u>	(28) Received By (Sign and PRINT) <u>[Signature]</u>	(30) Receiver Comments	(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?

Cask Seal No. Yes No

Sample No. Yes No

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-1F (2) Sample Number 96-259 (3) Supervisor M. S. Jones (8) Cask Serial Number SU-108
 (4) Tank AN-105 (5) Riser 13A (6) Segment 7 (7) Core 152

(9) FIELD (10) Shipment Description

(33) LABORATORY

Over Top Dose Rate 4.5 mkr/hr A. Work Package Number FS-96-00270
 Side Dose Rate 42 mkr/hr B. Cask Seal Number 10473
 Bottom Dose Rate 15 mkr/hr C. Sampler Serial Number 94-090S
 Smearable Contamination < 200 dpm/gross smear D. Date and Time Sampler Unseated 6-1-96/1338
< 100 dpm/gross smear E. Expected Liquid Content 30%⁰
< 100 dpm/gross smear F. Expected Solid Content 70%⁰
 (Initial) (Beta-Gamma) RCT* (HPT) R G. Dose Rate Through Drill String 2 R/H/R
 (Signature) (Signature) (HPT) (Signature)

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

90

WHC-SD-WM-DP-199, REV. D

(12) Field Comments

LIBS ADDED TO DRILL STRING FOR HEAD FILL

(13) Point of Origin AN-105 (14) Destination 222-S (15) Sender Name (Sign and PRINT) REPP J POSZNIK for M.C. Jones (16) Date/Time 6-12-96/0900 (17) Sender Comments

(19) Reacquired By (Sign and PRINT) REPP J POSZNIK (20) Reacquired By (Sign and PRINT) James K. Embury (21) Date/Time 6-12-96/0910 (22) Receiver Comments

(23) Reacquired By (Sign and PRINT) James K. Embury (24) Reacquired By (Sign and PRINT) EE Dubos (25) Date/Time 6-12-96/1000 (26) Receiver Comments

(27) Reacquired By (Sign and PRINT) James K. Embury (28) Received By (Sign and PRINT) EE Dubos (29) Date/Time (30) Receiver Comments

(34) Laboratory Comments

(31) Seal Intact Upon Receipt? Yes No Shipment No. Yes No Cask Seal No. Yes No

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

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-087F (2) Sample Number 96-260 (3) Supervisor M.S. Jones (4) Tank AN-105 (5) Riser 12A (6) Segment 8 (7) Core 152 (8) Cask Serial Number 256 SN 247

Shipping and Laboratory sections. Shipping: (9) FIELD, (10) Shipment Description, A-H. Laboratory: (13) LABORATORY, RCT* (HPT), (14) Destination, (15) Origin Name, (16) Date/Time, (17) Sender Comments, (18) Point of Origin, (19) Received By, (20) Received By, (21) Date/Time, (22) Receiver Comments, (23) Date/Time, (24) Received By, (25) Date/Time, (26) Receiver Comments, (27) Retinquished By, (28) Date/Time, (29) Receiver Comments, (30) Receiver Comments, (31) Seal Intact Upon Receipt?, (32) Seal Data Consistent with this Record?

(11) INFORMATION (Include statement of laboratory tests to be performed.) LIBR ADDED TO DRILL STRING FOR HEAD FIELD AFTER SAMPLE WAS PUT IN CASK A PIECE OF PLASTIC WAS FOUND STUCK IN THE LATCHING FINGER ON THE SUMMER IT WAS TEST TRUE.

(12) Field Comments (13) Laboratory Comments (14) Destination 22A-5 (15) Origin Name (Sign and PRINT) R. J. LEONARD (16) Date/Time 6-28-96/1045 (17) Sender Comments (18) Point of Origin AN-105 (19) Received By (Sign and PRINT) R. J. LEONARD (20) Received By (Sign and PRINT) James K. ... (21) Date/Time 6-28-96/1045 (22) Receiver Comments (23) Date/Time 6-28-96/1045 (24) Received By (Sign and PRINT) N. LAPIERS (25) Date/Time 6-28-96/1130 (26) Receiver Comments (27) Retinquished By (Sign and PRINT) (28) Receiver Comments (29) Receiver Comments (30) Receiver Comments (31) Seal Intact Upon Receipt? (32) Seal Data Consistent with this Record? (33) Shipment No. (34) Cask Seal No.

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Segment Number 200W-08-11 (2) Sample Number 96-266 (3) Supervisor R. French (4) Tank AA-105 (5) Rise 1.2A (6) Segment 9 (7) Core 152 (8) Cask Serial Number 77 (9) Work Package Number E 5-96-00270

Radiation Survey Data:		110. Shipment Description	
Over Top Dose Rate	(8) FIELD	A. Work Package Number	<u>10381</u>
Side Dose Rate	<u>1 wsf/hr</u>	B. Cask Seal Number	<u>95-1065</u>
Bottom Dose Rate	<u>42 wsf/hr</u>	C. Sampler Serial Number	<u>4-12-96/1036</u>
Screenable Contamination	<u>15 wsf/hr</u>	D. Date and Time Sampler Unsealed	<u>30%</u>
	<u>570 wsf/hr</u>	E. Expected Liquid Content	<u>70%</u>
	<u>1 Kilocurie</u>	F. Expected Solid Content	<u>1.5R</u>
		G. Dose Rate Through Draft Shield	<u>19</u>
		H. Expected Sample Length	

ACT* (HPT) P. P. [Signature] (HPT) [Signature]

(11) INFORMATION (Include statement of laboratory tests to be performed.)
 001

(12) Field Comments: 1500 ml Sodium formate added next X-rayed bottom of sample clean - B-sample

(13) Point of Origin	(14) Destination	(15) Sender Name (Sign and PRINT)	(16) Date/Time	(17) Sender Comments
<u>AA-105</u>	<u>223 S</u>	<u>W. H. [Signature] for F. Frost</u>	<u>6/29/01 10:50</u>	
(18) Seal Intact Upon Receipt?	(19) Dispatched By (Sign and PRINT)	(20) Received By (Sign and PRINT)	(21) Date/Time	(22) Receiver Comments
<input checked="" type="checkbox"/> Yes	<u>[Signature]</u>	<u>[Signature]</u>	<u>7-2-91</u>	
(23) Reimpounded By (Sign and PRINT)	(24) Reimpounded By (Sign and PRINT)	(25) Date/Time	(26) Receiver Comments	
<u>[Signature]</u>	<u>[Signature]</u>	<u>11-7-8</u>		
(27) Impounded By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	
<u>[Signature]</u>	<u>[Signature]</u>	<u>11-7-8</u>		

(31) Seal Intact Upon Receipt? Yes No

(32) Data Consistent with this Record? Yes No

Sample No. Yes No

Shippers No. Yes No

ACT* (HPT) [Signature] (HPT) [Signature]

CERTIFICATION: WWS - (WWS of Sample Management) Valid - Recipient of Sample. Dis - From Consignor. C.A.S.C. Acknowled - From Recipient. 01/81

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 280W-08-TF (2) Sample Number 96-262 (3) Supervisor R. French (4) Tank AN-105 (5) Riser 12A (6) Segment 10 (7) Core 152 (8) Cask Serial Number SN-68

110) Shipment Description

A. Work Package Number ES-96-00270

B. Cask Seal Number 10380

C. Sampler Serial Number 95-1095

D. Date and Time Sampler Unseated 6-12-96 / 1130

E. Expected Liquid Content 30%

F. Expected Solid Content 70%

G. Dose Rate Through Drill String 1.6 R

H. Expected Sample Length 19"

(9) FIELD (13) LABORATORY

Over Top Dose Rate 0.5 mR/hr

Side Dose Rate 50 mR/hr

Bottom Dose Rate 10 mR/hr

Measureable Contamination 200 cps / 100 cm²

Signature: [Signature] (HPT) RCT* [Signature] (HPT) RCT* [Signature] (Alpha) [Signature] (Beta-Gamma) [Signature] (Signature)

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

101

WHC-SD-WM-OP-199, REV. 0

GOPY

(12) Field Comments 1500 ml lithium bromide added
-8 sampler
not x-rayed
sample clean

(14) Destination 222-S

(15) Sender Name (Sign and PRINT) Bluy RJ Resink for F. Frost

(16) Date/Time 6-13-96 1700

(17) Sender Comments

(20) Received By (Sign and PRINT) [Signature]

(21) Date/Time 6-13-96

(22) Receiver Comments

(24) Approved By (Sign and PRINT) [Signature]

(25) Date/Time 6-13-96

(26) Received By (Sign and PRINT) [Signature]

(27) Receiver Comments

(28) Date/Time 6-13-96

(30) Receiver Comments

(32) Seal Data Consistent with this Record?

(31) Seal Intact Upon Receipt? Yes No

(18) Seal Intact Upon Release? 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, S8-95 Goldsrod - Tank Farm Operations, S4-43

BC-6000-308 (02/794)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 2001108-1F (2) Sample Number 96-263 (3) Supervisor Dana DeLoe
 (4) Tank AN105 (5) Riser 12A (6) Segment 11 (7) Core 152 (8) Cask Serial Number 1013C

Radiation Survey Data:

(9) FIELD (33) LABORATORY

Over Top Dose Rate 20.5 mR/hr 50.5 mR/hr
 Side Dose Rate 37 mR/hr 50 mR/hr
 Bottom Dose Rate 10 mR/hr 10 mR/hr
 Smearable Contamination 220 dpm/100 cm² <10 dpm/100 cm²
 (Alpha) (Beta-Gamma) (Signature) (Alpha) (Beta-Gamma) (Signature)

RCT* (HPT) [Signature] RCT* (HPT) [Signature]
 (Signature) (Signature)

(10) Shipment Description
 A. Work Package Number E5-96-00270
 B. Cask Seal Number 11285
 C. Sampler Serial Number 95-1205
 D. Date and Time Sampler Unseated 6-12-96 1805
 E. Expected Liquid Content 10%
 F. Expected Solid Content 90%
 G. Dose Rate Through Drill String 2.3 R/hr
 H. Expected Sample Length 19"

(11) INFORMATION (Include statement of laboratory tests to be performed.)
 102

COPY

WHC-SD-WM-CP-199, REV. 0

(12) Field Comments

(34) Laboratory Comments

(13) Point of Origin <u>AN105</u>	(14) Destination <u>2225</u>	(15) Sampler Name (Sign and PRINT) <u>[Signature]</u>	(16) Date/Time <u>6-13-96/1700</u>	(17) Sender Comments
(20) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(21) Received By (Sign and PRINT) <u>[Signature]</u>	(22) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(23) Date/Time <u>6-13-96</u>	(22) Receiver Comments
(23) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(24) Received By (Sign and PRINT) <u>[Signature]</u>	(25) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(26) Date/Time <u>6-13-96</u>	(26) Receiver Comments
(27) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(28) Received By (Sign and PRINT) <u>[Signature]</u>	(29) Date/Time <u>6-13-96</u>	(30) Receiver Comments	(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

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-TF (2) Sample Number 96-264 (3) Supervisor Dennis J. Quinn (8) Cask Serial Number 52008
 (4) Tank AW 105 (5) Riser 12A (6) Segment 12 (7) Core 152

(10) Shipment Description

(9) FIELD

Radiation Survey Date: _____

Over Top Dose Rate 50.5 mrem

Side Dose Rate 47 mrem

Bottom Dose Rate 15 mrem

Sensarable Contamination 520 dpm (Alpha)

_____ (Beta-Gamma)

_____ (Signature)

ACT* _____ (HPT)

_____ (Signature)

RCT* _____ (HPT)

_____ (Signature)

A. Work Package Number ES-96-00270

B. Cask Seal Number 11286

C. Sampler Serial Number 95-0975

D. Date and Time Sampler Unseared 6-12-96 21:28

E. Expected Liquid Content 10%

F. Expected Solid Content 90%

G. Dose Rate Through Drill String 2.3R/HR

H. Expected Sample Length 190

WHC-SD-WM-DP-199, REV. 0

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

103

(12) Field Comments

(13) Laboratory Comments

(13) Point of Origin <u>AW 105</u>	(14) Destination <u>222S</u>	(15) Sender Name (Sign and PRINT) <u>James Sickels</u>	(16) Date/Time <u>6-24-96</u>	(17) Sender Comments
(19) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(20) Received By (Sign and PRINT) <u>Enstelo Salinas</u>	(21) Date/Time <u>6-24-96</u>	(22) Receiver Comments	
(23) Relinquished By (Sign and PRINT) <u>Enstelo Salinas</u>	(24) Received By (Sign and PRINT) <u>EE Dukes</u>	(25) Date/Time <u>6-24-96</u>	(26) Receiver Comments	
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(31) Seal Intact Upon Receipt? Yes No

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

Cask Seal No. _____

Shipment No. _____

Yes No

Yes No

Sample No. _____

Yes No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85 Goldenrod - Tank Farm Operations, S4-43 BC-6000-303 (02/89)

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

M.C. Jones

(1) Shipment Number 200W-08-TF (2) Sample Number 96-265 (3) Supervisor M.C. Jones (8) Cask Serial Number C-1036

(4) Tank AN-105 (5) Riser 12ft (6) Segment 13 (7) Core 152

Radiation Survey Data:

(9) FIELD (10) Shipment Description

Over Top Dose Rate 505 mrem A. Work Package Number ES-96-00270

Side Dose Rate 47 mrem B. Cask Seal Number 10444

Bottom Dose Rate 16 mrem C. Sampler Serial Number 95-1075

Smearable Contamination 200 dpm (Alpha) D. Date and Time Sampler Unsealed 6-13-96 / 0154

1000 dpm (Beta-Gamma) E. Expected Liquid Content 30%⁰

RCT* [Signature] (HPT) F. Expected Solid Content 70%⁰

RCT* [Signature] (HPT) G. Dose Rate Through Drill String 2.0 R/hr

H. Expected Sample Length 19"

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

WHC-SD-WM DP-199, REV. 0

(12) Field Comments

LIBC ADDR TO DRILL STRING FOR HEAT PIPES

(13) Point of Origin AN-105 (14) Destination 222-S

(15) Repackaged By (Sign and PRINT) James Sickets (16) Repackaged By (Sign and PRINT) James Sickets

(17) Sender Comments

(18) Seal Intact Upon Release? Yes No (19) Seal Intact Upon Receipt? Yes No

(20) Repackaged By (Sign and PRINT) Marko Sulmed (21) Date/Time 6-24-96

(22) Receiver Comments

(23) Repackaged By (Sign and PRINT) Marko Sulmed (24) Date/Time 6-24-96

(25) Date/Time 6-24-96 (26) Receiver Comments

(27) Repackaged By (Sign and PRINT) [Signature] (28) Date/Time 6-24-96

(29) Receiver Comments

(30) Receiver Comments

(31) Seal Date Consistent with this Record? Yes No

(32) Seal Date Consistent with this Record? Yes No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S0-B5 Goldenrod - Tank Farm Operations, S4-A3

SC 5000-204 8/2

COPY

259 373 1432

222

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number 2000-08-77 (2) Sample Number 96-266 (3) Supervisor M.C. Jones (8) Cask Seal Number C-2005

ink AN-105 (5) Riser 12A (6) Segment 14 (7) Core 152

(9) FIELD (33) LABORATORY

er Top Dose Rate 0.5 mrem/hr <0.5 mrem/hr

le Dose Rate 40 mrem/hr 25 mrem/hr

tom Dose Rate 23 mrem/hr 15 mrem/hr

reable Contamination <20 dpm <20 dpm (Alpha)

<1K dpm (Beta-Gamma)

CT* M. Payne (Signature) RCT* (HPT)

CT* (HPT) (Signature)

(10) Shipment Description

A. Work Package Number ES-96-00270

B. Cask Seal Number 10445

C. Sampler Serial Number 95-1255

D. Date and Time Sampler Unset 6-13-96/8:30

E. Expected Liquid Content 30%

F. Expected Solid Content 70%

G. Dose Rate Through Drill String 2 R/hr

H. Expected Sample Length 19"

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

WHC-SO-WM-DP-199, REV. 0

105

(34) Laboratory Comments

LIBR WAS ADDED TO DRILL STRING FOR HEAD FIELD

3) Point of Origin <u>AN-105</u>	(114) Destination <u>222-S</u>	(14) Sender Name (Sign and PRINT) <u>Empy Sickle James Sickle</u>	(16) Date/Time <u>6-18-96</u>	(17) Sender Comments
4) Requisitioned By (Sign and PRINT) <u>Empy Sickle James Sickle</u>	(124) Received By (Sign and PRINT) <u>W. Dunning Jr</u>	(12) Received By (Sign and PRINT)	(21) Date/Time <u>6-18-96/3:4</u>	(22) Receiver Comments
5) Requisitioned By (Sign and PRINT) <u>Empy Sickle James Sickle</u>	(124) Received By (Sign and PRINT) <u>W. Dunning Jr</u>	(24) Receiver (Sign and PRINT)	(25) Date/Time <u>6-18-96/4:30</u>	(26) Receiver Comments
7) Requisitioned By (Sign and PRINT) <u>Empy Sickle James Sickle</u>	(124) Received By (Sign and PRINT) <u>W. Dunning Jr</u>	(28) Receiver (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments
(32) Seal Data Consistent with this Record?				
(31) Seal Intact Upon Release?		Shipment No. <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes		Cask Seal No. <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
(18) Seal Intact Upon Release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(31) Seal Intact Upon Receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Sample No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

(RGS)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-7P (2) Sample Number 96-267 (3) Supervisor R. Lusk Hunt (4) Tank A4-105 (5) Riser 12A (6) Segment 15 (7) Core 152 (8) Cask Serial Number C 1041

10) Shipment Description

(9) FIELD (33) LABORATORY

Over Top Dose Rate LO.5 MBHPE (Alpha) 50.5

Side Dose Rate 39 m/HR (Beta-Gamma) 45 m/HR

Bottom Dose Rate 20 m/HR (Alpha) 10 m/HR

Smearable Contamination 120 dpm/100 cm² (Alpha) 5.0

1000 dpm/100 cm² (Beta-Gamma) 5.1K

RCT* (HPT) [Signature] RCT* (HPT) [Signature]

(A) Work Package Number ES-96-00270

(B) Cask Seal Number 10302

(C) Sampler Serial Number RGS-008

(D) Date and Time Sampler Unsetted 6-13-96 10:12 AM

(E) Expected Liquid Content 30%

(F) Expected Solid Content 70%

(G) Dose Rate Through Drill Stiring 1.5 R

(H) Expected Sample Length 19"

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

106

WHC-SD-WM-DP-199, REV. 0

COPY

(12) Field Comments

R.G. Sampley
1500 ml Lithium Bromide
Sampler is clean
Recovery 100% LX-ray

(13) Point of Origin 12A (14) Destination 222's LABS

(15) Sender Name (Sign and PRINT) J. Lusk Hunt
(16) Date/Time 6/13/96 1700

(17) Sender Comments

(18) Seal Intact Upon Release? Yes No

(19) Seal Intact Upon Receipt? Yes No

(20) Received By (Sign and PRINT) [Signature]

(21) Date/Time 6/13/96

(22) Receiver Comments

(23) Reinspected By (Sign and PRINT) [Signature]

(24) Date/Time 6/13/96

(25) Detg/Time 6:15-96

(26) Receiver Comments

(27) Reinspected By (Sign and PRINT) [Signature]

(28) Date/Time 6/13/96

(29) Receiver Comments

(30) Receiver Comments

(31) Seal Data Consistent with this Receipt? Yes No

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

(34) Laboratory Comments

Sample No. Yes No

Cask Seal No. Yes No

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

ment Number AN 105 (2) Sample Number 96-268 (3) Supervisor James S. Jones (8) Cask Serial Number 74

(5) Riser 12A (6) Segment 16 (7) Core 152

(9) FIELD LO-5
Top Dose Rate 30 mrem/hr
Dose Rate 18 mrem/hr
Bottom Dose Rate 2000 m
Variable Contamination (Alpha) < 1000
(Beta-Gamma) < 1500
RCT* (HPT) [Signature]
RCT* (HPT) [Signature]

(10) Shipment Description
A. Work Package Number ES-96-00270
B. Cask Seal Number 11297
C. Sampler Serial Number 94-4655
D. Date and Time Sampler Unseated 6-13-96 2101
E. Expected Liquid Content 10.8
F. Expected Solid Content 90.8
G. Dose Rate Through Drill String 2.02 / HR
H. Expected Sample Length 19"

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

WHC-SO-WM-DP-199, REV. 0

101

Field Comments (34) Laboratory Comments

(1) Point of Origin <u>AN05</u>	(114) Destination <u>2225</u>	(175) Sender Name (Sign and PRINT) <u>James S. Jones</u>	(116) Degrading <u>6-18-96</u>	(117) Sender Comments
(2) Relinquished By (Sign and PRINT) <u>James S. Jones</u>	(120) Received By (Sign and PRINT) <u>[Signature]</u>	(121) Date/Time <u>6-18-96</u>	(122) Receiver Comments	
(3) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(125) Date/Time <u>6-18-96</u>	(126) Receiver Comments		
(4) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(129) Date/Time <u>6-18-96</u>	(130) Receiver Comments		
(32) Seal Data Consistent with this Record?				
(18) Seal Intact Upon Release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(31) Seal Intact Upon Receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cask Seal No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Sample No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

(RGS)

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 2000-08-IF (2) Sample Number 96-209 (3) Supervisor M.C. JONES (8) Cask Serial Number SN-67

(4) Tank AN-105 (5) Riser 12A (6) Segment 17 (7) Core 152

Radiation Survey Data:

(9) FIELD

Over Top Dose Rate 52 mrem/hr

Side Dose Rate 36 mrem/hr

Bottom Dose Rate 20 mrem/hr

Measurable Contamination 520 dpm (Alpha)

5.1K (Beta-Gamma)

RCT* (HPT) [Signature] RCT* (HPT) [Signature]

(10) SHIPMENT DESCRIPTION

A. Work Package Number ES-96-00270

B. Cask Seal Number 0148

C. Sampler Serial Number RGS-006

D. Date and Time Sampler Unseated 6-18-96 6:14:46/007

E. Expected Liquid Content 70%

F. Expected Solid Content 70%

G. Dose Rate Through Drift String 1.8 R/HR

H. Expected Sample Length 1M

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

108

WHIC-SD-WM-OP-199, REV. 0

(12) Field Comments
LIGOR ADDED TO DRIFT STRING NEAR FIELD.
THE SAMPLER IS A RGS SAMPLER

(13) Point of Origin AN-105 (14) Destination 232-S

(15) Sender Name (Sign and PRINT) Dennis Siskel James Siskel (16) Date/Time 6-18-96

(17) Sender Comments

(18) Received By (Sign and PRINT) [Signature] (19) Received By (Sign and PRINT) [Signature]

(20) Received By (Sign and PRINT) [Signature] (21) Date/Time 6-18-96

(22) Receiver Comments

(23) Received By (Sign and PRINT) [Signature] (24) Received By (Sign and PRINT) [Signature]

(25) Received By (Sign and PRINT) [Signature] (26) Received By (Sign and PRINT) [Signature]

(27) Received By (Sign and PRINT)

(28) Receiver Comments

(29) Date/Time

(30) Receiver Comments

(31) Seal Intact Upon Receipt? Yes No

(32) Seal Date Consistent with this Record? Yes No

Shipment No. Yes No

Cask Seal No. Yes No

Sample No. Yes No

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number Z000-08-1E (2) Sample Number 96-270 (3) Supervisor M. C. Jones
(4) Tank AU-105 (5) Riser 12A (6) Segment 18 (7) Core 152 (8) Cask Serial Number C-1045

Radiation Survey Date:

(9) FIELD (33) LABORATORY

Over Top Dose Rate < 0.5 mrem/hr < 0.5 mrem/hr
 Side Dose Rate 40 mrem/hr 33 mrem/hr
 Bottom Dose Rate 15 mrem/hr 70 mrem/hr
 Smearable Contamination < 20 dpm < 20 dpm
 (Alpha) (Alpha)
< 11 cpm < 11 cpm
 (Beta-Gamma) (Beta-Gamma)
 RCT* (HPT) [Signature] RCT* (HPT) [Signature]

(10) Shipment Description

A. Work Package Number FS-96-00270
 B. Cask Seal Number 10346
 C. Sampler Serial Number 94-462
 D. Date and Time Sampler Unsealed 6-14-96/1240
 E. Expected Liquid Content 3090
 F. Expected Solid Content 7090
 G. Dose Rate Through Drill String 1.9 R/hr
 H. Expected Sample Length 19"

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

109

WHC-SD-WM-DP-199, REV. 0

(12) Field Comments
L10R ADDED TO DRILL FOR HEEL FWL

(13) Point of Origin AU-105 (14) Destination 222-S

(15) Sender Name (Sign and PRINT) James Siskel Jones Siskel (16) Date/Time 6-18-96
 (17) Sender Comments

(18) Relinquished By (Sign and PRINT) [Signature] (19) Received By (Sign and PRINT) [Signature] (20) Date/Time 6-18-96
 (21) Receiver Comments

(22) Relinquished By (Sign and PRINT) [Signature] (23) Received By (Sign and PRINT) [Signature] (24) Date/Time 6-18-96
 (25) Receiver Comments

(26) Relinquished By (Sign and PRINT) [Signature] (27) Received By (Sign and PRINT) [Signature] (28) Date/Time 6-18-96
 (29) Receiver Comments

(30) Receiver Comments

(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 Measurement Yellow - Recipient of Sample Pink - Core Sampler 56-85 Goldwood - Tank Farm Operations 56-43

(RGS)

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-IF (2) Sample Number 96-271 (3) Supervisor M. C. Jones
(4) Tank 105-AJ (5) Riser 12-A (6) Segment 19 (7) Core 152 (8) Cask Serial Number SN-64

Radiation Survey Data:

(9) FIELD

Over Top Dose Rate < 0.5 mrem/hr

Side Dose Rate 38 mrem/hr

Bottom Dose Rate 2.5 mrem/hr

Smearable Contamination < 20 dpm

(10) Shipment Description

A. Work Package Number ES-96-00270

B. Cask Seal Number 10447

C. Sampler Serial Number RGS-023

D. Date and Time Sampler Unset 6-14-96 / 0422

E. Expected Liquid Content 30%O

F. Expected Solid Content 70%O

G. Dose Rate Through Drill String 1.7 R/HR

H. Expected Sample Length 19"

(11) LABORATORY

ACT* (HPT) ACT* (HPT)

ACT* (HPT) ACT* (HPT)

ACT* (HPT) ACT* (HPT)

(12) SIGNATURE

(Alpha) [Signature]

(Beta-Gamma) [Signature]

(Signature) [Signature]

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

110

WHC-SD-WM-OP-199, REV. 0

(12) Field Comments

LIBR added to Drill string for Head File

This a RGS Sampler

(13) Point of Origin 222-S

(14) Destination James Suckb James Suckels

(15) Requisitioned By (Sign and PRINT) [Signature]

(16) Date/Time 6-18-96

(17) Sender Comments

(18) Seal Intact Upon Release? Yes No

(19) Sender Name (Sign and PRINT) For Mr. Jones

(20) Received By (Sign and PRINT) [Signature]

(21) Date/Time 6-18-96

(22) Receiver Comments

(23) Requisitioned By (Sign and PRINT) [Signature]

(24) Received By (Sign and PRINT) [Signature]

(25) Date/Time 6-18-96

(26) Receiver Comments

(27) Requisitioned By (Sign and PRINT) [Signature]

(28) Received By (Sign and PRINT) [Signature]

(29) Date/Time 6-18-96

(30) Receiver Comments

(31) Seal Intact Upon Receipt? Yes No

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

Cask Seal No. Yes No

(RGS)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 200W-08 TE (2) Sample Number 96-273 (3) Supervisor BOGEM (4) Tank AL-105 (5) Riser 12A (6) Segment 24 (7) Core 152 (8) Cask Serial Number C2014

Radionuclide Survey Data: (9) FIELD (33) LABORATORY (10) Shipment Description A. Work Package Number ES-96-270/6 B. Cask Seal Number 1345 C. Sampler Serial Number R65-018 D. Date and Time Sampler Unseated 6/17/96 1830 E. Expected Liquid Content 70% F. Expected Solid Content 30% G. Dose Rate Through Drill String 1.6 R/hr H. Expected Sample Length 19"

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

VHC-SD-WM-D-199, REV. 0

112

Table with 4 columns: (13) Point of Origin, (14) Destination, (15) Sender Name (Sign and Print), (16) Date/Time, (17) Sender Comments, (18) Seal Intact Upon Receipt?, (19) Requisitioned By (Sign and Print), (20) Requisitioned By (Sign and Print), (21) Date/Time, (22) Receiver Comments, (23) Requisitioned By (Sign and Print), (24) Received By (Signed and Printed), (25) Date/Time, (26) Receiver Comments, (27) Requisitioned By (Sign and Print), (28) Received By (Sign and Print), (29) Date/Time, (30) Receiver Comments, (31) Seal Intact Upon Receipt?, (32) Seal Data Consistent with this Record?, (33) Signer's No., (34) Laboratory Comments

(18) Seal Intact Upon Receipt? (31) Seal Intact Upon Receipt? (32) Seal Data Consistent with this Record? (33) Signer's No. (34) Laboratory Comments

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

(1) Shipment Number 200-08-TF (2) Sample Number 96-274 (3) Supervisor BOGEN (8) Cask Seal Number 516
 (4) Tank AN-105 (5) Riser 2A (6) Segment 22 (7) Core 152

(10) Shipment Description

A. Work Package Number _____
 B. Cask Seal Number 1326
 C. Sampler Serial Number 75-155
 D. Date and Time Sampler Unseated 6/18/96 1829
 E. Expected Liquid Content 80%
 F. Expected Solid Content 20%
 G. Dose Rate Through Drill String 1.4 R/hr
 H. Expected Sample Length 13"

(9) FIELD LABORATORY

Over Top Dose Rate < 0.5 mrem
 Side Dose Rate 35 mrem
 Bottom Dose Rate 13 mrem
 Measurable Contamination < 20 dpm (Alpha)
< 1000 dpm (Beta-Gamma)
 RCT* (HPT) S. Koepf (Signature)
 RCT* (HPT) S. Koepf (Signature)

WHC-SD-WM DP-199, REV. 0

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

113

(12) Field Comments
 HBZ ACTIVATED w/ 6" REMAINING IN STROKE.

(34) Laboratory Comments

(13) Point of Origin AN-105	(14) Destination 222-S	(15) Sender Name (Sign and PRINT) James Skelch James Skelch	(16) Date/Time 6-24-96	(17) Sender Comments
(18) Acquired By (Sign and PRINT) James Skelch	(19) Received By (Sign and PRINT) Eustacio Spinas Jr	(20) Received By (Sign and PRINT) Eustacio Spinas Jr	(21) Date/Time 6-24-96	(22) Receiver Comments
(23) Relinquished By (Sign and PRINT) Eustacio Spinas Jr	(24) Received By (Sign and PRINT) Eustacio Spinas Jr	(25) Date/Time 6-24-96	(26) Date/Time 6-24-96	(26) Receiver Comments
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Date/Time	(30) Receiver Comments

(32) Seal Data Consistent with this Record?

(18) Seal Intact Upon Release? Yes No

(31) Seal Intact Upon Receipt? Yes No

Shipping 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, S8-85 Goldenrod - Tank Farm Operations, S4-43 BC-6000-309 K

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 300 a of 7 (2) Sample Number 96-275 (3) Supervisor Dennis J. Riser
 (4) Tank AR 105 (5) Riser 7B (6) Segment 1 (7) Core 153 (8) Core Sample Number C 1083

Residence Survey Date: _____ (9) FIELD _____ (10) LABORATORY _____

Over Top Dose Rate 0.5 Mcm/hr
 Side Dose Rate 74 Mcm/hr
 Bottom Dose Rate 36 Mcm/hr
 Swearable Contamination 6.70 (Alpha)
5.1600 (Beta-Gamma)
1.1K (Alpha)
 RCT* (BPT) RA (Signature) RCT* (HPT) _____ (Date Gamma) _____ (Date Beta)

(11) Shipment Description
 A. Work Package Number ES-95-00487
 B. Core Seal Number 11282
 C. Sampler Serial Number 74-4685
 D. Date and Time Sampler Unstuffed 6-25-78 1313
 E. Expected Liquid Content 30%
 F. Expected Solids Content 70%
 G. Dose Rate Through Drill String 2.0R/HR
 H. Expected Sample Length 17

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

COPY

114

(12) Field Comments _____ (13) Laboratory Comments _____

(13) Place of Origin <u>AR 105</u>	(14) Destination <u>8225</u>	(15) Sample Number (Sign and PRINT) <u>96-275</u>	(16) Date/Time <u>6-25-78</u>	(17) Sender Comments
(18) Authorized By (Sign and PRINT) <u>Steve B. Brown</u>	(19) Received By (Sign and PRINT) <u>Steve B. Brown</u>	(20) Received By (Sign and PRINT) <u>Steve B. Brown</u>	(21) Date/Time <u>6-25-78</u>	(22) Receiver Comments
(23) Authorized By (Sign and PRINT) <u>Steve B. Brown</u>	(24) Received By (Sign and PRINT) <u>Steve B. Brown</u>	(25) Authorized By (Sign and PRINT) <u>Steve B. Brown</u>	(26) Date/Time <u>6-25-78</u>	(26) Receiver Comments
(27) Inspected By (Sign and PRINT) <u>Steve B. Brown</u>	(28) Received By (Sign and PRINT) <u>Steve B. Brown</u>	(29) Authorized By (Sign and PRINT) <u>Steve B. Brown</u>	(30) Date/Time <u>6-25-78</u>	(30) Receiver Comments

(31) Seal Intact Upon Receipt? Yes No
 (32) Seal Date Consistent with this Record? Yes No
 Core Seal No. Yes No
 Sample No. Yes No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 58-95 Goldwood - Tank Farm Operations, 58-43 BC-6000-309 (03/84)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

COPY

1 Shipment Number 200-08-1F (2) Sample Number 76-276 (3) Supervisor M.C. Jones (4) Cask Serial Number 60519243470450

1) Tank AN-105 (5) Riser 7B (6) Segment 2 (7) Core 153 (8) Cask Serial Number 60519243470450

(10) Shipment Description ES-95-00487

(11) LABORATORY

(11A) RELO 05

(11B) Work Package Number 60519243470450

(11C) Cask Seal Number 38

(11D) Sampler Serial Number 72

(11E) Date and Time Sampler Unleaded 6-25-96/2100

(11F) Expected Liquid Content 3080

(11G) Expected Solid Content 7090

(11H) Dose Rate Through Drill String 2.3 R/MR

(11I) Expected Sample Length 19"

(11J) RCT: 41K (Alpha) (11K) Date/Company 6/25/96

(11L) RPT: [Signature] (11M) Signature [Signature]

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

115

(12) Field Comments

L.I.B.R. ADDED TO DRILL STRING FOR HEAL FIELD.

(12-4) Laboratory Comments

(13) Chain of Custody

(13-1) Point of Origin AN-105 7B (13-2) Destination 200-08-1F

(13-3) Released By (Sign and PRINT) [Signature] (13-4) Received By (Sign and PRINT) [Signature]

(13-5) Date Released 6-25-96 (13-6) Date Received 6-25-96

(13-7) Released By (Sign and PRINT) [Signature] (13-8) Received By (Sign and PRINT) [Signature]

(13-9) Date Released 6-25-96 (13-10) Date Received 6-25-96

(13-11) Released By (Sign and PRINT) [Signature] (13-12) Received By (Sign and PRINT) [Signature]

(13-13) Date Released 6-25-96 (13-14) Date Received 6-25-96

(18) Seal Intact Upon Release? Yes No

(19) Seal Intact Upon Receipt? Yes No

(20) Seal Data Consistent with this Record? Yes No

(21) Shipment No. Yes No

(22) Cask Seal No. Yes No

(23) Sample No. Yes No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 56-85 Guldensrod - Tank Farm Operations, 54-43 DC-6000-329 (02B 4)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W 081E (2) Sample Number 96-277 (3) Supervisor FOGEL (8) Cask Serial Number 56
 (4) Tank AA-105 (5) Riser 7B (6) Segment 3 (7) Core 153

(9) FIELD (13) LABORATORY

Over Top Dose Rate 60.5 mrem/hr
 Side Dose Rate 41 mrem/hr
 Bottom Dose Rate 13
 Measurable Contamination 1.20 (Alpha)
1.1000 (Beta-Gamma)
 RCT* None RCT* None
 (RPT) None (RPT) None

(10) Shipment Description
 A. Work Package Number ES-95-00487/D
 B. Cask Seal Number 11131
 C. Sampler Serial Number 95-1245
 D. Date and Time Sampler Unsealed 4/26/96 0154
 E. Expected Liquid Content 80B
 F. Expected Solid Content 20%
 G. Dose Rate Through Dose String 2.2 R/hr
 H. Expected Sample Length 19"

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

COPY

(12) Field Comments
 WATER w/ LIBR USED AS HEAD FLUID

(14) Laboratory Comments

(13) Point of Origin <u>AA-105</u>	(14) Description <u>222 S</u>	(15) Sample: Name (Sign and PRINT) <u>222 S</u>	(16) Date/Time <u>4/26/96</u>	(17) Sender Comments
(15) Requisition/Job and PRINT <u>222 S</u>	(16) Received By (Sign and PRINT) <u>[Signature]</u>	(17) Date/Time <u>8-14-20</u>	(18) Receiver Comments	(19) Sender Comments
(16) Requisition/Job and PRINT <u>222 S</u>	(17) Received By (Sign and PRINT) <u>[Signature]</u>	(18) Date/Time <u>8-14-20</u>	(19) Receiver Comments	(20) Sender Comments
(17) Requisition/Job and PRINT <u>222 S</u>	(18) Received By (Sign and PRINT) <u>[Signature]</u>	(19) Date/Time <u>8-14-20</u>	(20) Receiver Comments	(21) Sender Comments
(18) Seal Intact Upon Receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(19) Seal Intact Upon Receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(20) Seal Date Consistent with Date Received? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(21) Seal Date Consistent with Date Received? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(22) Seal Date Consistent with Date Received? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

DISTRIBUTION: White - Office of Sample Management Yellow - Receptors of Sample Pink - Core Sampling, 36-95 Colored - Tank Farm Operations, 64-43

BC-6000-509 (03/24)

(RGS)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 2000-08-TF (2) Sample Number 96-278 (3) Supervisor [Signature]
1) Tank AN-105 (5) Riser 7B (6) Segment 4 (7) Core 153 (8) Cask Serial Number C 1025

(110) Shipment Description

(10) Shipment Description

(11) LABORATORY

Over Top Dose Rate 50.5 mc/hr

Side Dose Rate 28.9 mc/hr

Bottom Dose Rate 13 mc/hr

Smearable Contamination 220 dpm/100cm²

Work Package Number ES-95-00407/0

Cask Seal Number DP-6125185 11278

Sampler Serial Number RGS-016

Date and Time Sampler Unseated 6/24/96 0300

Expected Liquid Content 8078

Expected Solid Content 2070

Dose Rate Through Drill String 2.0 R/hr

Expected Sample Length 19'

RCT* (HPT) [Signature] RCT* (HPT) [Signature]

(Bate-Gamma) (Alpha) (Bate-Gamma) (Signature)

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

2) Field Comments
RGS SAMPLE.
WATER WITH LIBR USED AS HEAD FLUID

3) Point of Origin AN-105	(14) Destination 2225	(15) Sender Name (Sign and PRINT) James Sicketts	(16) Date/Time 6-25-96	(17) Sender Comments
5) Relinquished By (Sign and PRINT) James Sicketts	(20) Received By (Sign and PRINT) Cecil Byrd	(21) Date/Time 6-28-96	(22) Receiver Comments	
3) Relinquished By (Sign and PRINT) James Sicketts	(24) Received By (Sign and PRINT) N. L. APLEERS	(25) Date/Time 6-28-96	(26) Receiver Comments	
7) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release? Yes No

(19) Seal Intact Upon Receipt? Yes No

(32) Seal Date Consistent with this Record? Yes No

Cask Seal No. Yes No

Shipment No. Yes No

Sample No. Yes No

COF

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 2000-08-TP (2) Sample Number 96-279 (3) Supervisor Davey J. Reese
 (4) Tank AN105 (5) Rise 7B (6) Segment 5 (7) Core 153 (8) Cash Seal Number C2010

(9) FIELD

Radiation Survey Date: <0.5

Over Top Dose Rate 43

Side Dose Rate 20

Bottom Dose Rate <20

Site Radiologic Contamination SLK (Alpha)

RCT* (Beta Gamma) SLK

HPT* (Gamma) SLK

RCT* (Alpha) SLK

HPT* (Alpha) SLK

(10) LABORATORY

(11) Shipment Description ES-95-00487

A. Work Package Number 11281

B. Cash Seal Number 95-1095

C. Sampler Serial Number 6-26-96 0914

D. Date and Time Sampler Unsealed 3070

E. Expected Liquid Content 7070

F. Expected Solid Content 1.5 R/HR

G. Dose Rate Through Drill String 19"

H. Expected Sample Length

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

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(12) Field Comments		(14) Laboratory Comments	
(13) Point of Origin <u>AN-105</u>	(14) Destination <u>2225</u>	(15) Sender Name (Sign and PRINT) <u>Davey Reese - James Sicks</u>	(16) Date of Receipt <u>8-7-96</u>
(16) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(17) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(18) Receiver Name <u>James Sicks</u>	(19) Date of Receipt <u>8-7-96</u>
(20) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(21) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(22) Receiver Name <u>James Sicks</u>	(23) Date of Receipt <u>8-7-96</u>
(24) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(25) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(26) Receiver Name <u>James Sicks</u>	(27) Date of Receipt <u>8-7-96</u>
(28) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(29) Relinquished By (Sign and PRINT) <u>James Sicks</u>	(30) Receiver Name <u>James Sicks</u>	(31) Date of Receipt <u>8-7-96</u>
(31) Seal Intact Upon Release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		(32) Seal Intact Upon Receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Shipment Receipts <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cash Seal Mts. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Sample No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Sample No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 56-65 Goldenrod - Tank Farm Operations, 54-43 BC-6000-303 (02/94)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Jul. 3, 1995

M. G. Jones

1) Shipment Number 2004208-TF (2) Sample Number 96-282 (3) Supervisor M. G. Jones (8) Cask Serial Number SN-72
 1) Tank AA-105 (5) Riser 7D (6) Segment 8 (7) Core 153

<p>(9) FIELD</p> <p>Over Top Dose Rate <u>< 0.5 mrem/h</u></p> <p>Side Dose Rate <u>3.7 mrem</u></p> <p>Bottom Dose Rate <u>1.1 mrem</u></p> <p>Smearable Contamination <u>520</u> (Alpha)</p> <p style="text-align: center;">(33) LABORATORY</p> <p>Over Top Dose Rate <u>< 0.5 mrem/h</u></p> <p>Side Dose Rate <u>3.9 mrem/h</u></p> <p>Bottom Dose Rate <u>1.1 mrem/h</u></p> <p>Smearable Contamination <u>220</u> (Alpha)</p> <p style="text-align: center;">(10) Shipment Description</p> <p>A. Work Package Number <u>KS-96-00487</u></p> <p>B. Cask Seal Number <u>10451</u></p> <p>C. Sampler Serial Number <u>94-0835</u></p> <p>D. Date and Time Sampler Unseated <u>6-26-96/1728</u></p> <p>E. Expected Liquid Content <u>30%</u></p> <p>F. Expected Solid Content <u>70%</u></p> <p>G. Dose Rate Through Drill String <u>2 RMR</u></p> <p>H. Expected Sample Length <u>19'</u></p>	<p>RICT* (HPT) <u>[Signature]</u></p> <p>RICT* (HPT) <u>[Signature]</u></p> <p>(Beta-Gamma) <u>[Signature]</u></p> <p>(Signature) <u>[Signature]</u></p>
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1) INFORMATION (Include statement of laboratory tests to be performed.)

WHC-SD-WM-DP-199, REV. 0

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<p>2) Field Comments</p> <p style="text-align: center;">(34) Laboratory Comments</p> <p style="font-size: 2em; text-align: center;">LBS Added To Drill String For Head Fluid</p>	<p>(11) Point of Origin <u>AA-105</u></p> <p>(14) Destination <u>RR-5</u></p> <p>(15) Sender Name (Sign and PRINT) <u>James Sickett</u></p> <p>(20) Received By (Sign and PRINT) <u>[Signature]</u></p> <p>(24) Received By (Sign and PRINT) <u>[Signature]</u></p> <p>(28) Received By (Sign and PRINT) <u>[Signature]</u></p> <p>(16) Date/Time <u>7-5-96</u></p> <p>(21) Date/Time <u>7-3-96</u></p> <p>(25) Date/Time <u>7-3-96</u></p> <p>(29) Date/Time <u>7-3-96</u></p> <p>(17) Sender Comments</p> <p>(22) Receiver Comments</p> <p>(26) Receiver Comments</p> <p>(30) Receiver Comments</p>
<p>(18) Seal Intact Upon Release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>(31) Seal Intact Upon Receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>(32) Seal Data Consistent with this Record? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Shipment No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Cask Seal No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Sample No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200W-08-1F (2) Sample Number 96-283 (3) Supervisor M. C. Jones (8) Cask Serial Number C 2015
 1) Tank AK-105 (5) Riser 7B (6) Segment 9 (7) Core 153

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

(9) FIELD (33) LABORATORY

Over Top Dose Rate 0.8 mrem/h
 Side Dose Rate 38 mrem/h
 Bottom Dose Rate 16 mrem/h
 Smearable Contamination <20 (Alpha) <1K (Beta-Gamma)
 RCT* (HPT) [Signature] RCT* (HPT) [Signature]
 (Alpha) <1K (Beta-Gamma) [Signature]

(10) Shipment Description
 A. Work Package Number ES-95-00487
 B. Cask Seal Number 10458
 C. Sampler Serial Number 94-4665
 D. Date and Time Sampler Unseated 6-26-96/2147
 E. Expected Liquid Content 30%
 F. Expected Solid Content 70%
 G. Dose Rate Through Drill String 2.5 R/hr
 H. Expected Sample Length 19" R/hr

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WHO-SI-WM-DP-199, REV. 0

2) Field Comments
LIBC Added To Drill String For Heat Flux

(34) Laboratory Comments

1) Print of Origin <u>AK-105</u>	(14) Destination <u>222-S</u>	(15) Sender Name (Sign and PRINT) <u>[Signature] F. Resnik for M. Jones</u>	(16) Date/Time <u>7-2-96/1350</u>	(17) Sender Comments
2) Relinquished By (Sign and PRINT) <u>[Signature] R. J. Penzlik</u>	(20) Received By (Sign and PRINT) <u>[Signature] Conni's Botwick Conni Botwick</u>	(21) Date/Time <u>7-2-96 1:50</u>	(22) Receiver Comments	
3) Relinquished By (Sign and PRINT) <u>[Signature] Conni's Botwick Conni Botwick</u>	(24) Received By (Sign and PRINT) <u>[Signature] F. F. Dicks</u>	(25) Date/Time <u>7-2-96 1430</u>	(26) Receiver Comments	
4) 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
 Cask Seal No. Yes No
 Sample No. Yes No

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200110817 (3) Sample Number 76-284 (5) Supervisor BEGAN (7) Core 15-3 (9) Cask Serial Number 1004C
 (4) Tank AA1-105 (6) Risk 7B (8) Segment 10

(11) FIELD

Radiation Survey Date: 045

Over Top Dose Rate 43

Side Dose Rate 12

Bottom Dose Rate 520

Seamable Contamination

(12) LABORATORY

A. Work Package Number ER-75-00187

B. Cask Seal Number 11155

C. Sampler Serial Number 85-0835

D. Date and Time Sampler Unsealed 6/27/76 0127

E. Expusted Liquid Content 20%

F. Expusted Solid Content 20%

G. Dose Rate Through Cask Stop 2.0E+4

H. Expected Sample Length 19"

RET* (HPT) [Signature] RET** (HPT) [Signature]

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

123

(12) Field Comments WATER WITH L-1-BE USER WAS HEAVY FLUID.

(13) Laboratory Comments

(15) Date/Time	(17) Sender Comments
7/20/96 193	
(16) Date/Time	(18) Receiver Comments
7/20/96	
(19) Date/Time	(21) Receiver Comments
7/20/96	
(20) Date/Time	(22) Receiver Comments
7/20/96	
(23) Date/Time	(24) Receiver Comments

(13) Seal Data Consistent with this Report?

(18) Seal Intact Upon Release? Yes No

(19) Seal Intact Upon Receipt? Yes No

Shipment No. Yes No

Cask Seal No. Yes No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 5E-4S Goldenrod - Tank Farm Operations, 54-43

8C-6000-309 (0 2/84)

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200W-08-7F (2) Sample Number 96-285 (3) Supervisor BOGEM

(4) Tank AN-105 (5) Riser 7B (6) Segment 11 (7) Core 153 (8) Cask Serial Number 52004

radiation Survey Data:

(9) FIELD (33) LABORATORY

Over Top Dose Rate 0.5 MREM 1.7 mrem/hy

Side Dose Rate 0.5 MREM 3.6 mrem/hy

Bottom Dose Rate 0.5 MREM 1.6 mrem/hy

Smearable Contamination 200 20 (Alpha)

2.1K 2.1K (Beta-Gamma)

RCT* (HPT) [Signature] RCT* (HPT) [Signature] (Signature)

(10) Shipment Description

A. Work Package Number E2-75-00187

B. Cask Seal Number 11136

C. Sampler Serial Number 95-0995

D. Date and Time Sampler Unseated 6/27/96 0419

E. Expected Liquid Content 80%

F. Expected Solid Content 20%

G. Dose Rate Through Drill String 2.0 R/h

H. Expected Sample Length 19"

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

124

WEC-SD-WM-CP-199, REV. 0

2) Field Comments
WATER WITH LIBR USED AS HEAD FLUID

(34) Laboratory Comments

3) Point of Origin <u>AN-105</u>	(14) Destination <u>2225</u>	(15) Sender Name (Sign and PRINT) <u>Alvin R. P. Pawnik to G. Bogem</u>	(16) Date/Time <u>7-9-96/13SD</u>	(17) Sender Comments
9) Relinquished By (Sign and PRINT) <u>Alvin R. P. Pawnik</u>	(20) Received By (Sign and PRINT) <u>Conrad Rastback</u>	(21) Date/Time <u>7-27-96 1:31</u>	(22) Receiver Comments	
3) Relinquished By (Sign and PRINT) <u>Conrad Rastback</u>	(24) Received By (Sign and PRINT) <u>Conrad Rastback</u>	(25) Date/Time <u>7-27-96 1440</u>	(26) Receiver Comments	
7) Relinquished By (Sign and PRINT) <u>Conrad Rastback</u>	(28) Received By (Sign and PRINT) <u>Conrad Rastback</u>	(29) Date/Time	(30) Receiver Comments	

(18) Seal Intact Upon Release? Yes No

(31) Seal Intact Upon Receipt? Yes No

(32) Seal Date Consistent with this Record? Yes No

Shipment No. Yes No

Cask Seal No. Yes No

Sample No. Yes No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200111-08-IT (2) Sample Number 96-286 (3) Supervisor Bosen (8) Cask Serial Number C-2011
 1) Tank AN-105 (5) Riser 7B (6) Segment 12 (7) Core 153

10) Shipment Description
 A. Work Package Number ES-25-00-107
 B. Cask Seal Number 11130
 C. Sampler Serial Number MS-6 95-1265
 D. Date and Time Sampler Unseated 6/27/96 0543
 E. Expected Liquid Content 60%
 F. Expected Solid Content 80%
 G. Dose Rate Through Drill String 2.0 R/hr
 H. Expected Sample Length 19"

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

12) Field Comments
WATER WITH LIBR USED AS HEAD FLUID

13) LABORATORY
 (9) FIELD
0.8 MREM
4.0 MREM
1.5 MREM
<20 (Alpha)
<1K (Beta-Gamma)
[Signature] (Signature)
 RCT* (HPT) _____ RCT* (HPT) _____
 (Alpha) (Beta-Gamma) (Signature)

14) Laboratory Comments

3) Point of Origin <u>AN-105</u>	114) Destination <u>222 5</u>	115) Sender Name (Sign and PRINT) <u>[Signature] for G. Bosen</u>	116) Date/Time <u>7-29-96 1350</u>	117) Sender Comments
5) Relinquished By (Sign and PRINT) <u>[Signature] R. J. Pearson</u>	20) Received By (Sign and PRINT) <u>Connie Bosen</u>	21) Date/Time <u>7-29-96 1:50</u>	22) Receiver Comments	
3) Relinquished By (Sign and PRINT) <u>Connie Bosen</u>	24) Received By (Sign and PRINT) <u>[Signature] E. P. Dubois</u>	25) Date/Time <u>7-29-96 1440</u>	26) Receiver Comments	
7) 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
 Shipment No. Yes No
 Seal Data Consistent with this Record? Yes No
 Cask Seal No. Yes No
 Sample No. Yes No

STR/BUTTON: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 56-85 Goldenrod - Tank Farm Operations, S4-43

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WHO-SI-WM-DP-199, REV 0

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number W 87-3-96
200F08-IT

(1) Shipment Number AA 105 (2) Sample Number 96-287 (3) Supervisor R. Frank Lentz
 (4) Riser 7B (5) Segment 13 (6) Core 153 (7) Cask Serial Number C-1015

Validation Survey Data:		(9) FIELD	(33) LABORATORY	(10) Shipment Description
Over Top Dose Rate		<u>0.5 mrem</u>	<u>0.6 mrem/hr</u>	A. Work Package Number <u>E5-95</u>
Side Dose Rate		<u>60 mrem</u>	<u>60 mrem/hr</u>	B. Cask Seal Number <u>10325</u>
Bottom Dose Rate		<u>15 mrem</u>	<u>15 mrem/hr</u>	C. Sampler Serial Number <u>95-0685</u>
Smearable Contamination		<u><20</u>	<u><20</u>	D. Date and Time Sampler Unseated <u>6-27-95/1440</u>
		<u><1K</u>	<u><1K</u>	E. Expected Liquid Content <u>30%</u>
				F. Expected Solid Content <u>70%</u>
				G. Dose Rate Through Drill String <u>2.3R</u>
				H. Expected Sample Length <u>19"</u>

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

126

Universal sampler
 1500ml Lithium Bromide added
 samples clean - no liquid

2) Field Comments	(34) Laboratory Comments	(16) Date/Time	(17) Sender Comments
		7-3-96	
		7-3-96	
		7-3-96	
		7-3-96	

(18) Seal Intact Upon Release? Yes No

(31) Seal Intact Upon Receipt? Yes No

(32) Seal Date Consistent with this Record? Yes No

Shipment No. Yes No

Cask Seal No. Yes No

Sample No. Yes No

RGS

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200w-08-TF (2) Sample Number 96-288 (3) Supervisor M.C. Jones (8) Cask Serial Number 15-G
 4) Tank AA-105 (5) Riser 7B (6) Segment 14 (7) Core 153

(9) FIELD

Over Top Dose Rate 50.5 mR/hr
 Side Dose Rate 45 mR/hr
 Bottom Dose Rate 22 mR/hr
 Smearable Contamination < 20 dpm/100 cm²
 (Alpha)
< 100 dpm/100 cm²
 (Beta-Gamma)

(33) LABORATORY
AD. Jones
45 mR/hr
16 mR/hr
< 20 dpm
 (Alpha)
< 1 Kdpm
 (Beta-Gamma)
[Signature]
 (Signature)

RCI* (HPT) [Signature] RCT* (HPT) [Signature]

(10) Shipment Description
 A. Work Package Number ES-95-00487
 B. Cask Seal Number 10479
 C. Sampler Serial Number RGS-017
 D. Date and Time Sampler Unseated 6-27-96/1758
 E. Expected Liquid Content 30%
 F. Expected Solid Content 70%
 G. Dose Rate Through Drill String 2.5 R/HR
 H. Expected Sample Length 19'

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

127

WFO-SO-WM-DP-199, REV. 0

(2) Field Comments
 LIBR ADDED TO DRILL STRING AT HEAD FIELD.

(34) Laboratory Comments

3) Point of Origin <u>AA-105</u>	(14) Destination <u>RR-S</u>	(15) Sender Name (Sign and Print) <u>James Sicks</u>	(16) Date/Time <u>6-28-96</u>	(17) Sender Comments
4) Requisitioned By (Sign and Print) <u>James Sicks</u>	(18) Received By (Sign and Print) <u>[Signature]</u>	(20) Received By (Sign and Print) <u>[Signature]</u>	(21) Date/Time <u>6-28-96</u>	(22) Receiver Comments
5) Requisitioned By (Sign and Print) <u>[Signature]</u>	(19) Received By (Sign and Print) <u>[Signature]</u>	(24) Received By (Sign and Print) <u>[Signature]</u>	(25) Date/Time <u>6-28-96</u>	(26) Receiver Comments
6) Requisitioned By (Sign and Print) <u>[Signature]</u>	(21) Received By (Sign and Print) <u>[Signature]</u>	(28) Received By (Sign and Print) <u>[Signature]</u>	(29) Date/Time <u>6-28-96</u>	(30) Receiver Comments

(18) Seal Intact Upon Release? Yes No (31) Seal Intact Upon Receipt? Yes No
 (32) Seal Date Consistent with this Record? Yes No

Shipment No. Yes No Cask Seal No. Yes No

Sample No. Yes No

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Supervisor M.S. Jones

(1) Shipment Number 200W-087E (2) Sample Number 96-289 (3) Core 153 (4) Tank AT-105 (5) Risk 2B (6) Segment 15 (7) Core Seal Number ES-96-00487 (8) Cask Serial Number 20-6

(10) Shipment Description 10452

A. Work Package Number 95-0895

B. Cask Seal Number 6-88-16/1A08

C. Sampler Serial Number 3020

D. Date and Time Sampler Unsealed 2090

E. Expected Liquid Content 2 RIMS

F. Expected Solid Content 19"

G. Core Rise Through Drill String

H. Expecting Sample Length

RECEIVED BY: [Signature] (Alpha) (Date/Time) 2090

RECEIVED BY: [Signature] (Alpha) (Date/Time) 2090

RECEIVED BY: [Signature] (Alpha) (Date/Time) 2090

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

1200

(12) Field Comments Lid is Appled to Drill String for Head Piece

(13) Laboratory Comments

(15) Sample Name (Sign and PRINT)	(17) Sender Comments
<u>15W Sample for M.C. Jones</u>	<u>2090/245</u>
(16) Account/Segment/Date	(22) Receiver Comments
<u>200W-087E/153</u>	<u>17167-30-76</u>
(18) Packaging By (Sign and PRINT)	(25) Receiver Comments
<u>M.S. Jones</u>	<u>153-2090</u>
(19) Requisitioned By (Sign and PRINT)	(26) Receiver Comments
<u>[Signature]</u>	<u>153-2090</u>
(20) Requisitioned By (Sign and PRINT)	(27) Receiver Comments
<u>[Signature]</u>	<u>153-2090</u>
(21) Seal Intact Upon Receipt?	(28) Seal Data Consistent with this Record?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> 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, 56-95 Custodial - Tank Farm Operations, 54-43 BC-6000-309 (0)

RGS

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200W-88-7F (2) Sample Number 96-280 (3) Supervisor R. Frank East
1) Tank AL 105 (5) Riser 7B (6) Segment 16 (7) Core 15.3 (8) Cask Serial Number C-2008

(9) FIELD (10) SHIPMENT DESCRIPTION

Over Top Dose Rate 1 mR/hr (A) Work Package Number ES-95-00487
Slide Dose Rate 30 mR/hr (B) Cask Seal Number 10304
Bottom Dose Rate 15 mR/hr (C) Sampler Serial Number RGS-15
Smearable Contamination 20 ppm/100cm² (Alpha) (D) Date and Time Sampler Unseated 4-28-96 / 1100
1000 ppm/100cm² (Beta-Gamma) (E) Expected Liquid Content 30 g
(RCT*) (HPT) (Signature) [Signature] (F) Expected Solid Content 70%
(RCT*) (HPT) (Signature) [Signature] (G) Dose Rate Through Drill String 2.0 R
(RCT*) (HPT) (Signature) [Signature] (H) Expected Sample Length 19

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

129

WHC-SD-WM-DP-199, REV. 0

2) Field Comments RGS sample
1500 ml lithium bromide added
sample clean

(14) Destination 2229 lab
(15) Sender Name (Sign and PRINT) James Sickett
(16) Date/Time 4-28-96
(17) Sender Comments

(20) Received By (Sign and PRINT) [Signature]
(21) Date/Time 4-28-96
(22) Receiver Comments

(24) Received By (Sign and PRINT) [Signature]
(25) Date/Time 4-28-96
(26) Receiver Comments

(28) Received By (Sign and PRINT) [Signature]
(29) Date/Time 4-28-96
(30) Receiver Comments

(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
Sampler No. Yes No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 200-0017 (2) Sample Number 96-291 (3) Supervisor BREN
 (4) Tank AA-105 (5) Header 3B (6) Segment 17 (7) Core 153 (8) Cask Serial Number 68

Radiation Survey Date:		133 LABORATORY	
Over Top Dose Rate	<u>1 Mrem/hr</u>	<u>5.5</u>	
Side Dose Rate	<u>37 Mrem/hr</u>	<u>3.7</u>	
Bottom Dose Rate	<u>27 Mrem/hr</u>	<u>2.1</u>	
Smearable Contamination	<u>5.20</u>	<u>2.00</u>	(Alpha)
	<u>1000</u>	<u>21K</u>	(Beta-Gamma)
RET. (HPT)	<u>[Signature]</u>	RET. (HPT)	<u>[Signature]</u>

(10) Shipment Description
 A. Work Package Number 85-85-001B-7
 B. Cask Seal Number 1128
 C. Sampler Seal Number 95-118 S
 D. Date and Time Sample/Unsealed 6/29/96 0825
 E. Expected Liquid Content 40%
 F. Expected Solid Content 60%
 G. Dose Rate Through DWR Staging 1.9 rad/hr
 H. Expected Sample Length 19"

COPY

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

130

(12) Field Comments
AMTBE WITH LIBY USED AS HEAD FLUID

(13) Laboratory Comments

(15) Points of Origin <u>AA-105</u>	(14) Destination <u>222 S</u>	(15) Sender Name (Signed and PRINT) <u>Stewart B. Stewart</u>	(16) Date/Time <u>6/29/96</u>	(17) Sender Comments
(18) Relinquished By (Sign and PRINT) <u>Stewart B. Stewart</u>	(19) Received By (Sign and PRINT) <u>Stewart B. Stewart</u>	(20) Resigned By (Sign and PRINT) <u>Stewart B. Stewart</u>	(21) Date/Time <u>6/29/96</u>	(22) Receiver Comments
(23) Relinquished By (Sign and PRINT) <u>Stewart B. Stewart</u>	(24) Received By (Sign and PRINT) <u>Stewart B. Stewart</u>	(25) Relinquished By (Sign and PRINT) <u>Stewart B. Stewart</u>	(26) Date/Time <u>6/29/96</u>	(27) Receiver Comments
(27) Relinquished By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Relinquished By (Sign and PRINT)	(30) Date/Time	(30) Receiver Comments

(18) Seal Intact Upon Release? Yes No

(21) Seal Intact Upon Receipt? Yes No

(13) Seal Date Consistent with this Record? Yes No

Shipment No. Yes No

Cask Seal No. Yes No

Sample No. Yes No

DISTRIBUTION: WHM - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, 36-85 Goldens - Tank Firm Operations, 54-43 SC-8000-309 (02/94)

RGS

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200W-08-17 (2) Sample Number, 96-292 (3) Supervisor R. Frank Hunt (4) Tank BW 105 (5) Riser 7B (6) Segment 18 (7) Core 153 (8) Cask Serial Number 77

110) Shipment Description

A. Work Package Number ES-95-00497

B. Cask Seal Number 10305

C. Sampler Serial Number RGS-019

D. Date and Time Sampler Unseated 6-28-96/0941

E. Expected Liquid Content 30%

F. Expected Solid Content 70%

G. Dose Rate Through Drill String 1.8R

H. Expected Sample Length 19"

(9) FIELD (33) LABORATORY

Over Top Dose Rate 1 mR/hr

Side Dose Rate 35 mR/hr

Bottom Dose Rate 10 mR/hr

Smearable Contamination 200 ppi / 100 cm²

ACT* (HPT) [Signature] RCT* (HPT) [Signature]

(Alpha) [Signature]

(Beta-Gamma) [Signature]

(Signature) [Signature]

1) INFORMATION ~~is~~ include statement of laboratory tests to be performed.

131

WHC-SD-WM-DP-199, REV. 0

2) Field Comments 1500 ml lithium benzoate added
RGS - sampler
sample clean

(34) Laboratory Comments

3) Point of Origin <u>7B</u> (14) Destination <u>2225 Lab</u>	(16) Days/Time <u>6-28-96</u>	(17) Sender Comments
3) Acquired By (Sign and PRINT) <u>James Sickett</u>	(21) Days/Time <u>6-28-96</u>	(22) Receiver Comments
3) Relinquished By (Sign and PRINT) <u>James Sickett</u>	(25) Days/Time <u>6-28-96</u>	(26) Receiver Comments
7) Relinquished By (Sign and PRINT) <u>[Signature]</u>	(23) Date/Time <u>6-28-96</u>	(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

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S6-85 Goldwater - Tank Farm Operations, S4-43

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

(1) Shipment Number 2000-08-47 (2) Sample Number 18-273 (3) Supervisor REBEL
 (4) Tank AN-185 (5) Pit # 19 (6) Segment 7B (7) Core 153 (8) Cask Serial Number 46

(9) FIELD (10) LABORATORY

Radiation Survey Data:
 Over Top Dose Rate 5045
 Side Dose Rate 310
 Bottom Dose Rate 21
 Smearable Contamination 220 (Alpha)
< 1K (Beta-Gamma) (Significant)
REBEL (Significant) RCT# (PRT) _____ RCT# (PRT) _____

(11) Shipment Description
 A. Work Package Number E3-35-00487
 B. Cask Seal Number 11137
 C. Sampler Serial Number 55-0903
 D. Date and Time Sampler Uncased 6/28/96 0521
 E. Expected Liquid Content 30%
 F. Expected Solid Content 68-68-70%
 G. Core Ratio Through Drill String 1.6 E/L
 H. Expected Sample Length 19'

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

132

(12) Field Comments
WATER WITH LUBR USED AT HEAD FLUID

(13) Laboratory Comments

(13) Point of Origin <u>AN-105</u>	(14) Destination <u>222-5</u>	(15) Under Name (Sign and PRINT) <u>James Sickett</u>	(16) Date/Time <u>8-7-96</u>	(17) Sender Comments
(18) Requisitioned By (Sign and PRINT) <u>James Sickett</u>	(19) Requisitioned By (Sign and PRINT) <u>James Sickett</u>	(20) Received By (Sign and PRINT) <u>James Sickett</u>	(21) Date/Time <u>8-7-96</u>	(22) Receiver Comments
(23) Requisitioned By (Sign and PRINT) <u>James Sickett</u>	(24) Requisitioned By (Sign and PRINT) <u>James Sickett</u>	(25) Received By (Sign and PRINT) <u>James Sickett</u>	(26) Date/Time <u>8/28/96</u>	(26) Receiver Comments
(27) Requisitioned By (Sign and PRINT)	(28) Received By (Sign and PRINT)	(29) Date/Time	(30) Receiver Comments	(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

Signature No. Yes No

Cask Seal No. Yes No

Sampled 96. Year No

DISTRIBUTION: White - Office of Sample Management Yellow - Recipient of Sample Pink - Core Sampling, S&B5 Greenred - Tank Farm Operations, S&4-43

BC-6000-309 02/29/91

RGS

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200W-08-7F (2) Sample Number 96-294 (3) Supervisor R. Frank List
 2) Tank AW 105 (5) Riser 7B (6) Segment 20 (7) Core 153 (8) Cask Serial Number 54-76

Validation Survey Date: (9) FIELD

Over Top Dose Rate 0.7 mrem/h (33) LABORATORY Muench
 Side Dose Rate 28 mrem/h 28 mrem/h
 Bottom Dose Rate 25 mrem/h 25 mrem/h
 Smearable Contamination <20 (Alpha) <1K (Beta-Gamma)
 RCT* (HPT) [Signature] RCT* (HPT) [Signature]
 (Signature) (Signature)

(10) Shipment Description
 A. Work Package Number E5-95-00487
 B. Cask Seal Number 10303
 C. Sampler Serial Number R19-24
 D. Date and Time Sampler Unseated 6-28-96/0938
 E. Expected Liquid Content 30%
 F. Expected Solid Content 70%
 G. Dose Rate Through Drill String 1.2R
 H. Expected Sample Length 19"

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

133

1506 ml lithium bromide added
RGS sampler
sampled clean + no liquid

WHIC-SD-WM-DP-199, REV. 0

(34) Laboratory Comments

3) Point of Origin <u>7B</u> (14) Destination <u>2025 Lab.</u> (15) Supplier Name (Sign and PRINT) <u>July 2, 1996</u> (16) Date/Time <u>7/29/1996</u> (17) Sender Comments
4) Requisitioned By (Sign and PRINT) <u>[Signature]</u> (20) Received By (Sign and PRINT) <u>Connie Rodgers</u> (21) Date/Time <u>7-29-96</u> (22) Receiver Comments
5) Requisitioned By (Sign and PRINT) <u>[Signature]</u> (24) Received By (Sign and PRINT) <u>[Signature]</u> (25) Date/Time <u>7-29-96</u> (26) Receiver Comments
6) Requisitioned By (Sign and PRINT) <u>[Signature]</u> (28) Received By (Sign and PRINT) <u>[Signature]</u> (29) Date/Time <u>[Signature]</u> (30) Receiver Comments

(18) Seal Intact Upon Release? Yes No (31) Seal Intact Upon Receipt? Yes No
 (32) Seal Date Consistent with this Record? Yes No
 Cask Seal No. Yes No
 Sample No. Yes No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200W-08-TF (2) Sample Number 96-295 (3) Supervisor R. Frank Leach
 2) Tank AN 105 (5) Riser 7B (6) Segment 21 (7) Core 153 (8) Cask Serial Number C-1036

1) Shipment Date: (9) FIELD

Over Top Dose Rate 0.5 MREM (10) Shipment Description

Side Dose Rate 2B MREM A. Work Package Number ES-95-00487

Bottom Dose Rate 15 MREM B. Cask Seal Number 10306

Sneearable Contamination 280 C. Sampler Serial Number 95-0945

(Alpha) 21K D. Date and Time Sampler Unseated 6-28-86/12:21

(Beta-Gamma) OK E. Expected Liquid Content 30%

(Signature) [Signature] F. Expected Solid Content 70%

RACT* (HPT) [Signature] G. Dose Rate Through Drift String 1.7R

RACT* (HPT) [Signature] H. Expected Sample Length 19"

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

134

2) Field Comments
1500 ml lithium bromide added
universal sampler - 8
sampler clean - 7 drops of liquid on bottom

(34) Laboratory Comments

3) Point of Origin <u>78</u> (14) Destination <u>222S Lab.</u> (15) Supplier Name (Sign and PRINT) <u>Thomas Leach James Sicket</u> (16) Date/Time <u>7-3-86</u> (17) Sender Comments
4) Requisitioned By (Sign and PRINT) <u>Thomas Leach James Sicket</u> (18) Receiver Comments (21) Date/Time <u>7-3-86</u> (22) Receiver Comments
5) Requisitioned By (Sign and PRINT) <u>Thomas Leach James Sicket</u> (19) Received By (Sign and PRINT) <u>James Sicket</u> (25) Date/Time <u>7-3-86</u> (26) Receiver Comments
6) Requisitioned By (Sign and PRINT) <u>Thomas Leach James Sicket</u> (20) Received By (Sign and PRINT) <u>James Sicket</u> (23) Date/Time <u>7-3-86</u> (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

Cask Seal No. Yes No

Shipment No. Yes No

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

1) Shipment Number 200W-06-1F (2) Sample Number AK-105 96-287-29C (3) Supervisor Ronald Dye

4) Tank AK-105 (5) Riser 7B (6) Segment # 22 (7) Core 153 (8) Cask Serial Number 1013C

(9) FIELD (10) Shipment Description A. Work Package Number B. Cask Seal Number C. Sampler Serial Number D. Date and Time Sampler Unseated E. Expected Liquid Content F. Expected Solid Content G. Dose Rate Through Drill String H. Expected Sample Length		ES 1608 94-0855 6/28/66 - 1825 100% 0 1.5 R 14" stroke
(33) LABORATORY 15 men/ky 28 men/ky 10 men/ky 220 L/K (Beta-Gamma) RCT* (HPT) (Signature)		RCT* (HPT) (Signature)

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

1351

WHC-SD-WM-DP-199, REV 0

2) Field Comments

There is waste about 6" up sampler.
From Bottom

(34) Laboratory Comments

3) Point of Origin 200W-06-1F Relinquished By (Sign and PRINT) R. J. Reznik	(14) Destination 222-5 Lab.	(15) Sender Name (Sign and PRINT) R. J. Reznik	(16) Date/Time 7-27-66	(17) Sender Comments
3) Relinquished By (Sign and PRINT) R. J. Reznik	(20) Received By (Sign and PRINT) G. M. ...	(21) Date/Time 7-27-66	(22) Receiver Comments	(23) Date/Time 7-27-66
7) Relinquished By (Sign and PRINT)	(26) Received By (Sign and PRINT)	(27) Date/Time	(28) Receiver Comments	(29) Receiver Comments

(18) Seal Intact Upon Release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(31) Seal Intact Upon Receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(32) Seal Data Consistent with this Record? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cask Seal No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sample No. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
---	---	--	--	---

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

Shipment Number 200W-08-17 (2) Sample Number AK-105 Field Blank Field Blank (3) Supervisor Daniel Rizzo
 Tank AK-105 (5) Riser 7B (6) Segment Field Blank (7) Core 153 (8) Cask Serial Number 17 6

1: 222P 2: 222P 3: 222P 4: 222P 5: 222P 6: 222P 7: 222P 8: 222P 9: 222P 10: 222P 11: 222P 12: 222P 13: 222P 14: 222P 15: 222P 16: 222P 17: 222P 18: 222P 19: 222P 20: 222P 21: 222P 22: 222P 23: 222P 24: 222P 25: 222P 26: 222P 27: 222P 28: 222P 29: 222P 30: 222P 31: 222P 32: 222P 33: 222P 34: 222P 35: 222P 36: 222P 37: 222P 38: 222P 39: 222P 40: 222P 41: 222P 42: 222P 43: 222P 44: 222P 45: 222P 46: 222P 47: 222P 48: 222P 49: 222P 50: 222P 51: 222P 52: 222P 53: 222P 54: 222P 55: 222P 56: 222P 57: 222P 58: 222P 59: 222P 60: 222P 61: 222P 62: 222P 63: 222P 64: 222P 65: 222P 66: 222P 67: 222P 68: 222P 69: 222P 70: 222P 71: 222P 72: 222P 73: 222P 74: 222P 75: 222P 76: 222P 77: 222P 78: 222P 79: 222P 80: 222P 81: 222P 82: 222P 83: 222P 84: 222P 85: 222P 86: 222P 87: 222P 88: 222P 89: 222P 90: 222P 91: 222P 92: 222P 93: 222P 94: 222P 95: 222P 96: 222P 97: 222P 98: 222P 99: 222P 100: 222P

(9) FIELD (33) LABORATORY
 Over Top Dose Rate < 0.5 MREM < 0.5 MREM/4
 Side Dose Rate < 0.5 MREM < 0.5 MREM/4
 Bottom Dose Rate < 0.5 MREM < 0.5 MREM/4
 Smearable Contamination < 20 (Alpha) < 1K (Beta-Gamma)
 RCT* (HPT) [Signature] RCT* (HPT) [Signature]
 (Signature) (Signature)

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

136

WHC-SD-WM-DF-199, REV. 0

(2) Field Comments De-Ionized H₂O (34) Laboratory Comments

(13) Point of Origin <u>AK-105</u>	(14) Destination <u>222-5 6465</u>	(15) Sender Name (Sign and PRINT) <u>James Sickels</u>	(16) Date/Time <u>7-3-96</u>	(17) Sender Comments
(18) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(19) Received By (Sign and PRINT) <u>James Sickels</u>	(20) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(21) Date/Time <u>7-3-96</u>	(22) Receiver Comments
(23) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(24) Received By (Sign and PRINT) <u>James Sickels</u>	(25) Date/Time <u>7-3-96</u>	(26) Receiver Comments	(27) Receiver Comments
(28) Relinquished By (Sign and PRINT) <u>James Sickels</u>	(29) Received By (Sign and PRINT) <u>James Sickels</u>	(30) Date/Time	(31) Receiver Comments	(32) Receiver Comments

(18) Seal Intact Upon Release? Yes No (31) Seal Intact Upon Receipt? Yes No
 Shipment No. Yes No Cask Seal No. Yes No
 Sample No. Yes No

COPY

CHAIN-OF-CUSTODY RECORD FOR CORE SAMPLING

6:322AX 8:1995

REC 222S LAB ROCK 2F BACKSIDE

No. 2803

P. 4/8

(1) Shipment Number MO 22296 (2) Sample Number LIBC BLANK (3) Supervisor M. C. JONES
(4) Tank AX-105 (5) Riser 7B (6) Segment BLANK (7) Core 153 (8) Cask Serial Number 44A

Radiation Survey Date: _____ (9) FIELD _____ (33) LABORATORY _____

Over Top Dose Rate _____
Side Dose Rate _____
Bottom Dose Rate _____
Smearable Contamination _____

(Alpha) _____ (Beta-Gamma) _____
(Alpha) _____ (Beta-Gamma) _____

RCT* (HPT) _____ RCT* (HPT) _____
(Signature) _____ (Signature) _____

(10) Shipment Description _____
A. Work Package Number ES-95-00487
B. Cask Seal Number 10453
C. Sampler Serial Number N/A
D. Date and Time Sampler Unseated 7-1-96 0530
E. Expected Liquid Content 100%
F. Expected Solid Content 0%
G. Dose Rate Through Drill String 2.5 mR/hr
H. Expected Sample Length 100 mm.

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

137

WNC-SD-WM-CP-199, REV. 0

(12) Field Comments <u>LIBC FIELD BLANK</u>	(34) Laboratory Comments
(13) Point of Origin <u>AX-105</u>	(16) Date/Time <u>7-27-96</u>
(14) Destination <u>222-S</u>	(17) Sender Comments
(15) Relinquished By (Sign and PRINT) <u>William K. Patzani</u>	(21) Date/Time <u>7-27-96</u>
(20) Received By (Sign and PRINT) <u>Connie Roberts</u>	(22) Receiver Comments
(23) Relinquished By (Sign and PRINT) <u>Connie Roberts</u>	(25) Date/Time <u>7-27-96</u>
(24) Received By (Sign and PRINT) <u>William K. Patzani</u>	(26) Receiver Comments
(27) Relinquished By (Sign and PRINT) <u>Connie Roberts</u>	(29) Date/Time <u>7-27-96</u>
(28) Received By (Sign and PRINT) <u>William K. Patzani</u>	(30) Receiver Comments
(18) Seal Intact Upon Release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(32) Seal Data Consistent with this Record? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(31) Seal Intact Upon Receipt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cask Seal No. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

WHC-SD-WM-DP-199, REV. 0

INORGANIC ANALYSES

WHC-SD-WM-DP-199, REV. 0

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WHC-SD-WM-DP-199, REV. 0

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LABCORE Data Entry Template for Worklist#

11288

Analyst: RMM Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	28.45	28.1	N/A	Joules/g
96000832	AN-105	2 SAMPLE	S96T003732	0	DSC-01	LIQUID	N/A	0		Joules/g
96000832	AN-105	3 DUP	S96T003732	0	DSC-01	LIQUID	0	0	N/A	Joules/g
96000832	AN-105	4 SAMPLE	S96T003739	0	DSC-01	LIQUID	N/A	0		Joules/g
96000832	AN-105	5 DUP	S96T003739	0	DSC-01	LIQUID	0	0	N/A	Joules/g

Final page for worklist # 11288

RMM
Analyst Signature
7/31/96
Date

Paula Muck
Analyst Signature
8-6-96
Date

Verified/Validated by
Blandina Valenzuela
8-7-96

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 142 TO 146

DSC STD 12N14-B

13.760 mg

Rate: 10.0 °C/min

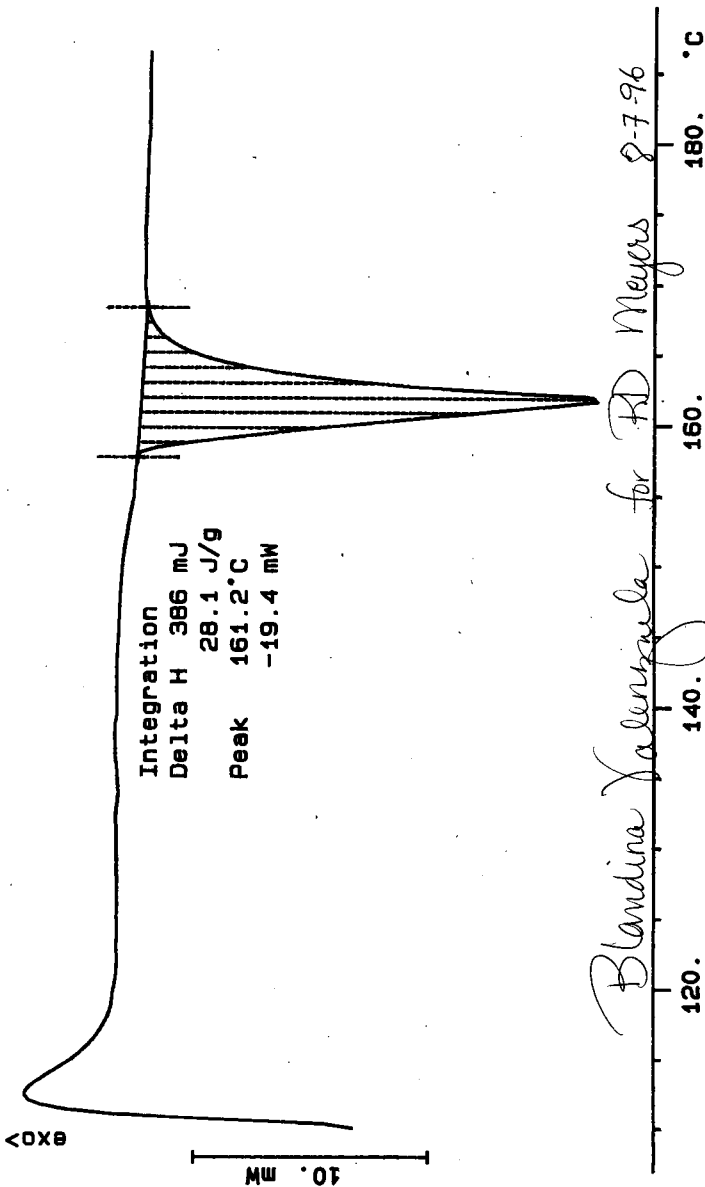
File: 00003.001

DSC METTLER

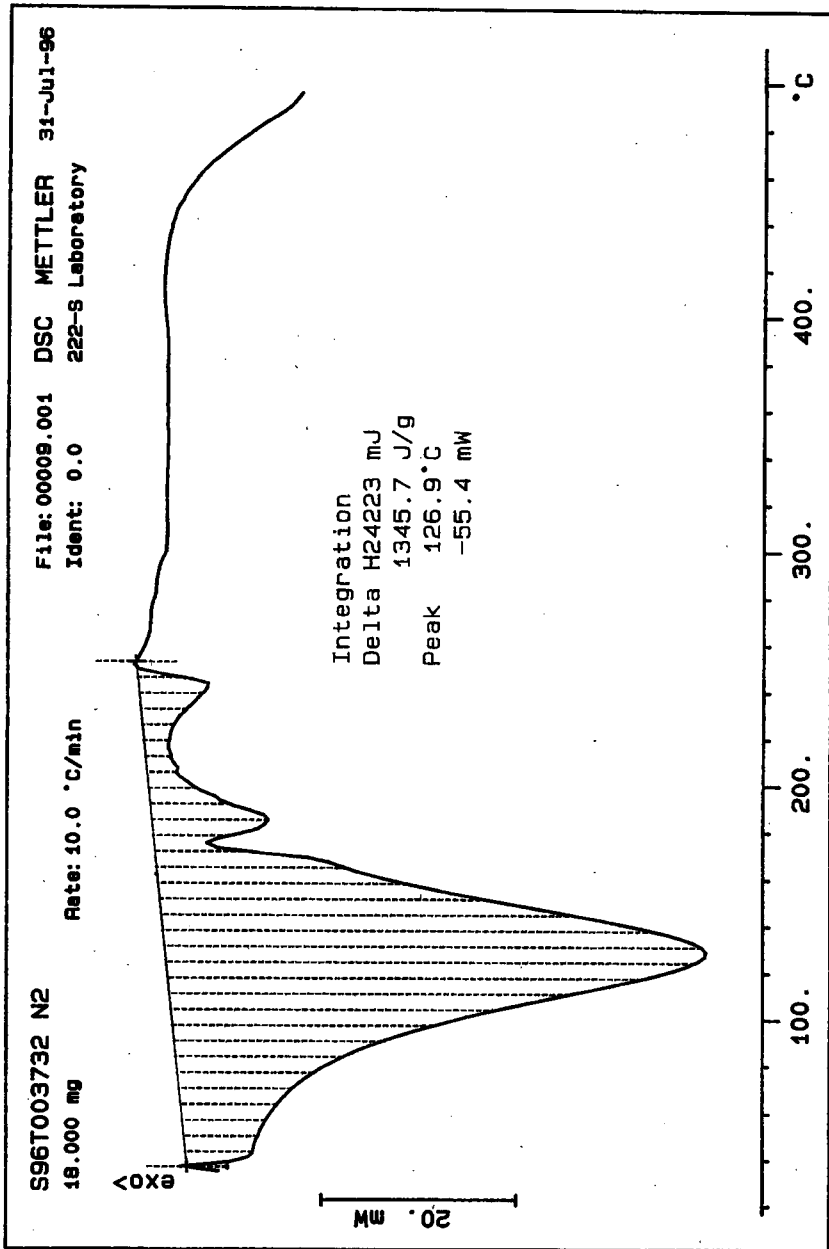
31-JUL-96

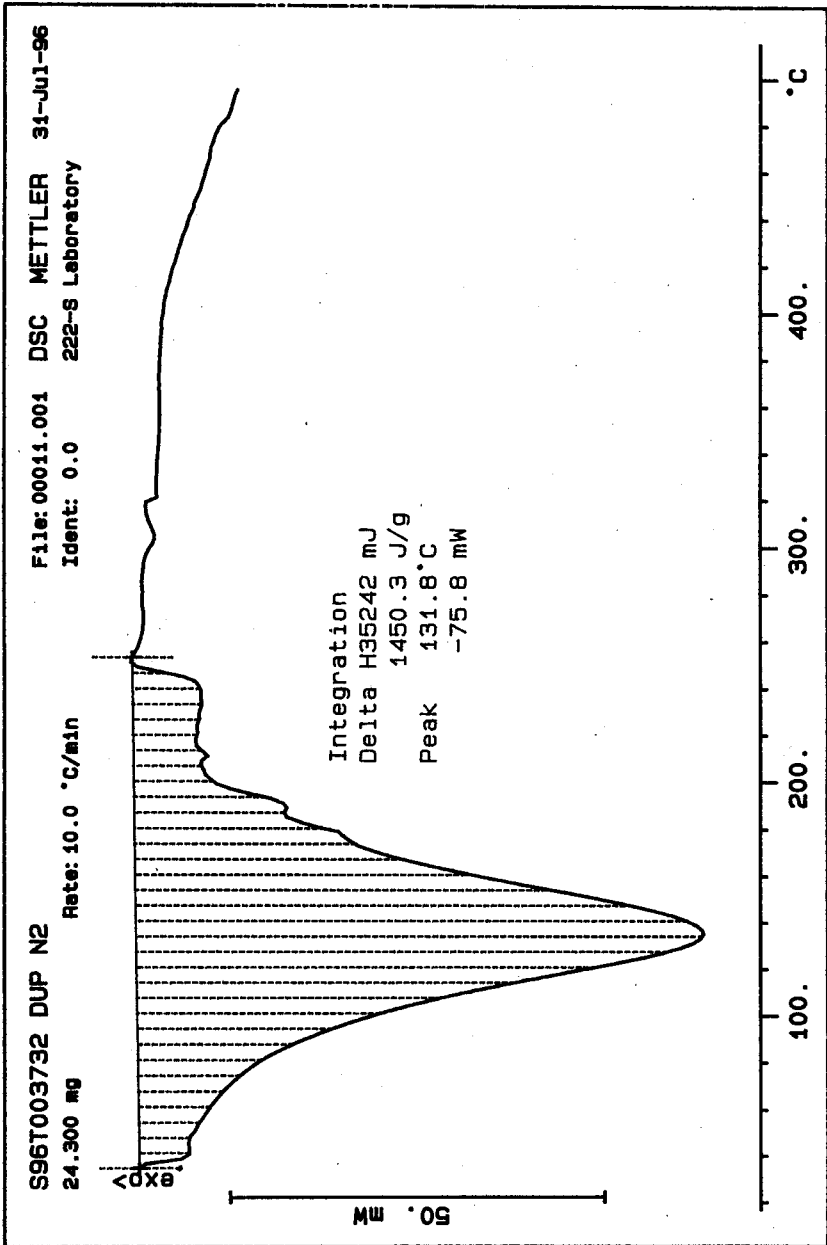
Ident: 0.0

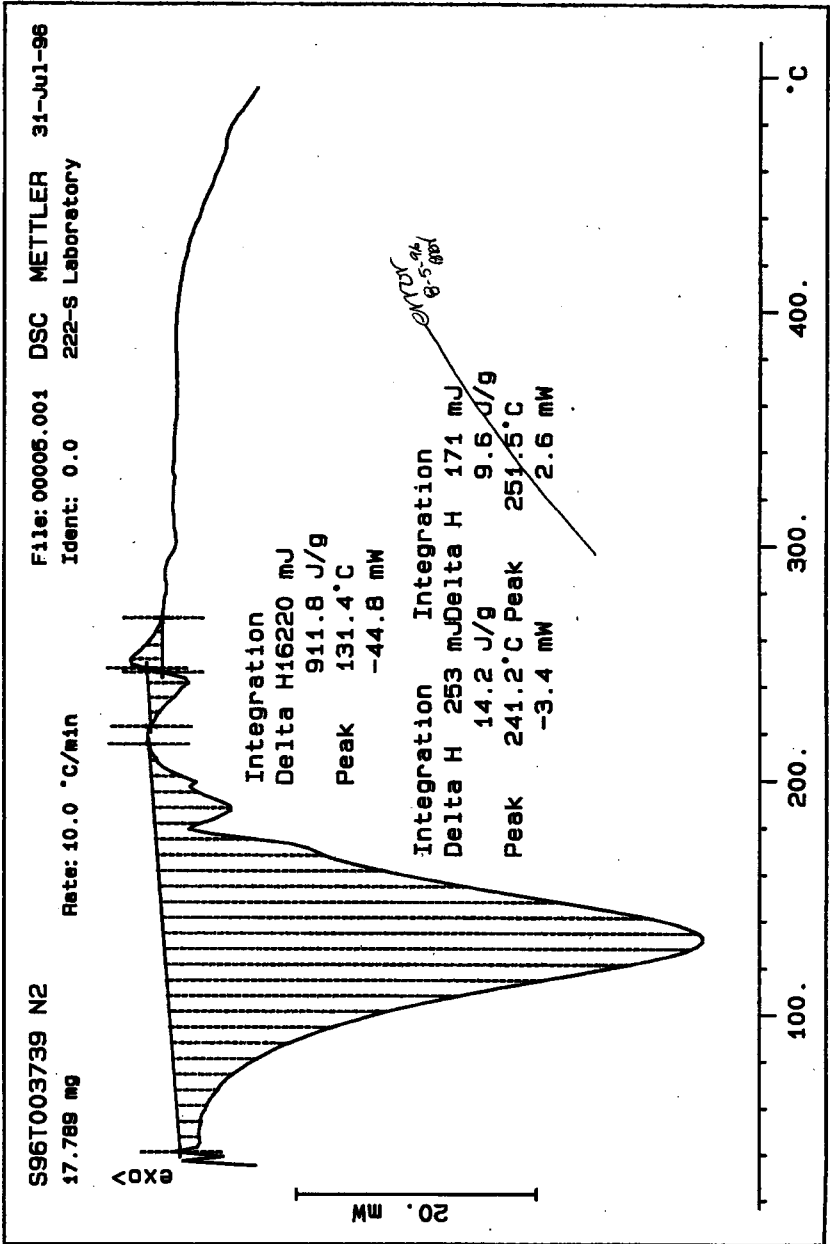
222-S Laboratory

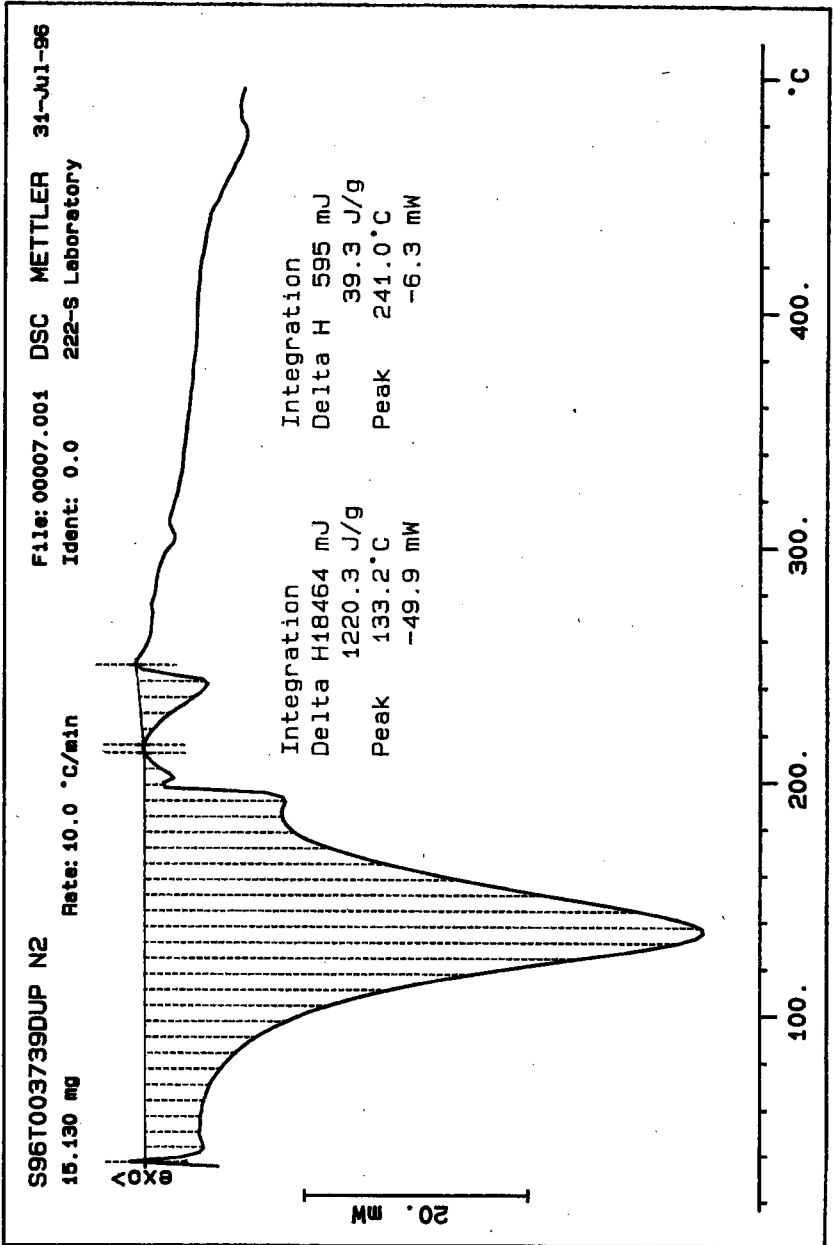


Blandina Valenzuela for RD Meyers 8-7-96









LABCORE Data Entry Template for Worklist#

11289

Analyst: KRM Instrument: DSC0 1 Book # 12014B

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

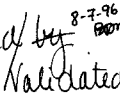
Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>28.1</u> *	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	S96T003740	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000832	AN-105	3 DUP	S96T003740	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000832	AN-105	4 SAMPLE	S96T003741	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000832	AN-105	5 DUP	S96T003741	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # **11289**


 Analyst Signature 7-31-96
 Date

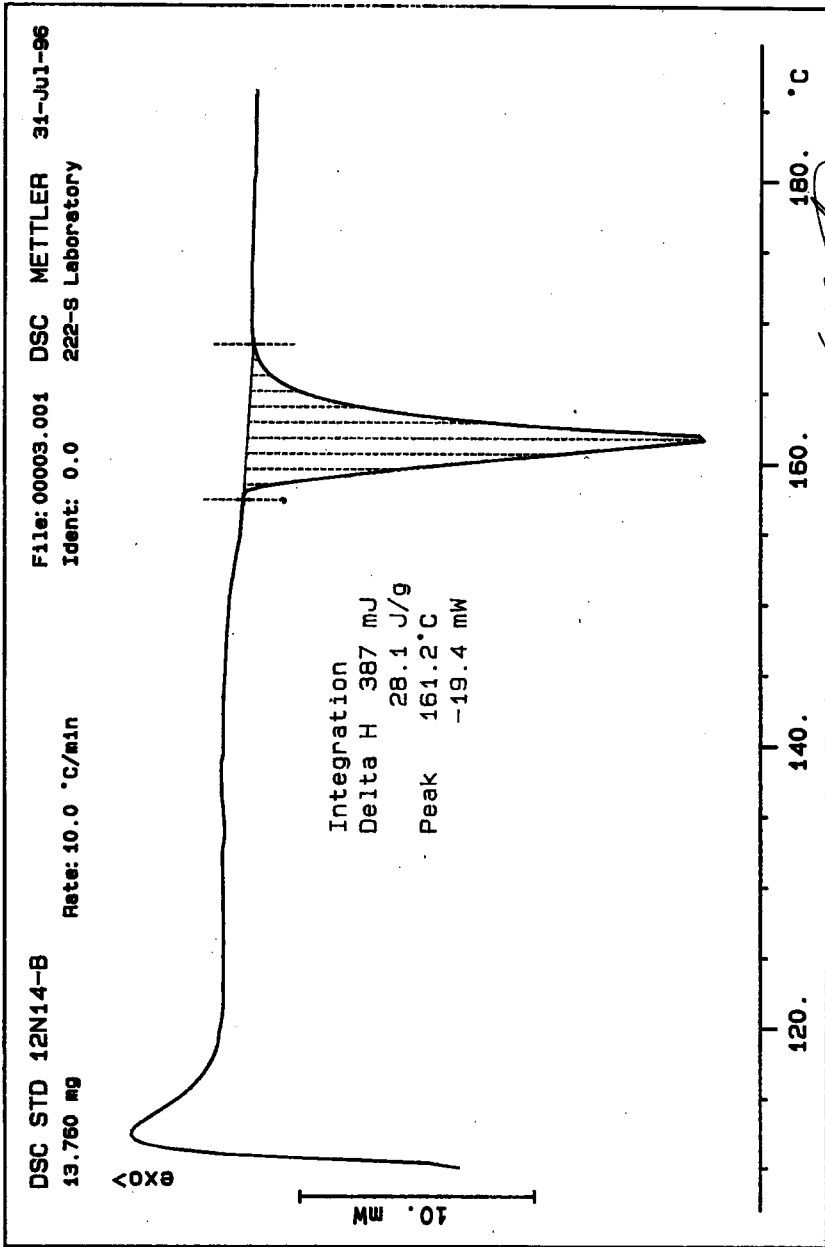

 Analyst Signature 8-6-90
 Date

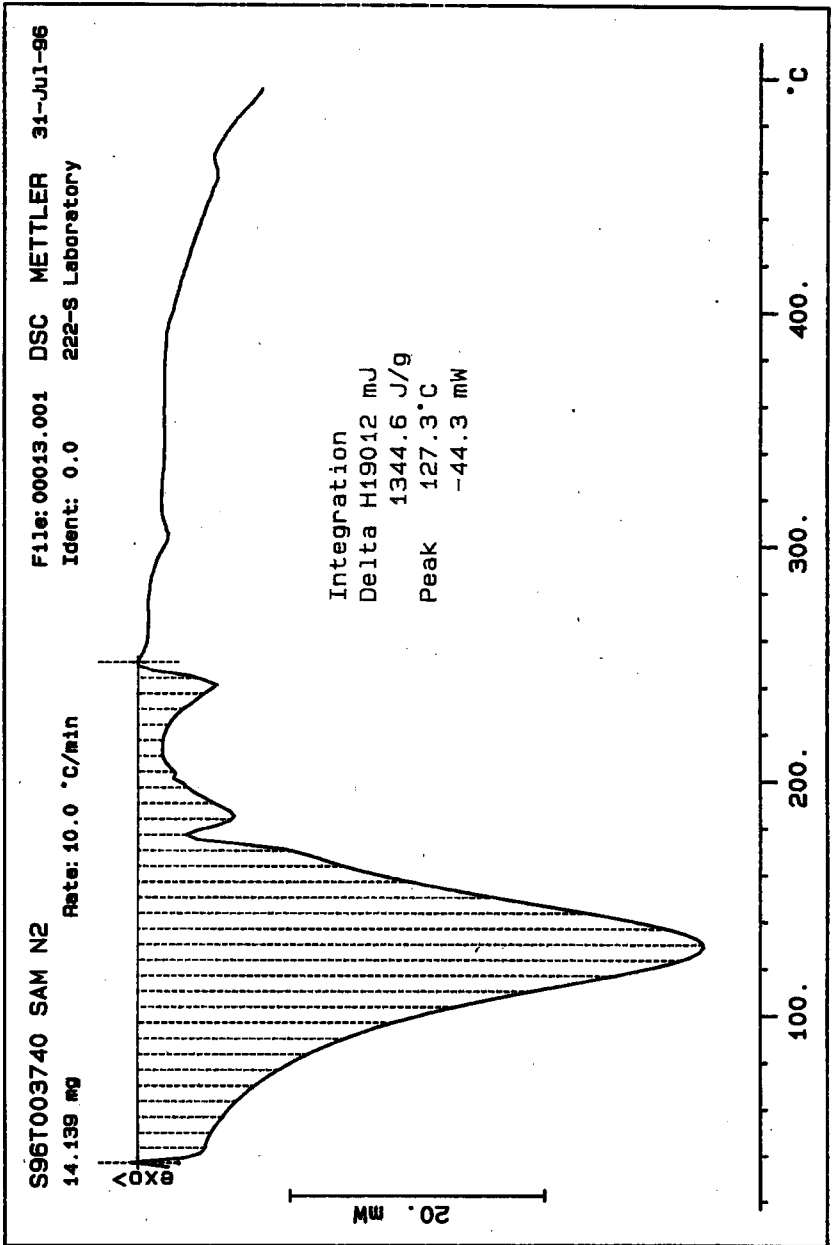
Verified by ⁸⁻⁷⁻⁹⁶ 
 Validated by
 Blandina
 Valenzuela ₈₋₇₋₉₆

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 148 TO 152.





S96T003740 DUP N2

17.852 mg

Rate: 10.0 °C/min

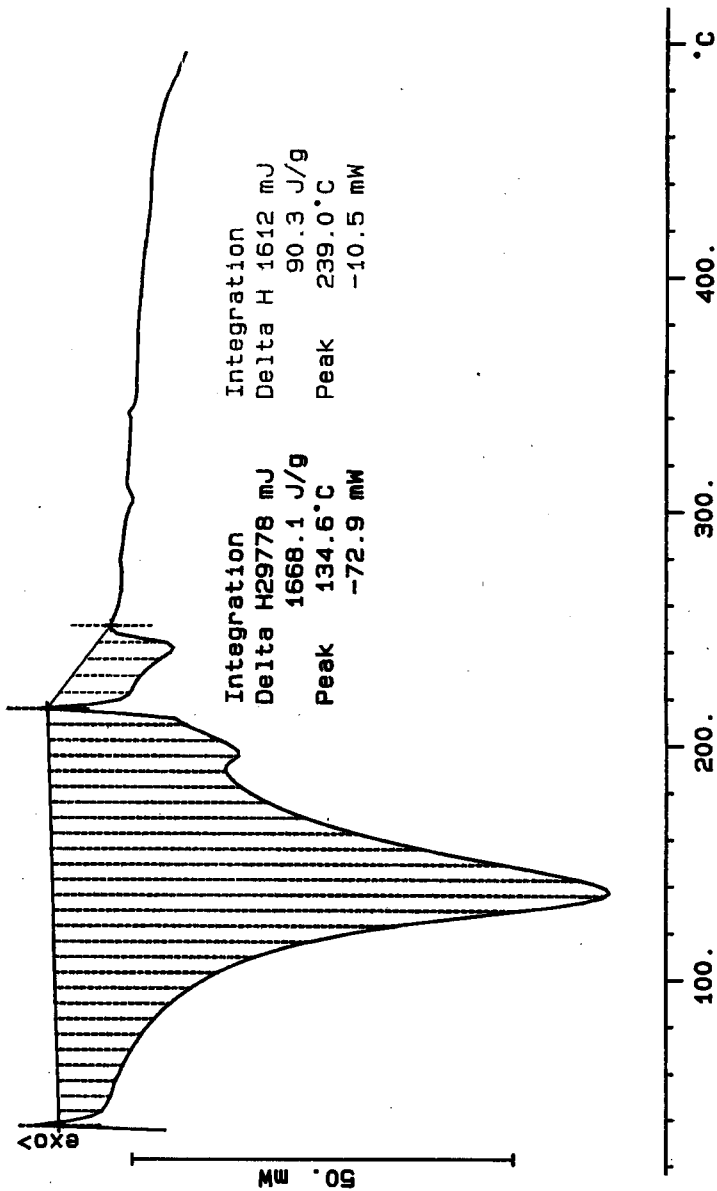
File: 00015.001

Ident: 0.0

DSC METTLER

31-JUL-96

222-S Laboratory

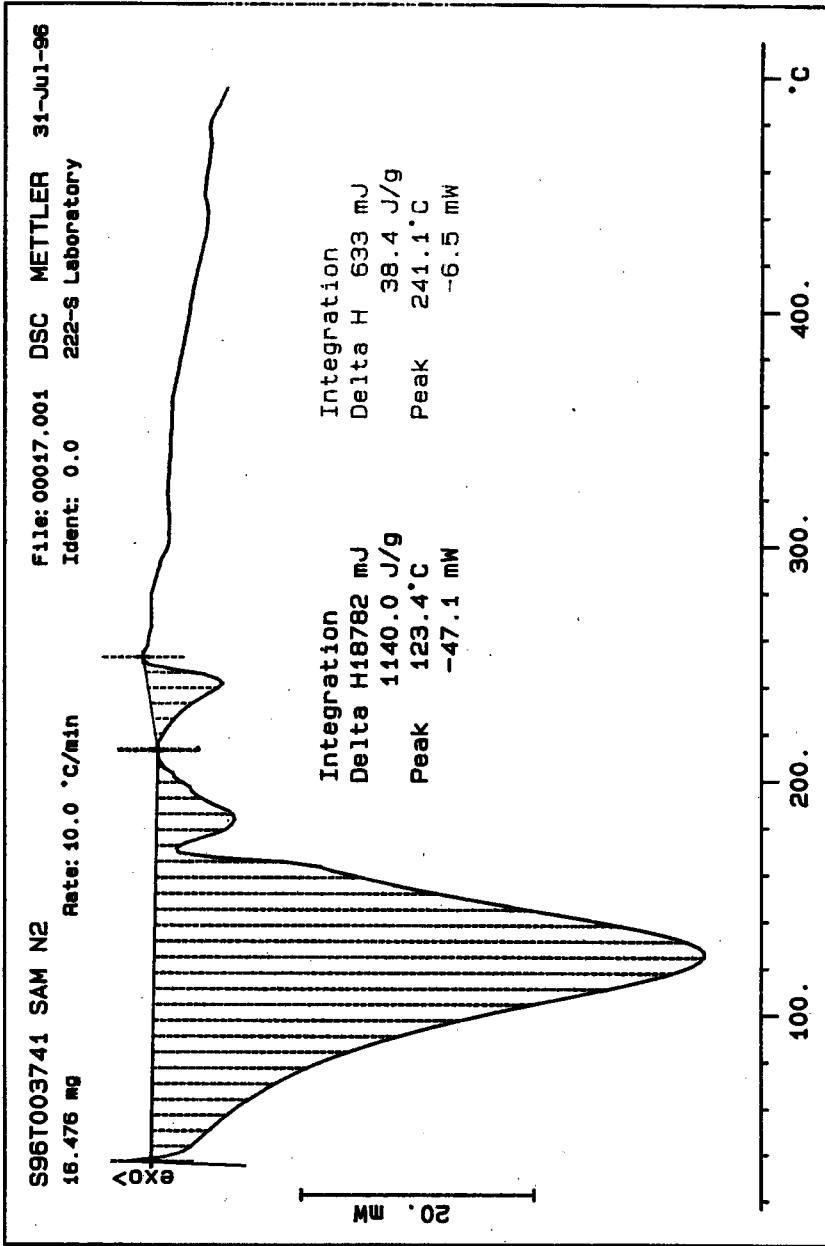


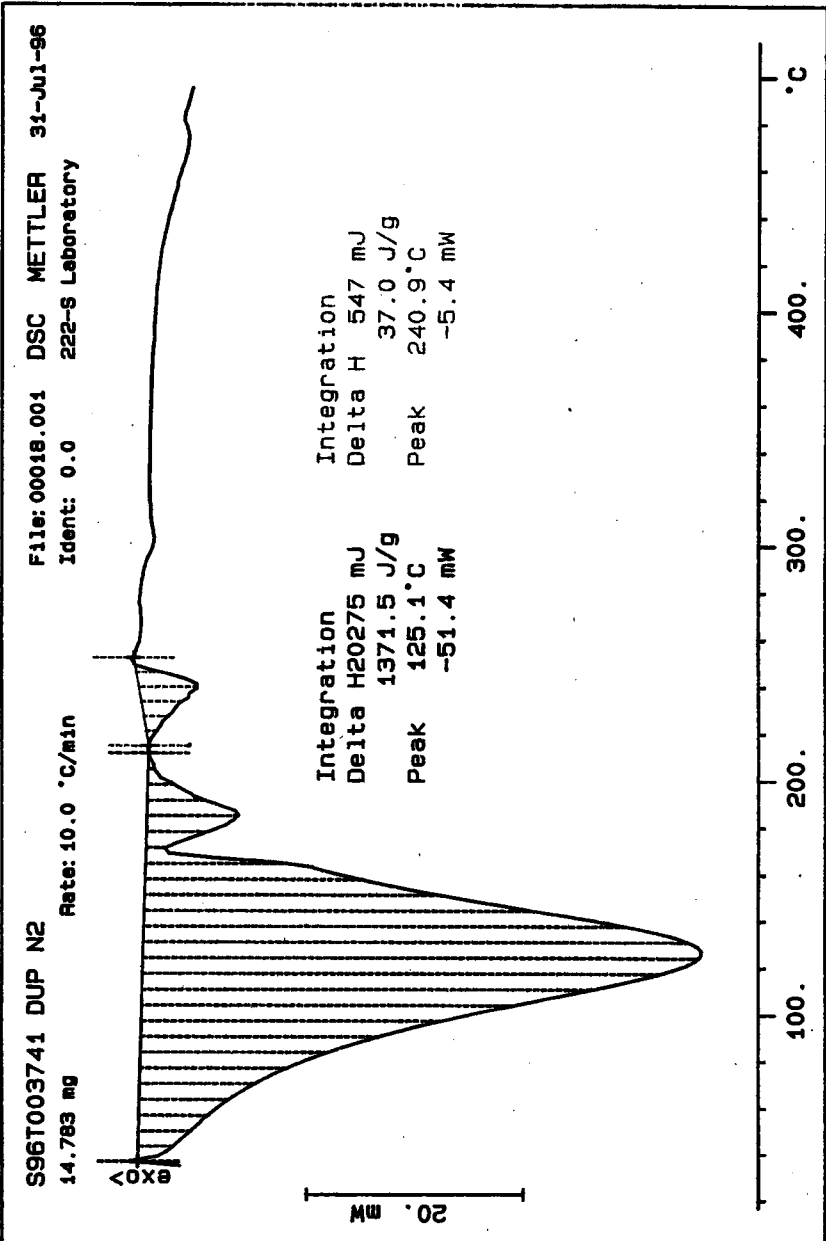
Integration

Delta H29778 mJ
1668.1 J/g
Peak 134.6°C
-72.9 mW

Integration

Delta H 1612 mJ
90.3 J/g
Peak 239.0°C
-10.5 mW





LABCORE Data Entry Template for Worklist#

11290

Analyst: SMF Instrument: DSC0 1 Book # 12N14B

Method: LA-514-113 Rev/Mod C-1 9/18/96-B

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	28.45	27.6	N/A	Joules/g
96000832	AN-105	2 SAMPLE	S96T003742	0	DSC-01	LIQUID	N/A	∅		Joules/g
96000832	AN-105	3 DUP	S96T003742	0	DSC-01	LIQUID	∅	∅	N/A	Joules/g
96000832	AN-105	4 SAMPLE	S96T003743	0	DSC-01	LIQUID	N/A	∅		Joules/g
96000832	AN-105	5 DUP	S96T003743	0	DSC-01	LIQUID	∅	∅	N/A	Joules/g

Final page for worklist # 11290

Smulton 8-1-96

Analyst Signature Date

Frank Male 8-6-96

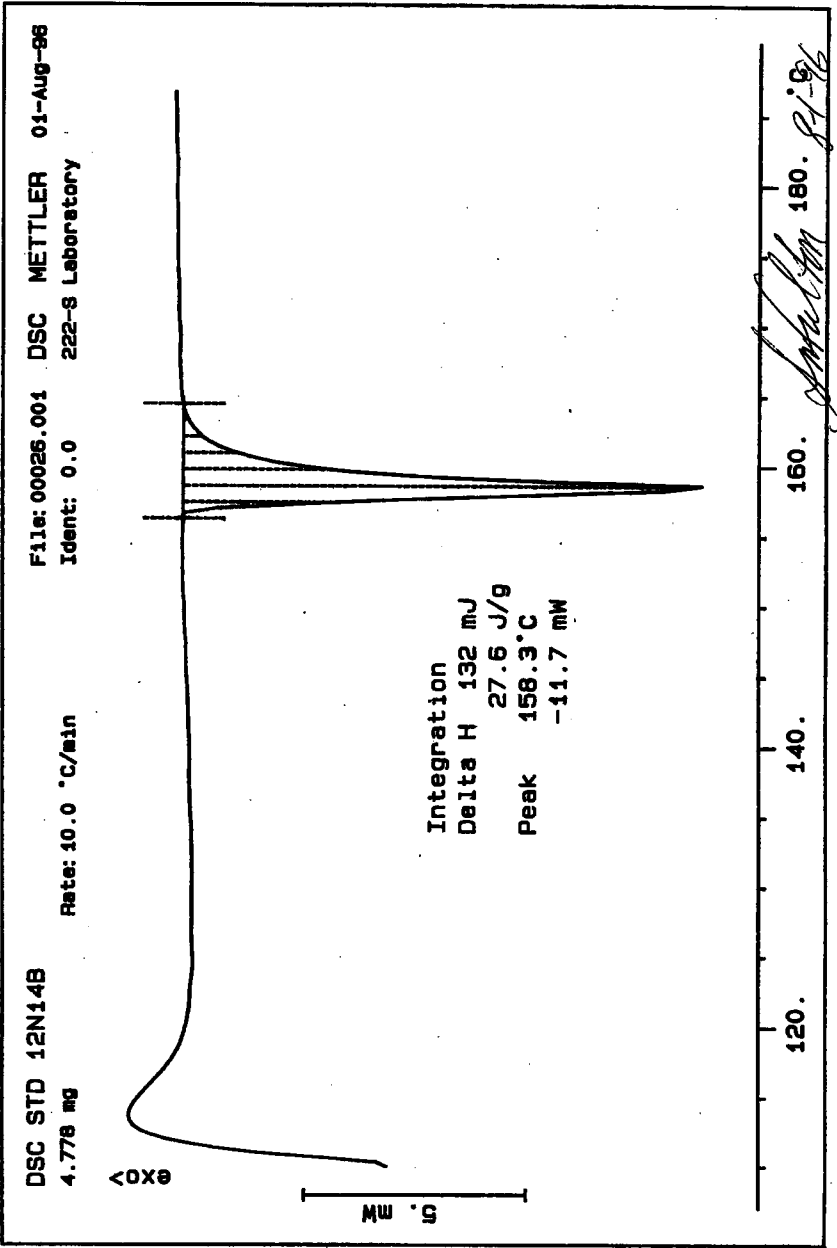
Analyst Signature Date

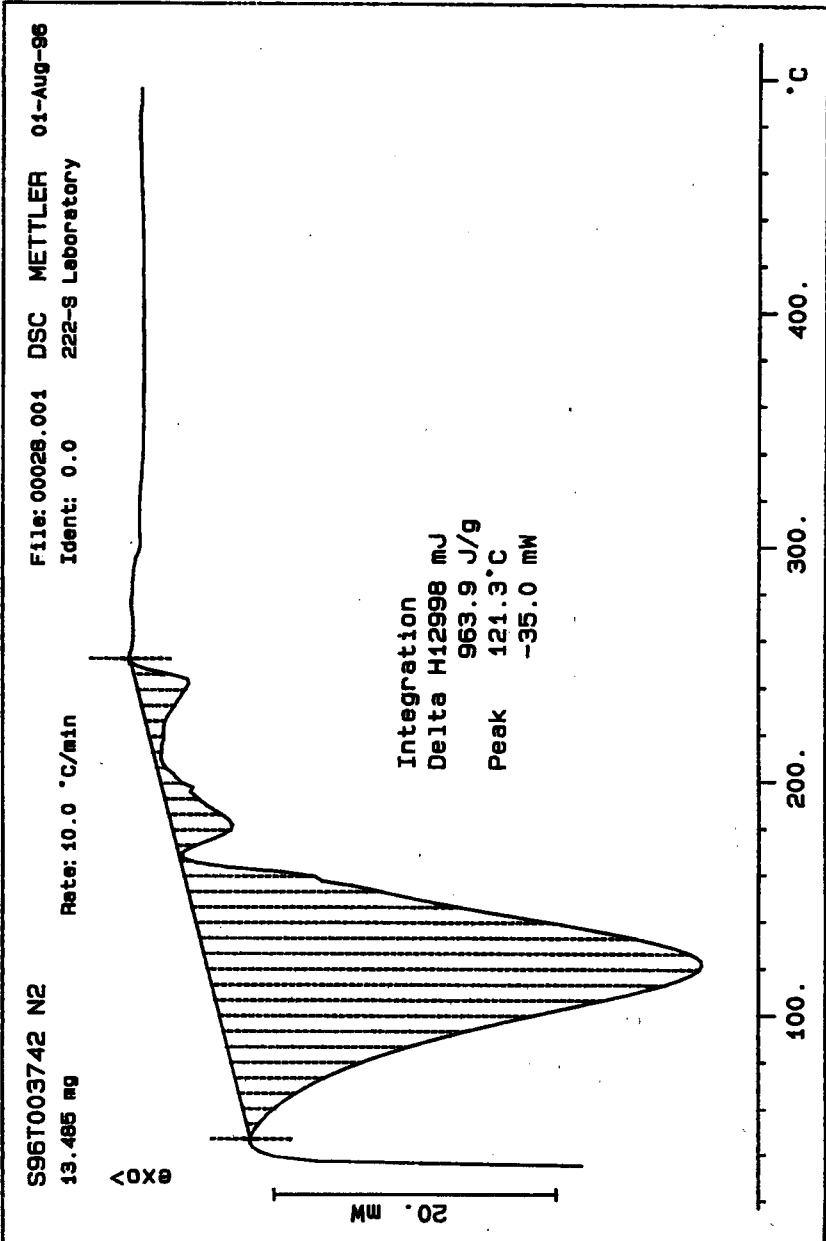
Verified/Validated by
Blandina Valenzuela
8-7-96

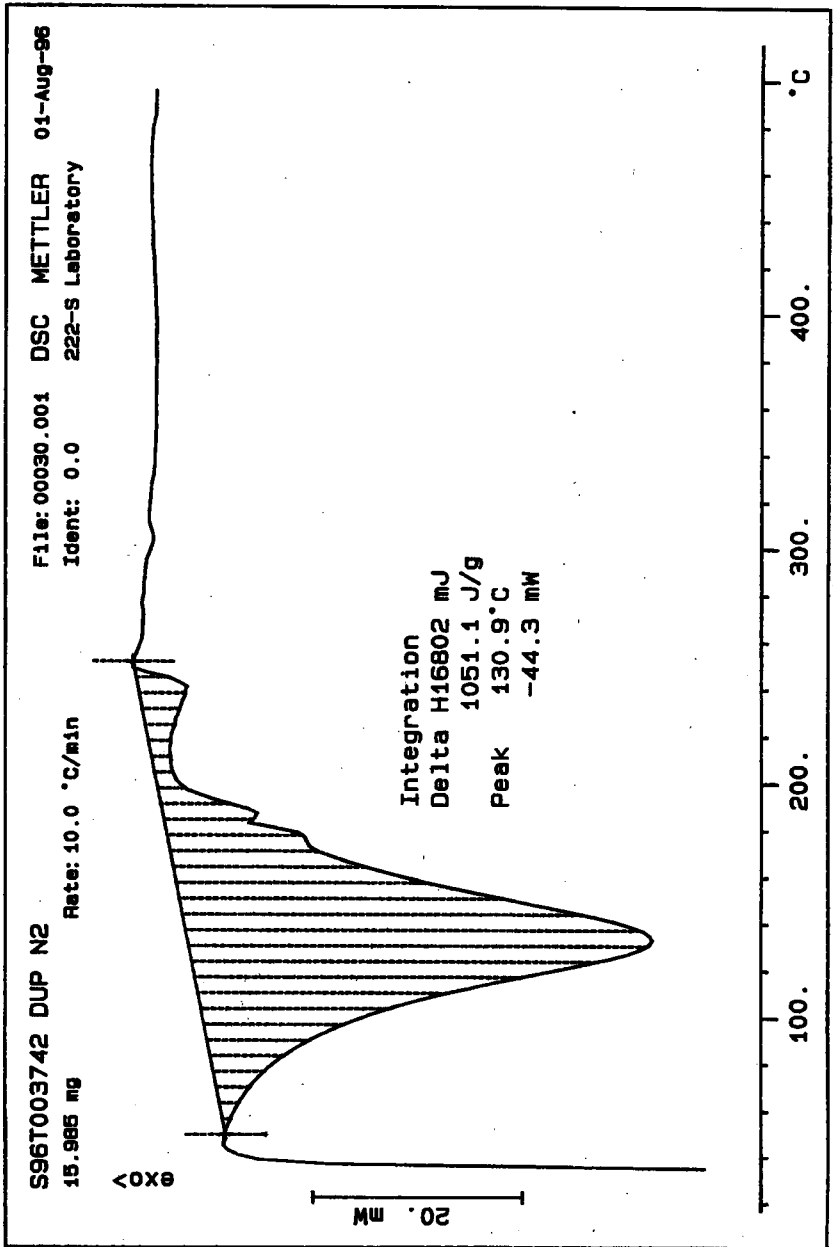
Data Entry Comments:

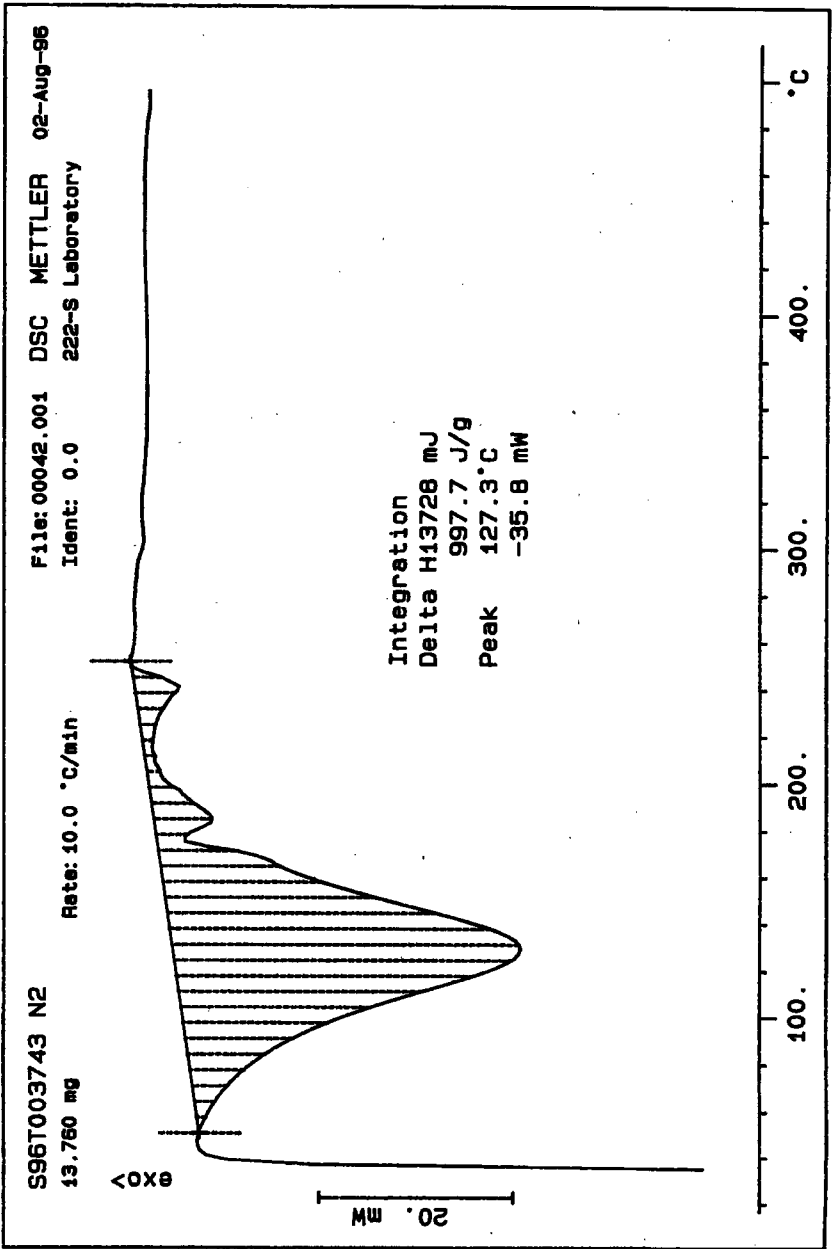
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

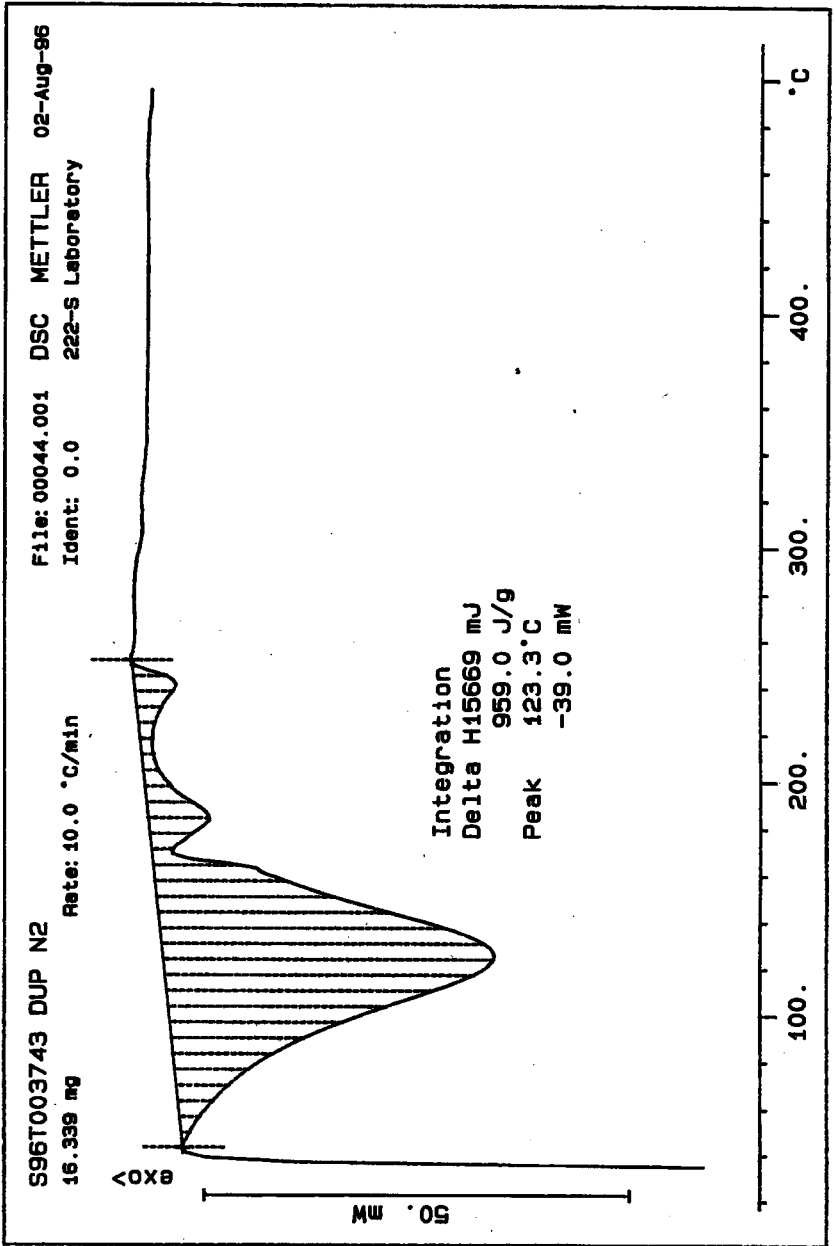
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 154 TO 158.











LABCORE Data Entry Template for Worklist#

11291

Analyst: SME/100 Instrument: DSC0 1 Book # 12214B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>27.8*</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	S96T003744	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000832	AN-105	3 DUP	S96T003744	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000832	AN-105	4 SAMPLE	S96T003745	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000832	AN-105	5 DUP	S96T003745	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11291

Smulson 8-2-96
Analyst Signature Date

Frank Mark 8-6-96
Analyst Signature Date

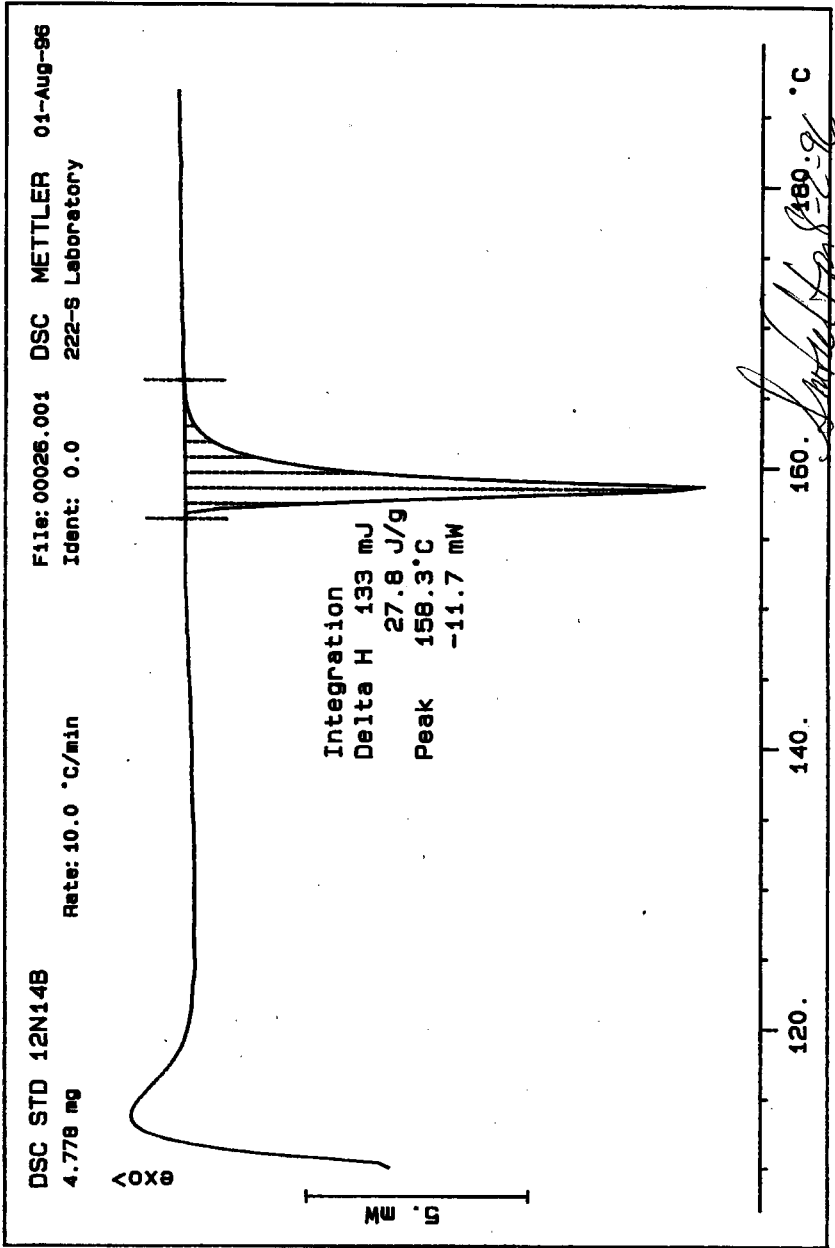
Anthony Purunk 8-2-96

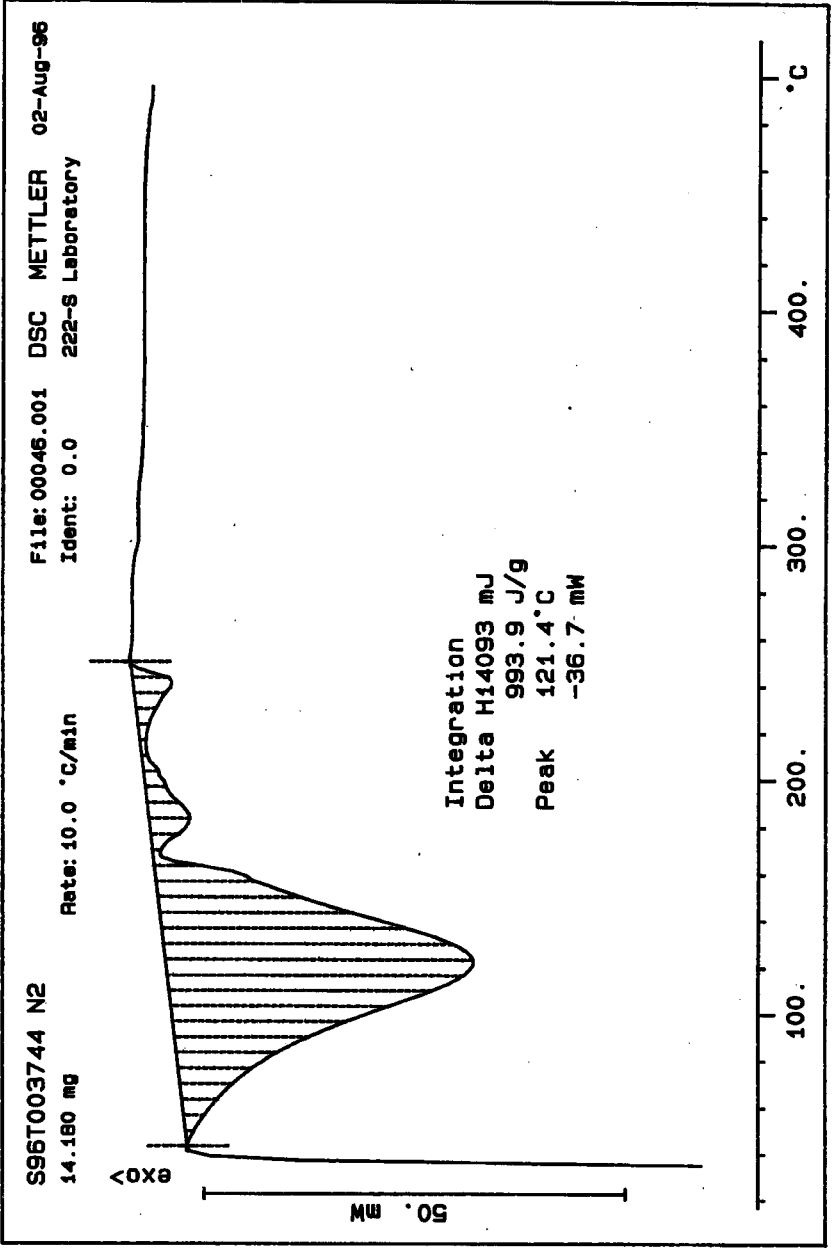
Verified/Validated by
Blandina Valenzuela 8-7-96

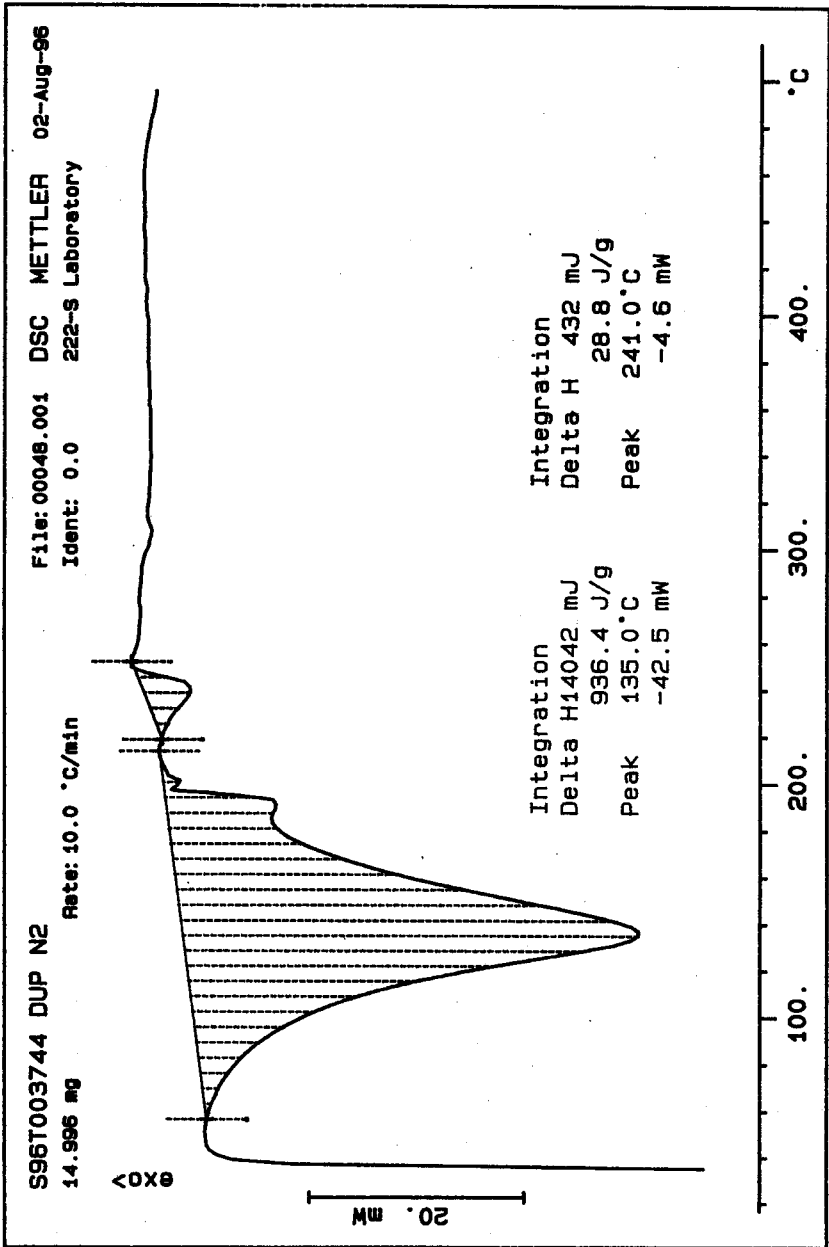
Data Entry Comments:

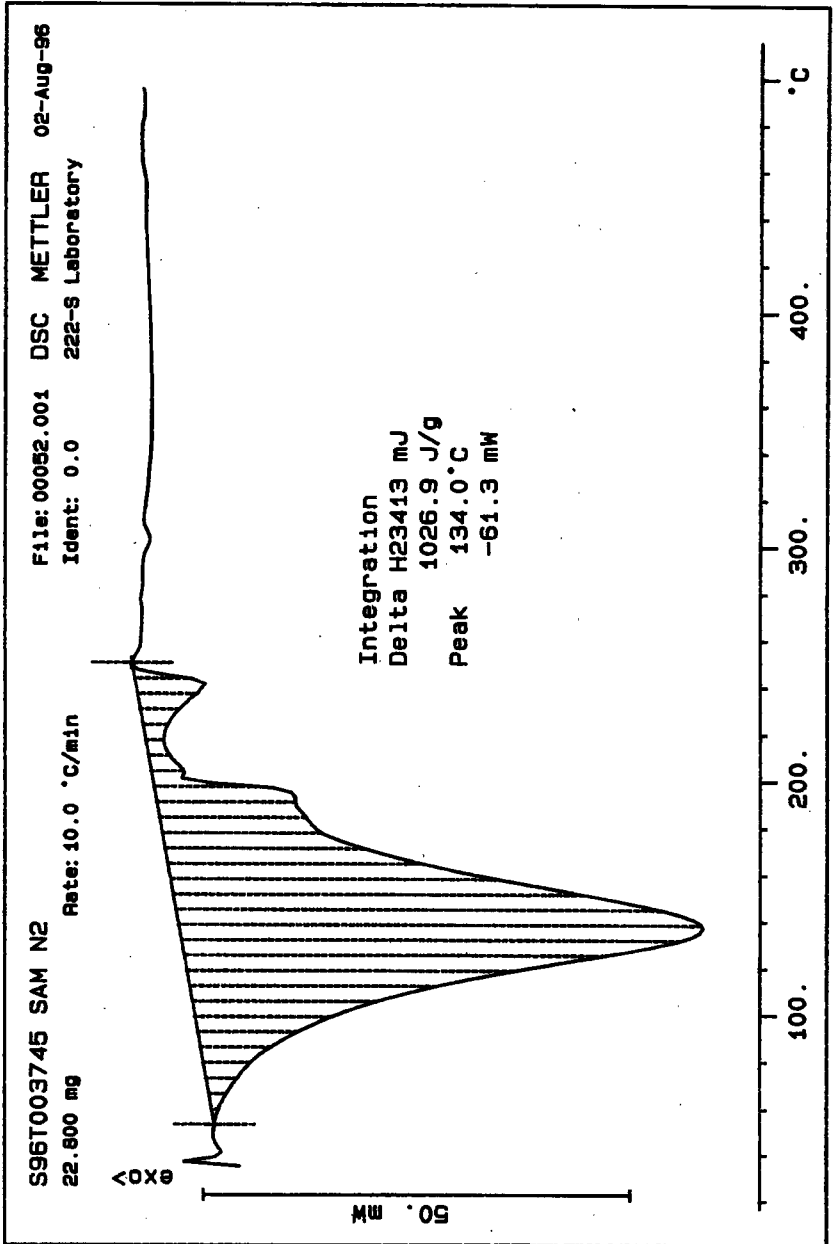
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 140 TO 144.









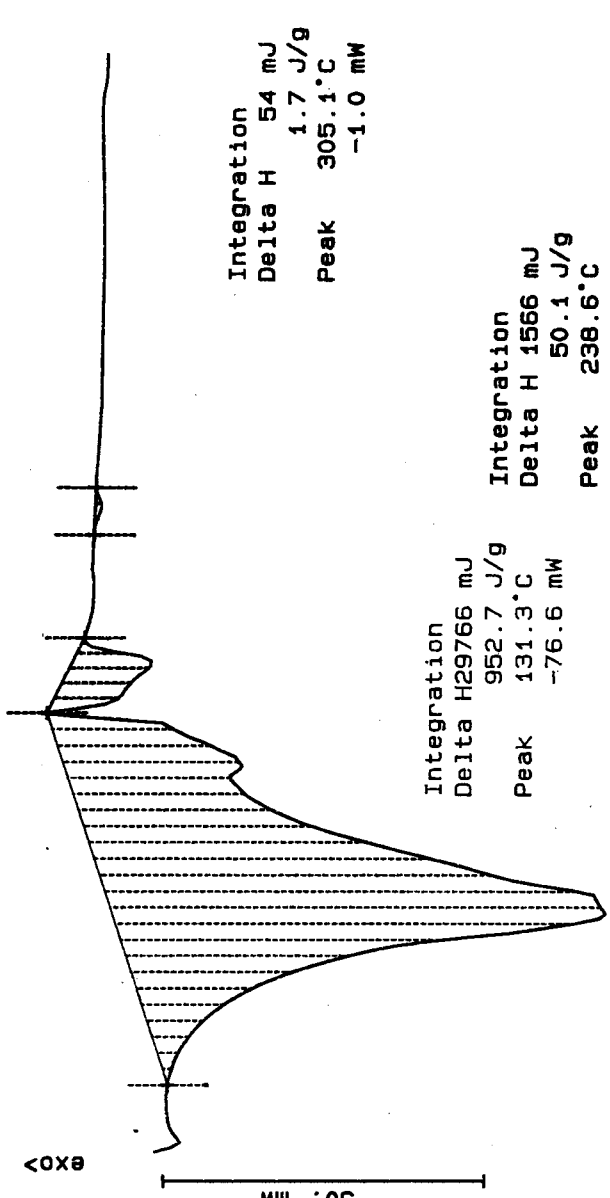
WHC-SD-WM-DP-199, REV. 0

3745 Ha
9.11.94

S96T003475 DUP N2
31.245 mg
File: 00054.001 DSC METTLER 02-AUG-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

exo v



50. mW

Integration
 Delta H 54 mJ
 1.7 J/g
 Peak 305.1°C
 -1.0 mW

Integration
 Delta H29766 mJ
 952.7 J/g
 Peak 131.3°C
 -76.6 mW

Integration
 Delta H 1566 mJ
 50.1 J/g
 Peak 238.6°C
 -12.5 mW

LABCORE Data Entry Template for Worklist#

11292

Analyst: ADP Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>26.84</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	S96T003746 0		DSC-01	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
96000832	AN-105	3 DUP	S96T003746 0		DSC-01	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g
96000832	AN-105	4 SAMPLE	S96T003747 0		DSC-01	LIQUID	<u>N/A</u>	<u>0</u>		Joules/g
96000832	AN-105	5 DUP	S96T003747 0		DSC-01	LIQUID	<u>0</u>	<u>0</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11292

[Signature] 8-2-96
Analyst Signature Date

[Signature] 8-6-96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
8-7-96

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.

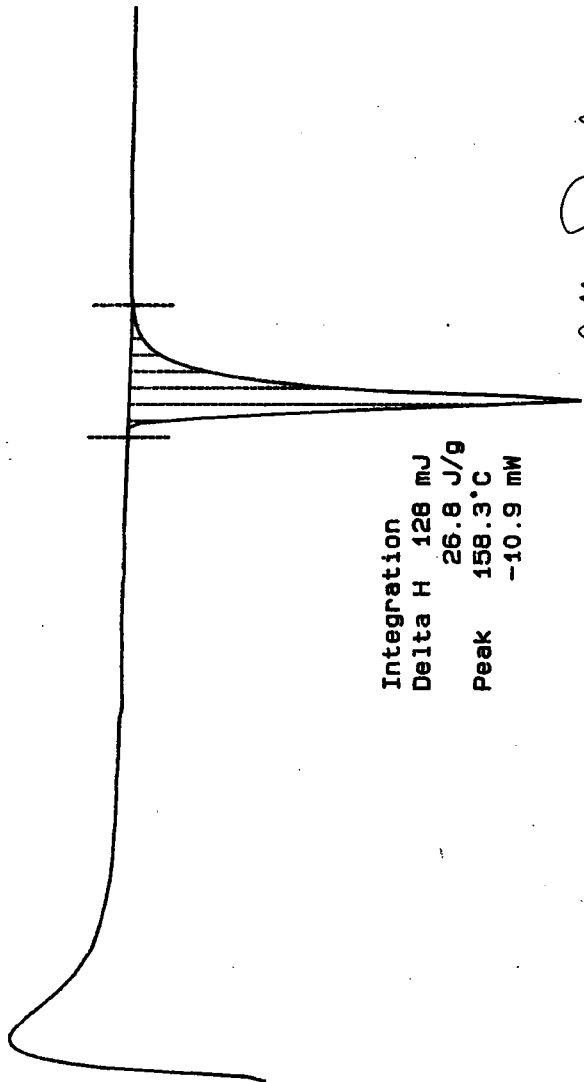
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 166 TO 170.

IND 12N14-B N2
4.778 mg

Rate: 10.0 °C/min

File: 00050.001 DSC METTLER 02-Aug-96
Ident: 0.0 222-S Laboratory

exo



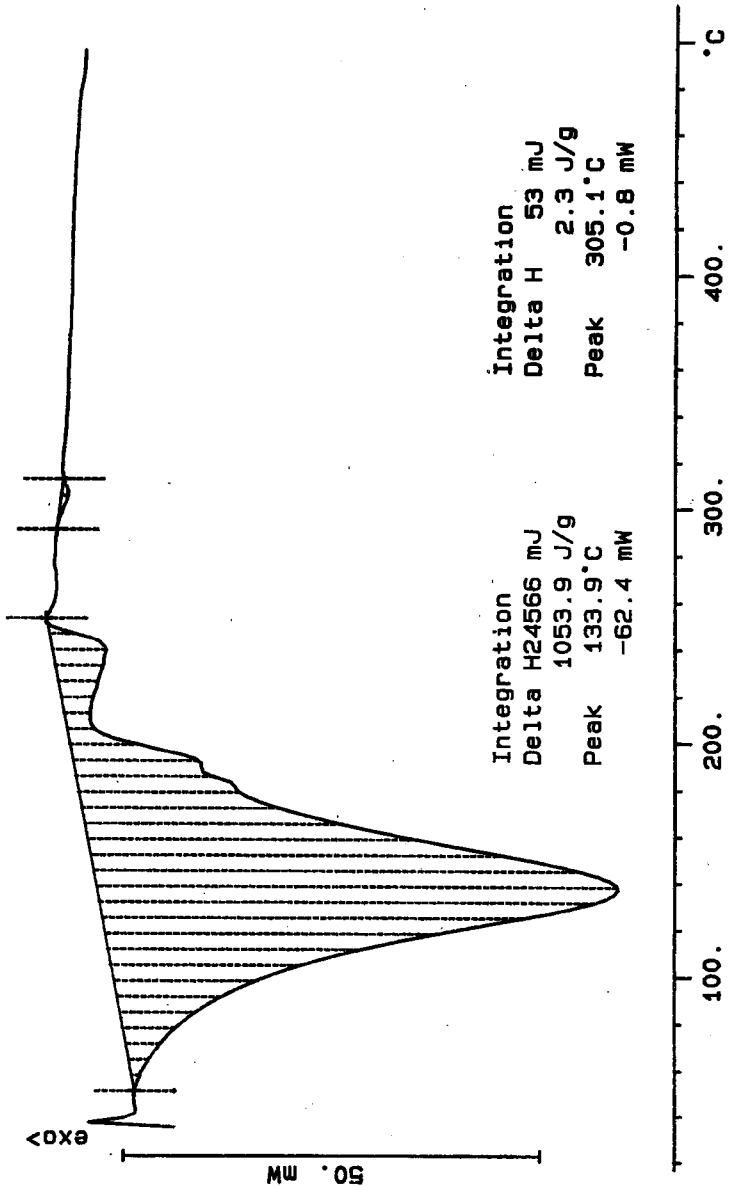
5 mW

Integration
Delta H 128 mJ
26.8 J/g
Peak 158.3°C
-10.9 mW

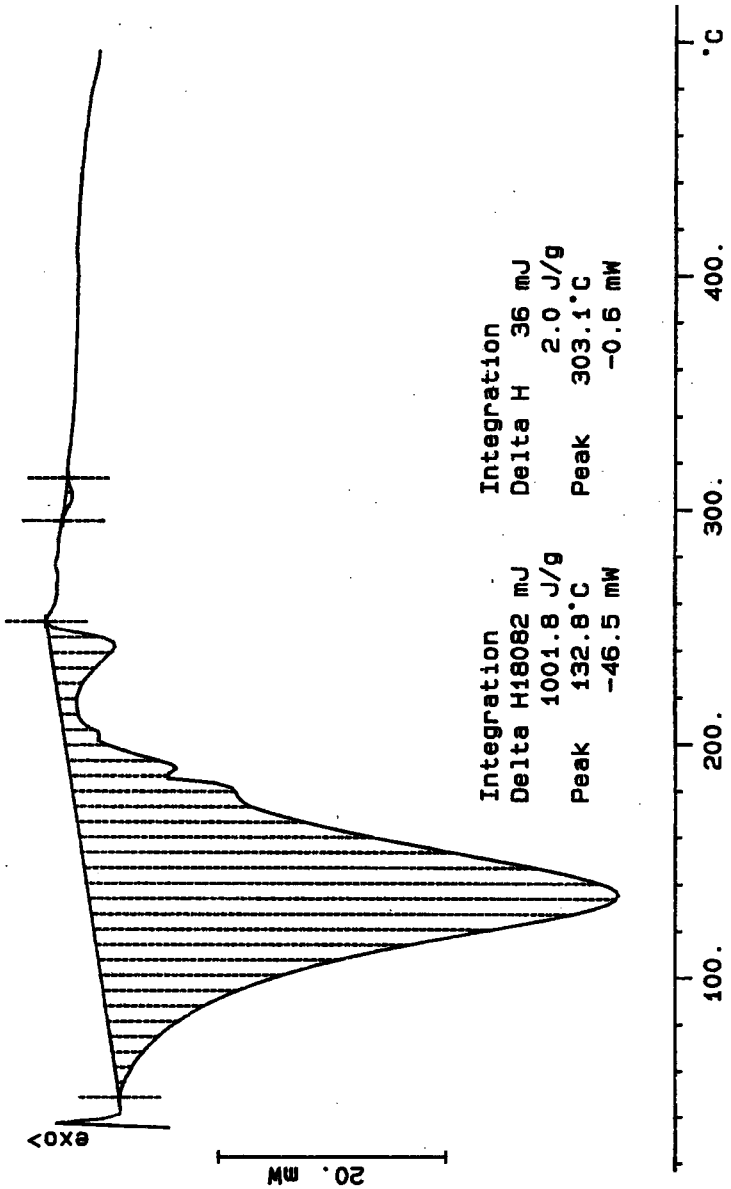
Anthony Perrotto

120. 140. 160. 180. °C

S96T003745 SAM N2
23.310 mg
Rate: 10.0 °C/min
File: 00056.001 DSC METTLER 02-Aug-96
Ident: 0.0 222-S Laboratory

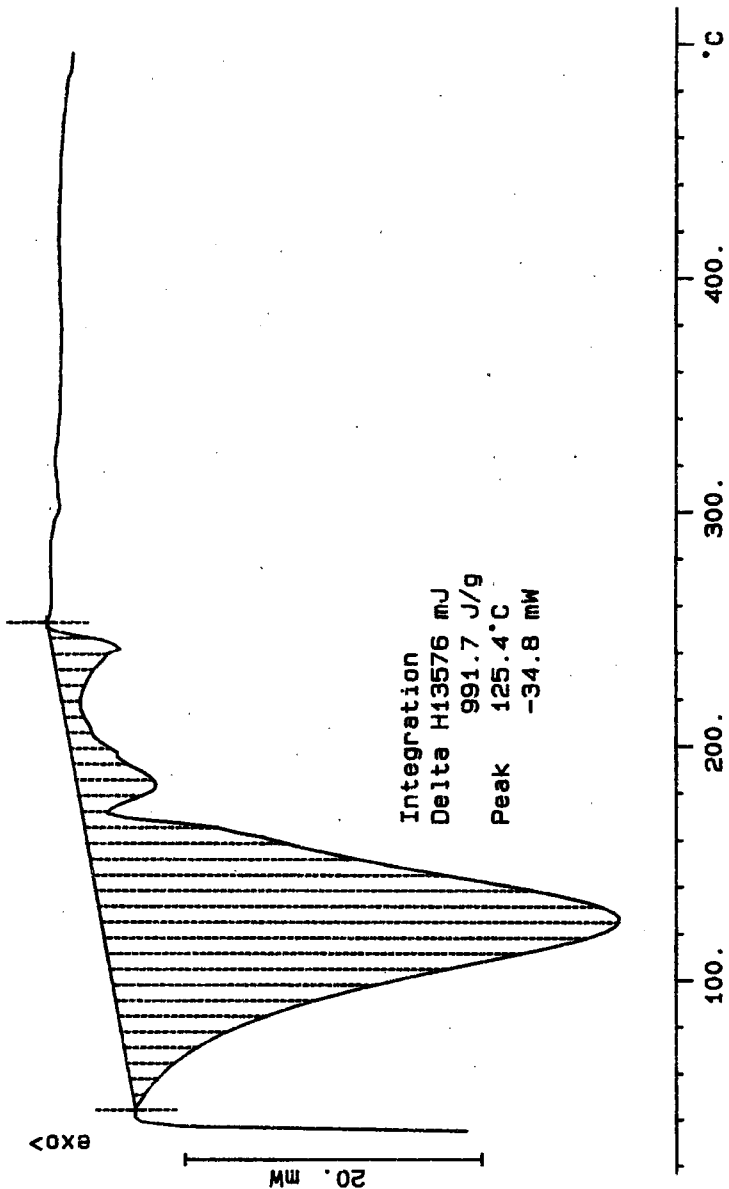


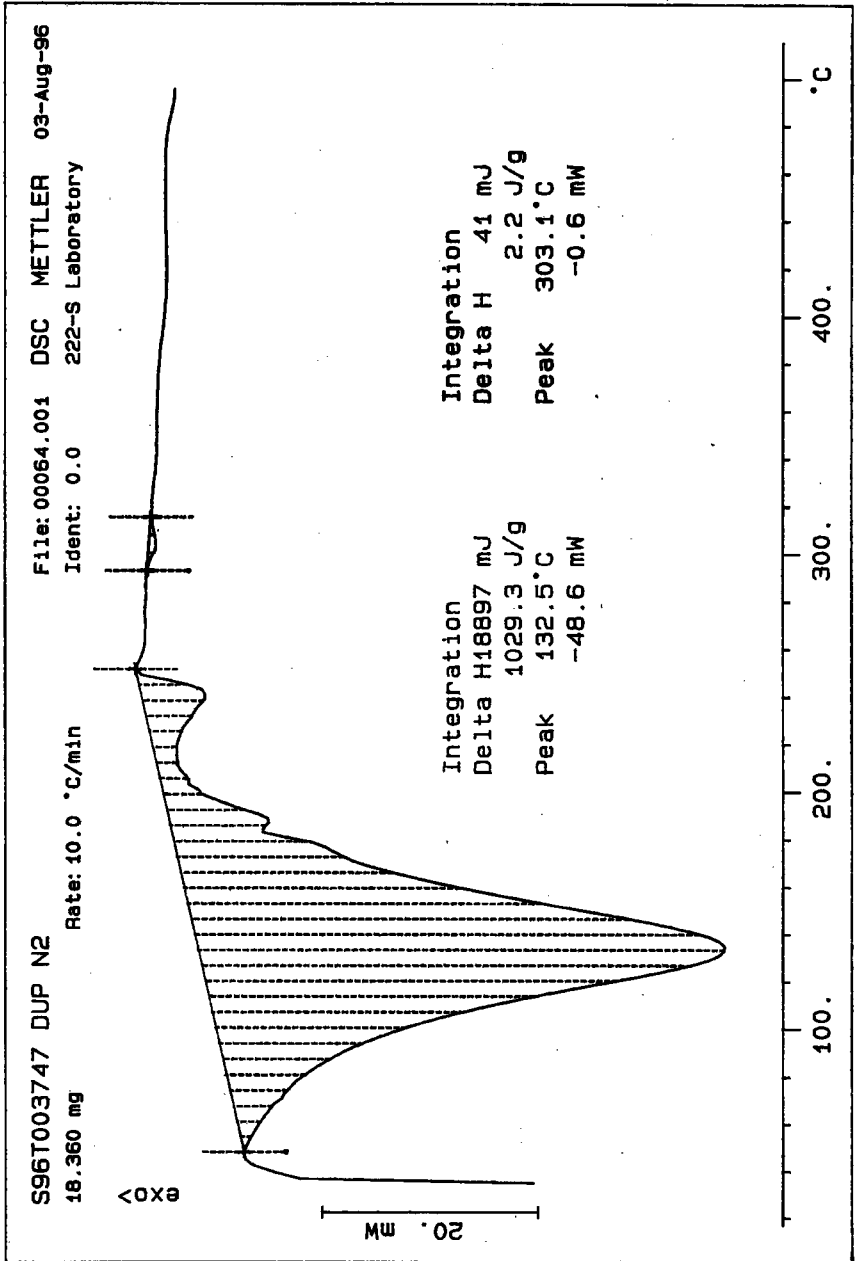
S96T003746 DUP N2
18.049 mg
Rate: 10.0 °C/min
File: 00058.001 DSC METTLER 02-Aug-96
Ident: 0.0 222-S Laboratory



S96T003747 SAM N2
13.690 mg
Rate: 10.0 °C/min

File: 00060.001
Ident: 0.0
DSC METTLER 222-S Laboratory
02-Aug-96





LABCORE Data Entry Template for Worklist#

11293

Analyst: ADP Instrument: DSC0 1 Book # 12N14-B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	28.45	28.7*	N/A	Joules/g
96000832	AN-105	2 SAMPLE	S96T003748	0	DSC-01	LIQUID	N/A	Ø		Joules/g
96000832	AN-105	3 DUP	S96T003748	0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g
96000832	AN-105	4 SAMPLE	S96T003749	0	DSC-01	LIQUID	N/A	Ø		Joules/g
96000832	AN-105	5 DUP	S96T003749	0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 11293

Anthony Peruto 8-3-96
Analyst Signature Date

Joseph Mark 8-6-96
Analyst Signature Date

Rae Ann Green 8-3-96

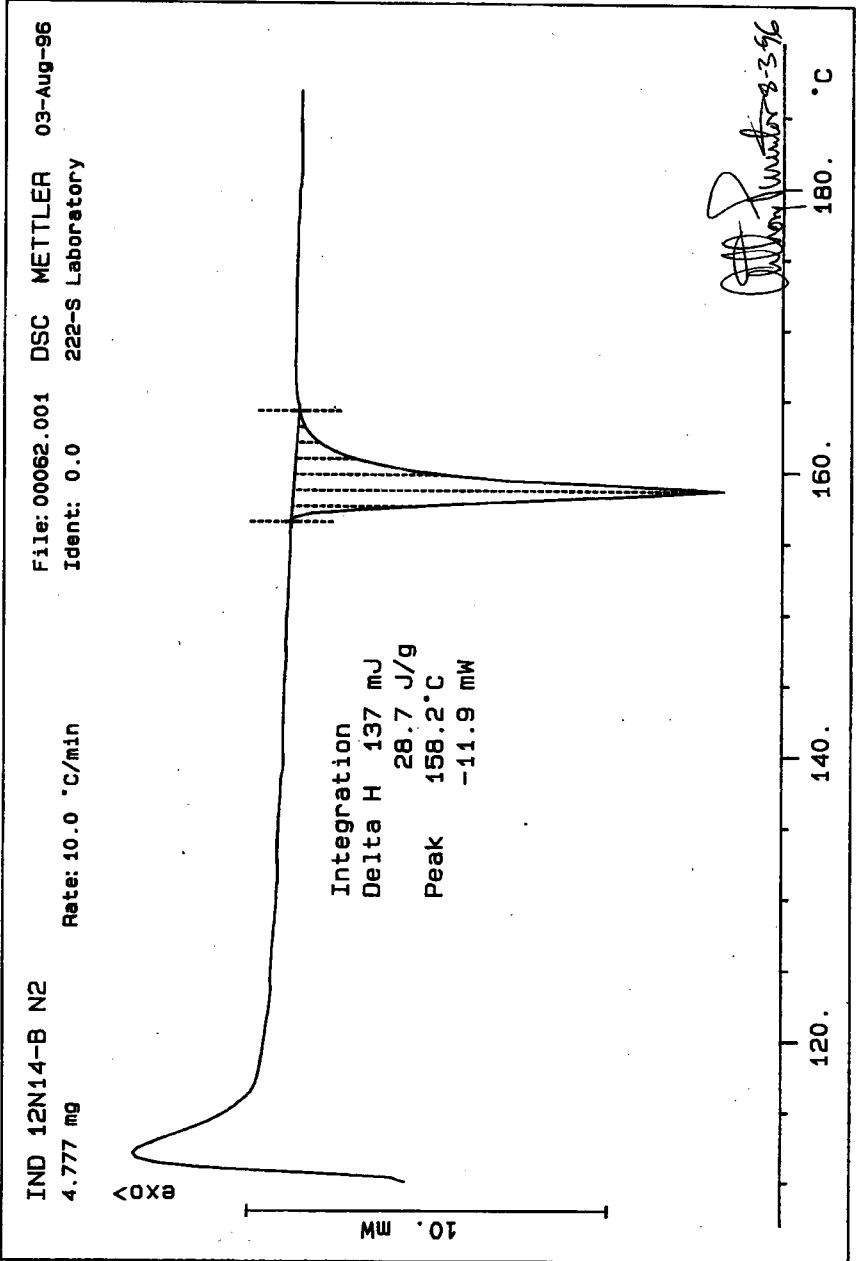
Verified/Validated by
Blandina Valenzuela 8-7-96

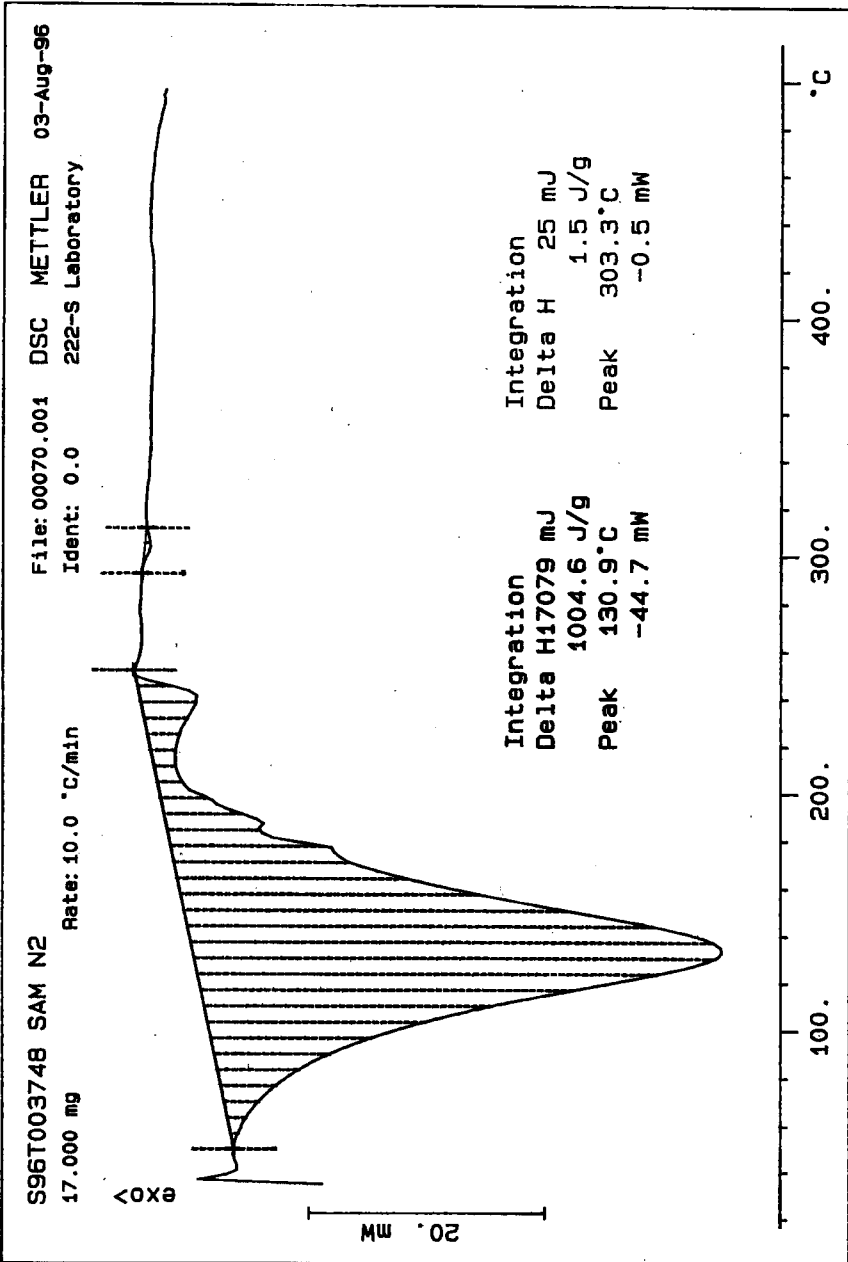
Data Entry Comments:

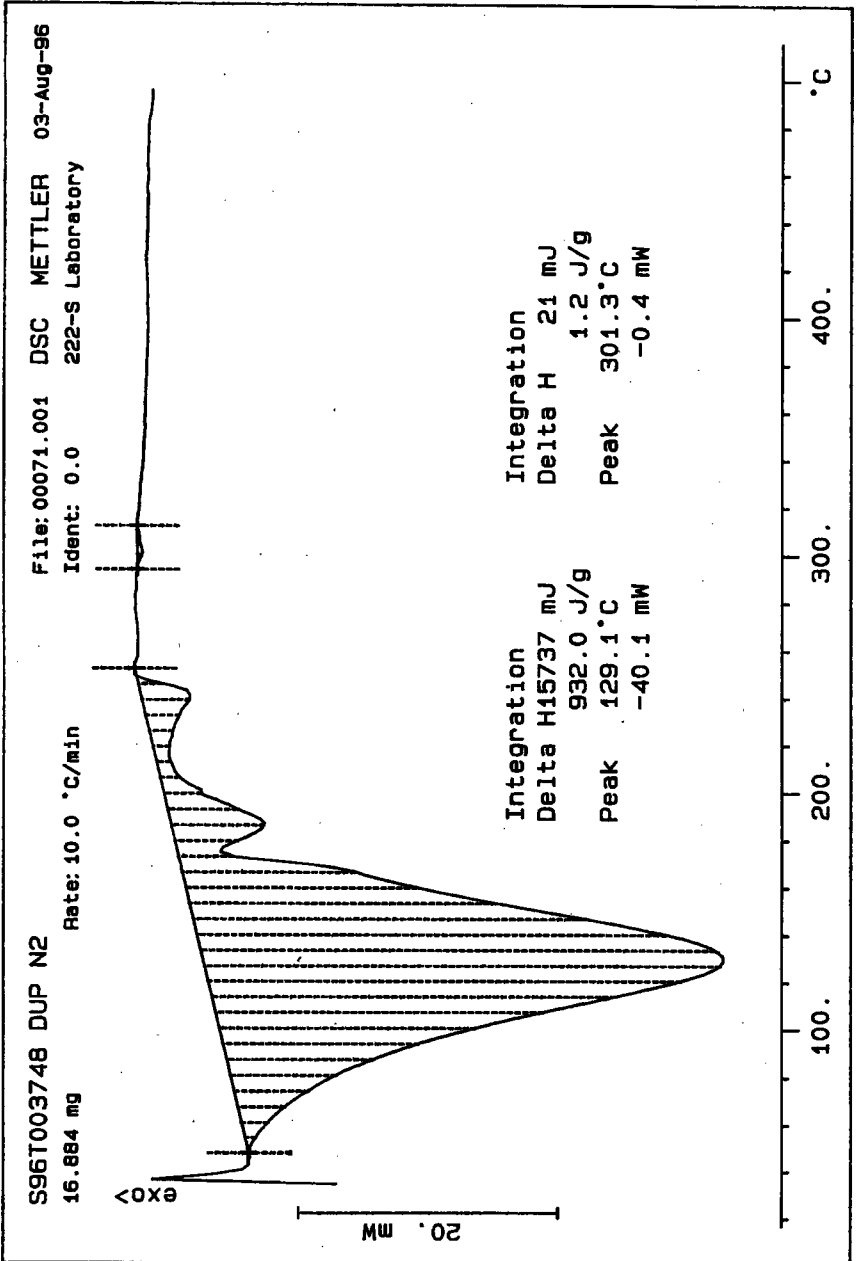
The thermogram for sample # S96T003749 was unretrievable. Sample was reanalyzed on worklist # 13019. 9/19/96

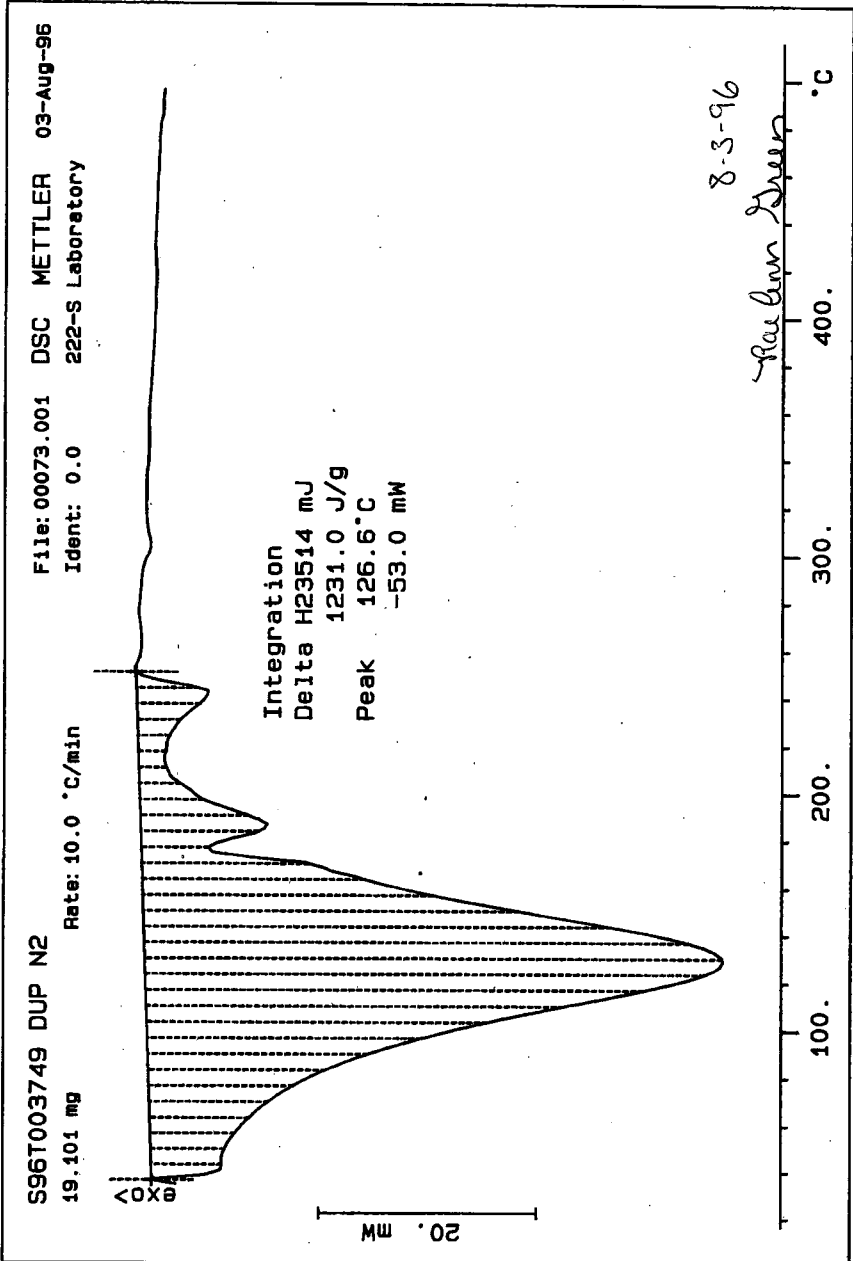
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 17a TO 17c.









LABCORE Data Entry Template for Worklist#

11294

Analyst: RS Instrument: DSC0 1 Book # 12N14-B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>29.2*</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	S96T003750 /0		DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000832	AN-105	3 DUP	S96T003750 0		DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000832	AN-105	4 SAMPLE	S96T003751 0		DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000832	AN-105	5 DUP	S96T003751 0		DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11294

Rae Ann Green 8-4-96
Analyst Signature Date

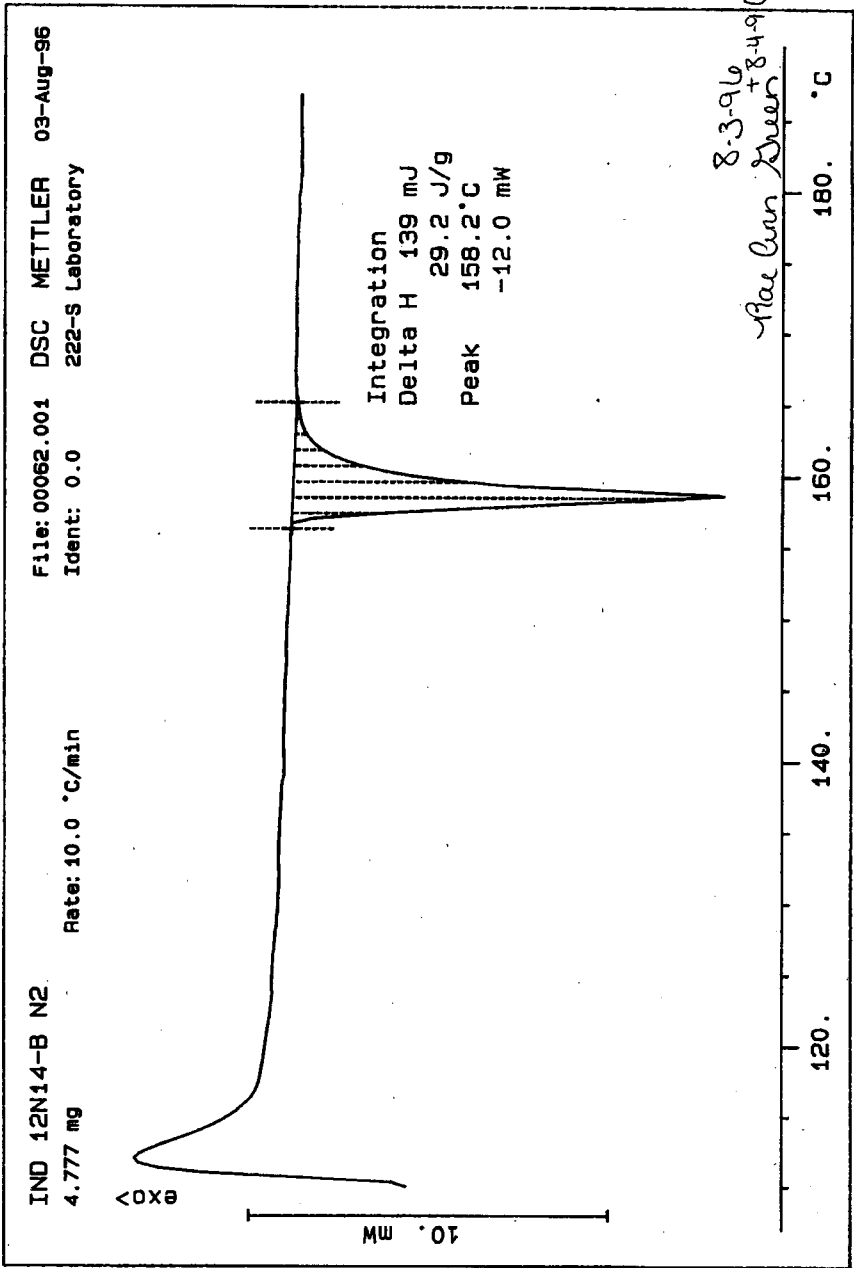
[Signature] 8-6-96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela 8-7-96

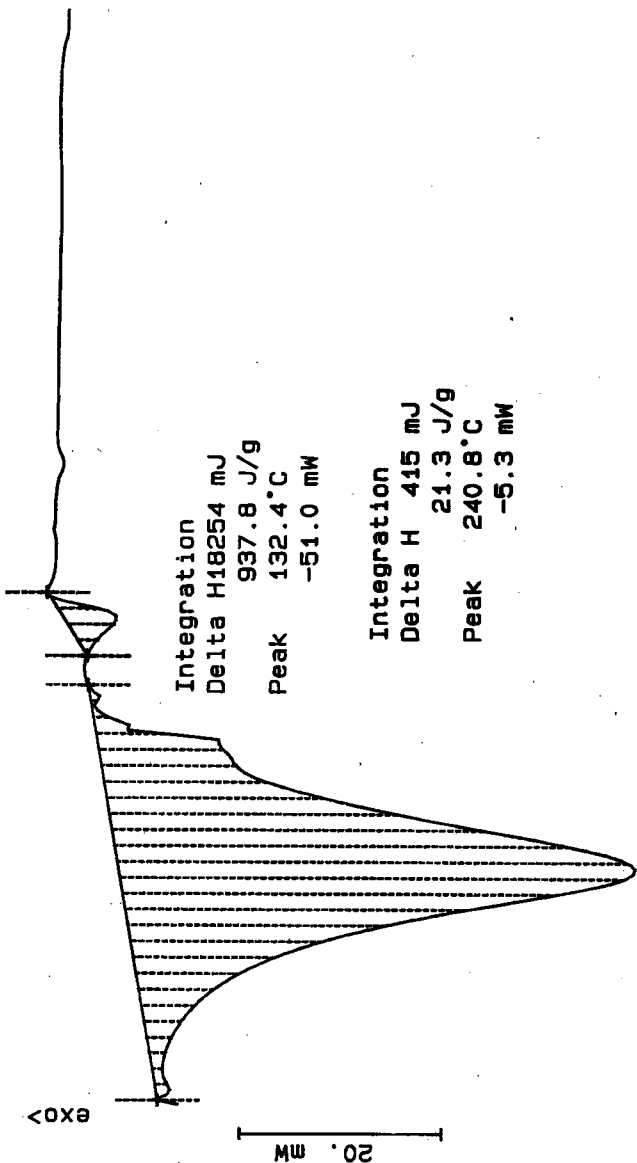
Data Entry Comments:

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 177 TO 181.



S96T003750 SAM N2
19.465 mg
Rate: 10.0 °C/min
File: 00074.001 DSC METTLER 04-Aug-96
Ident: 0.0 222-S Laboratory

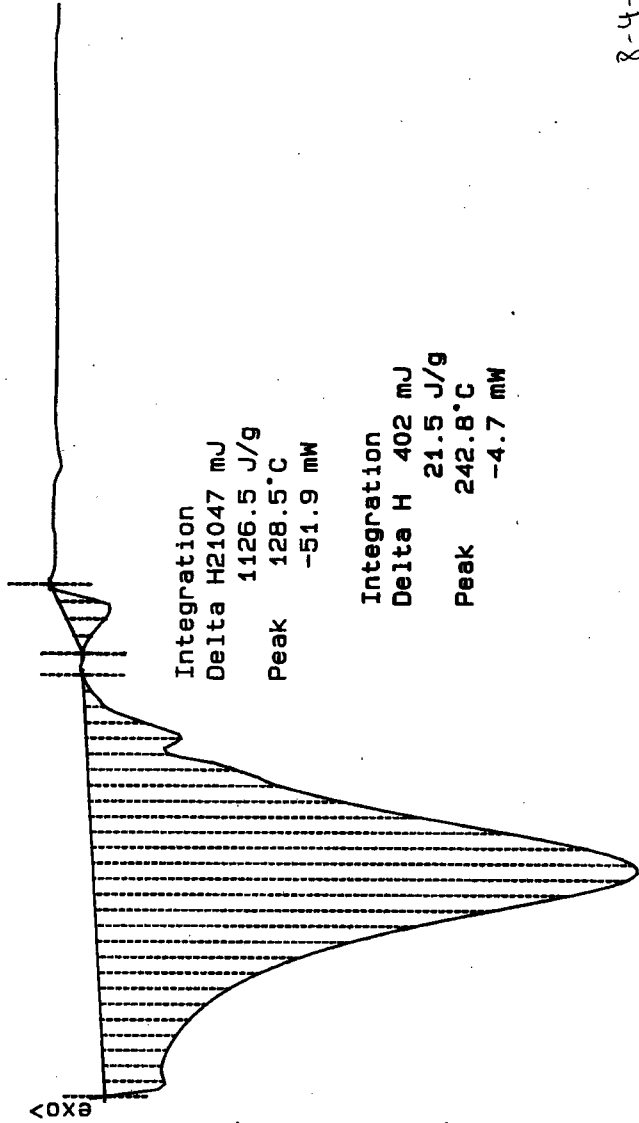


8-4-96
Rae Ann Dwyer

100. 200. 300. 400. °C

S96T003750 DUP N2
18.683 mg

File: 00075.001 DSC METTLER 04-Aug-96
Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory



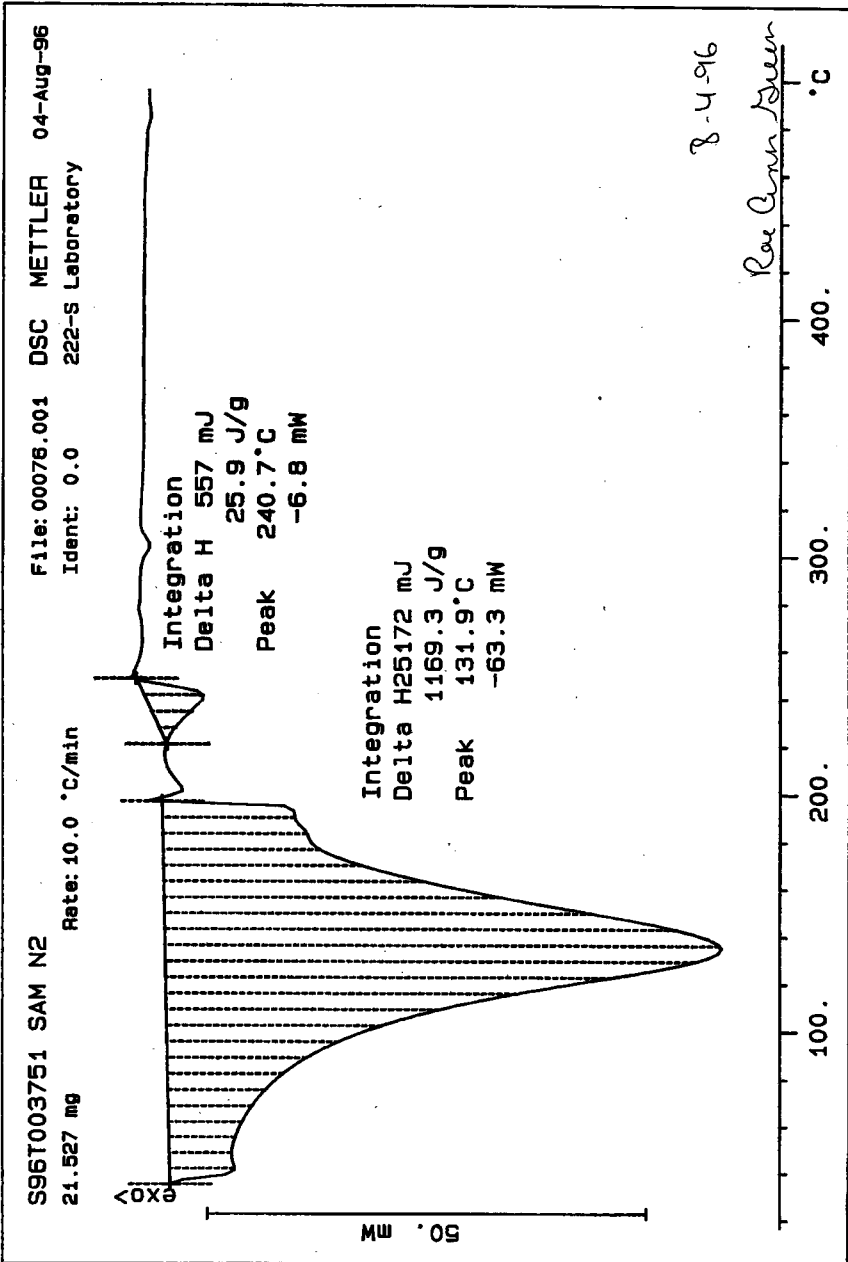
Integration
 Delta H21047 mJ
 1126.5 J/g
 Peak 128.5°C
 -51.9 mW

Integration
 Delta H 402 mJ
 21.5 J/g
 Peak 242.8°C
 -4.7 mW

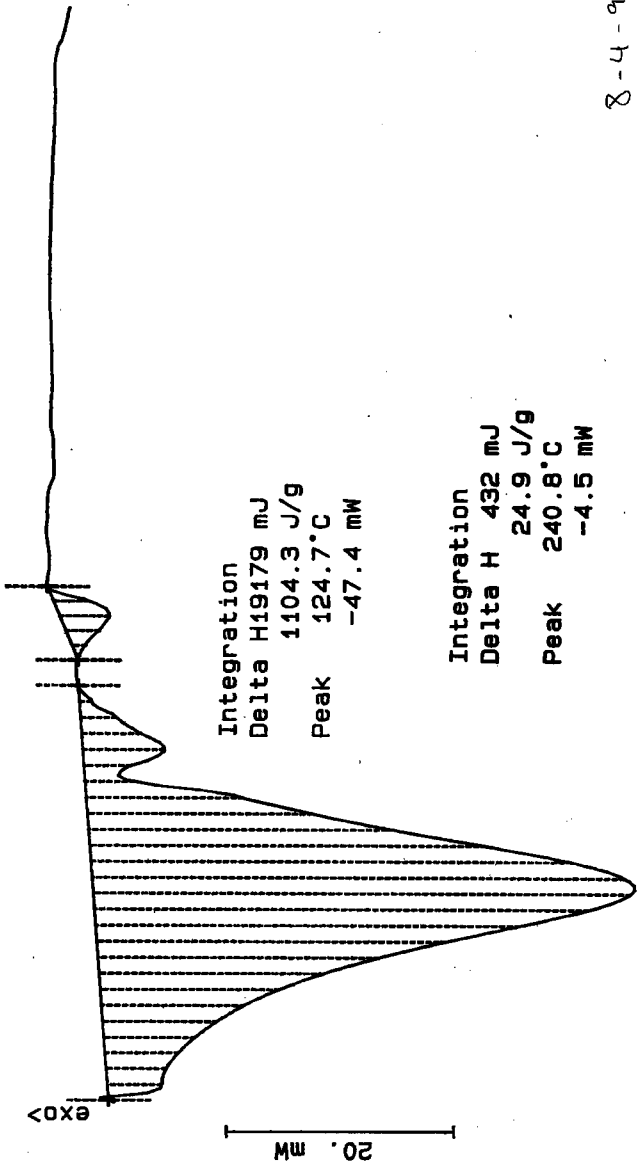
8-4-96

Rae Ann Johnson

°C



S96T003751 DUP N2
17.367 mg
Rate: 10.0 °C/min
File: 00077.001 DSC METTLER 04-AUG-96
Ident: 0.0 222-S Laboratory



Integration
Delta H 19179 mJ
1104.3 J/g
Peak 124.7°C
-47.4 mW

Integration
Delta H 432 mJ
24.9 J/g
Peak 240.8°C
-4.5 mW

8-4-96

Rae Ann Green

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 183 TO 185.

DSC STD 12N14B

4.776 mg

Rate: 10.0 °C/min

File: 00078.001

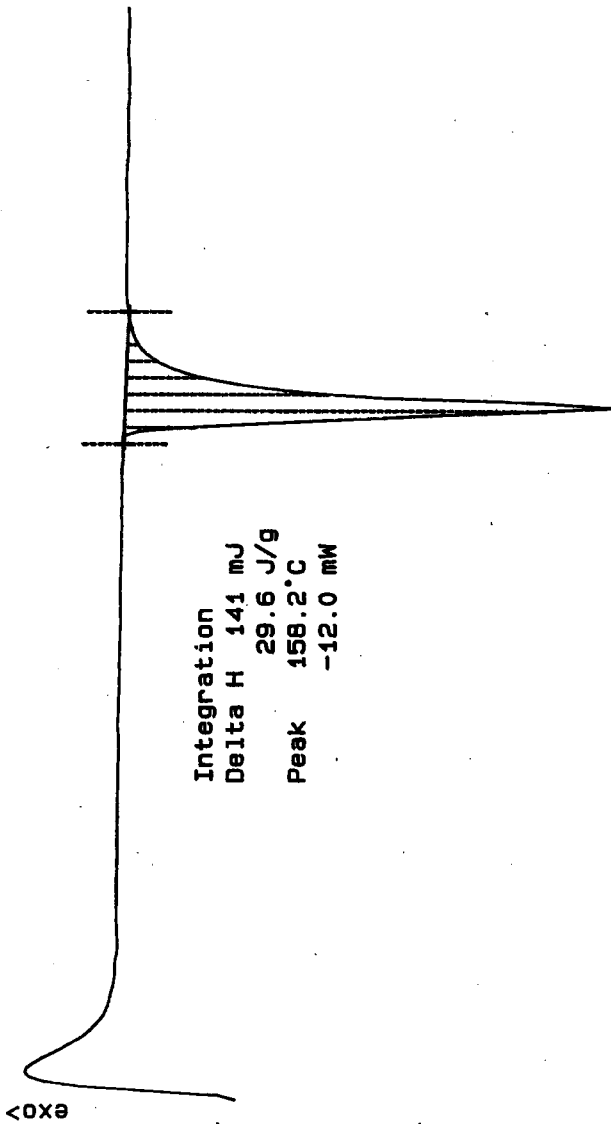
Ident: 0.0

DSC METTLER

222-S Laboratory

05-Aug-96

exo v



120.

140.

160.

180.

°C

Handwritten signature

S96T003731 SAM N2

16.568 mg

Rate: 10.0 °C/min

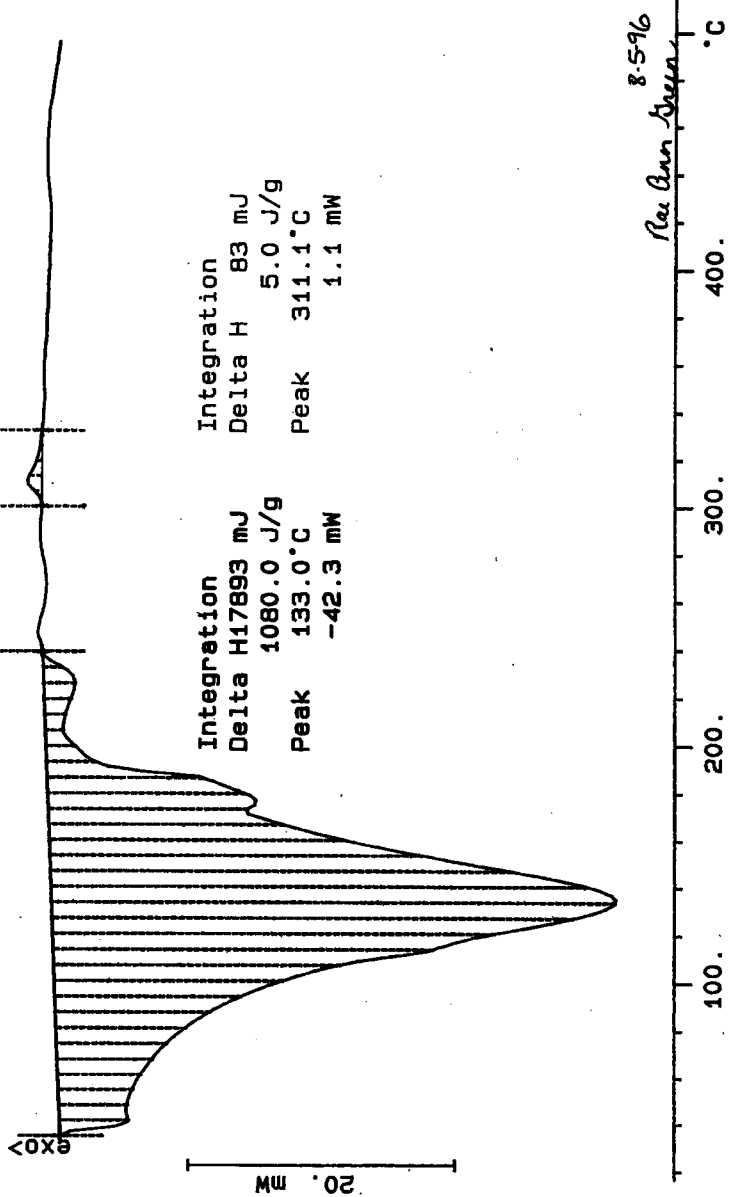
File: 00088.001

Ident: 0.0

DSC METTLER

05-Aug-96

222-S Laboratory



S96T003171 DUP N2
26.530 mg

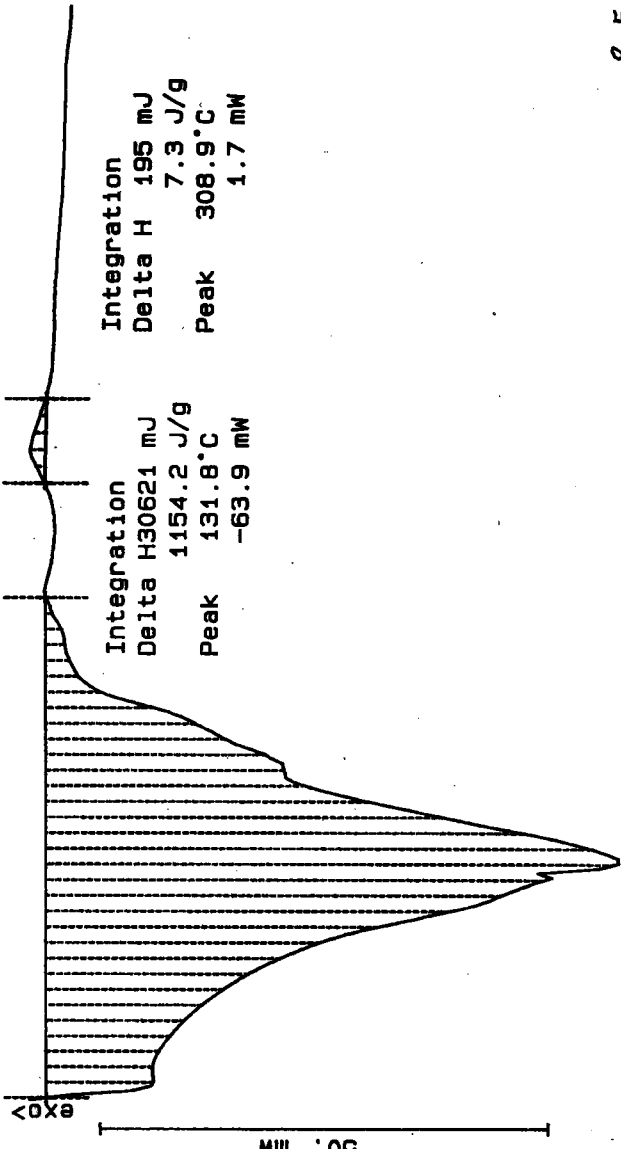
File: 00090.001 DSC METTLER 05-AUG-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

ΔXcD

Integration
Delta H30621 mJ
1154.2 J/g
Peak 131.8°C
-63.9 mW

Integration
Delta H 195 mJ
7.3 J/g
Peak 308.9°C
1.7 mW



8-5-96
Rae Ann Green

°C

50 mW

181

LABCORE Data Entry Template for Worklist#

11499

Analyst: KRW Instrument: DSC0 1 Book # 12N14B


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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>29.6</u>	N/A	Joules/g
96000832	AN-105	2 SAMPLE	S96T003792	0	DSC-01	SOLID	N/A	<u>24.3</u>		Joules/g
96000832	AN-105	3 DUP	S96T003792	0	DSC-01	SOLID	<u>24.3</u>	<u>37.7</u>	N/A	Joules/g
96000832	AN-105	4 SAMPLE	S96T003793	0	DSC-01	SOLID	N/A	<u>27.2</u>		Joules/g
96000832	AN-105	5 DUP	S96T003793	0	DSC-01	SOLID	<u>27.2</u>	<u>28.0</u>	N/A	Joules/g

Final page for worklist # 11499


Analyst Signature Date 8-5-96


Analyst Signature Date 8-6-96

Verified/Validated by
Blandina Valenzuela
^{SDV}
~~8-6-96~~ 8-7-96

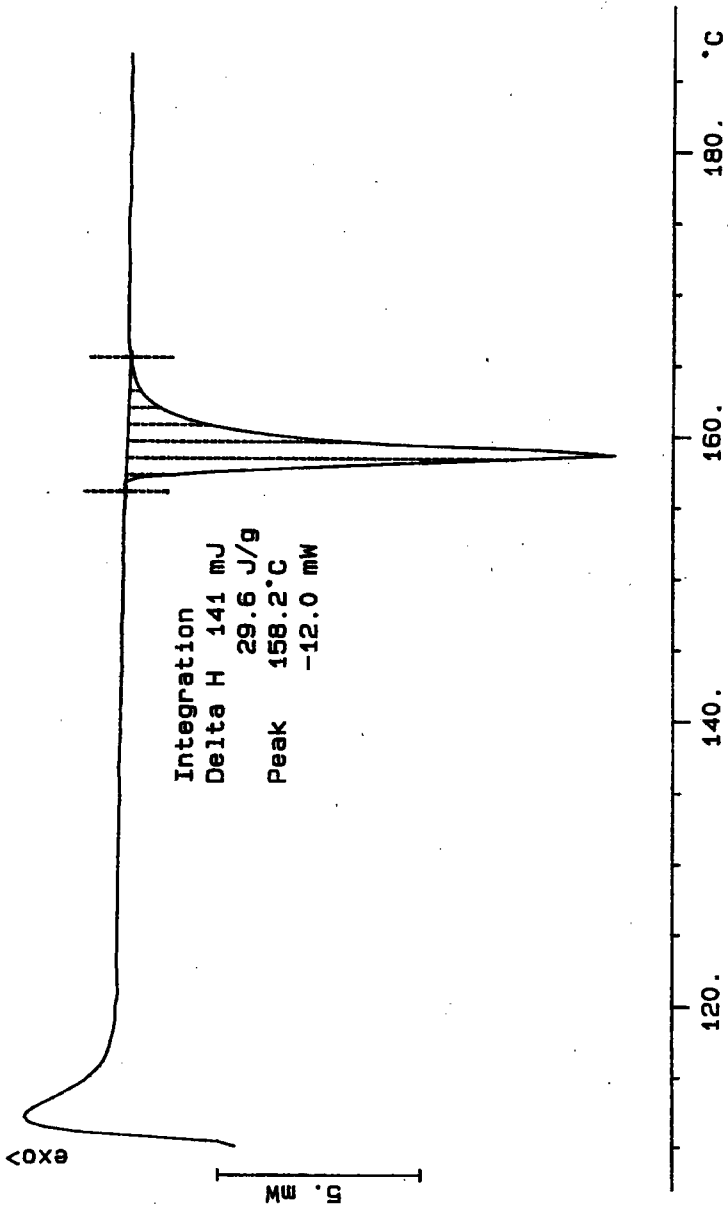
S96T003792 duplicate result is the sum of two exotherms.
The sample thermogram did not display two exotherms.

Data Entry Comments: S96T003793 results are the sum of two exotherms.

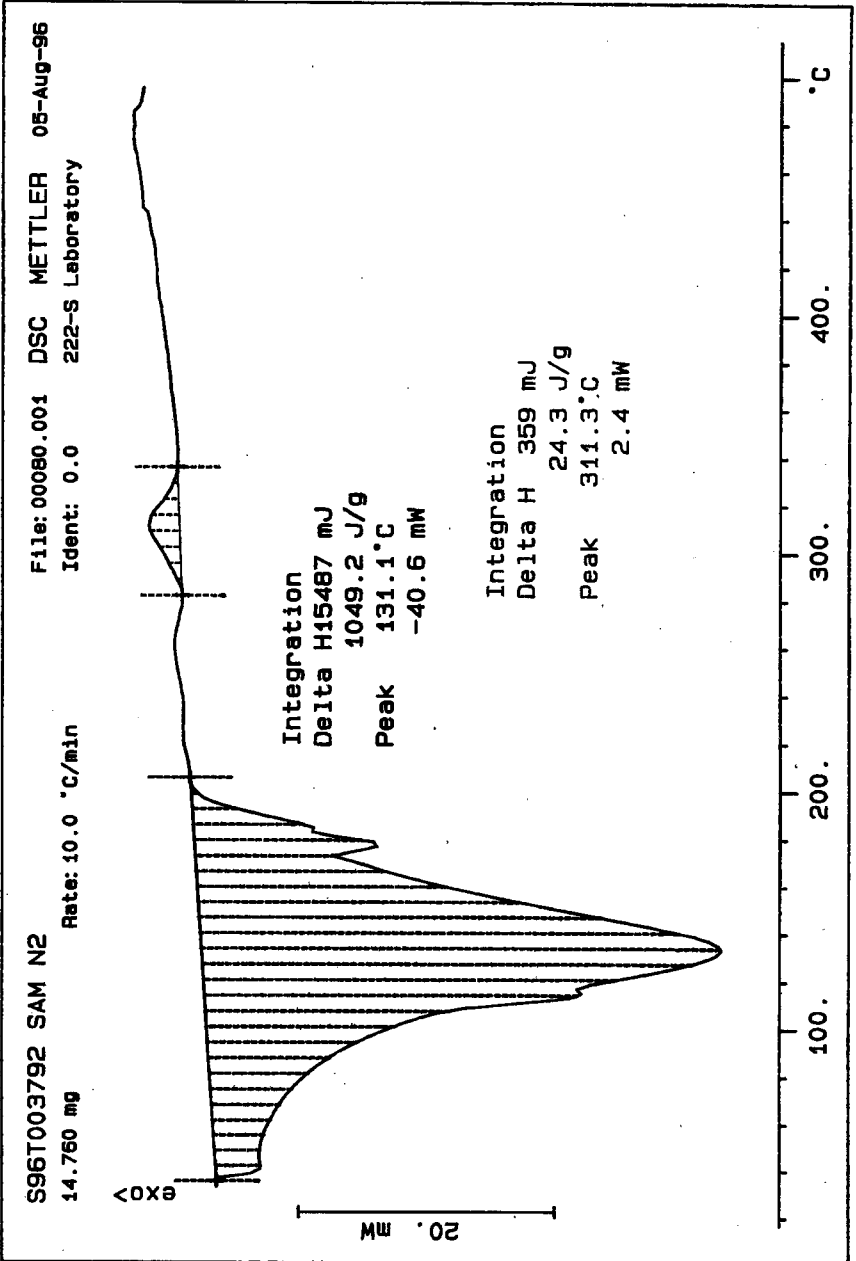
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 187 TO 191

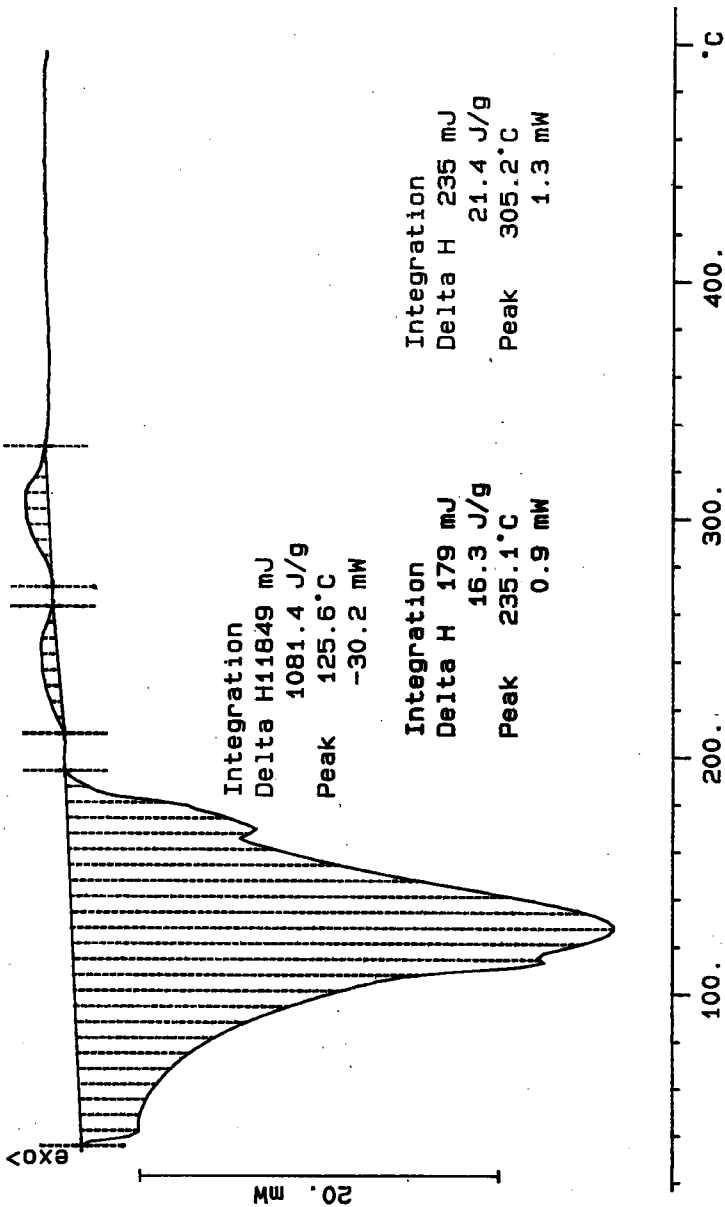
DSC STD 12N14B File: 00078.001 DSC METTLER 05-Aug-96
4.778 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

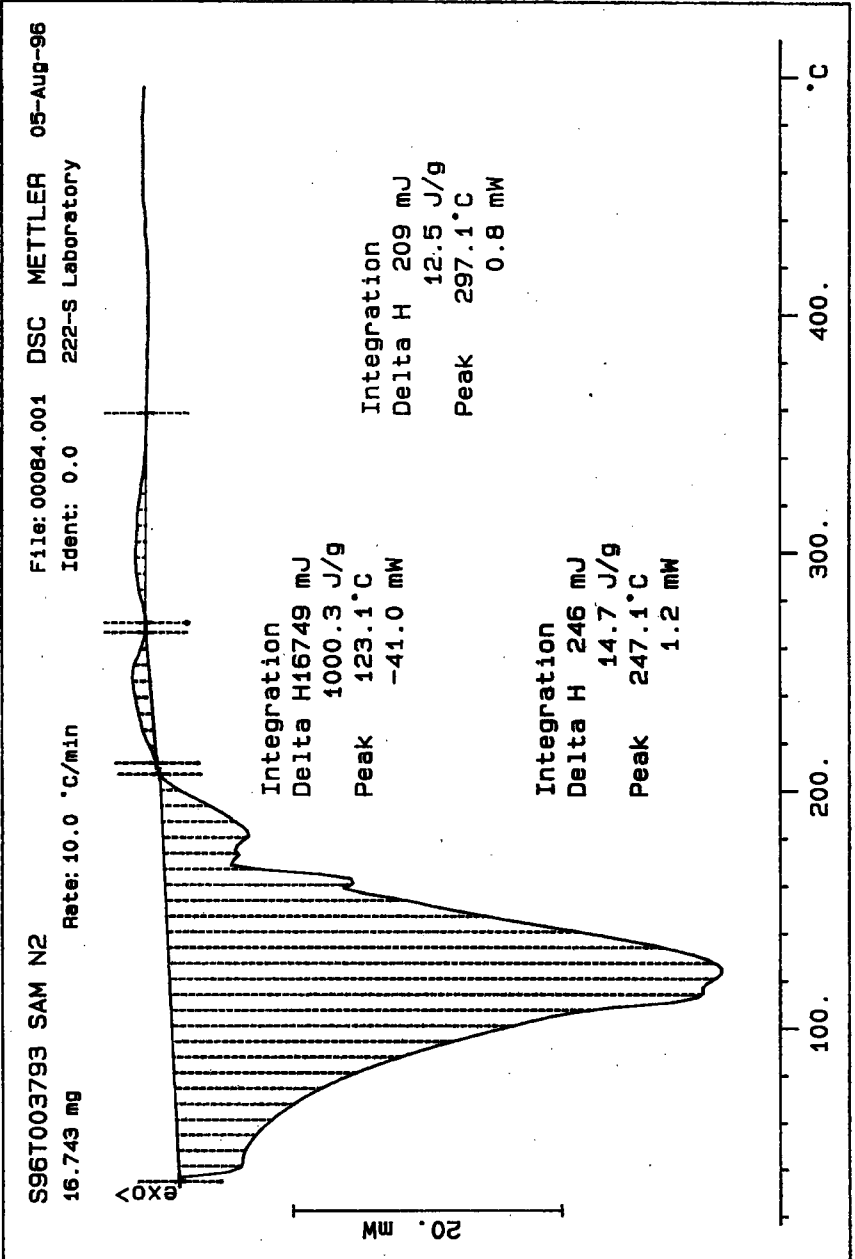


Signature

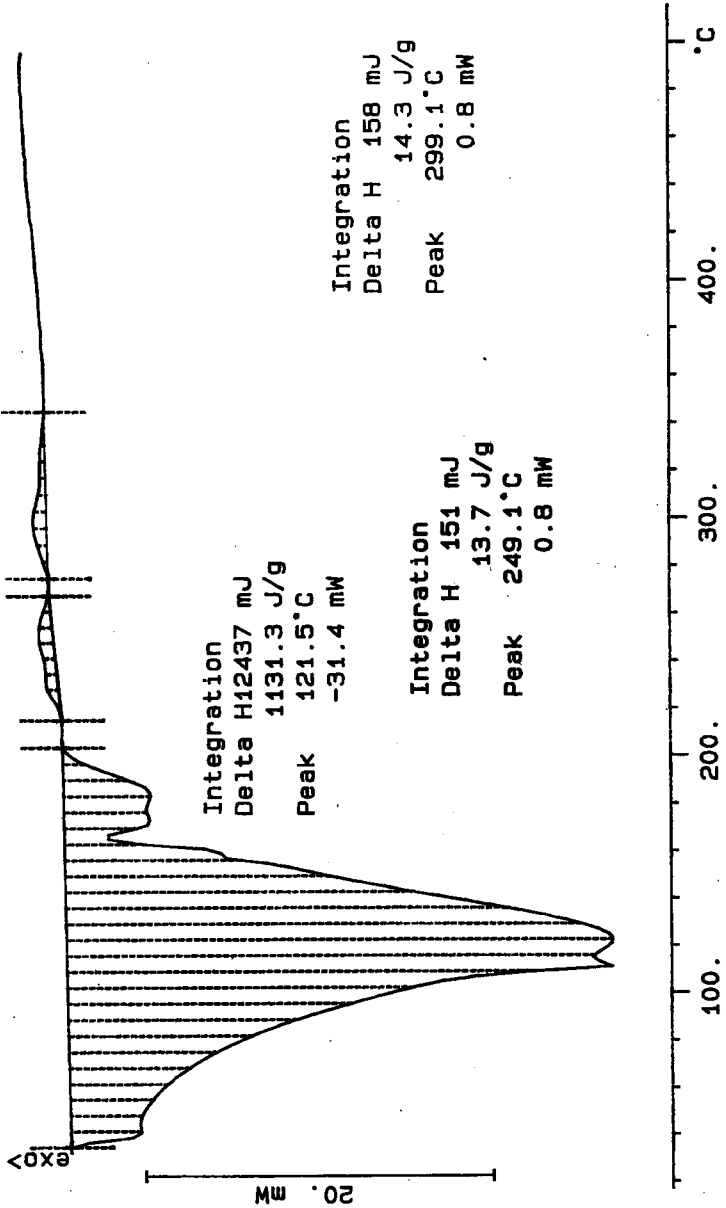


S96T003792 DUP N2
10.957 mg
Rate: 10.0 °C/min
File: 00082.001
Ident: 0.0
DSC METTLER 05-Aug-96
222-S Laboratory





S96T003793 DUP N2
10.993 mg
Rate: 10.0 °C/min
File: 00085.001
Ident: 0.0
DSC METTLER 05-Aug-96
222-S Laboratory



Integration
Delta H 1131.3 mJ
1131.3 J/g
Peak 121.5 °C
-31.4 mW

Integration
Delta H 151 mJ
13.7 J/g
Peak 249.1 °C
0.8 mW

Integration
Delta H 158 mJ
14.3 J/g
Peak 299.1 °C
0.8 mW

LABCORE Data Entry Template for Worklist#

11500

Analyst: Ra Instrument: DSC 1 Book # 12N14-B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>29.7</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	S96T003794	0	DSC-01	SOLID	<u>N/A</u>	<u>26.5</u>		Joules/g
96000832	AN-105	3 DUP	S96T003794	0	DSC-01	SOLID	<u>26.5</u>	<u>24.3</u>	<u>N/A</u>	Joules/g
96000832	AN-105	4 SAMPLE	S96T003795	0	DSC-01	SOLID	<u>N/A</u>	<u>30.7</u>		Joules/g
96000832	AN-105	5 DUP	S96T003795	0	DSC-01	SOLID	<u>30.7</u>	<u>32.7</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11500

Rae Ann Green 8-6-96
Analyst Signature Date

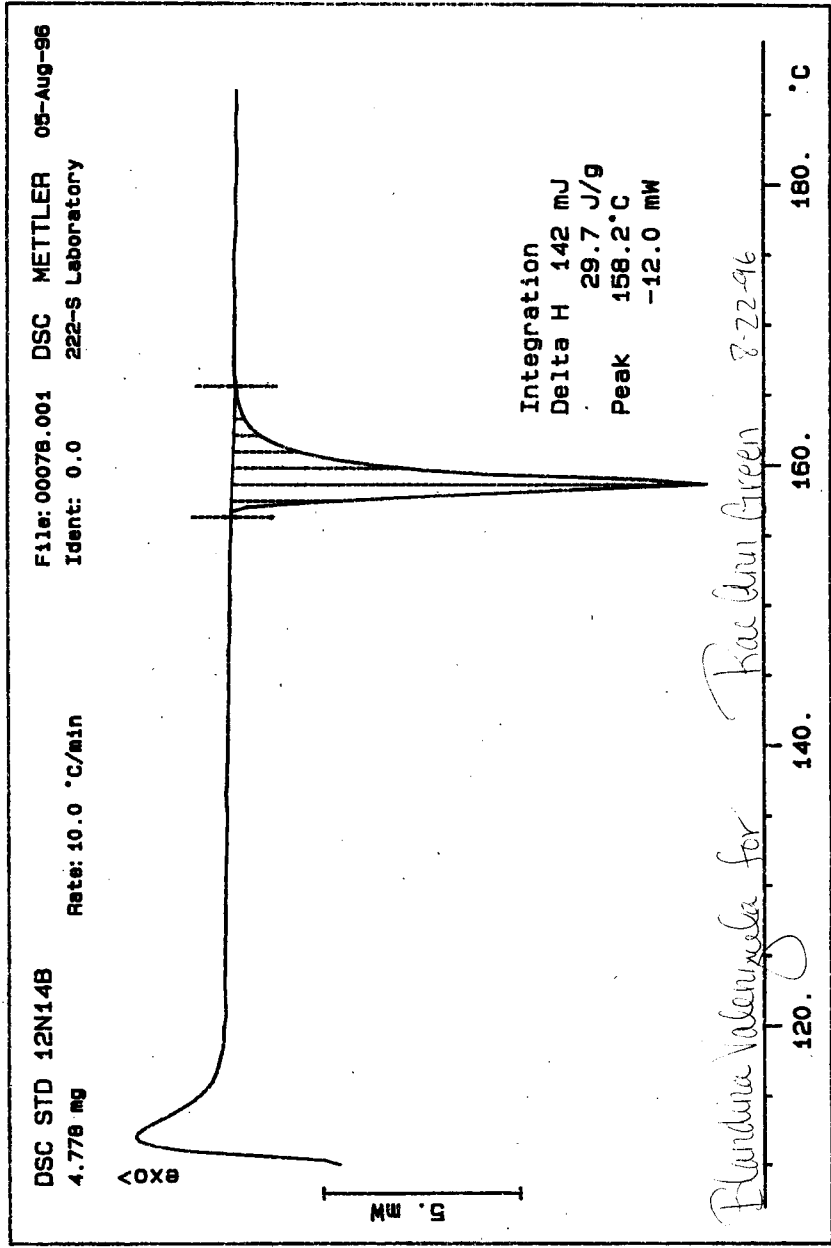
Rebecca 8/21/96
Analyst Signature Date

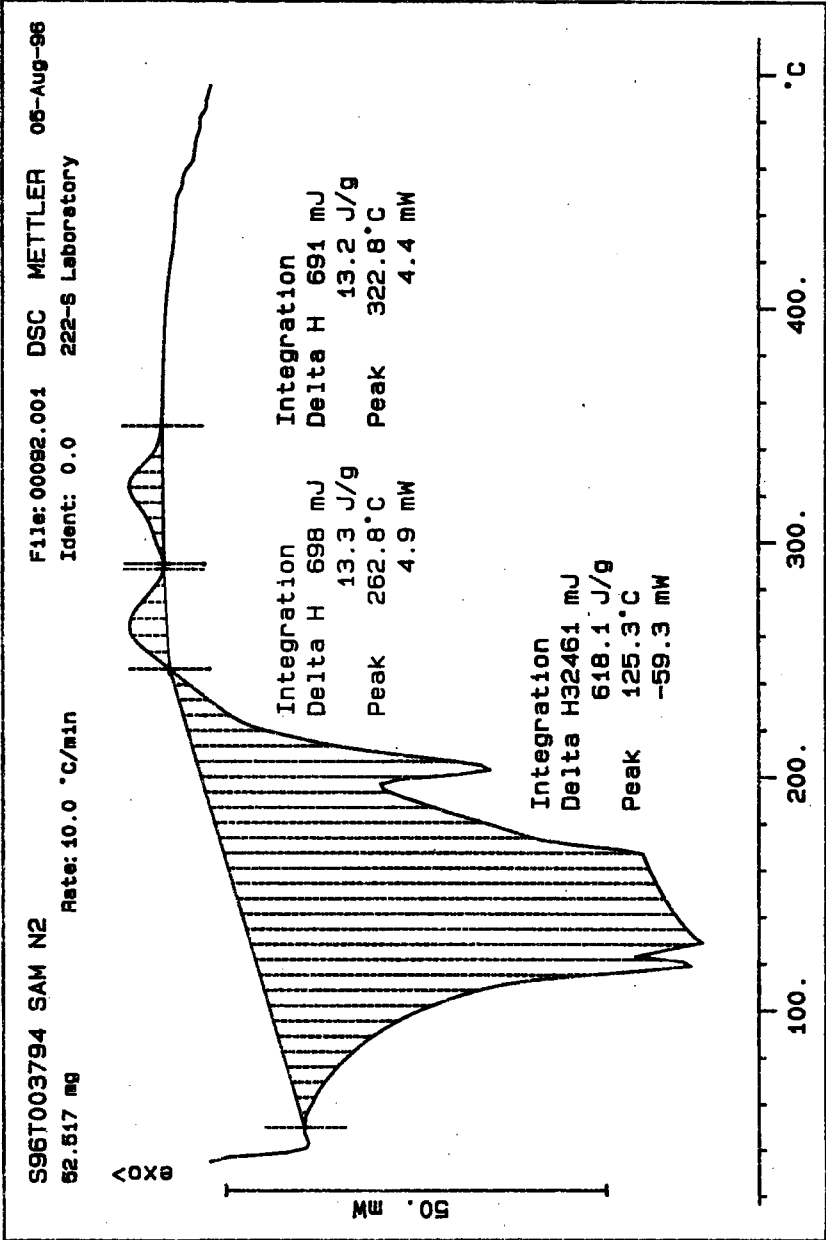
Verified/Validated by
Blarina
Valenzuela 8-22-96

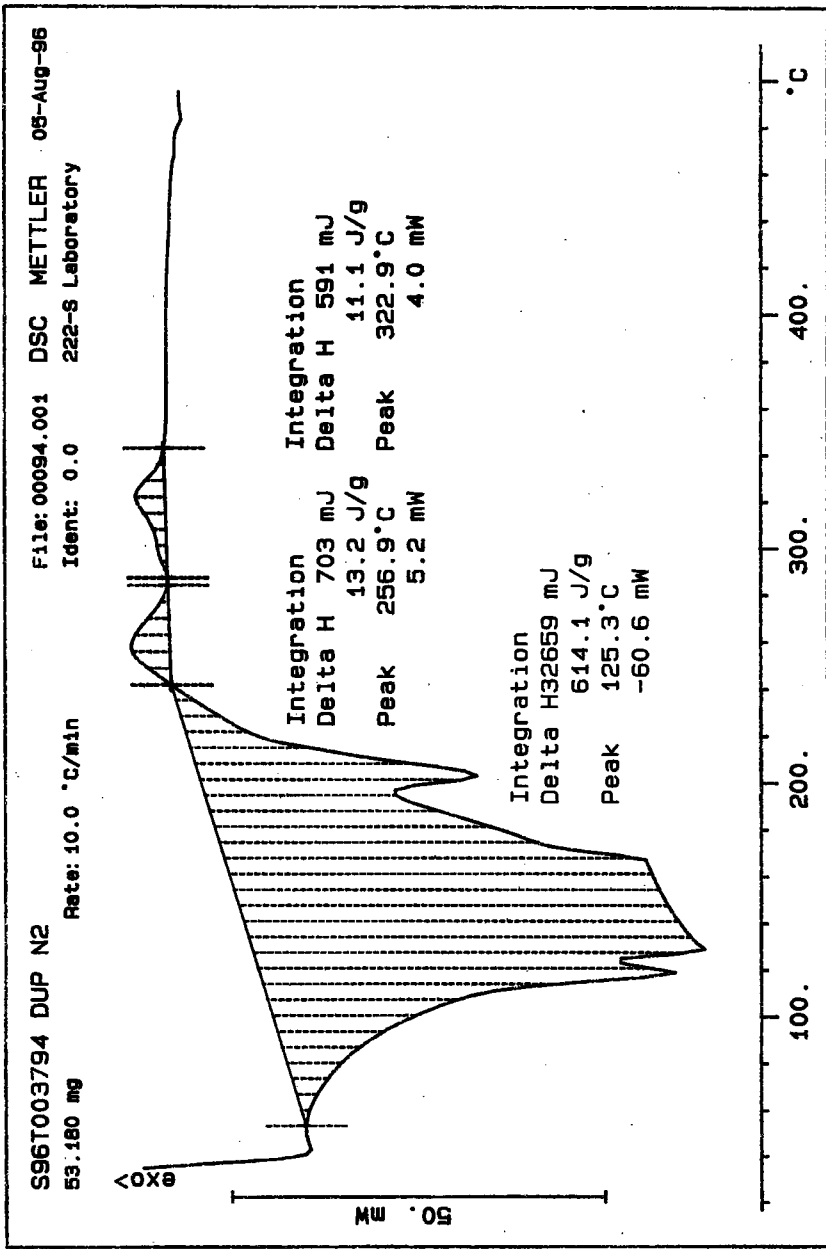
Data Entry Comments: S96T003794 results are the sum of two exotherms

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 142 TO 147.







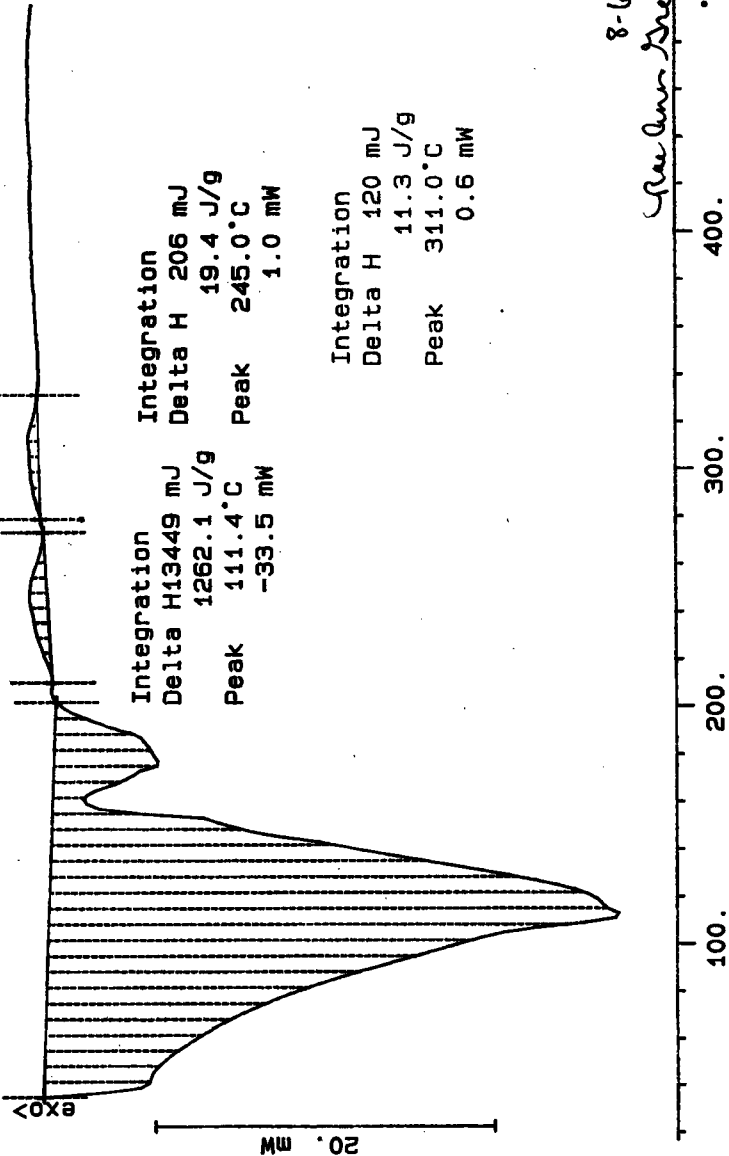
S96T003795 SAM N2

10.656 mg

File: 00096.001 DSC METTLER 06-Aug-96

Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



Integration

Delta H13449 mJ 1262.1 J/g
 Peak 111.4°C -33.5 mW

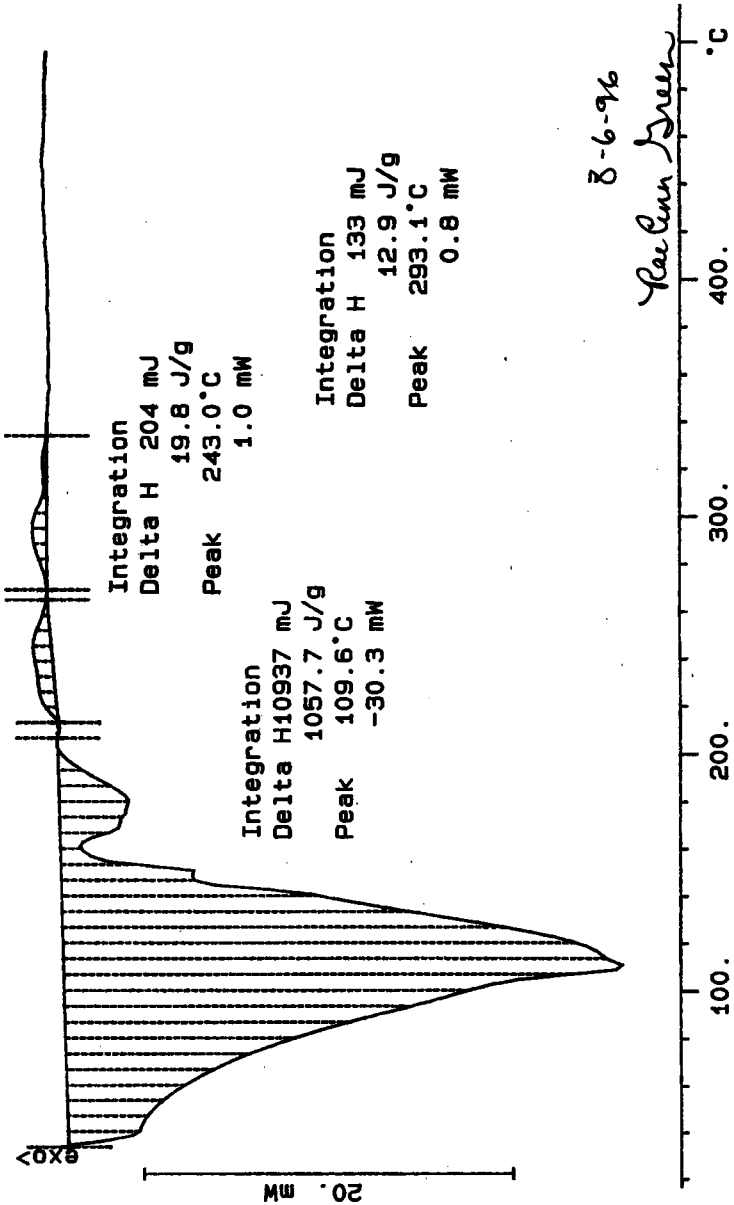
Integration

Delta H 206 mJ 19.4 J/g
 Peak 245.0°C 1.0 mW

Integration

Delta H 120 mJ 11.3 J/g
 Peak 311.0°C 0.6 mW

S96T003795 DUP N2
10.340 mg
Rate: 10.0 °C/min
File: 00098.001
Ident: 0.0
DSC METTLER
222-S Laboratory
06-Aug-96



LABCORE Data Entry Template for Worklist#

11501

Analyst: SMH Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>28.9*</u>	N/A	Joules/g
9600832	AN-105	2 SAMPLE	S96T003796	0	DSC-01	SOLID	N/A	<u>38.5</u>		Joules/g
9600832	AN-105	3 DUP	S96T003796	0	DSC-01	SOLID	<u>38.5</u>	<u>39.7</u>	N/A	Joules/g
9600832	AN-105	4 SAMPLE	S96T003797	0	DSC-01	SOLID	N/A	<u>0</u>		Joules/g
9600832	AN-105	5 DUP	S96T003797	0	DSC-01	SOLID	<u>0</u>	<u>0</u>	N/A	Joules/g

Final page for worklist # 11501

Susie M. Jullon 87-96
Analyst Signature Date

Teri Mack 9-3-96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
87-6-96
BN

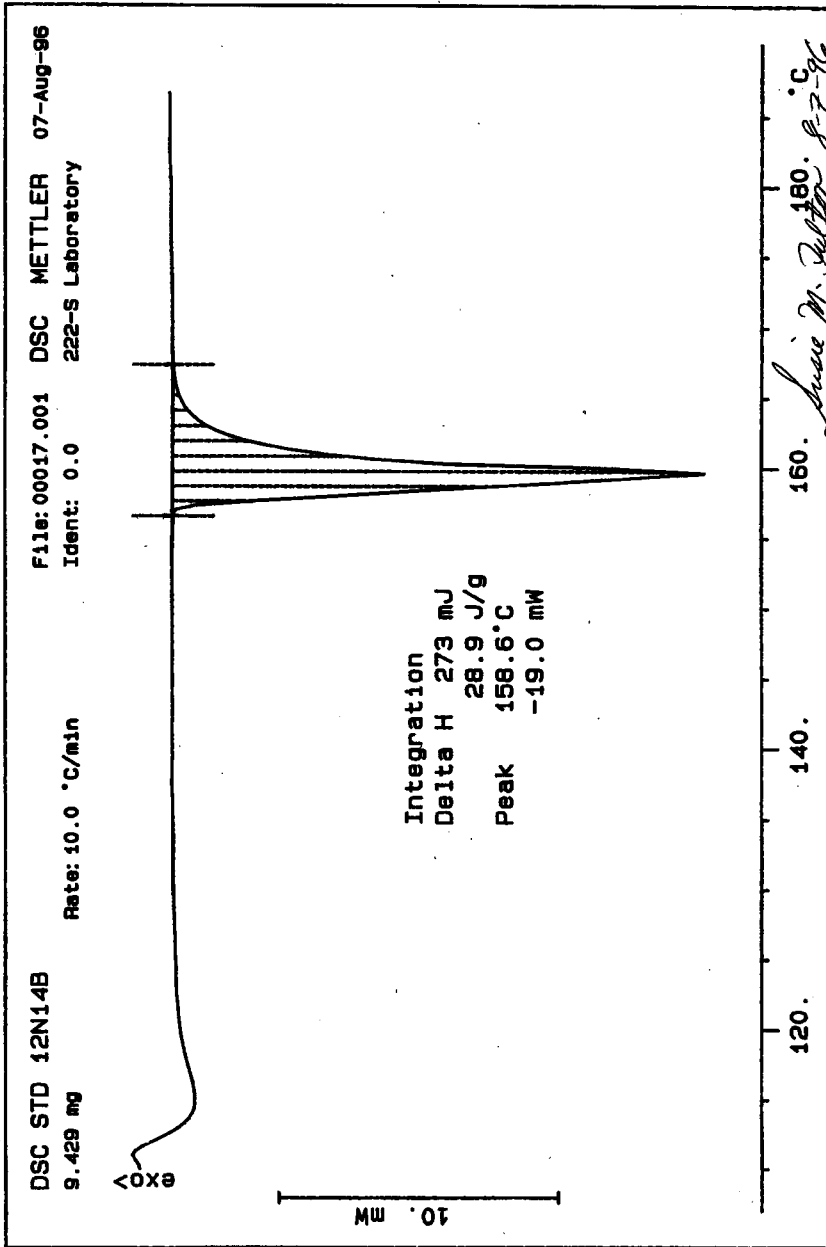
S96T003796 results are the sum of two exotherms.

S96T003797 was overintegrated, disregard lined out results
idea 9-17-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES *FL* TO *202*.

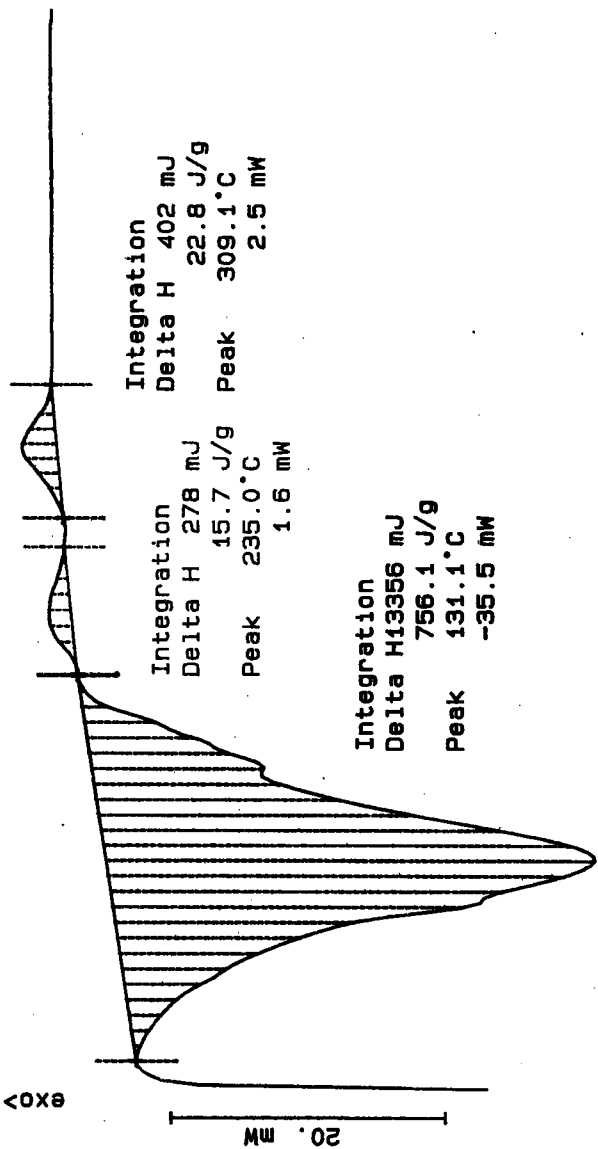


S96T003796 N2
17.664 mg

File: 00023.001 DSC METTLER 07-Aug-86
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

exo

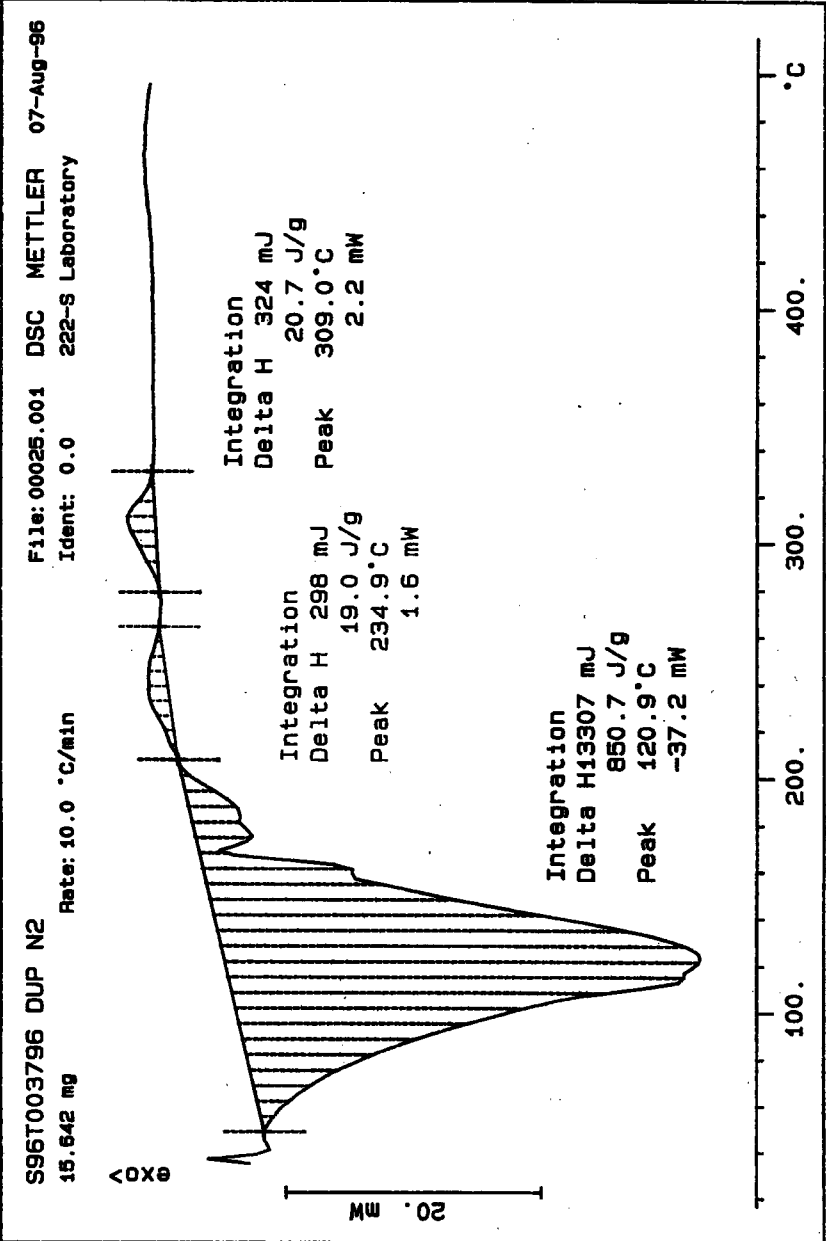


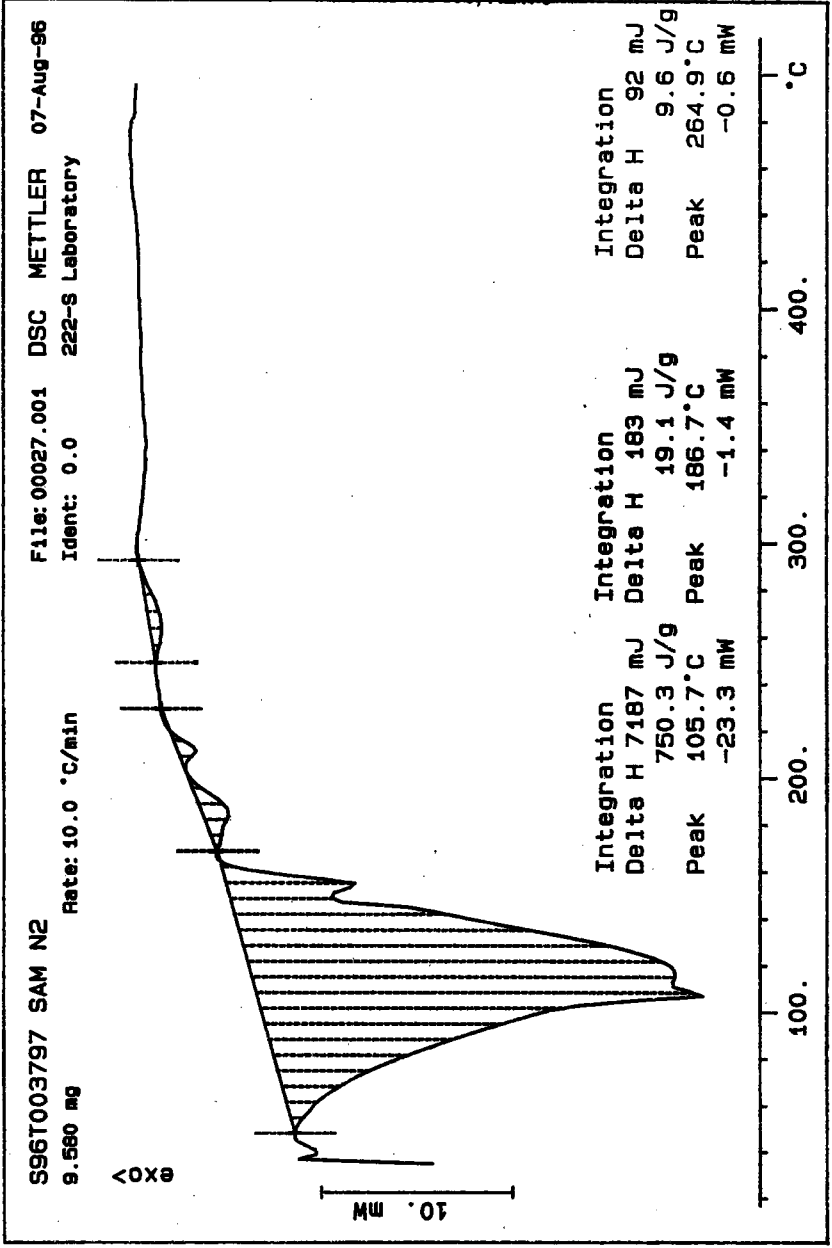
Integration	Delta H	402 mJ
Integration	Delta H	278 mJ
Integration	Delta H	42.8 J/g
Integration	Delta H	15.7 J/g
Integration	Delta H	235.0 °C
Integration	Delta H	309.1 °C
Integration	Delta H	2.5 mW
Integration	Delta H	1.6 mW

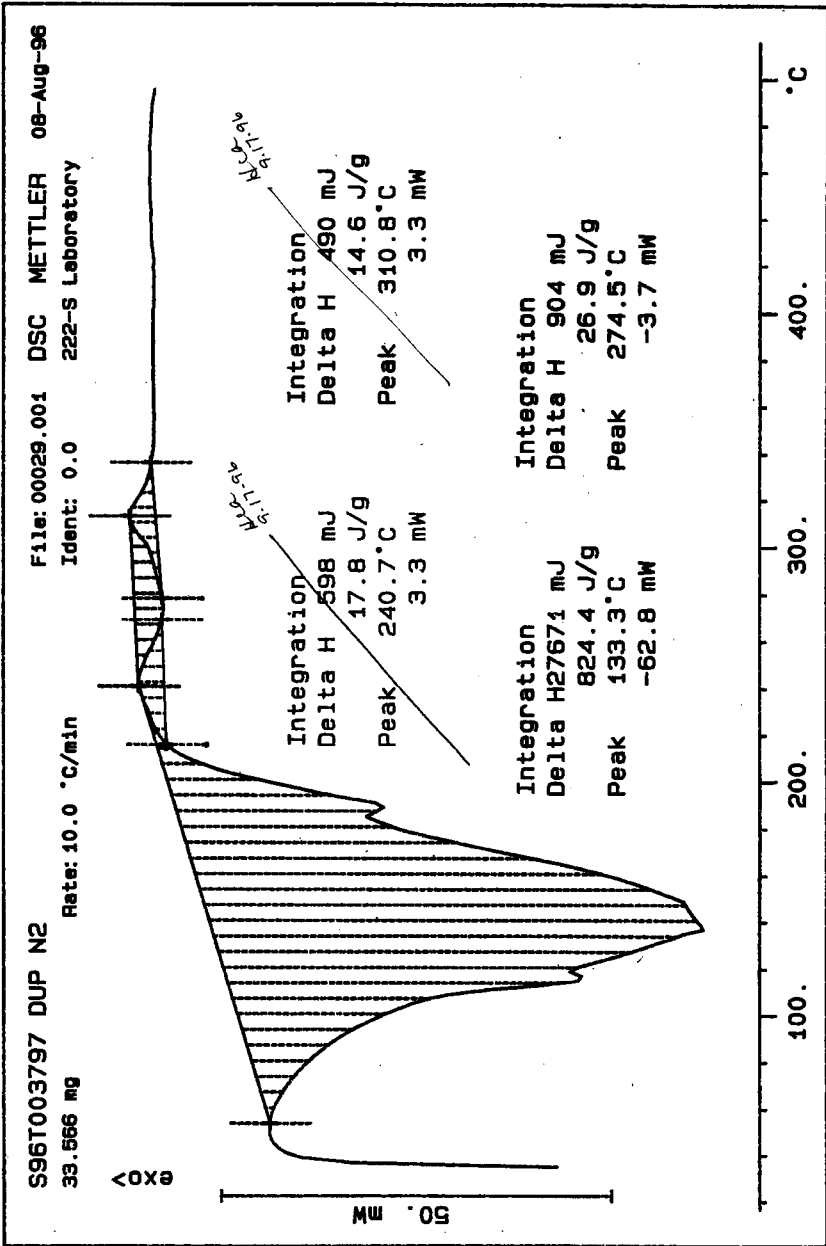
Integration	Delta H	13356 mJ
Integration	Delta H	756.1 J/g
Integration	Delta H	131.1 °C
Integration	Delta H	-35.5 mW

100. 200. 300. 400. °C

20. mW







LABCORE Data Entry Template for Worklist#

11502

Analyst: SMF Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>28.1</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	S96T003798	0	DSC-01	SOLID	<u>N/A</u>	<u>59</u>		Joules/g
96000832	AN-105	3 DUP	S96T003798	0	DSC-01	SOLID	<u>59</u>	<u>73</u>	<u>N/A</u>	Joules/g
96000832	AN-105	4 SAMPLE	S96T003816	0	DSC-01	SOLID	<u>N/A</u>	<u>28.4</u>		Joules/g
96000832	AN-105	5 DUP	S96T003816	0	DSC-01	SOLID	<u>28.4</u>	<u>24.2</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11502

Susie M. Dutton 8-8-96
Analyst Signature Date

[Signature] 8-12-96
Analyst Signature Date

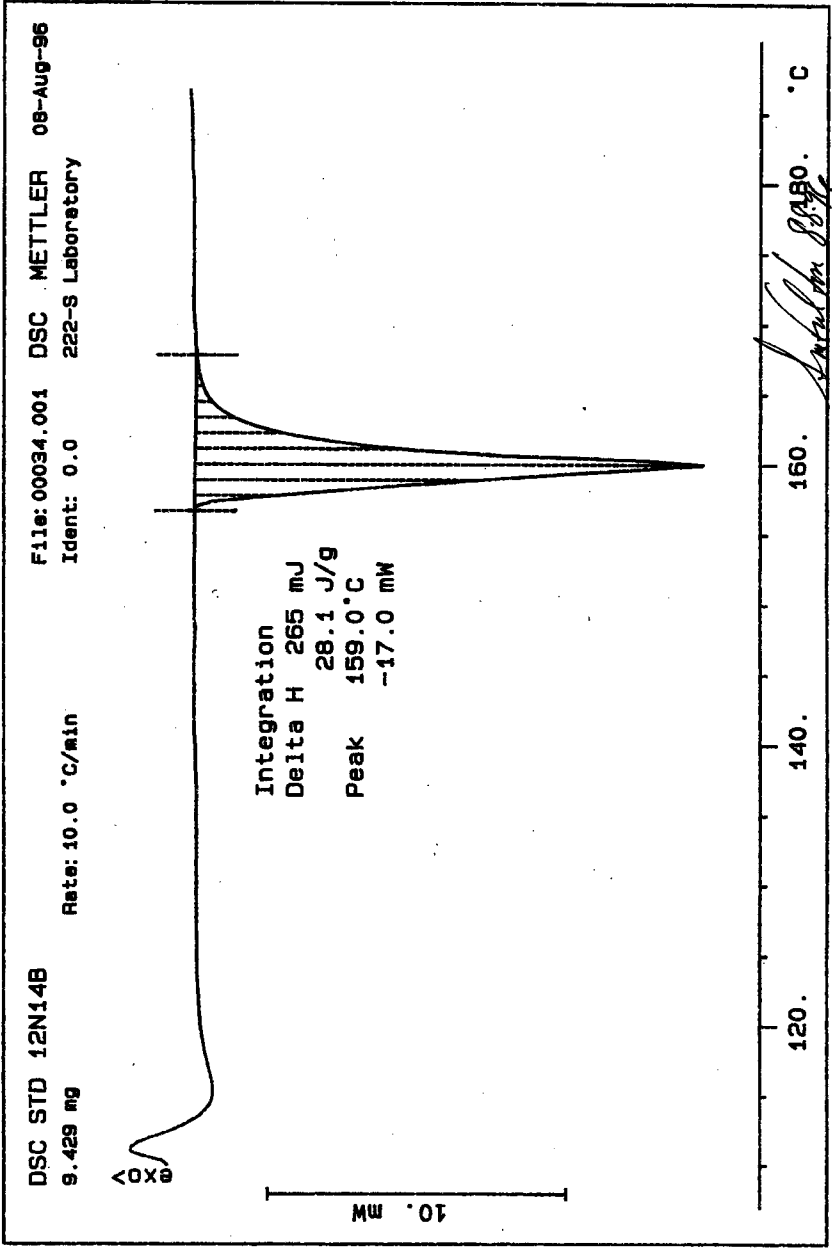
Verified/Validated by
Blandina Valenzuela 8-14-96

Data Entry Comments: S96T003798 results are the sum of two exotherms

S96T003816 results are the sum of two exotherms

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 200 TO 209.

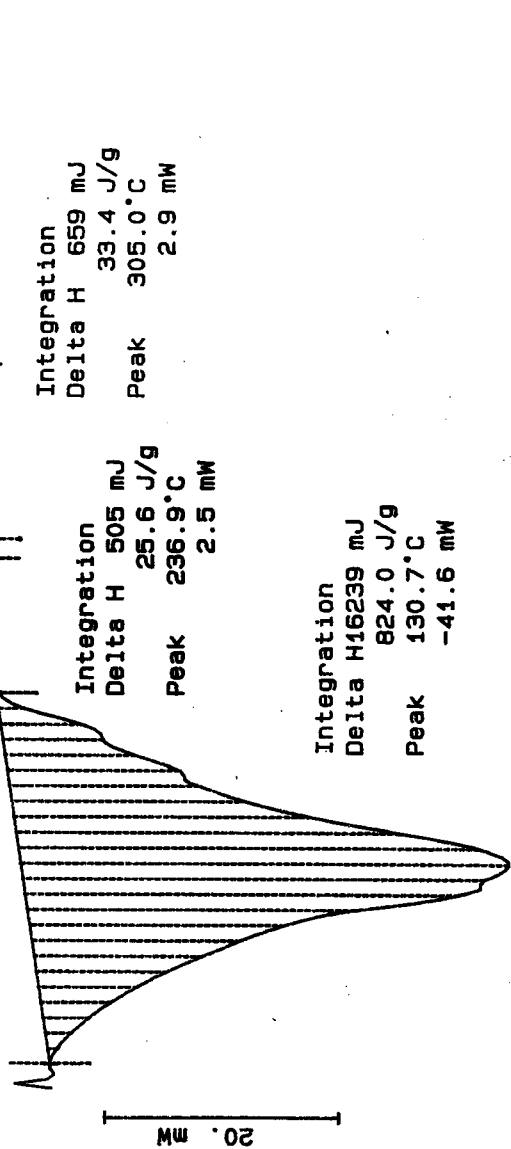


S96T003798 N2
19.709 mg

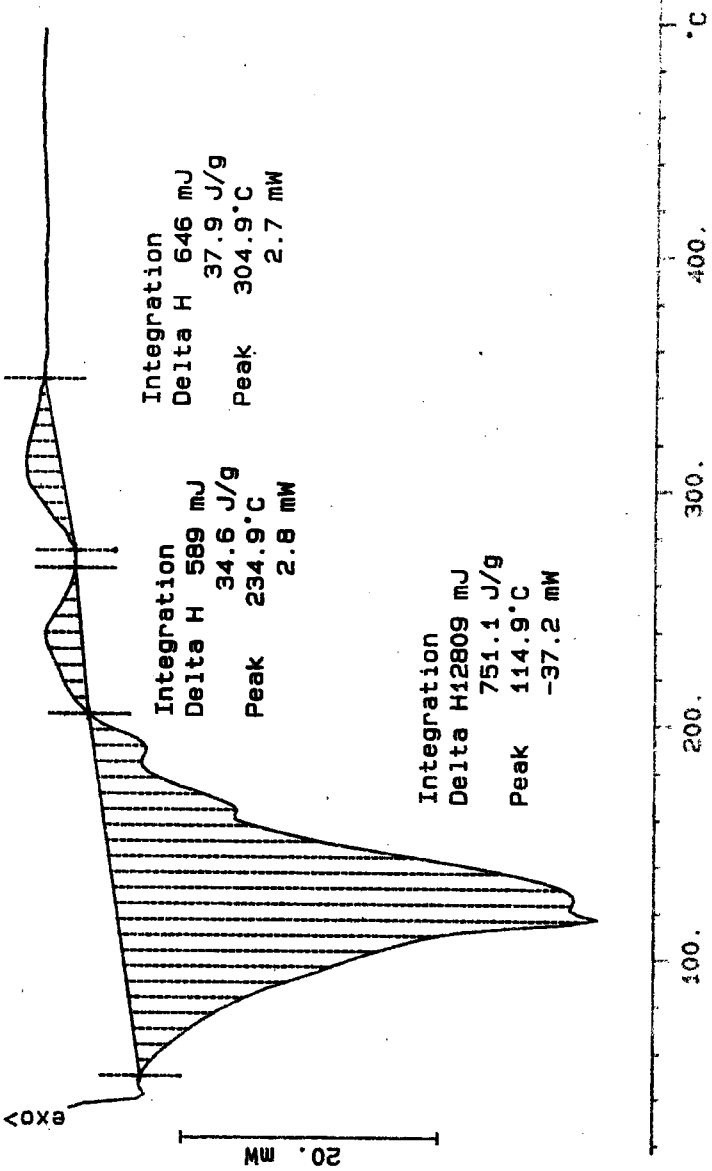
File: 00032.001 DSC METTLER 08-Aug-96
Ident: 0.0 222-S Laboratory

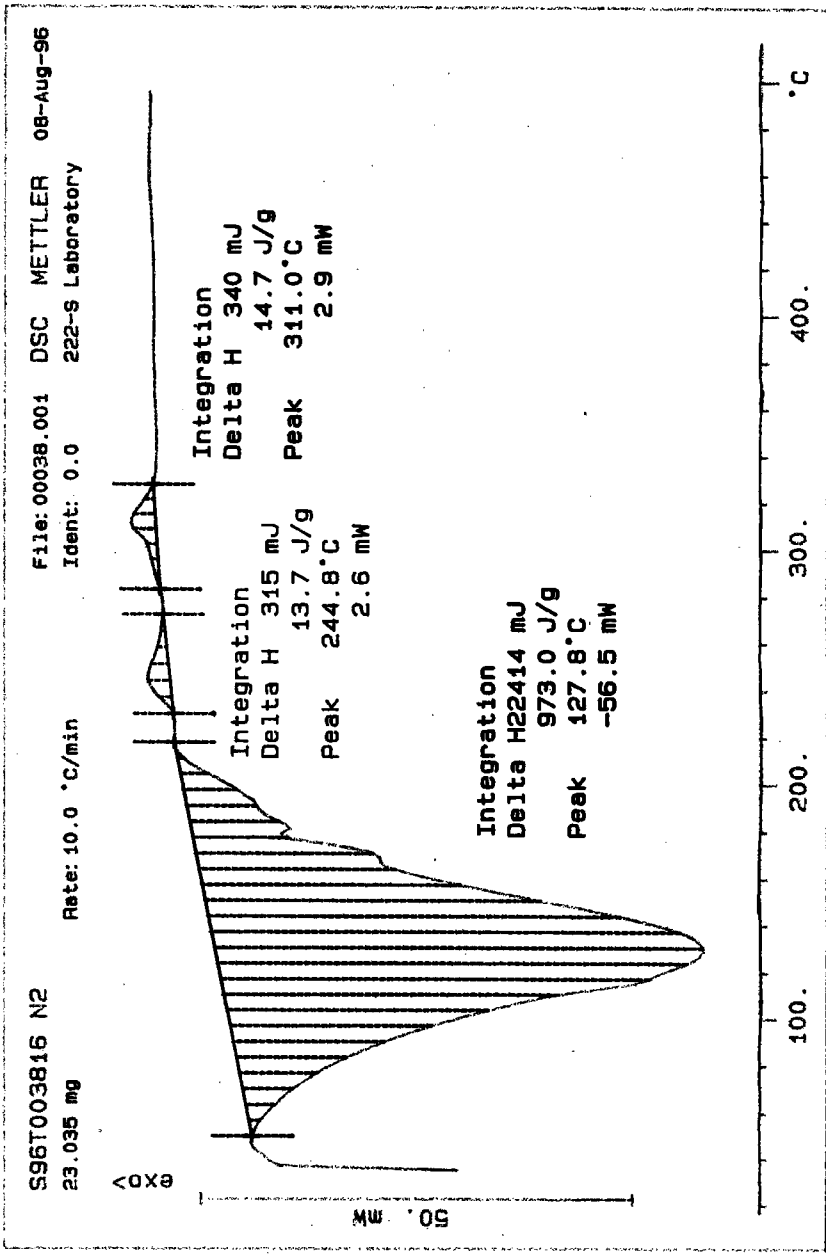
Rate: 10.0 °C/min

exo v

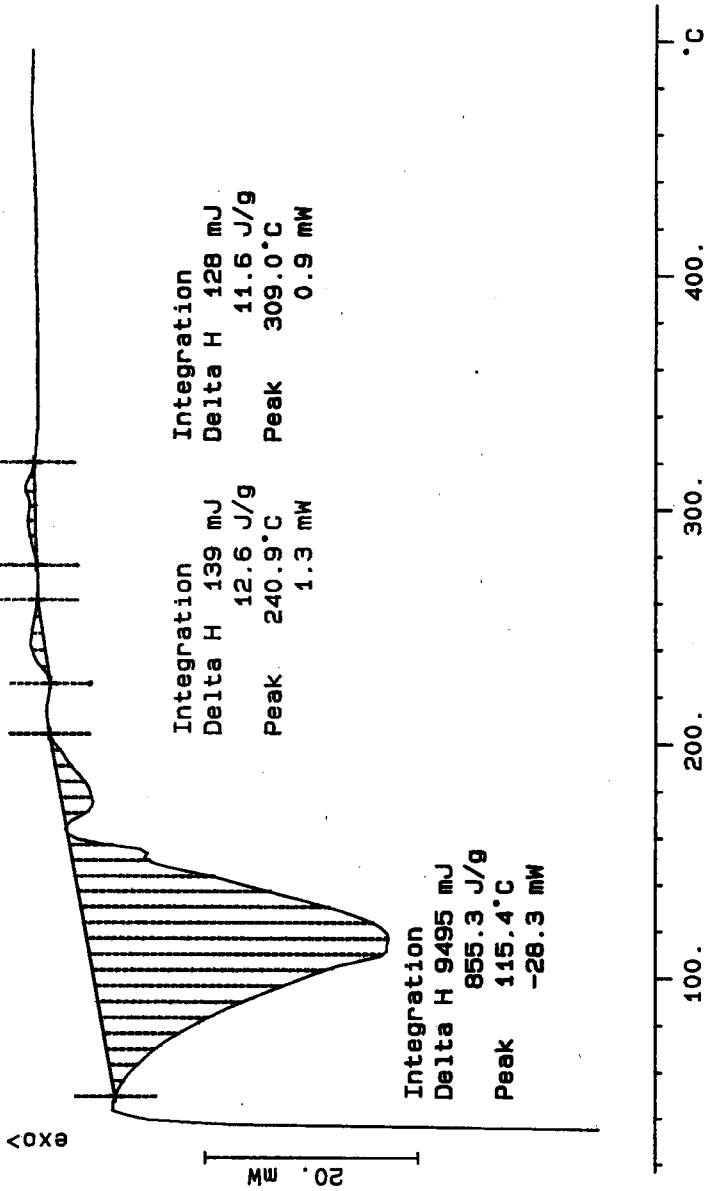


S96T003798 DUP N2
17.053 mg
Rate: 10.0 °C/min
File: 00036.001 DSC METTLER 08-AUG-96
Ident: 0.0 222-S Laboratory





S96T003816 DUP N2
11.102 mg
Rate: 10.0 °C/min
File: 00040.001 DSC METTLER 08-Aug-96
Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

11503

Analyst: ML Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: AN-105 DSC, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.4</u>	<u>27.4*</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	S96T003817	0	DSC-01	SOLID	<u>N/A</u>	<u>16.1</u>		Joules/g
96000832	AN-105	3 DUP	S96T003817	0	DSC-01	SOLID	<u>16.1</u>	<u>7.6</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11503

A. Lambel 08.08.96
Analyst Signature Date

Sturges 8-12-99^{S.P.}96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
8.14.96

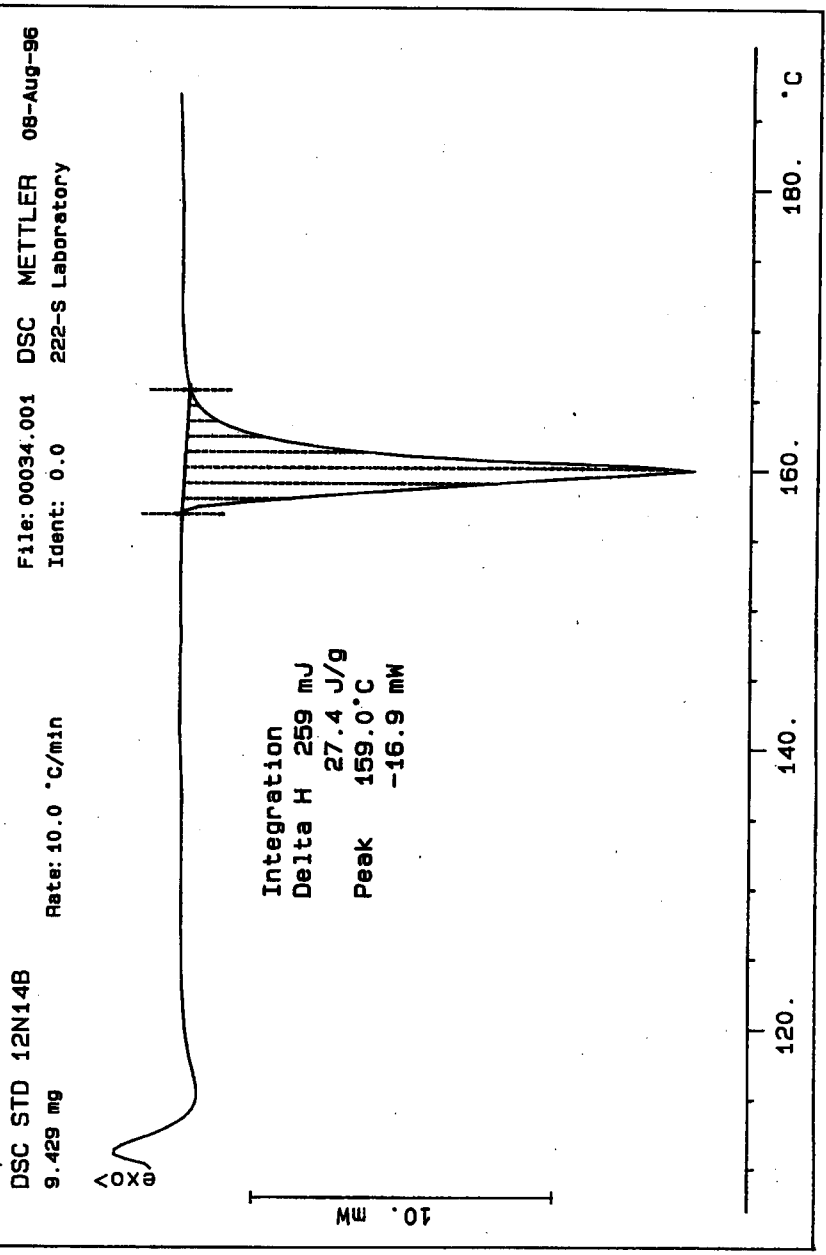
Data Entry Comments:

copy 8-12-96 The results are the sum of two weight loss ⁸⁻¹²⁻⁹⁶ ₈₀₇
exotherms

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.

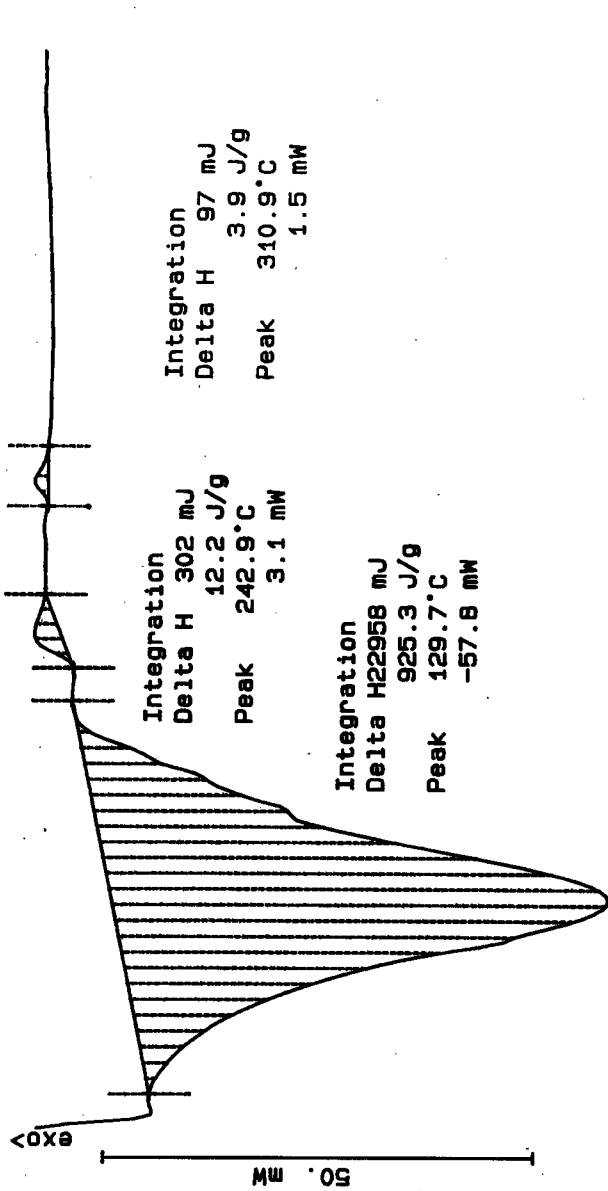
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 211 TO 212.

A. Fambel 08-08-96



S96T003817 SAM N2
 24.814 mg
 F11e: 00042.001 DSC METTLER 08-Aug-96
 Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

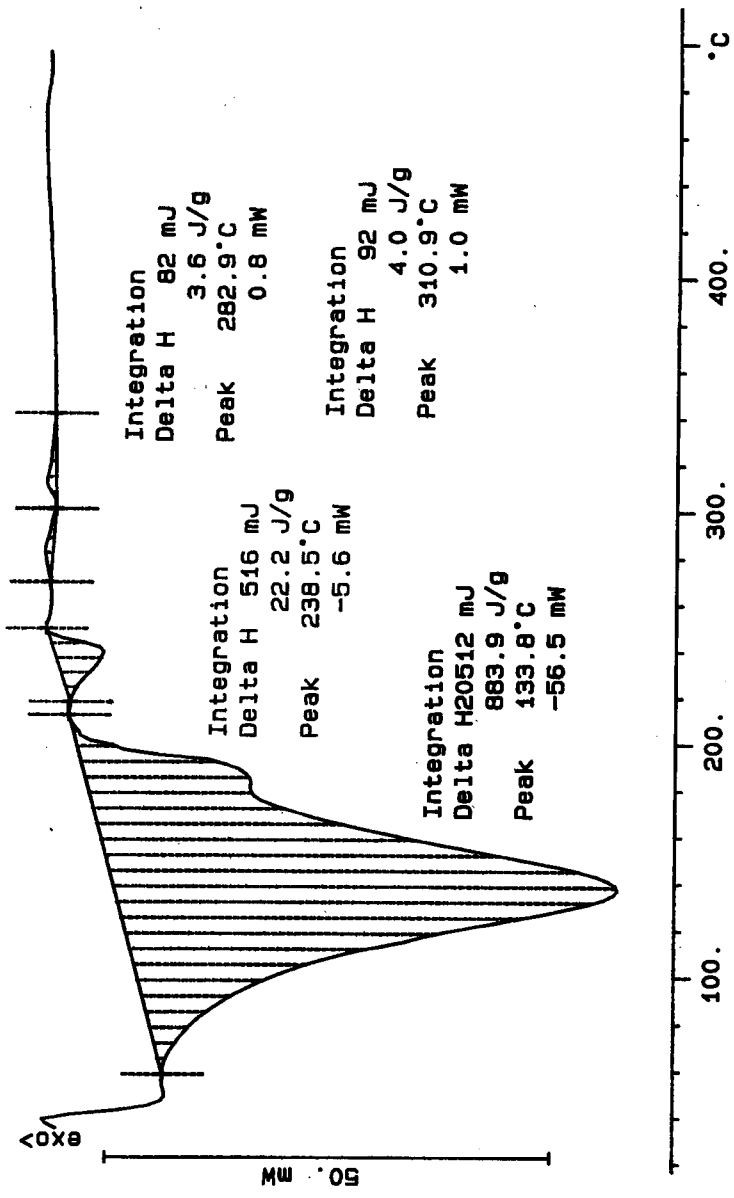


Integration
 Delta H 302 mJ
 12.2 J/g
 Peak 242.9°C
 3.1 mW

Integration
 Delta H 97 mJ
 3.9 J/g
 Peak 310.9°C
 1.5 mW

Integration
 Delta H 22958 mJ
 925.3 J/g
 Peak 129.7°C
 -57.6 mW

S96T003817 DUP N2
 23.207 mg
 Rate: 10.0 °C/min
 File: 00044.001 DSC METTLER 08-Aug-96
 Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

11658

Analyst: AL Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: DSC-01 FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>27.4*</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	S96T003974	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	3 DUP	S96T003974	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	S96T003975	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	5 DUP	S96T003975	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11658

A Lambert
Analyst Signature

08-08-96
Date

Stm P...
Analyst Signature

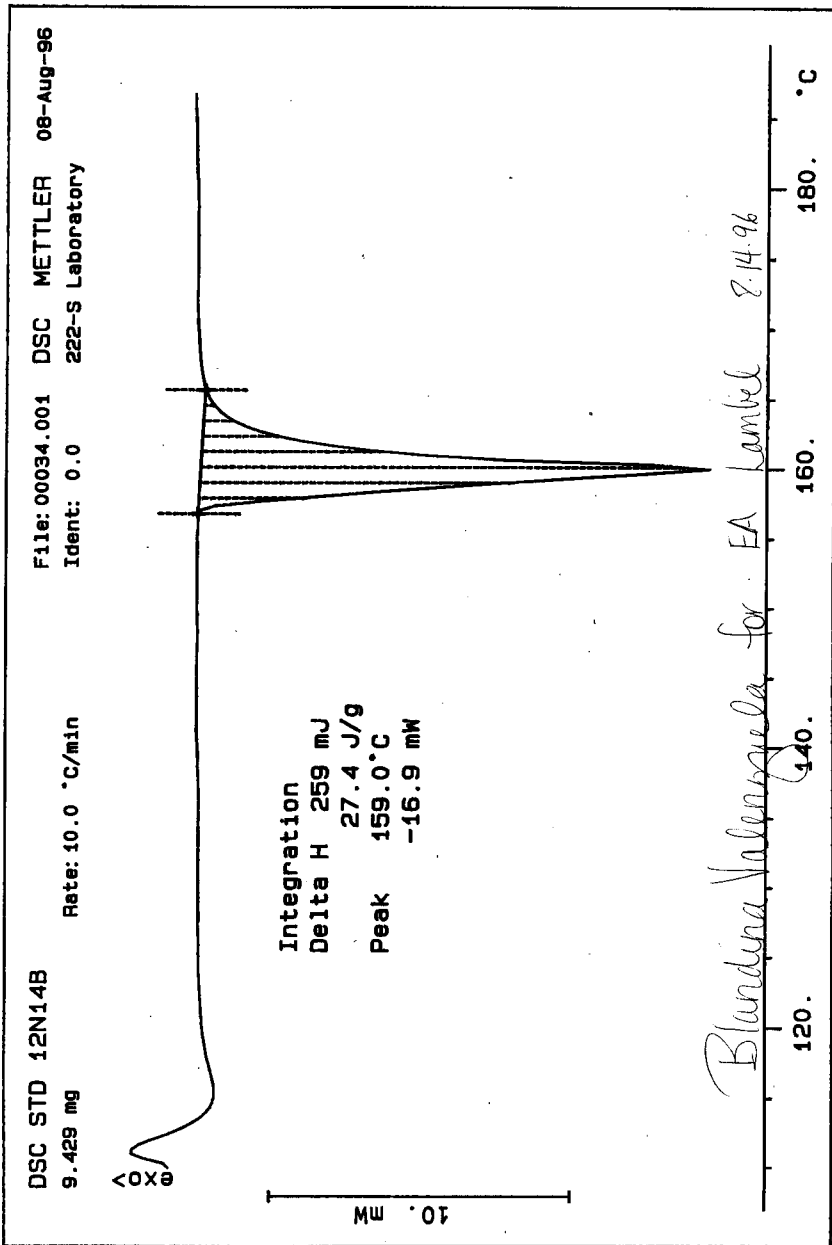
8-12-96
Date

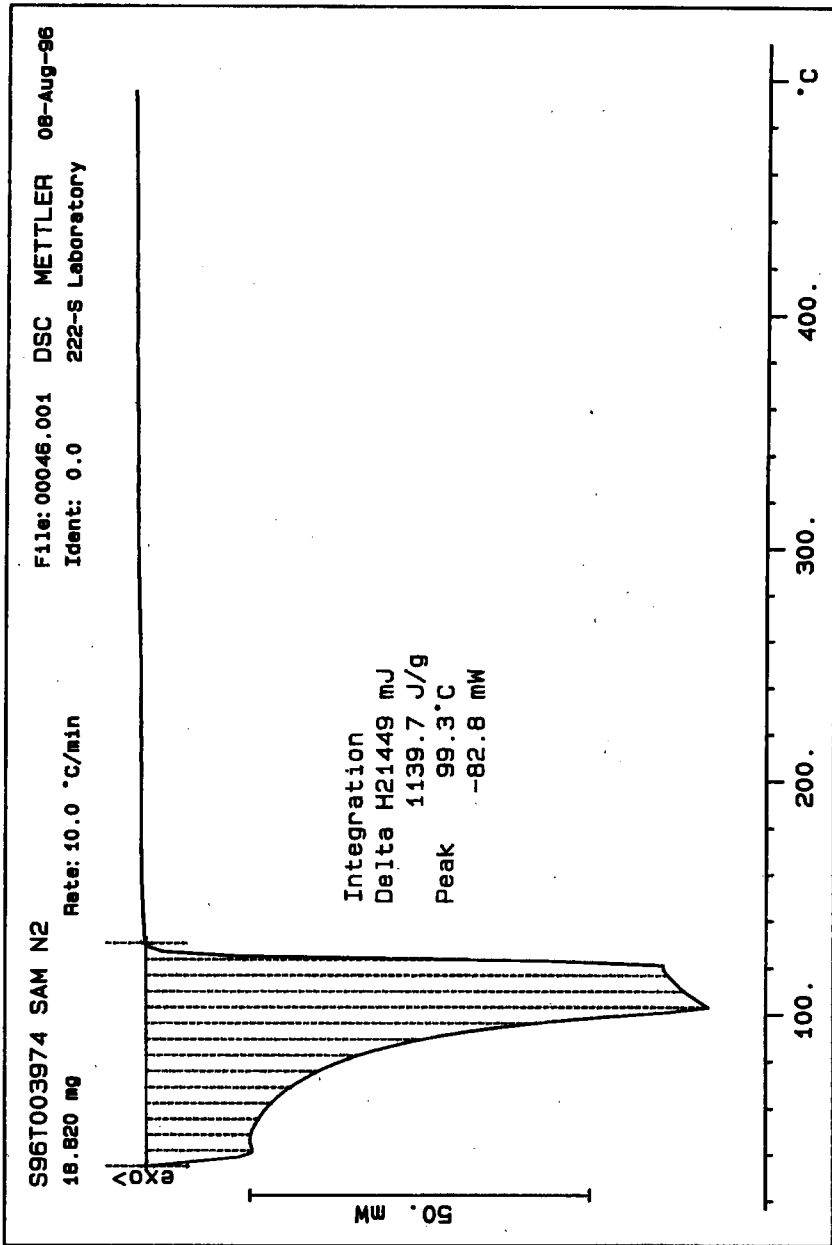
Data Entry Comments:

22

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 215 TO 219.

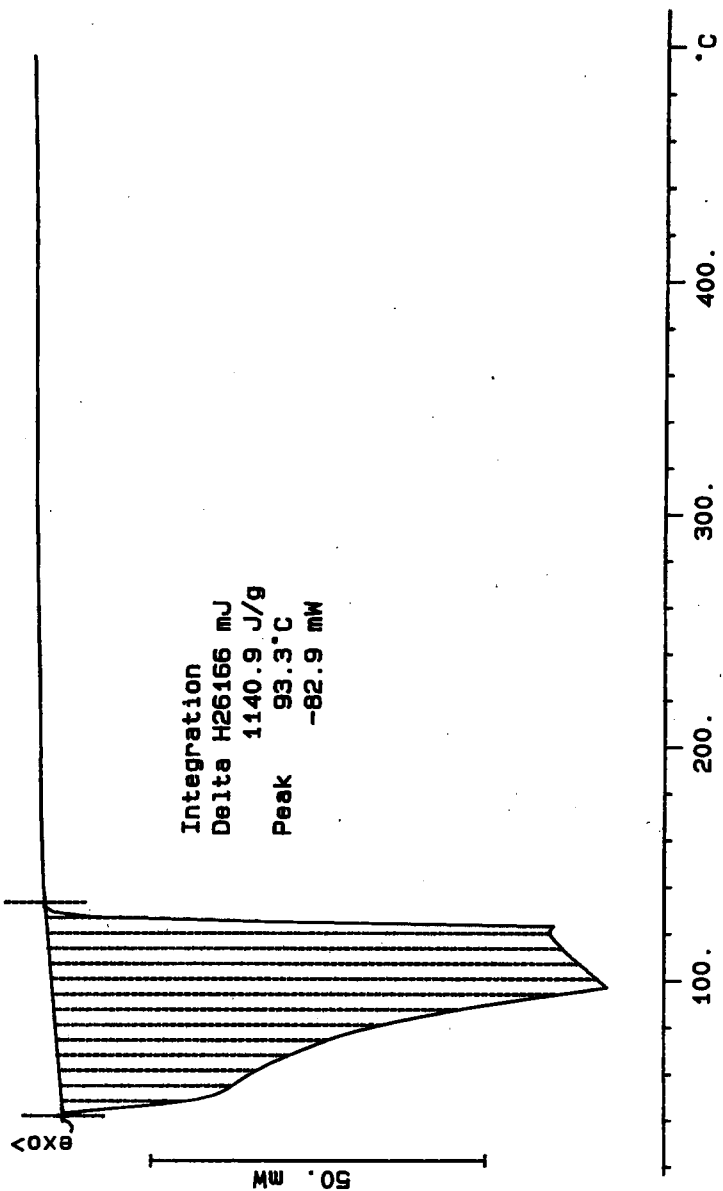


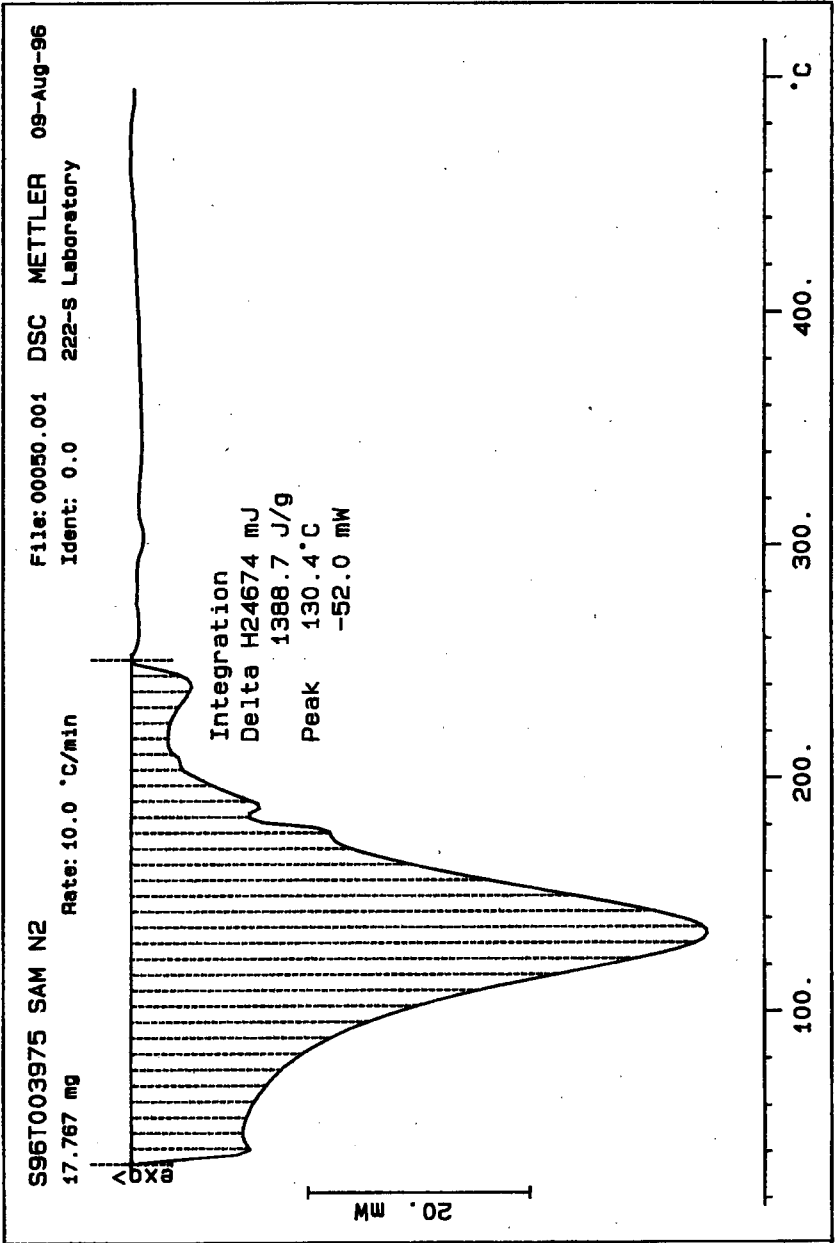


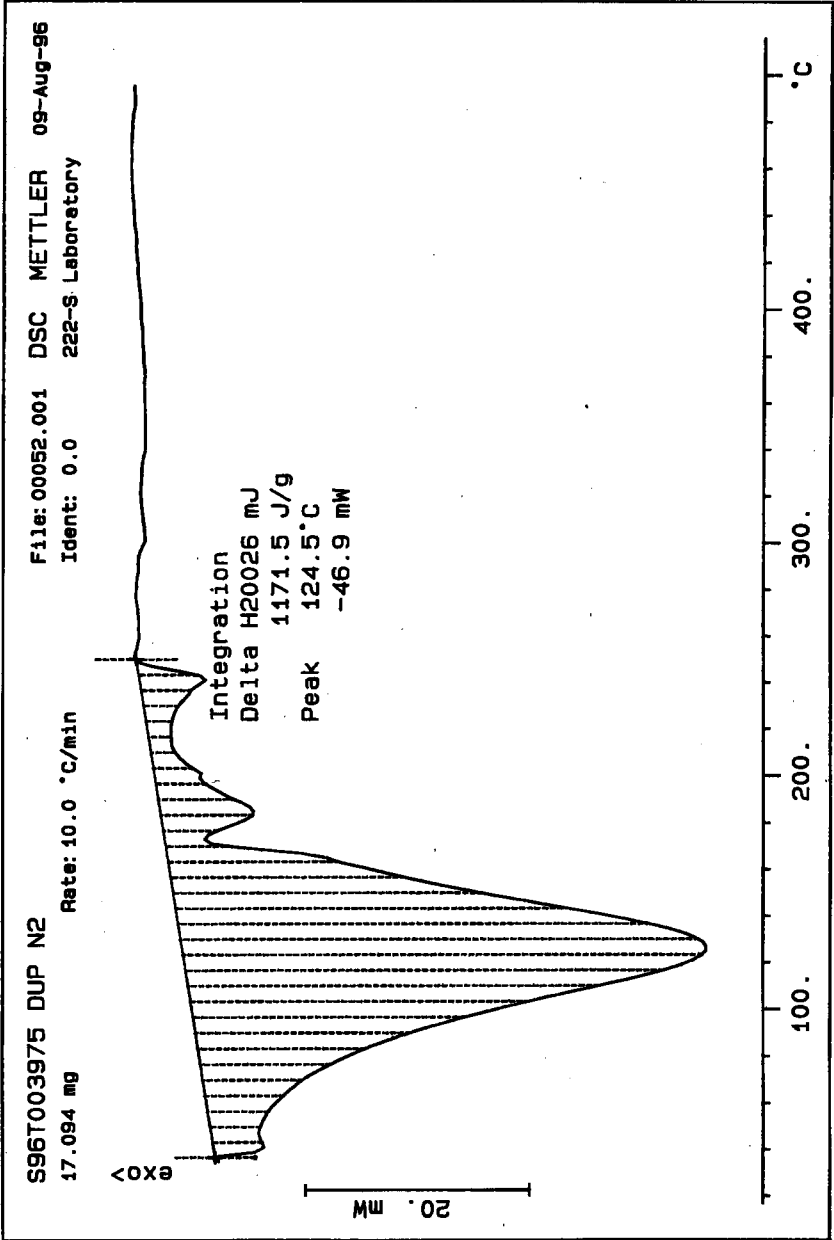
S96T003974 DUP N2
22.934 mg

Rate: 10.0 °C/min

File: 00048.001 DSC METTLER 08-Aug-96
Ident: 0.0 222-S Laboratory







LABCORE Data Entry Template for Worklist#

11659

Analyst: AM Instrument: DSC0 1 Book # 12014B

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

Worklist Comment: DSC-01 FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>30.4</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	S96T003976	0	DSC-01	LIQUID	<u>N/A</u>	<u>2.2</u>		Joules/g
96000945	AN-105	3 DUP	S96T003976	0	DSC-01	LIQUID	<u>2.2</u>	<u>∅</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	S96T003977	0	DSC-01	LIQUID	<u>N/A</u>	<u>∅</u>		Joules/g
96000945	AN-105	5 DUP	S96T003977	0	DSC-01	LIQUID	<u>∅</u>	<u>52.4</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11659

AM
Analyst Signature Date

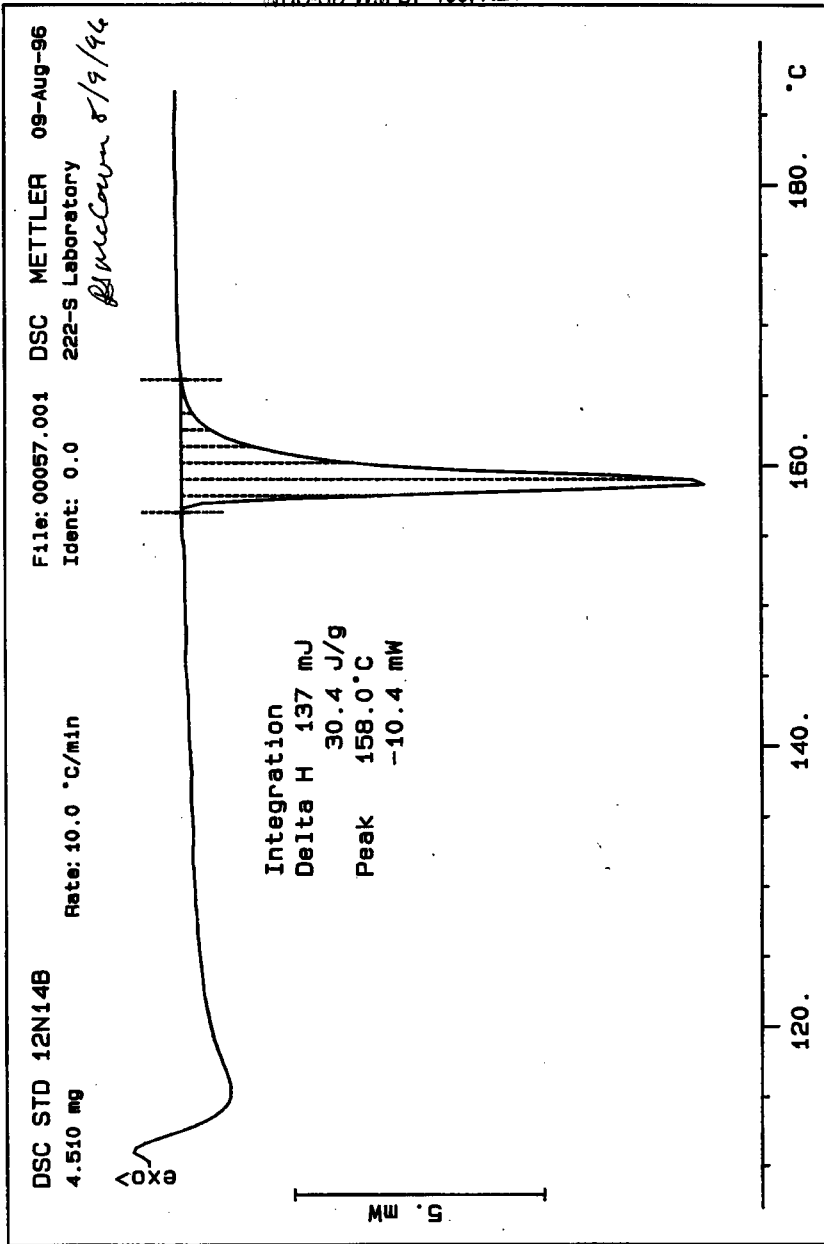
ACU
Analyst Signature Date

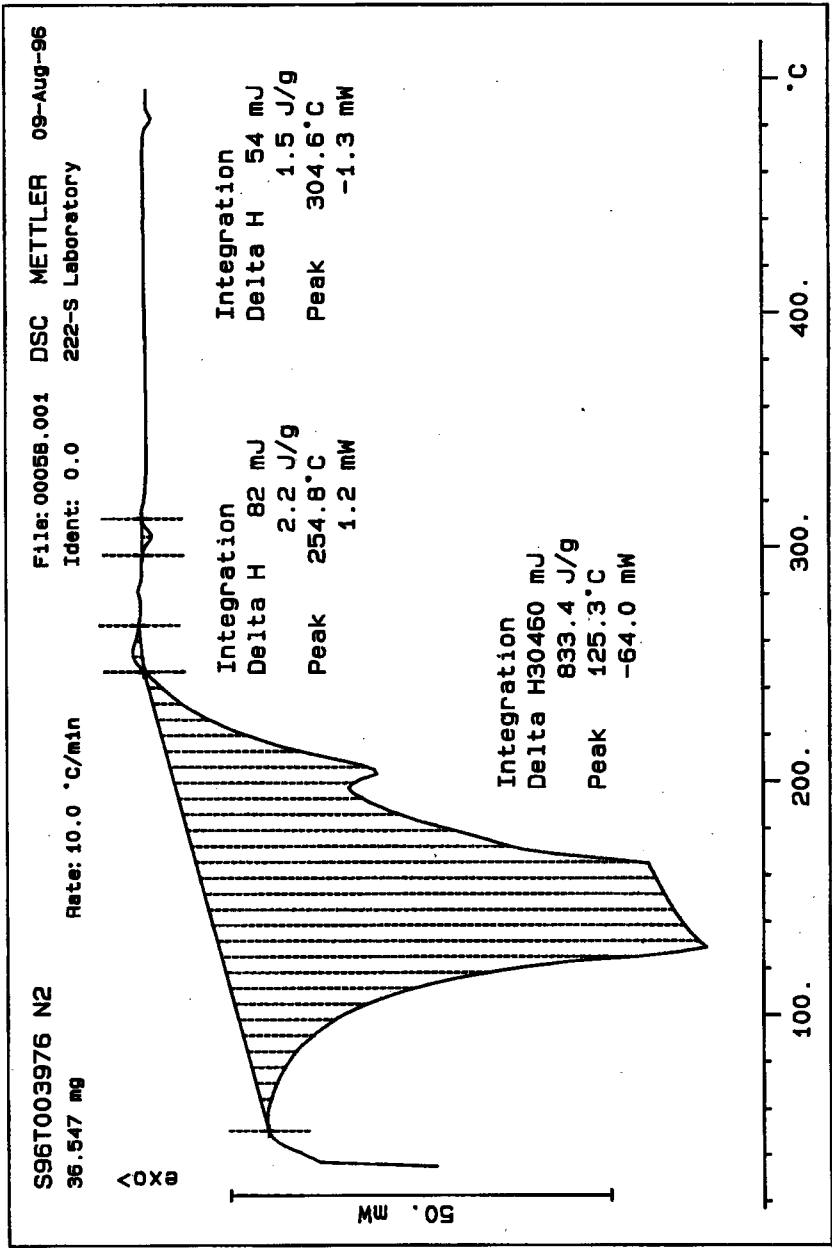
Verified/Validated by
Blandina
Valenzuela
8-14-96

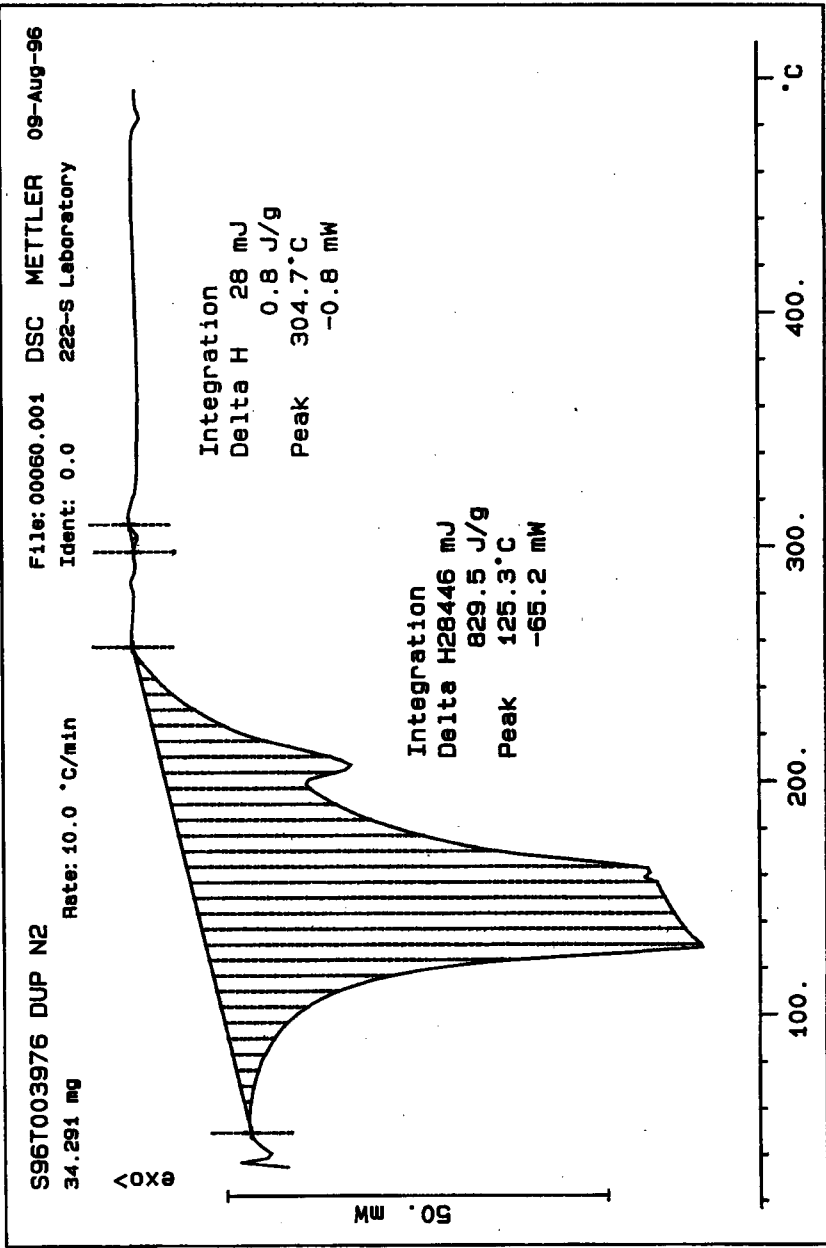
Data Entry Comments:

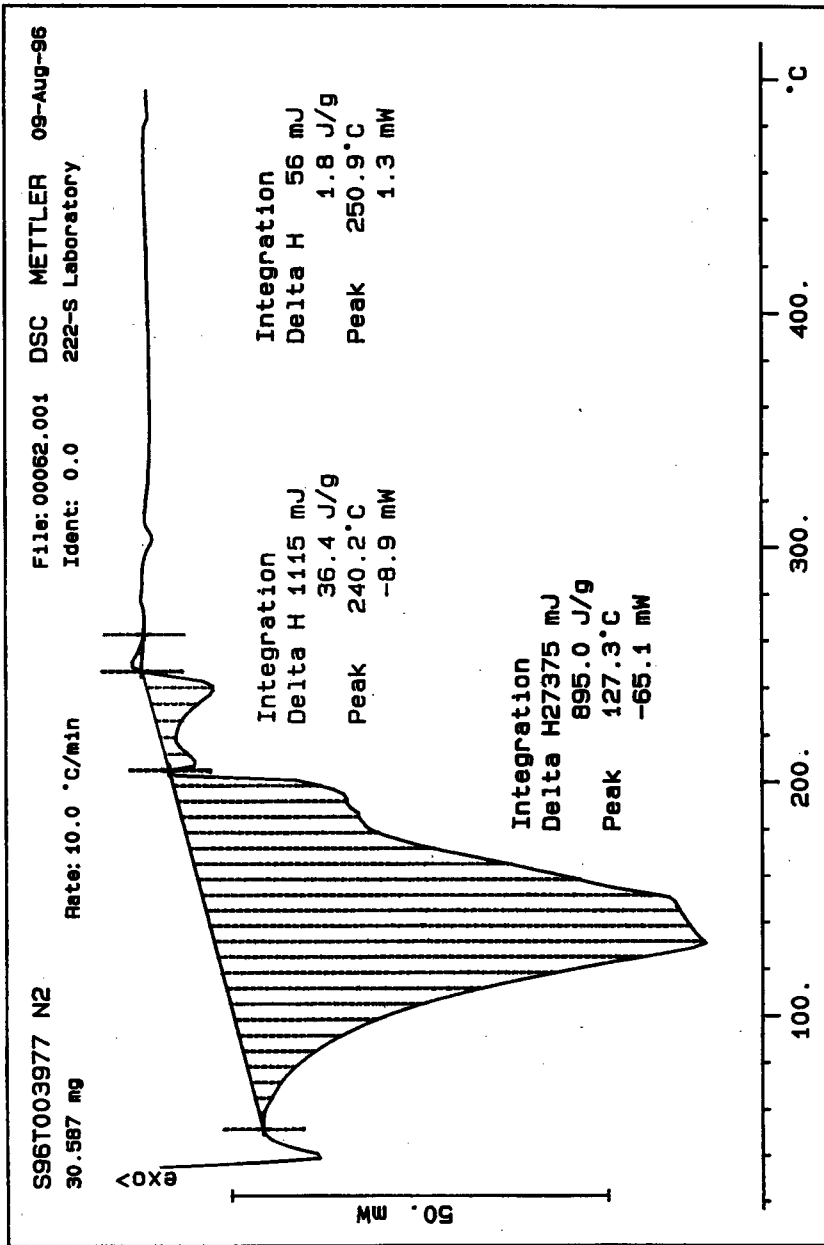
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 221 TO 222.









S96T003977 DUP N2
40.355 mg
Rate: 10.0 °C/min

File: 00064.001
Ident: 0.0
DSC METTLER 09-Aug-96
222-S Laboratory

exo

Integration
Delta H 24844 mJ
615.6 J/g
Peak 121.3°C
-54.3 mW

Integration
Delta H 2117 mJ
52.4 J/g
Peak 213.5°C
32.3 mW

50. mW

100. 200. 300. 400. °C

LABCORE Data Entry Template for Worklist#

11660

Analyst: EAL Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: DSC-01 FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>29.69</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	S96T003978	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	3 DUP	S96T003978	0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	S96T003979	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	5 DUP	S96T003979	0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000945	AN-105	6 SAMPLE	S96T003980	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	7 DUP	S96T003980	0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11660

See attached for signatures
Analyst Signature EAL Date 8-13-96

Analyst Signature _____ Date _____

Verified/Validated by
Blandina
Valenzuela 8-21-96

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#

11660

Analyst: ELJ Instrument: DSC0 _____ Book # IND 12N14B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: DSC-01 FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				DSC-01	LIQUID	_____	_____	N/A	Joules/g
96000945	AN-105	2 SAMPLE	S96T003978	0		DSC-01	LIQUID	N/A	_____	_____	Joules/g
96000945	AN-105	3 DUP	S96T003978	0		DSC-01	LIQUID	_____	_____	N/A	Joules/g
96000945	AN-105	4 SAMPLE	S96T003979	0		DSC-01	LIQUID	N/A	_____	_____	Joules/g
96000945	AN-105	5 DUP	S96T003979	0		DSC-01	LIQUID	_____	_____	N/A	Joules/g
96000945	AN-105	6 SAMPLE	S96T003980	0		DSC-01	LIQUID	N/A	_____	_____	Joules/g
96000945	AN-105	7 DUP	S96T003980	0		DSC-01	LIQUID	_____	_____	N/A	Joules/g

Final page for worklist # 11660

A. Lamb
Analyst Signature
8/12/96
Date
8/13/96

TC Wright
Analyst Signature
8/14/96
Date

DSC-03 instrument
was used
8.13.96

Blandina
Valenzuela

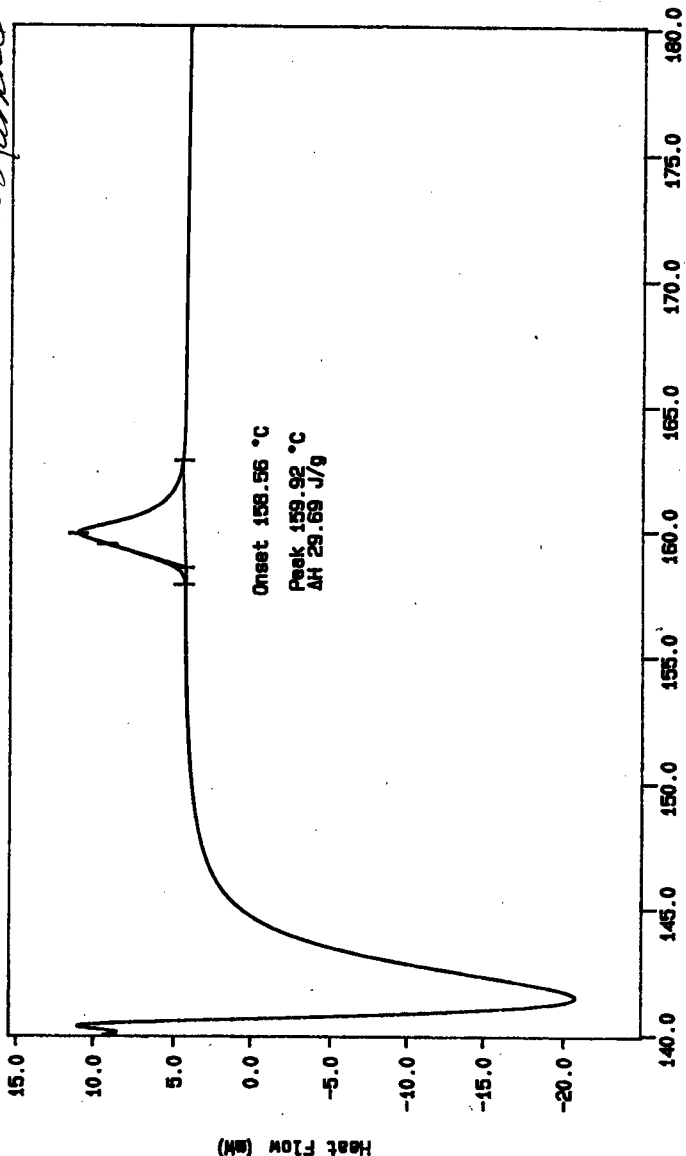
Data Entry Comments:

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: IND081201 Mon Aug 12 09: 04: 39 1996
Sample Weight: 2.120 mg
12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 202 TO 204.

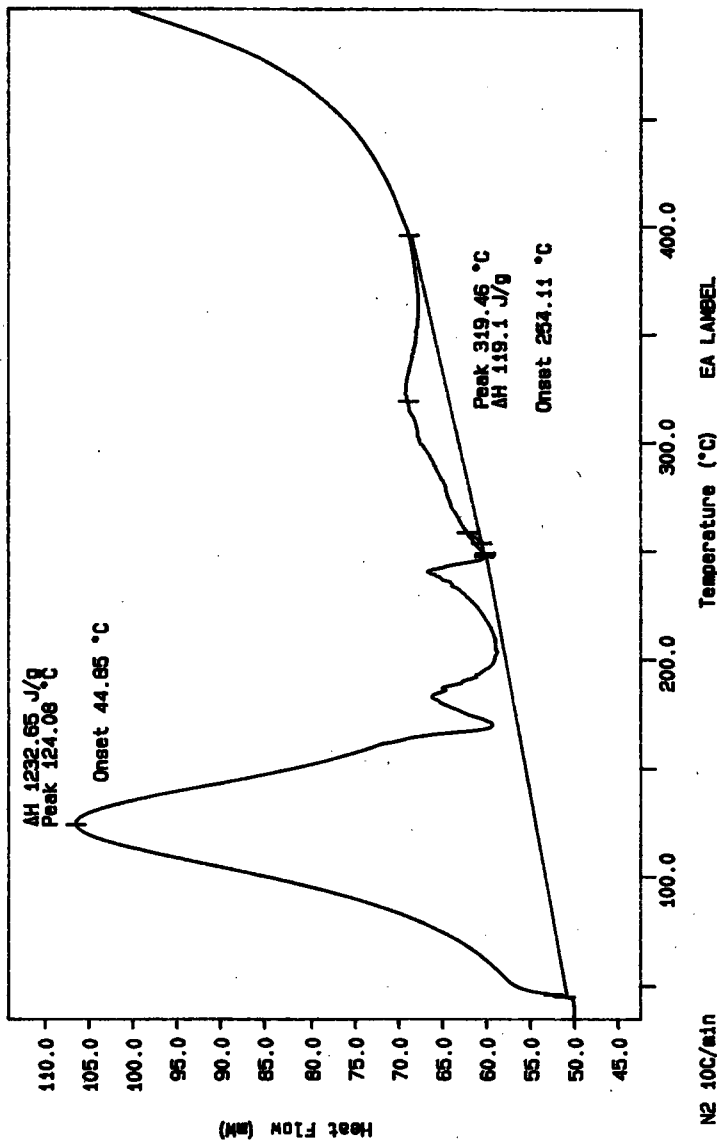
A. Langel



NO. EXOTHERM DOWN
TIME 148.8 8 TURNS 0.0 scan RATE: 10.0 C/min

EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 09: 26: 07 1996

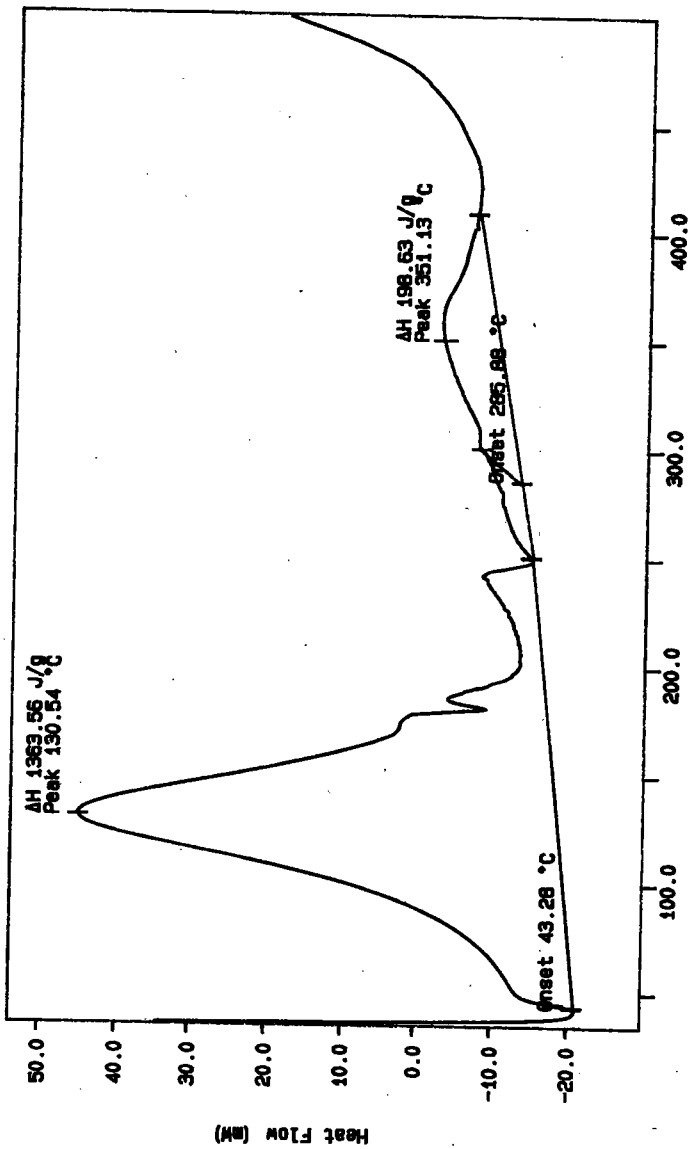
Curve 1: DSC
File info: SAH081204 Mon Aug 12 14:20:05 1996
Sample Weight: 16.910 mg
S96T003978



EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 15:00:23 1996

N2 10C/min
TIME 55.8 g
RATE 0.0 min RATE: 10.0 C/min

Curve 1: DSC
File info: SAM081205 Mon Aug 12 15:54:43 1996
Sample Weight: 19.400 mg
S96T003978 DUP

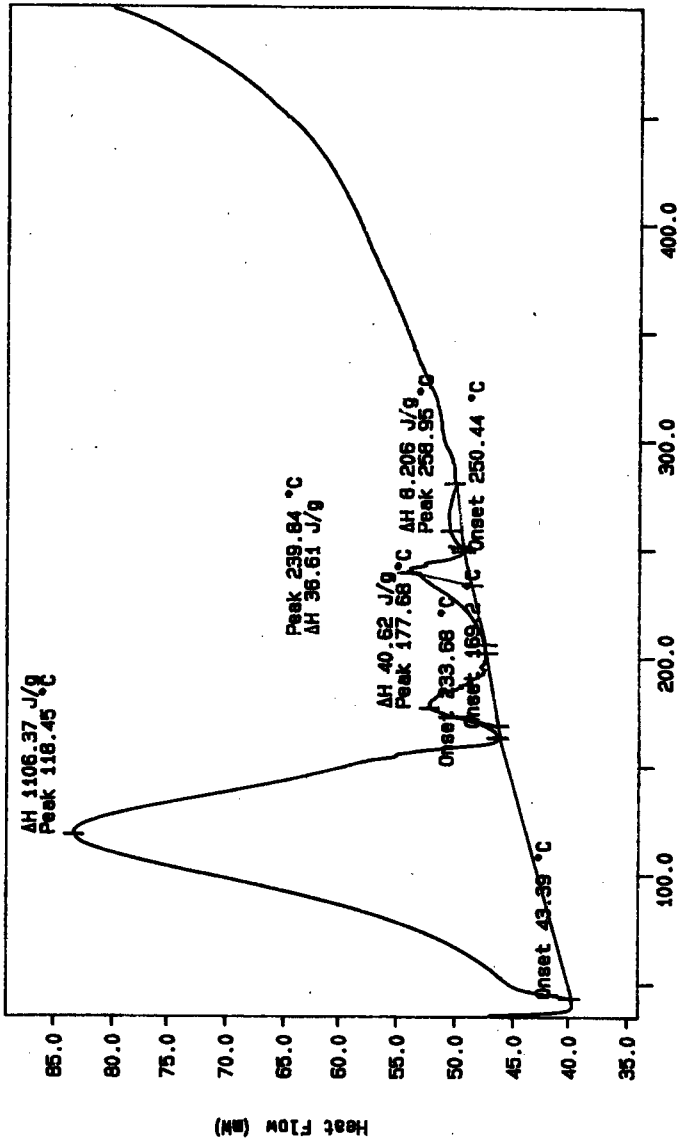


230

N2 10C/min
THERM: 888.8 g
THERM: 0.0 min RATE: 10.0 C/min

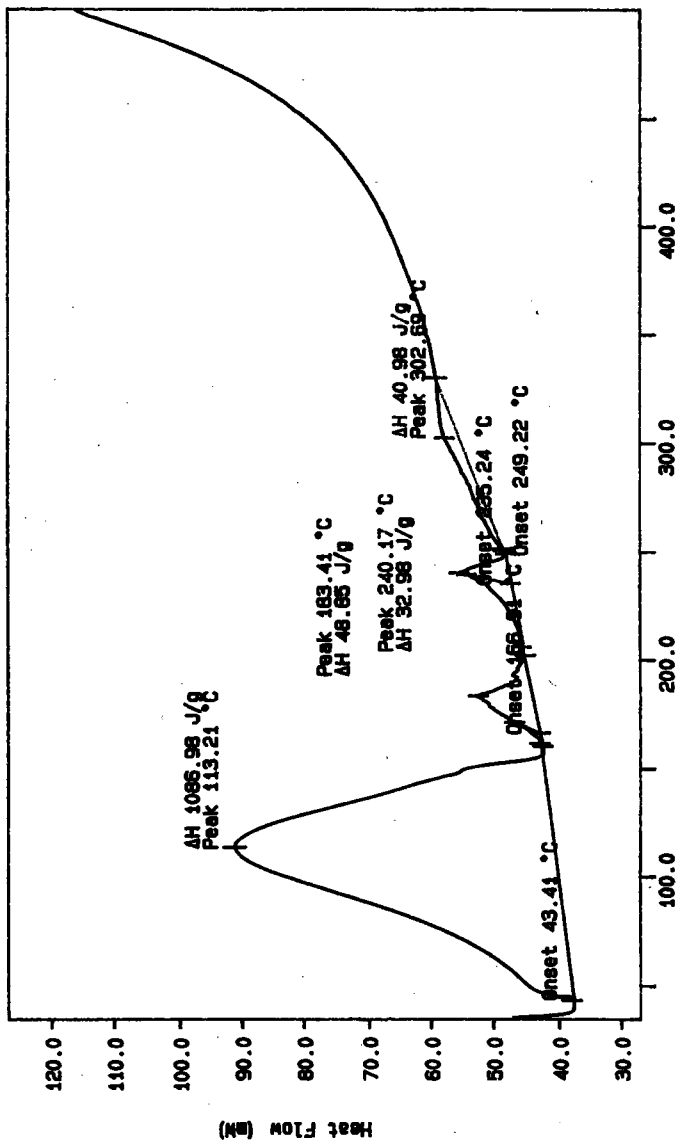
EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 21:48:40 1996

Curve 1: DSC
File info: SAM081206 Mon Aug 12 22:38:20 1996
Sample Weight: 12.730 mg
S96T003979



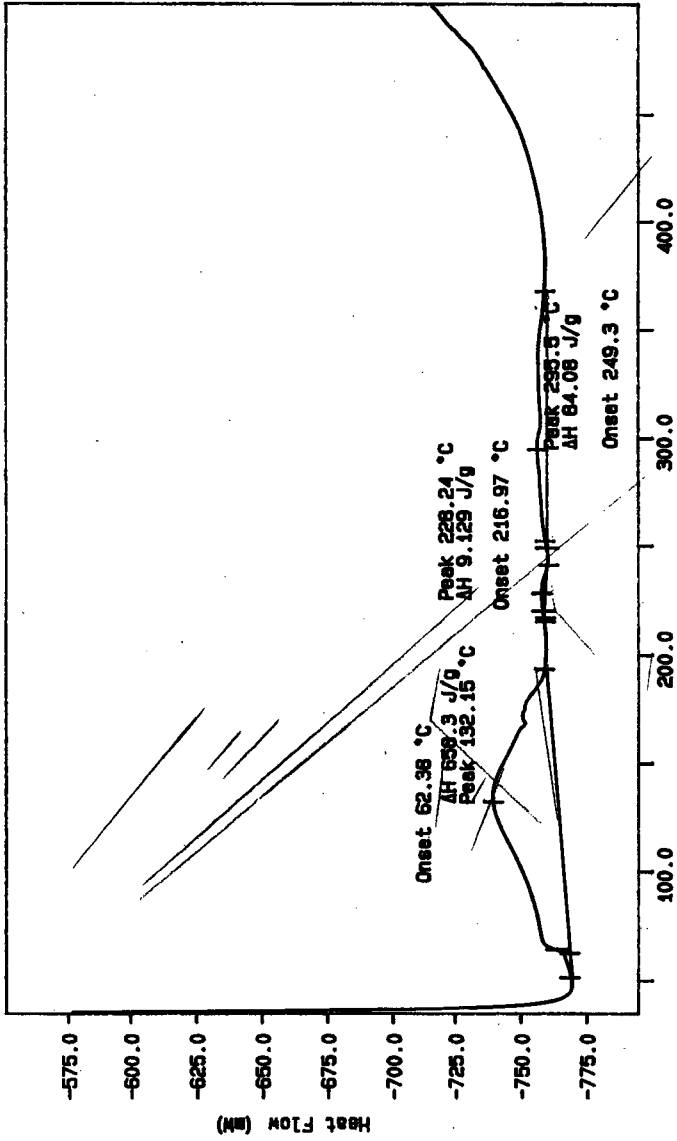
N2 100/min
TEMPERATURE 25.0 8
TIME 00:08
DSC RATE 10.0 C/min
RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 23:51:54 1996

Curve 1: DSC
File Info: SAM081301 Tue Aug 13 00:42:05 1996
Sample Weight: 16.610 mg
SS8T003979DUP



N2 10C/min
TEMP: 55.8 8
TIME: 0.0 min RATE: 10.0 C/min
FO MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Aug 13 01:22:34 1996

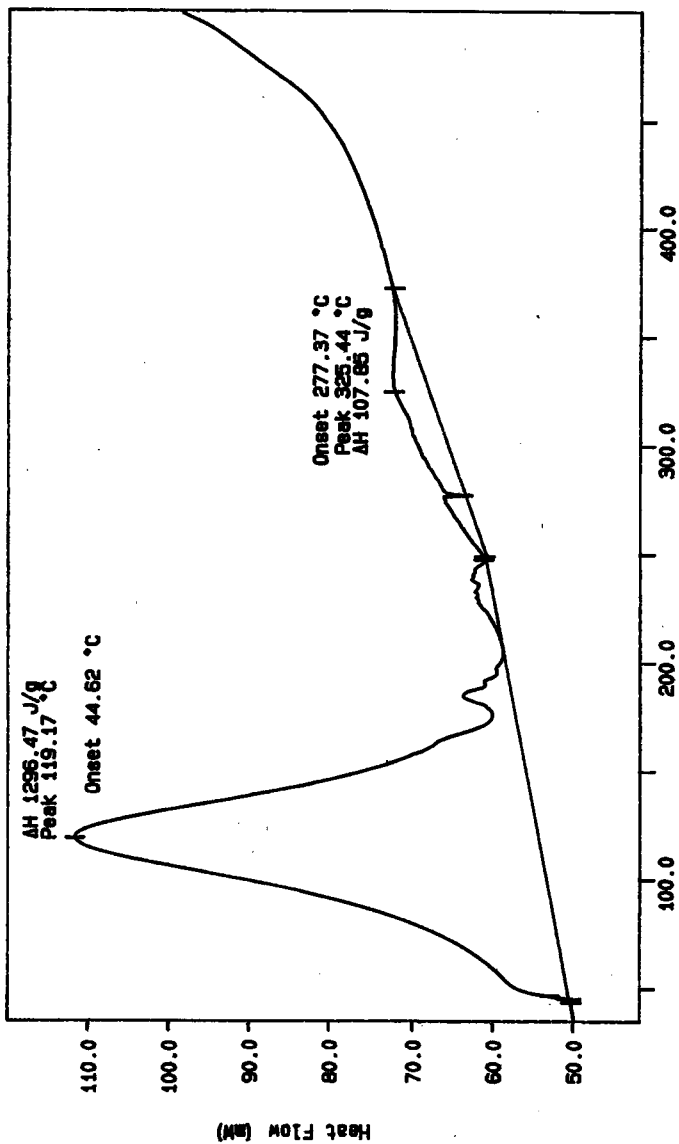
Curve 1: DSC
File Info: SAM081202 Mon Aug 12 10:30:11 1996
Sample Weight: 17.520 mg
SS6T003980



EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 11:49:13 1996

N2 100/min
TIME: 05.8 S
0.0 min RATE: 10.0 C/min

Curve 1: DSC
File info: SAM081203 Mon Aug 12 12:54:03 1996
Sample Weight: 16.110 mg
SS6T003980 DUP



N2 100/min
TEMPERATURE 50.0 °C
HEAT RATE 10.0 °/min
EA LABEL PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 13:26:44 1996

LABCORE Data Entry Template for Worklist#

11663

Analyst: SA Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: DSC-01 FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>29.9</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	S96T003981	0	DSC-01	SOLID	<u>N/A</u>	<u>21.</u>		Joules/g
96000945	AN-105	3 DUP	S96T003981	0	DSC-01	SOLID	<u>21.</u>	<u>18.2</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	S96T003982	0	DSC-01	SOLID	<u>N/A</u>	<u>57.5</u>		Joules/g
96000945	AN-105	5 DUP	S96T003982	0	DSC-01	SOLID	<u>57.5</u>	<u>94.8</u>	<u>N/A</u>	Joules/g
96000945	AN-105	6 SAMPLE	S96T003983	0	DSC-01	SOLID	<u>N/A</u>	<u>39.1</u>		Joules/g
96000945	AN-105	7 DUP	S96T003983	0	DSC-01	SOLID	<u>39.1</u>	<u>48.6</u>	<u>N/A</u>	Joules/g

Final page for worklist # 11663

A. Lambel 08-12-96
Analyst Signature Date

newlight 8/14/96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
8-14-96

S96T003981 result is the sum of two exotherms?

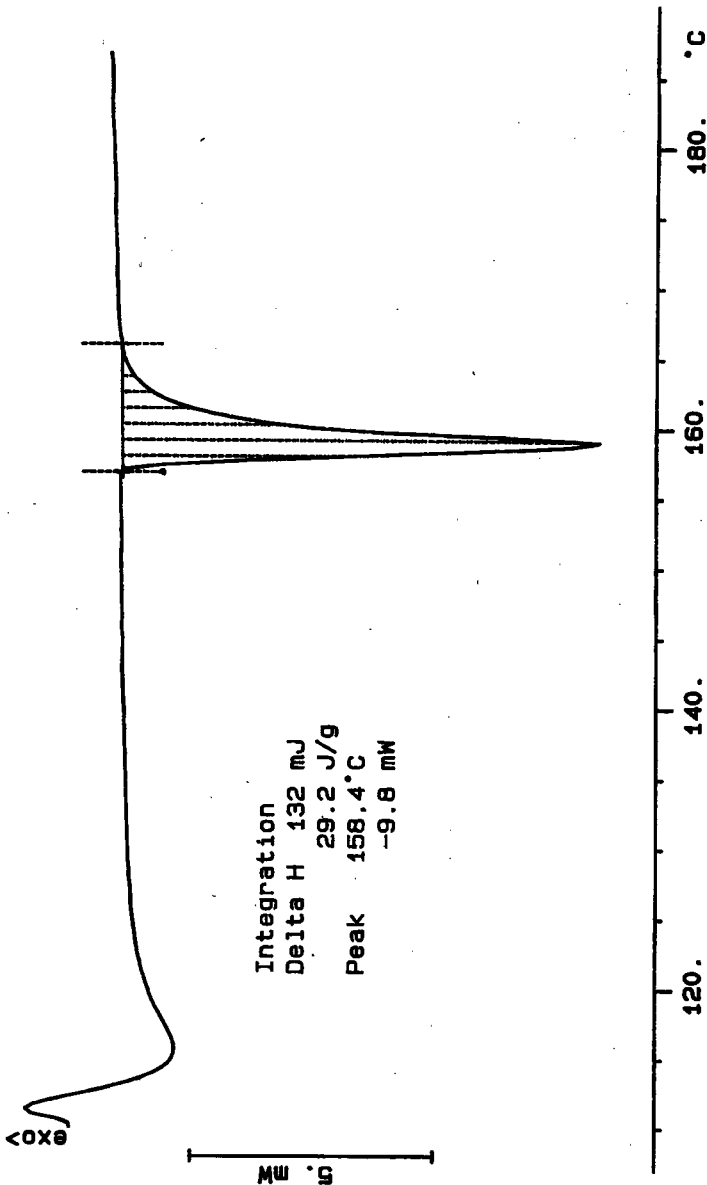
Data Entry Comments: S96T003983 result is the sum of two exotherms

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.

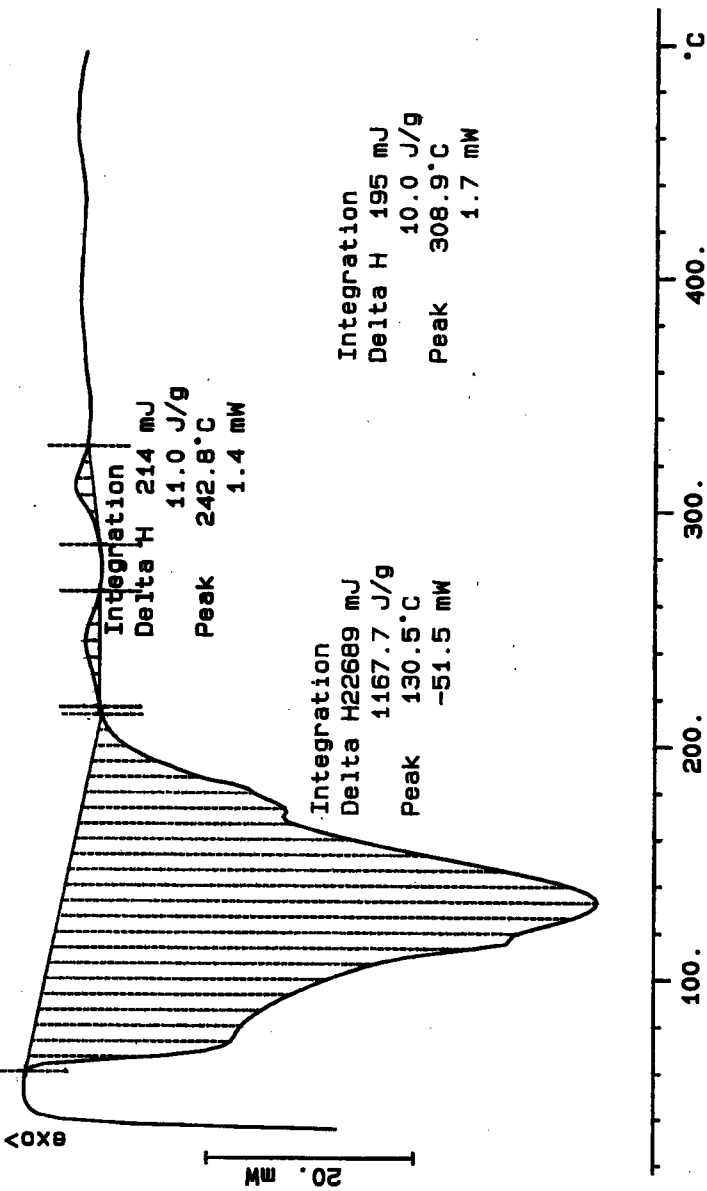
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 24 TO 242

A. Sankel 08.12.96

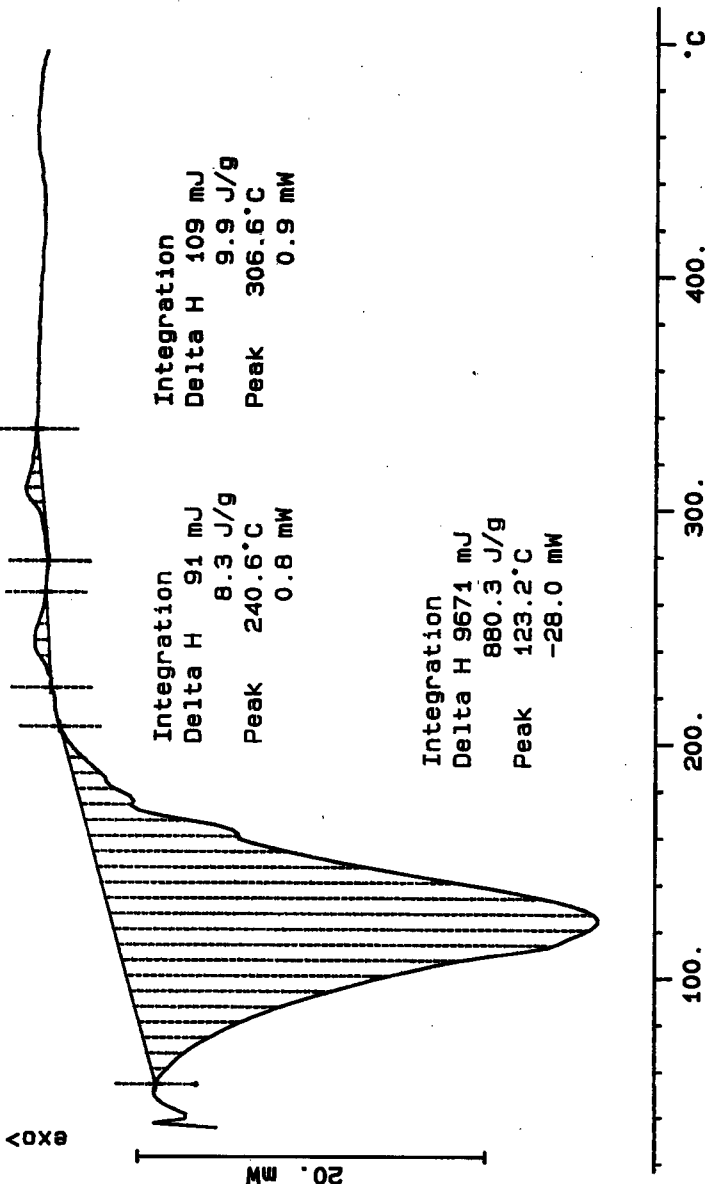
DSC STD 12N14-B File: 00080.001 DSC METTLER 12-Aug-86
4.510 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory



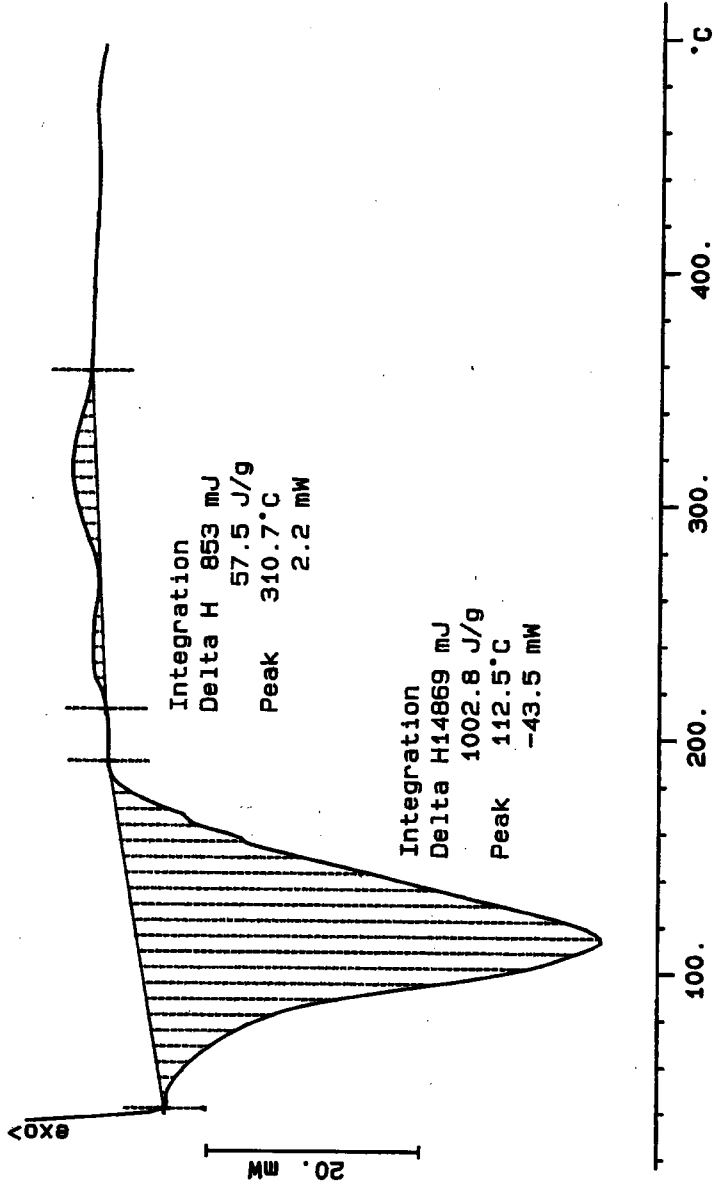
S96T003981 SAM N2
18.430 mg
Rate: 10.0 °C/min
File: 00082.001 DSC METTLER 12-Aug-86
Ident: 0.0 222-S Laboratory

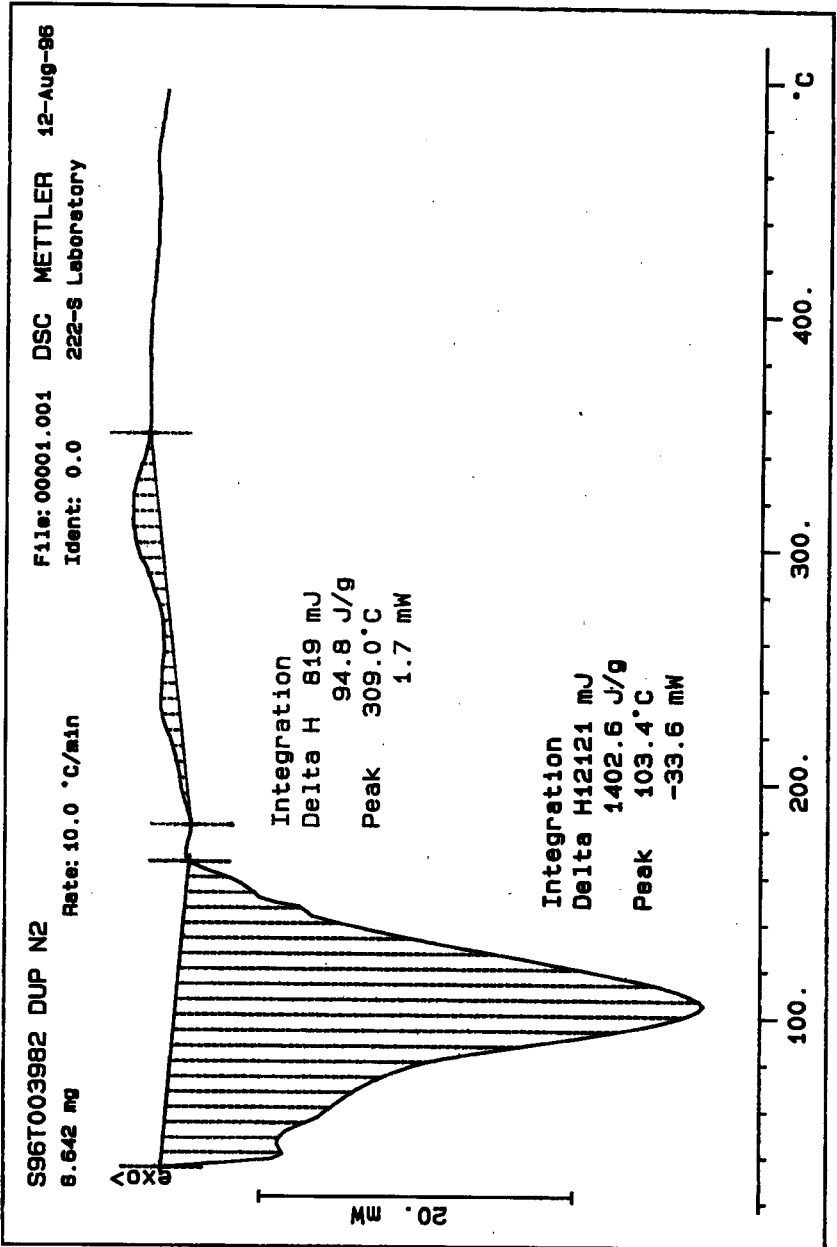


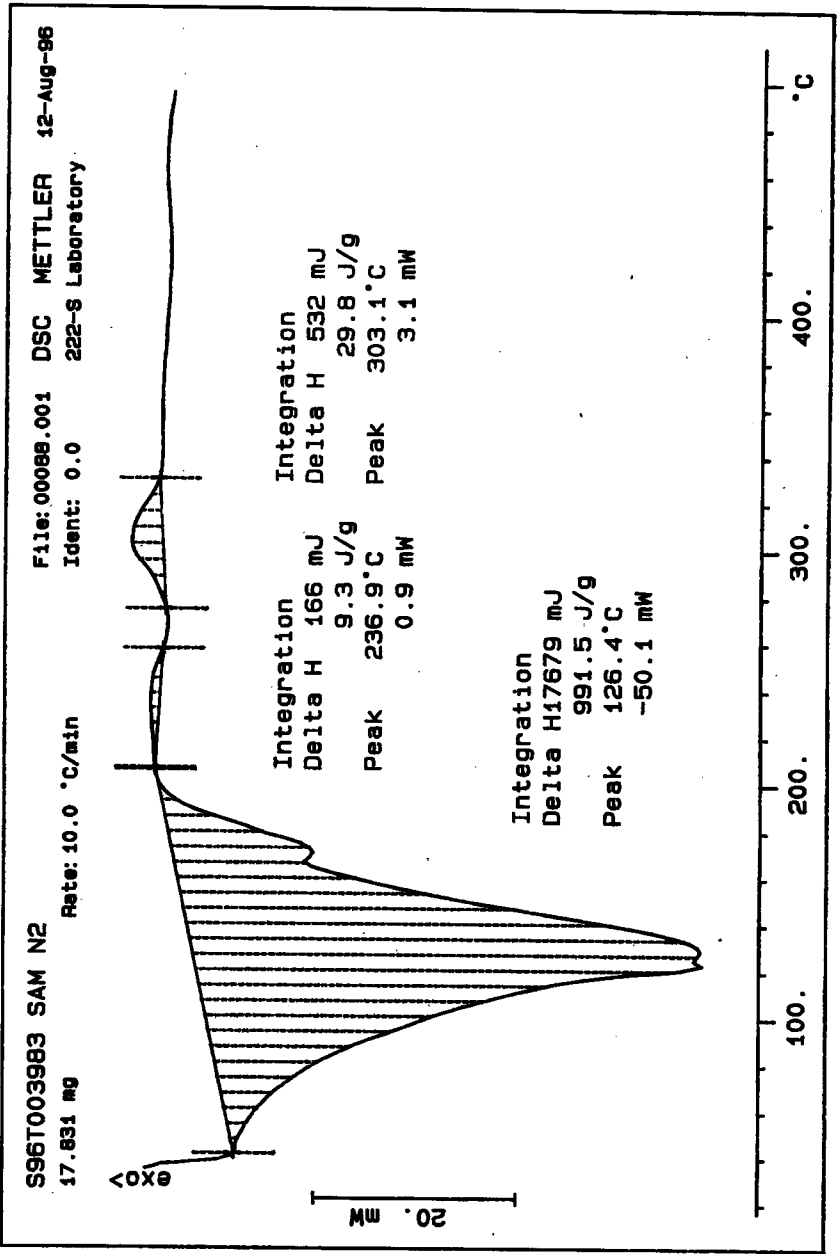
S96T003981 DUP N2
10.986 mg
Rate: 10.0 °C/min
File: 00084.001 DSC METTLER 12-Aug-86
Ident: 0.0 222-S Laboratory



S96T003982 SAM N2
14.828 mg
Rate: 10.0 °C/min
File: 00066.001 DSC METTLER 12-Aug-96
Ident: 0.0 222-S Laboratory



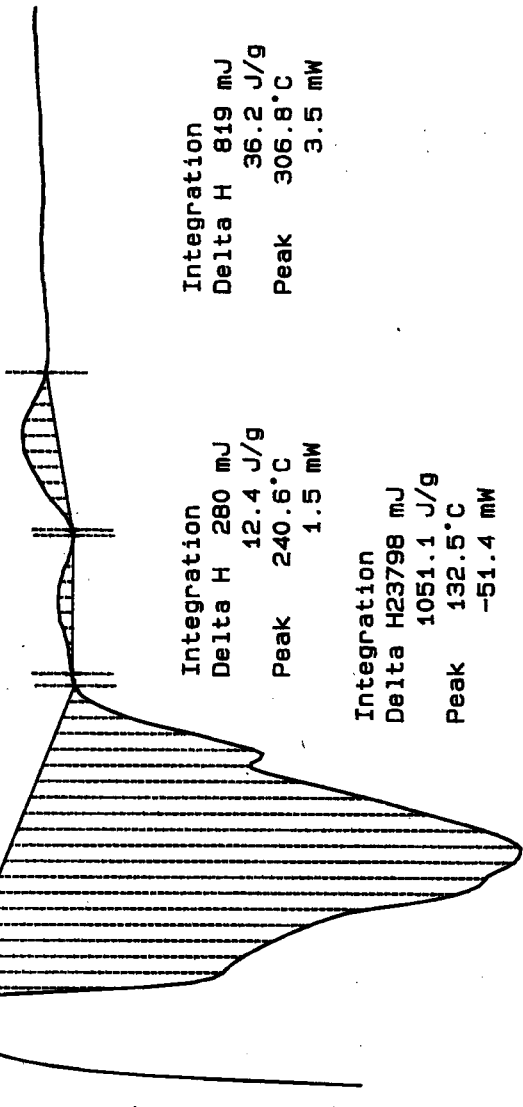




S96T003983 DUP N2
22.640 mg
Rate: 10.0 °C/min
File: 00007.001 DSC METTLER 13-Aug-96
Ident: 0.0 222-S Laboratory

exov

20. mW



Integration
Delta H 280 mJ
12.4 J/g
Peak 240.6°C
1.5 mW

Integration
Delta H 819 mJ
36.2 J/g
Peak 306.8°C
3.5 mW

Integration
Delta H23798 mJ
1051.1 J/g
Peak 132.5°C
-51.4 mW

100. 200. 300. 400. °C

LABCORE Data Entry Template for Worklist# 12274

Analyst: RM Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>26.9</u>	<u>N/A</u>	Joules/g
96000832	AN-105	2 SAMPLE	S96T004039	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000832	AN-105	3 DUP	S96T004039	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	S96T004308	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	5 DUP	S96T004308	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12274

RM 8/26/96
Analyst Signature Date

Linda M. Wade 8/29/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 9-3-96

Data Entry Comments:

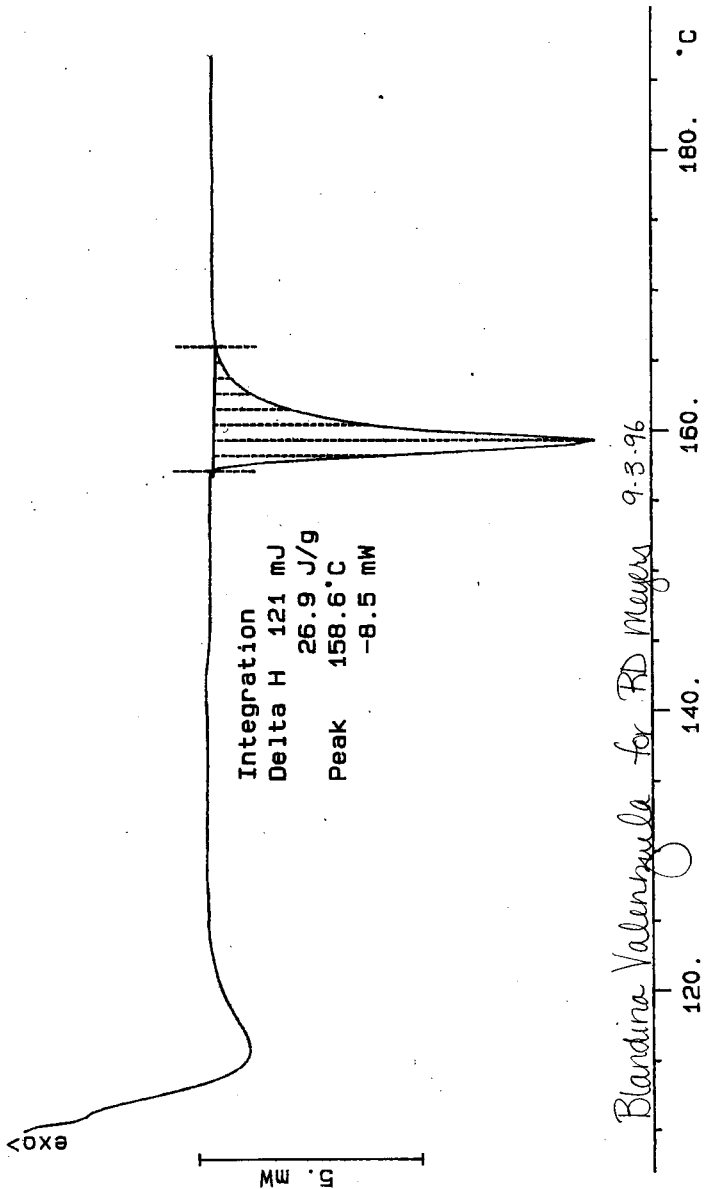
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 211 TO 218

DSC STD 12N14-B
4.510 mg

Rate: 10.0 °C/min

File: 00051.001 DSC METTLER 26-Aug-96
Ident: 0.0 222-S Laboratory



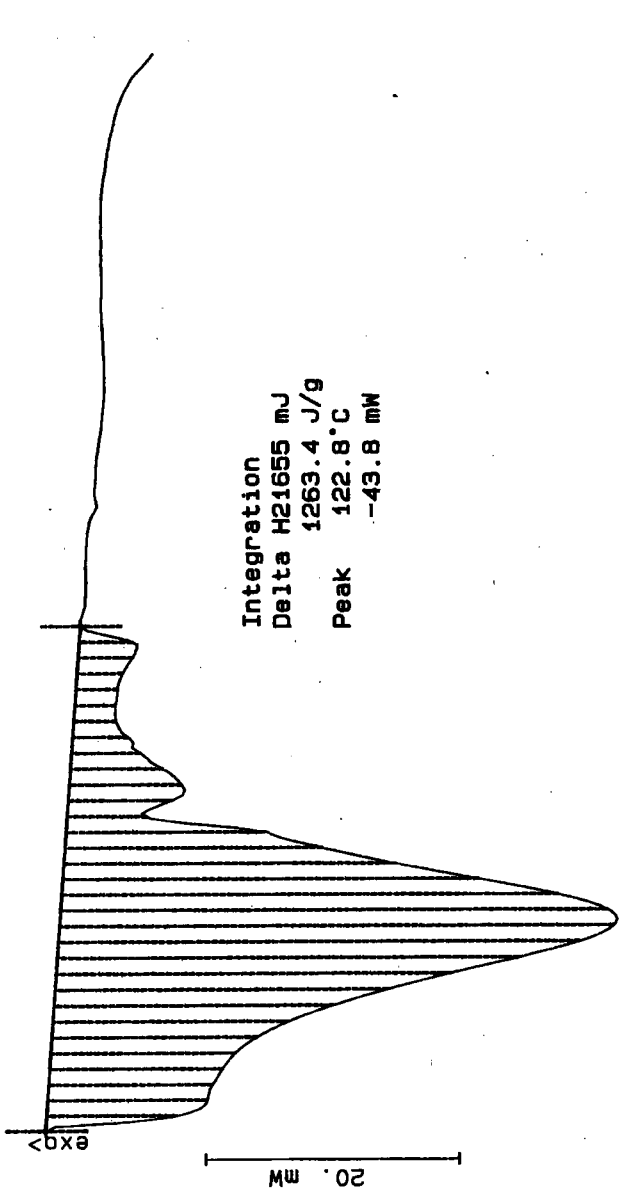
Blandina Valenzuela for PD Meyers 9-3-96

S96T004039 N2
17.140 mg

File: 00059.001
Ident: 0.0

DSC METTLER 27-Aug-96
222-S Laboratory

Rate: 10.0 °C/min

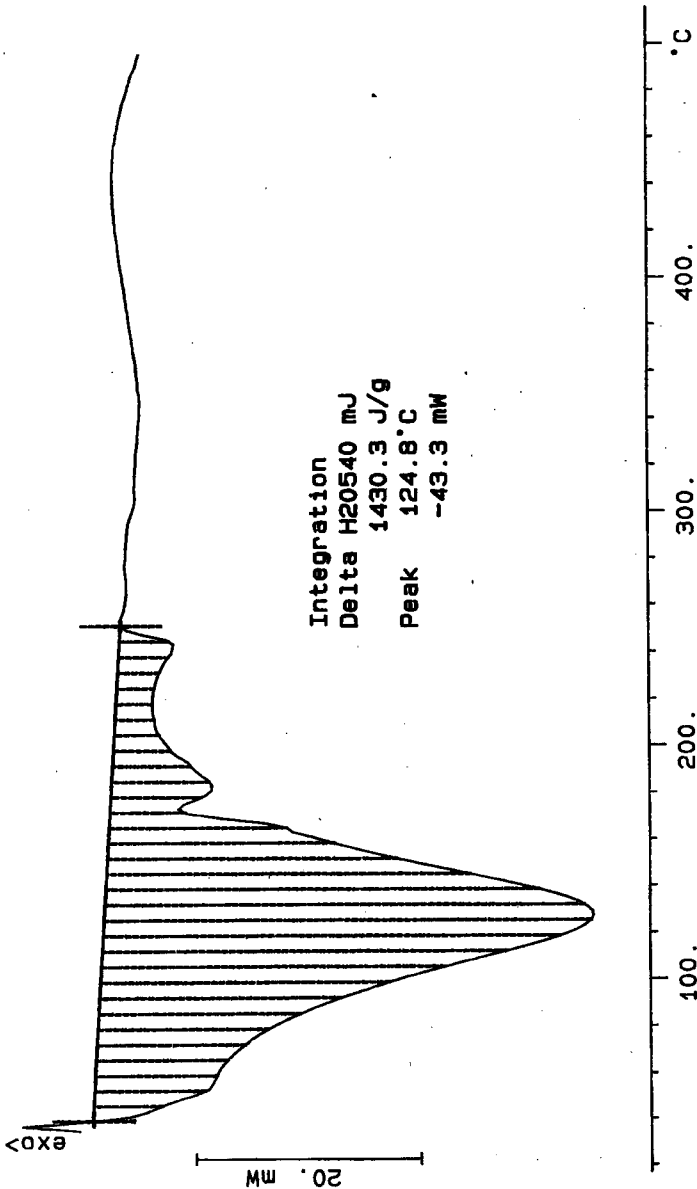


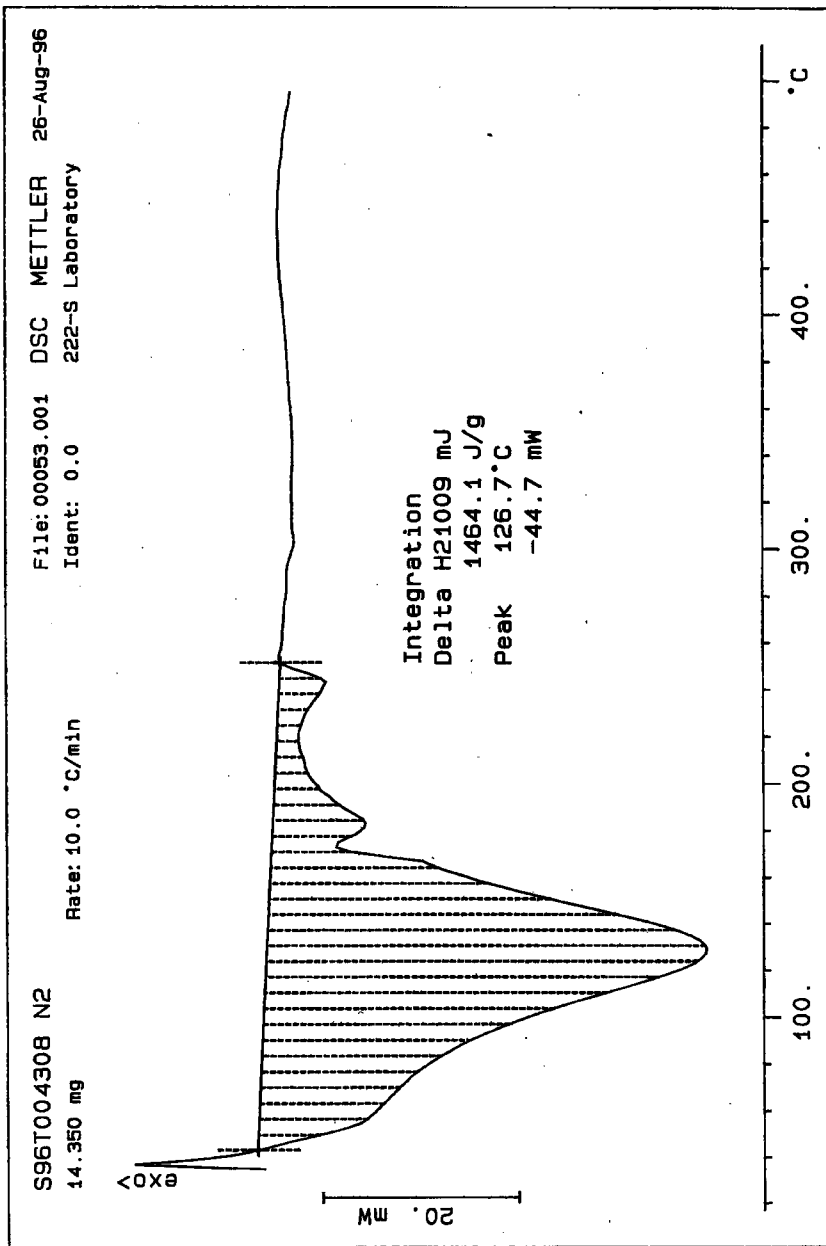
Integration
 Delta H21655 mJ
 1263.4 J/g
 Peak 122.8°C
 -43.8 mW

S96T004039 DUP N2
14.360 mg

Rate: 10.0 °C/min

File: 00061.001 DSC METTLER 27-Aug-96
Ident: 0.0 222-S Laboratory





S96T004308DUP N2

18.760 mg

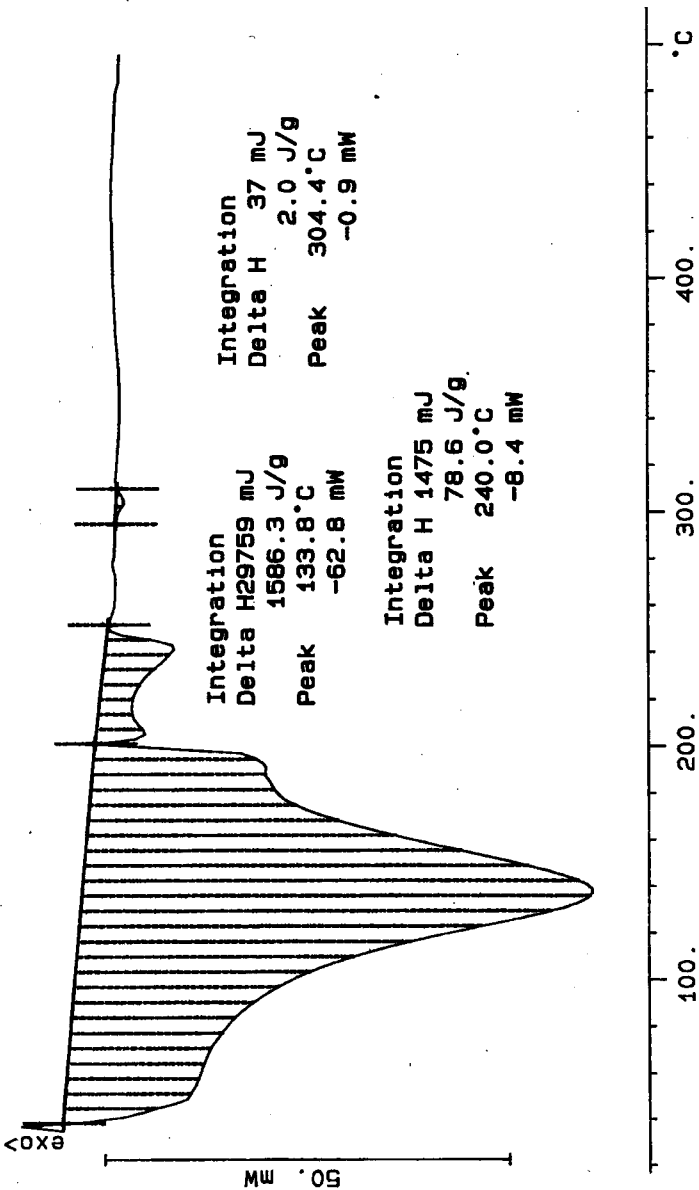
Rate: 10.0 °C/min

File: 00057.001

DSC METTLER

27-Aug-96

Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist# 12327

Analyst: BJ Instrument: DSC0 1 Book # 12N14-B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>29.9</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	S96T004310	0	DSC-01	SOLID	<u>N/A</u>	<u>40.4</u>		Joules/g
96000945	AN-105	3 DUP	S96T004310	0	DSC-01	SOLID	<u>40.4</u>	<u>23.9</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	S96T004311	0	DSC-01	SOLID	<u>N/A</u>	<u>34.7</u>		Joules/g
96000945	AN-105	5 DUP	S96T004311	0	DSC-01	SOLID	<u>34.7</u>	<u>57.1</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12327

Rae Ann Green 9-1-96
Analyst Signature Date

Reynold H 9/5/96
Analyst Signature Date

A Lambel 9-1-96

Verified/Validated by
Blandina Valenzuela
9-3-96

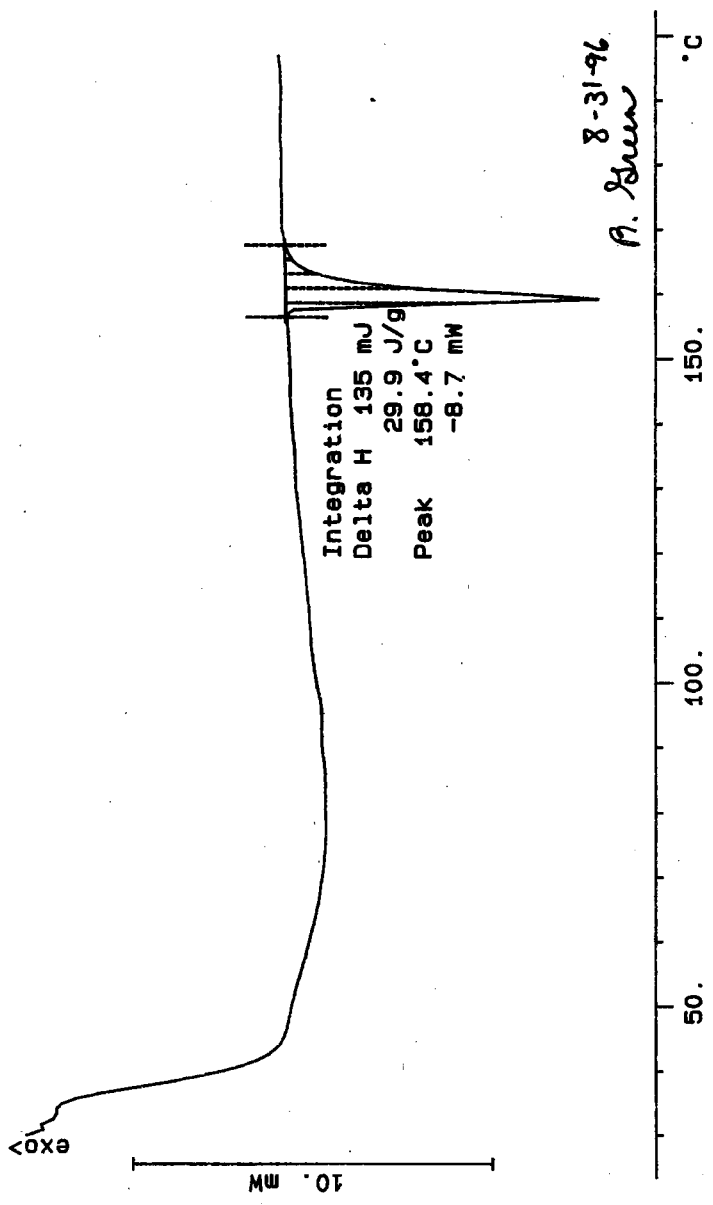
S96T004310 results are the sum of two exotherms

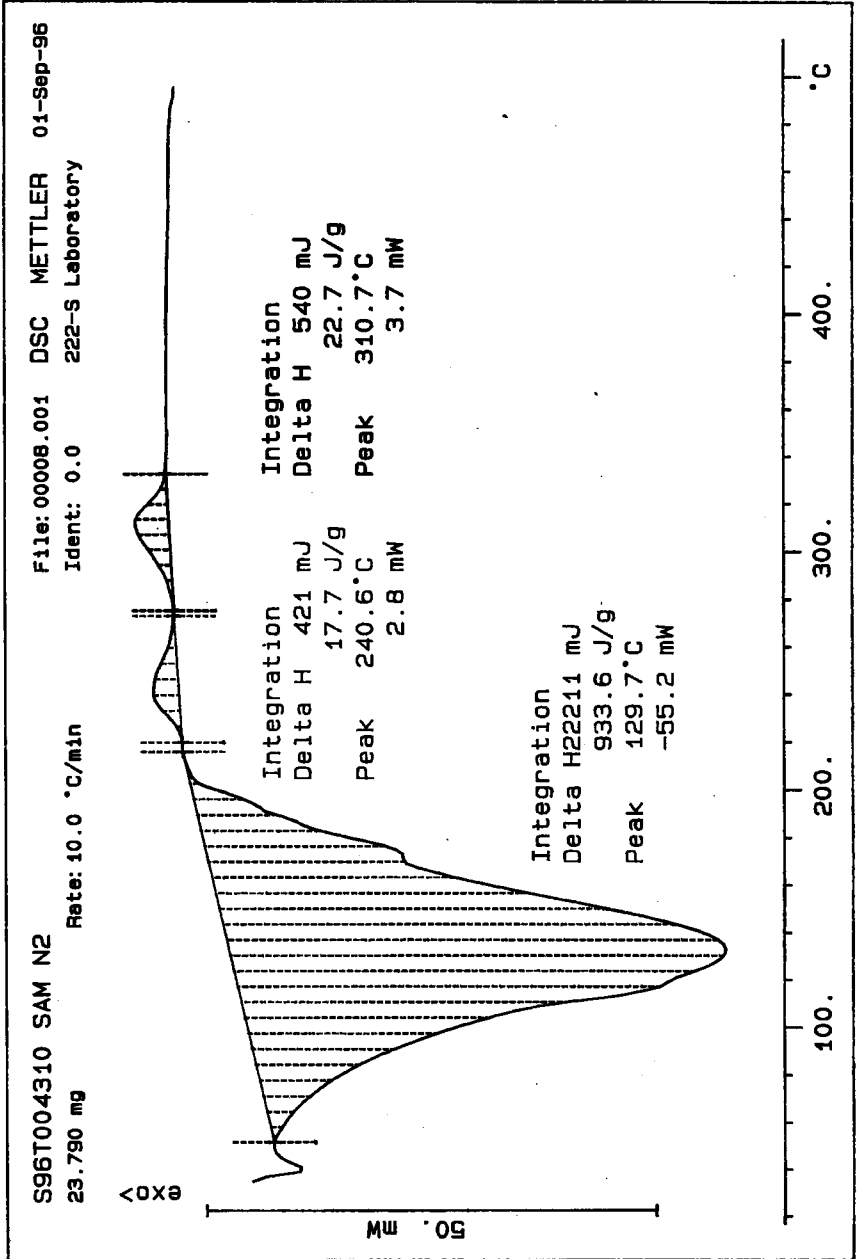
Data Entry Comments:

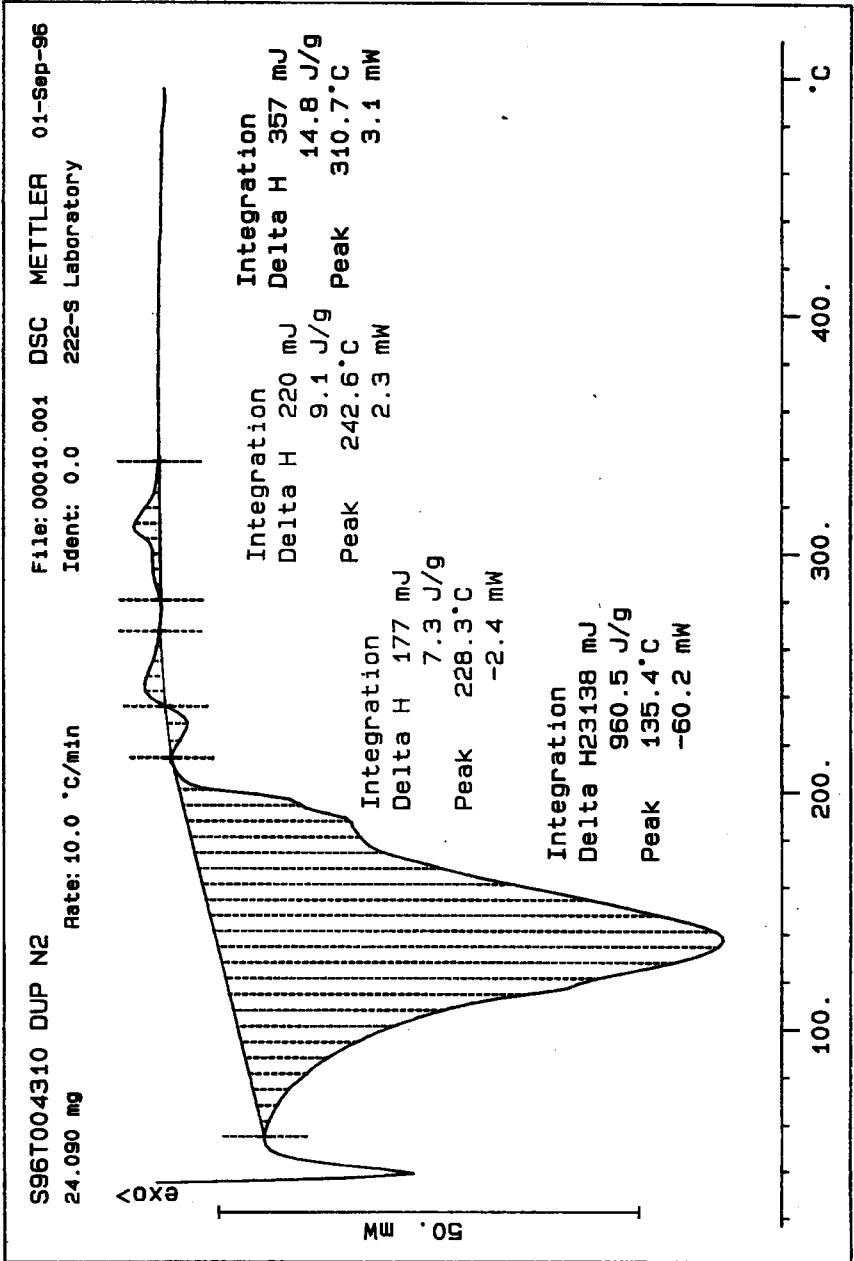
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

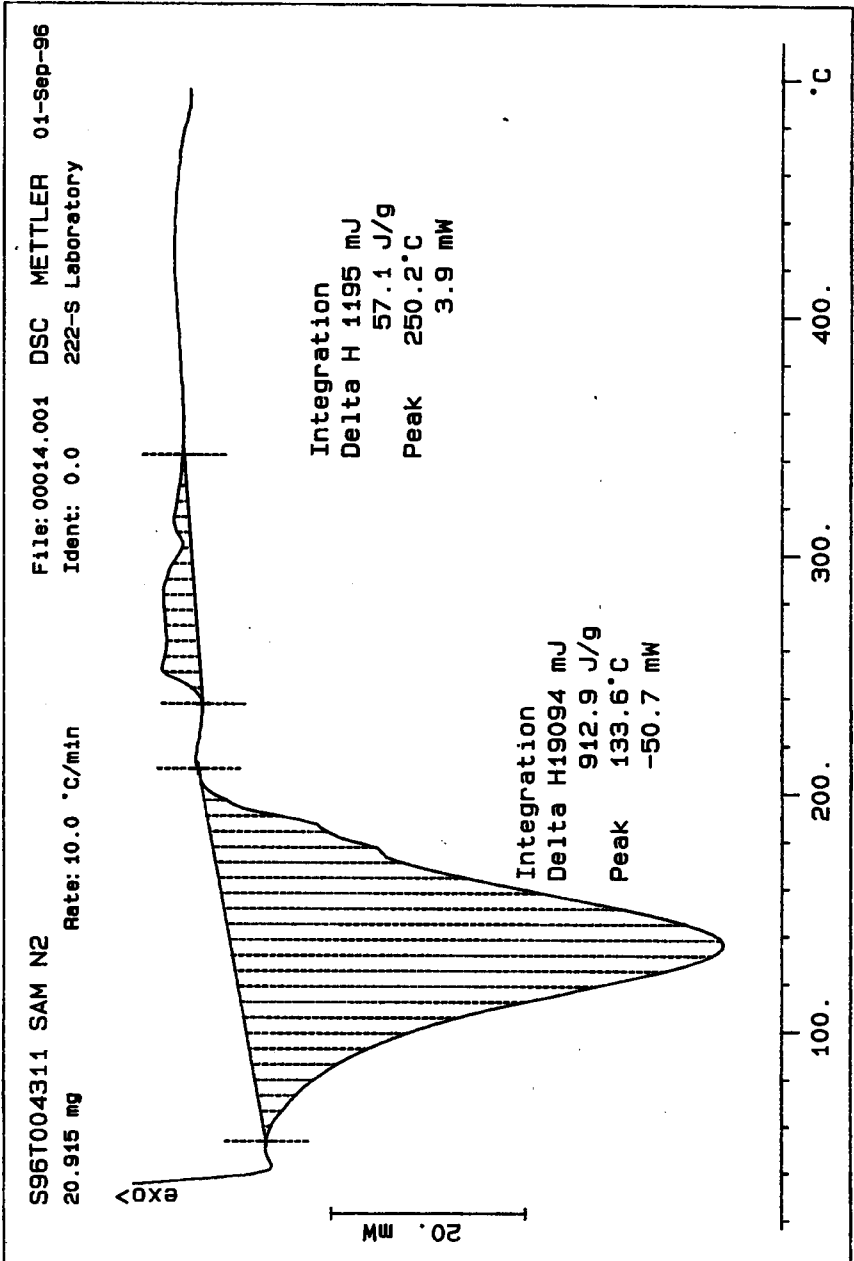
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 22 TO 24.

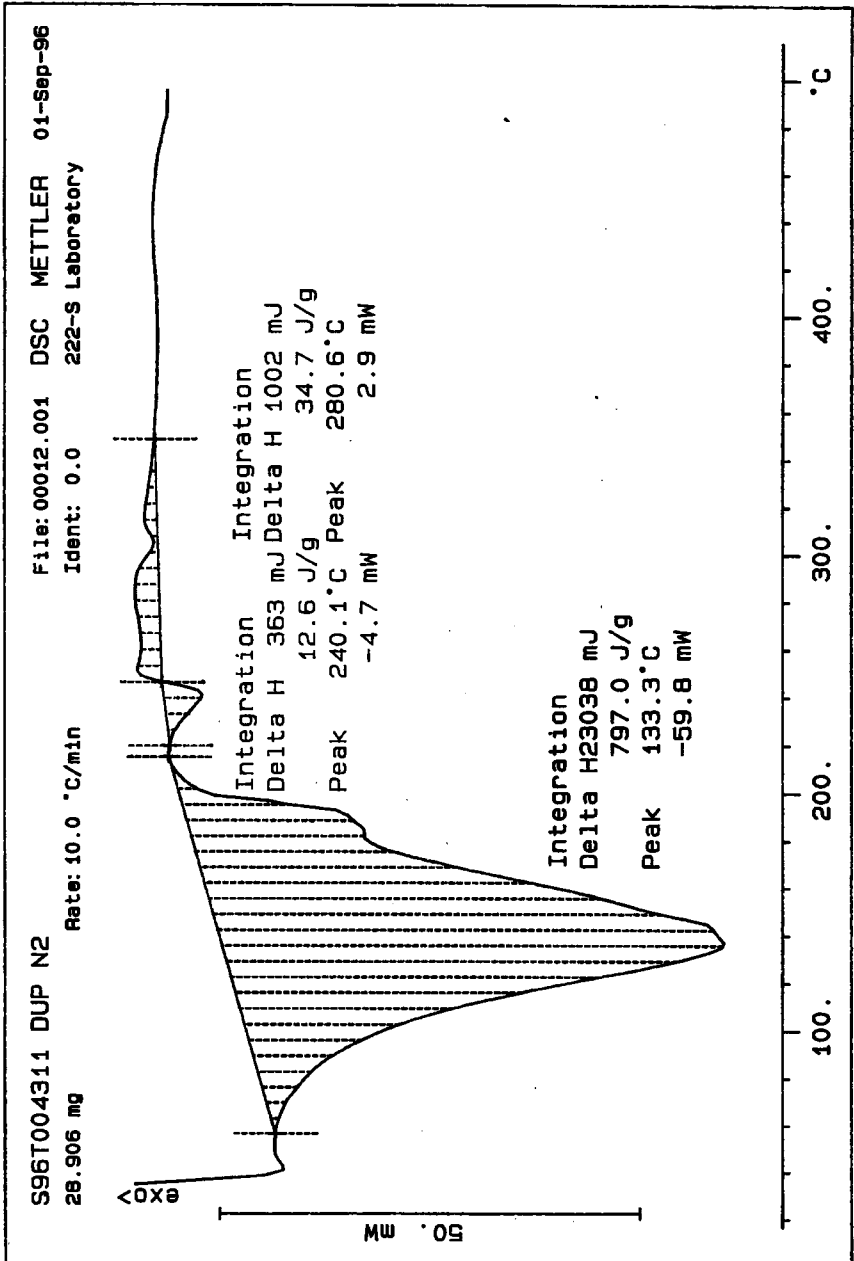
DSC STD 12N14-B File: 00005.001 DSC METTLER 31-Aug-96
4.510 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory











LABCORE Data Entry Template for Worklist# 12328

Analyst: SME Instrument: DSC0 1 Book # 12N14B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-01	SOLID	<u>28.45</u>	<u>26.7</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2	SAMPLE	S96T004335	0		DSC-01	SOLID	<u>N/A</u>	<u>39.31</u>	<u>N/A</u>	Joules/g
96000945	AN-105	3	DUP	S96T004335	0		DSC-01	SOLID	<u>39.31</u>	<u>39</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4	SAMPLE	S96T004435	0		DSC-01	SOLID	<u>N/A</u>	<u>48.7</u>	<u>N/A</u>	Joules/g
96000945	AN-105	5	DUP	S96T004435	0		DSC-01	SOLID	<u>48.7</u>	<u>94.1</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12328

Susie M. Dalton 9-4-96
Analyst Signature Date

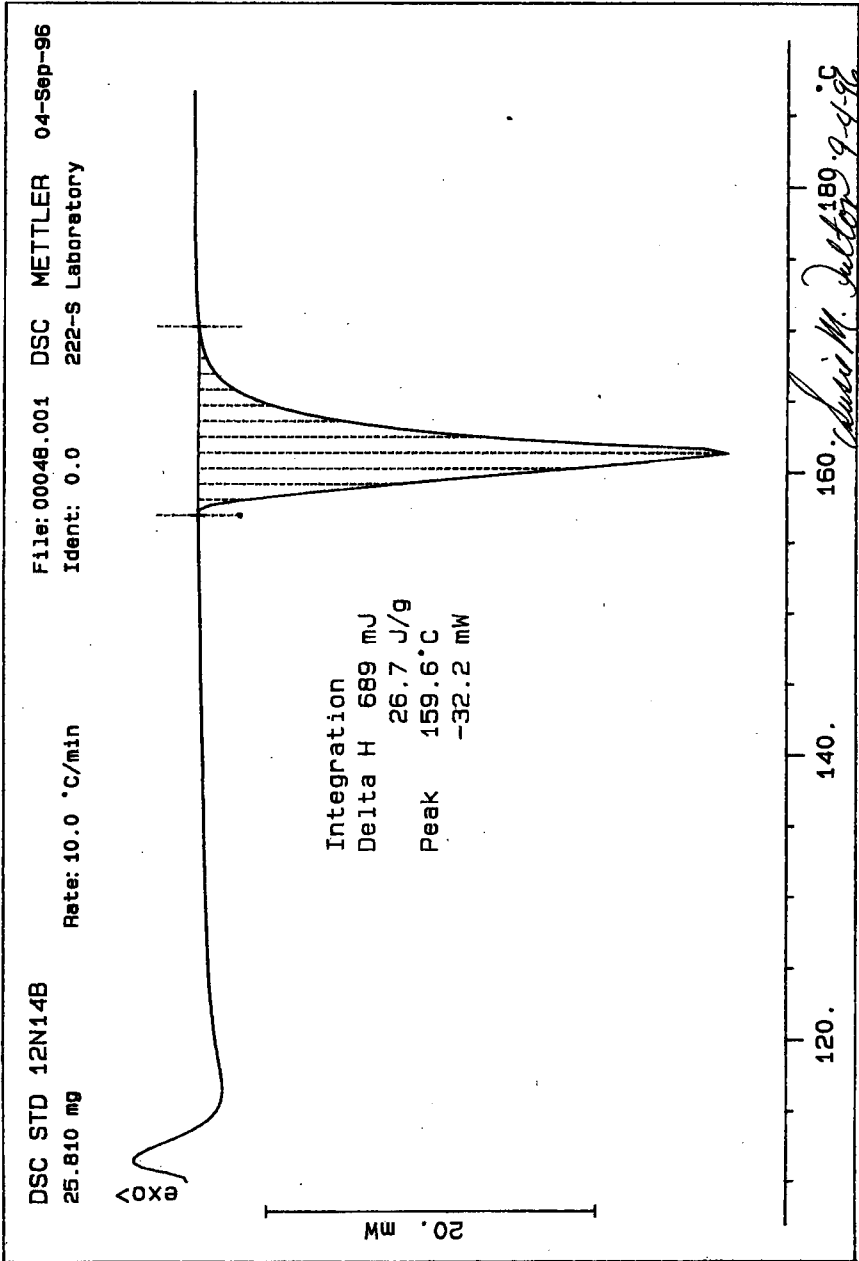
Reichert 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
9-6-96

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.

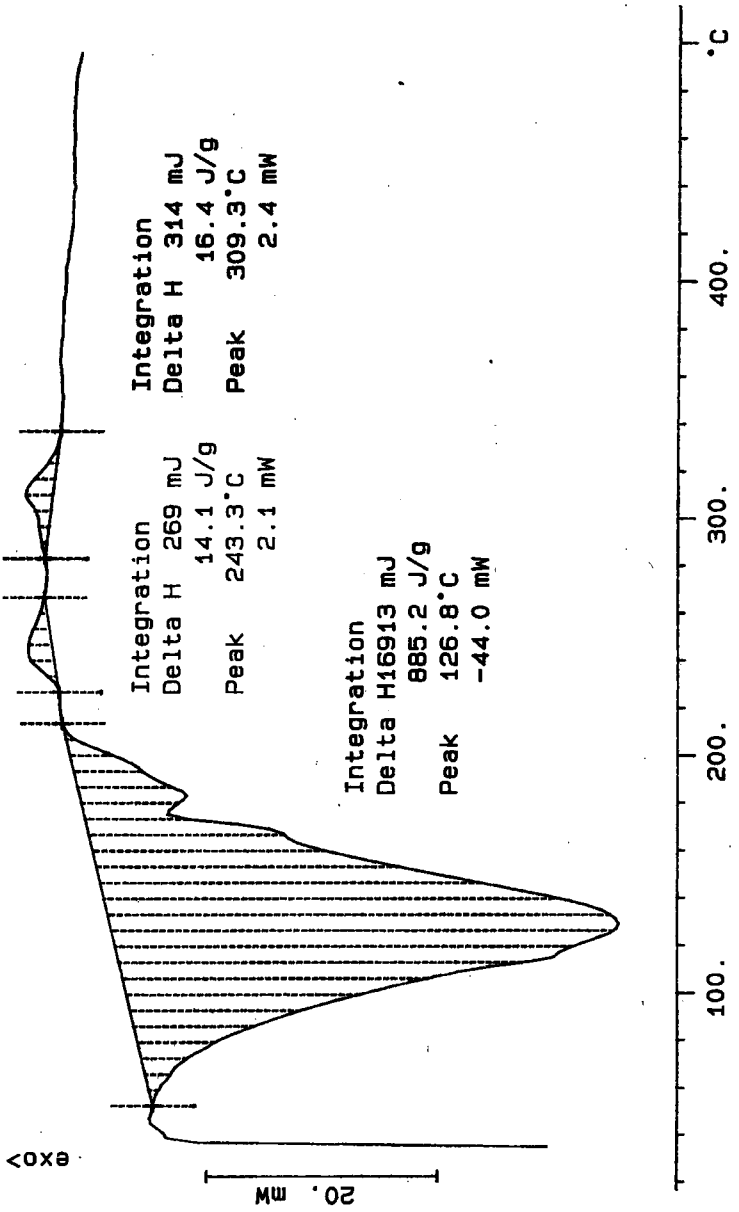
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 256 TO 260.



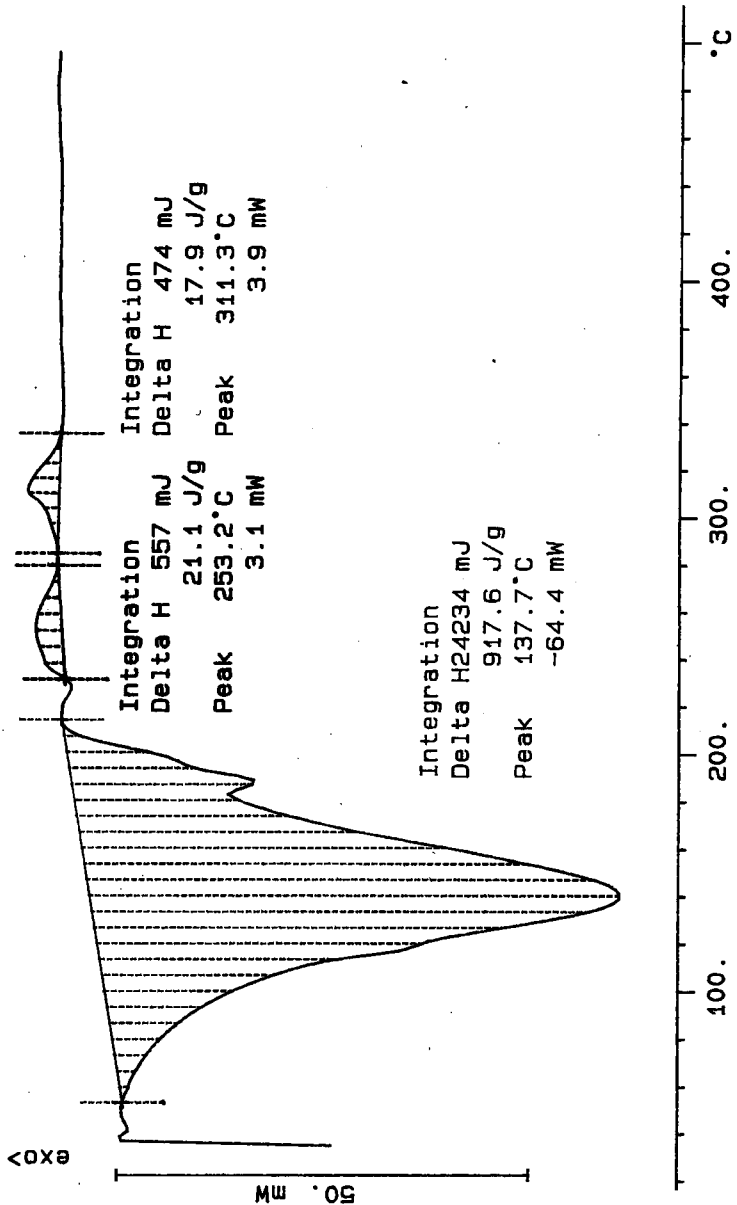
S96T004335 N2
19.107 mg

File: 00050.001 DSC METTLER 04-Sep-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



S96T004335 DUP N2
26.409 mg
Rate: 10.0 °C/min
File: 00052.001
Ident: 0.0
DSC METTLER 04-Sep-96
222-S Laboratory



S96T004435 SAM N2

59.812 mg

Rate: 10.0 °C/min

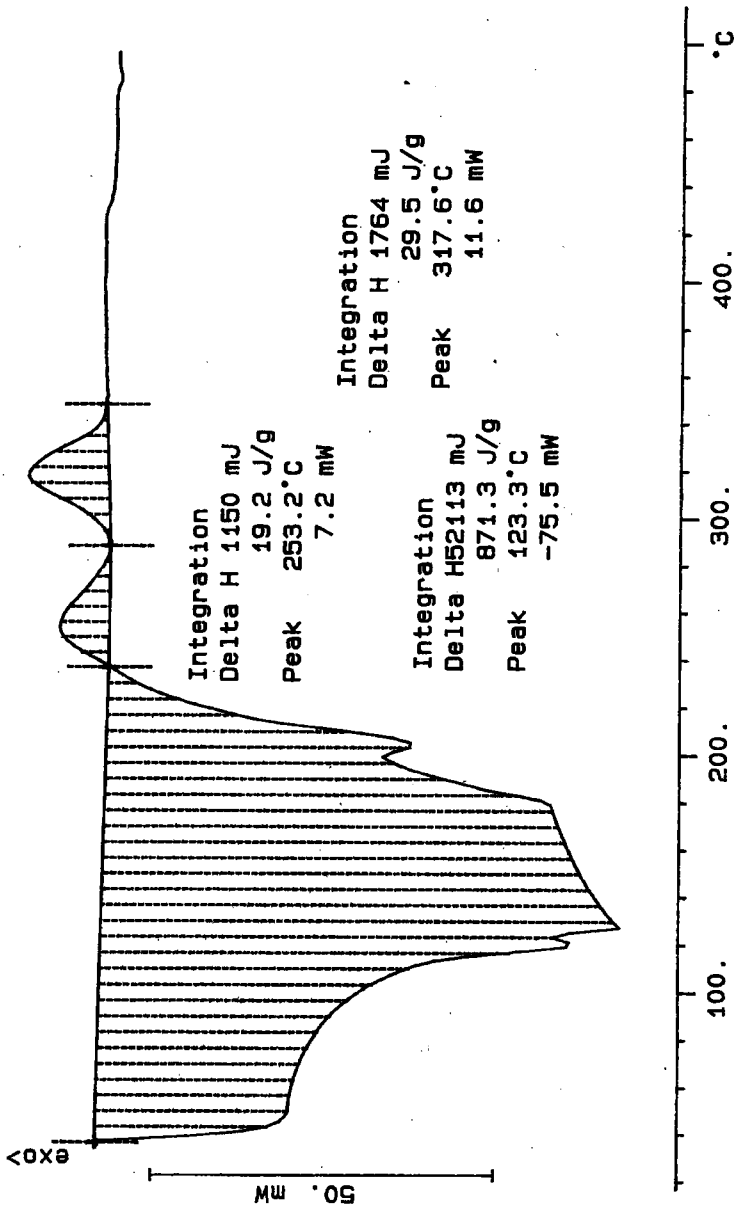
File: 00054.001

DSC METTLER

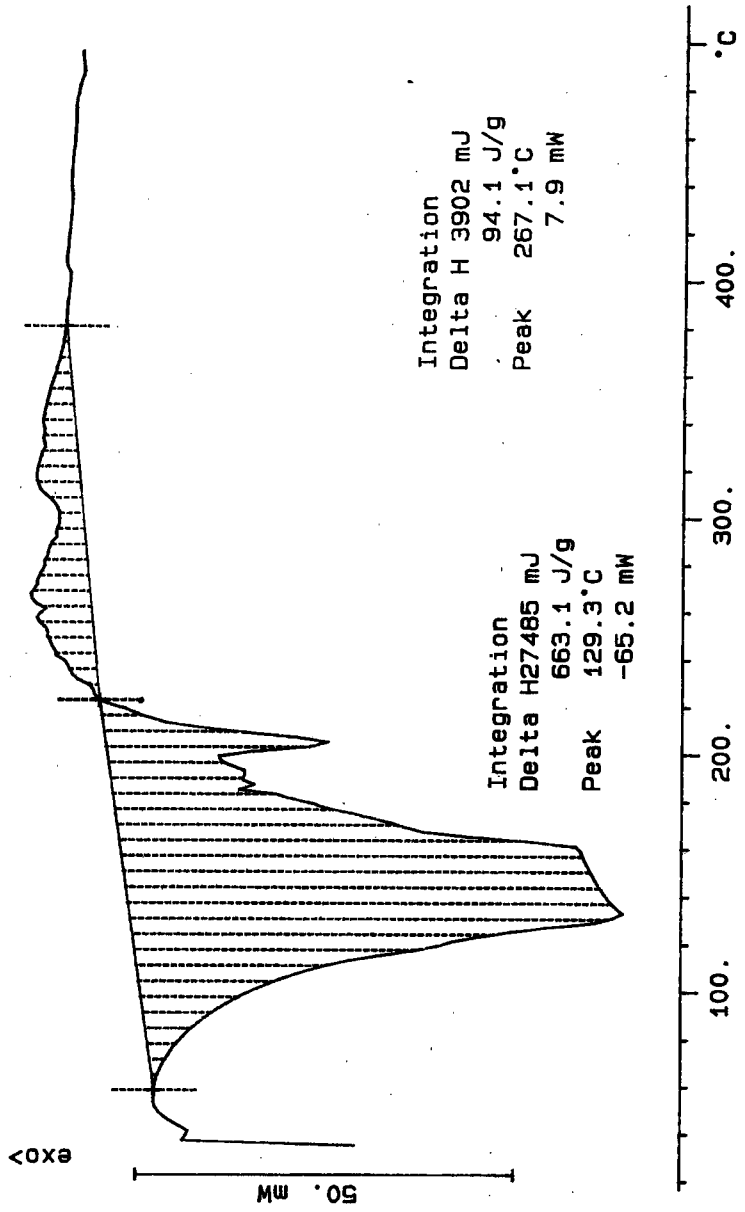
04-Sep-96

Ident: 0.0

222-s Laboratory



S96T004435 DUP N2
41.449 mg
Rate: 10.0 °C/min
File: 00058.001 DSC METTLER 05-Sep-96
Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist# 12329

Analyst: JK Instrument: DSC0 1 Book # 12214-B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>29.5*</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	S96T004436	0	DSC-01	SOLID	<u>N/A</u>	<u>15.8</u>		Joules/g
96000945	AN-105	3 DUP	S96T004436	0	DSC-01	SOLID	<u>15.8</u>	<u>19.6</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	S96T004437	0	DSC-01	SOLID	<u>N/A</u>	<u>22.9</u>		Joules/g
96000945	AN-105	5 DUP	S96T004437	0	DSC-01	SOLID	<u>22.9</u>	<u>44.4</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12329

Not Williams 9-1-96
Analyst Signature Date

Reichert 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 9-6-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 212 TO 216

DSC STD 12N14-B

4.510 mg

Rate: 10.0 °C/min

File: 00015.001

Ident: 0.0

DSC METTLER

01-Sep-96

exov

10. mW

Integration
Delta H 133 mJ
29.5 J/g
Peak 158.4 °C
-8.4 mW

Not King 9/1/96

50. 100. 150. 200. 250. °C

S96T004435 SAM N2

9.850 mg

Rate: 10.0 °C/min

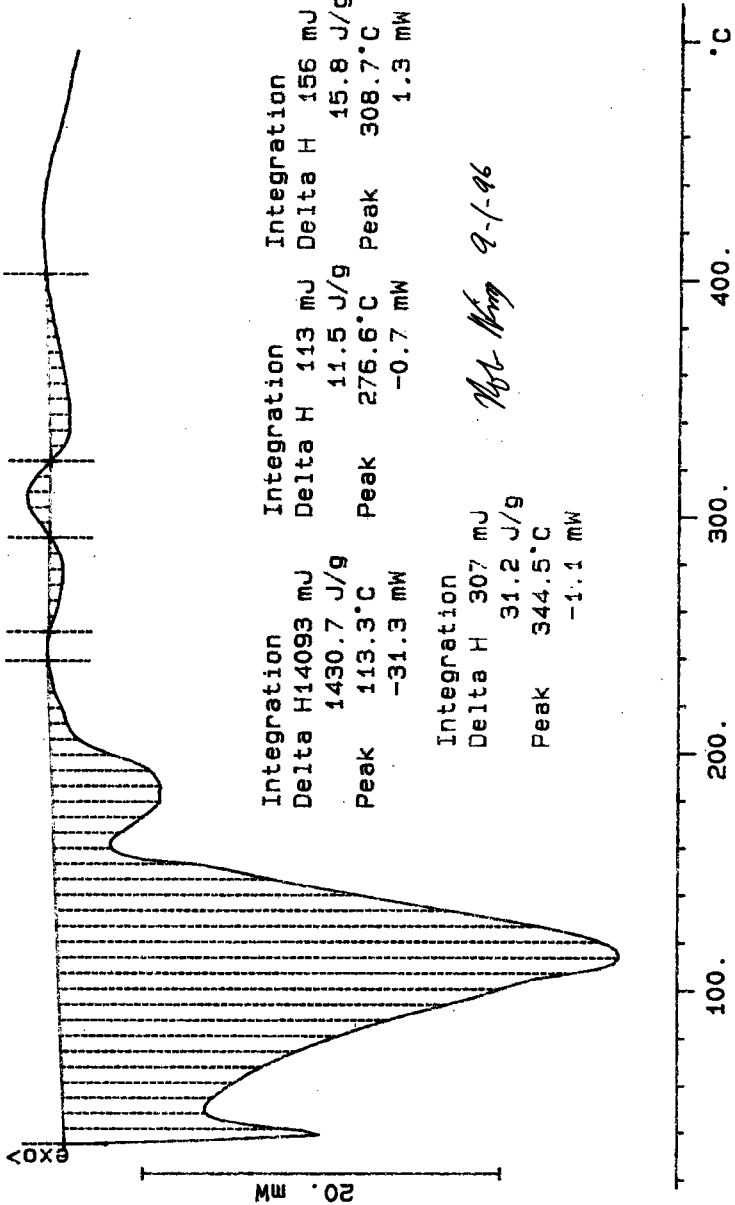
File: 00030.001

Ident: 0.0

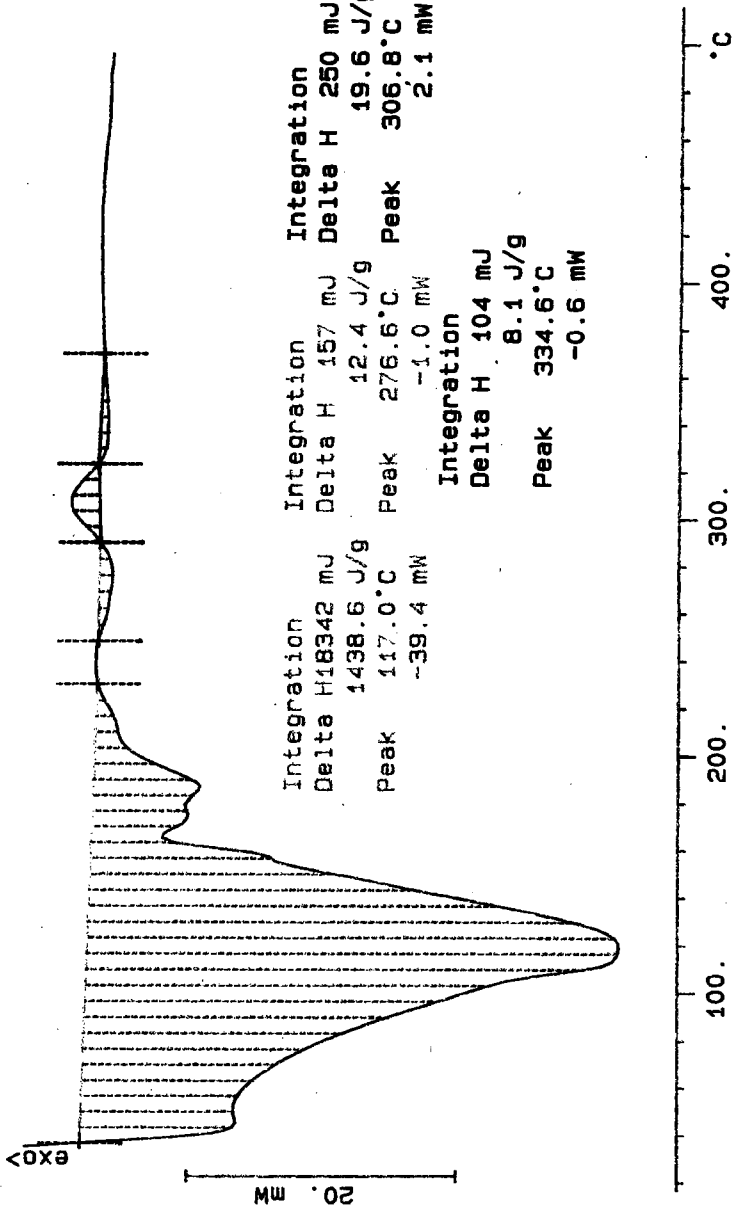
DSC METTLER

01-Sep-96

222-S Laboratory



S96T004436 DUP N2
 12.750 mg
 Rate: 10.0 °C/min
 File: 00032.001 DSC METTLER 02-Sep-96
 Ident: 0.0 222-S Laboratory



S96T004437 SAM N2

30.580 mg

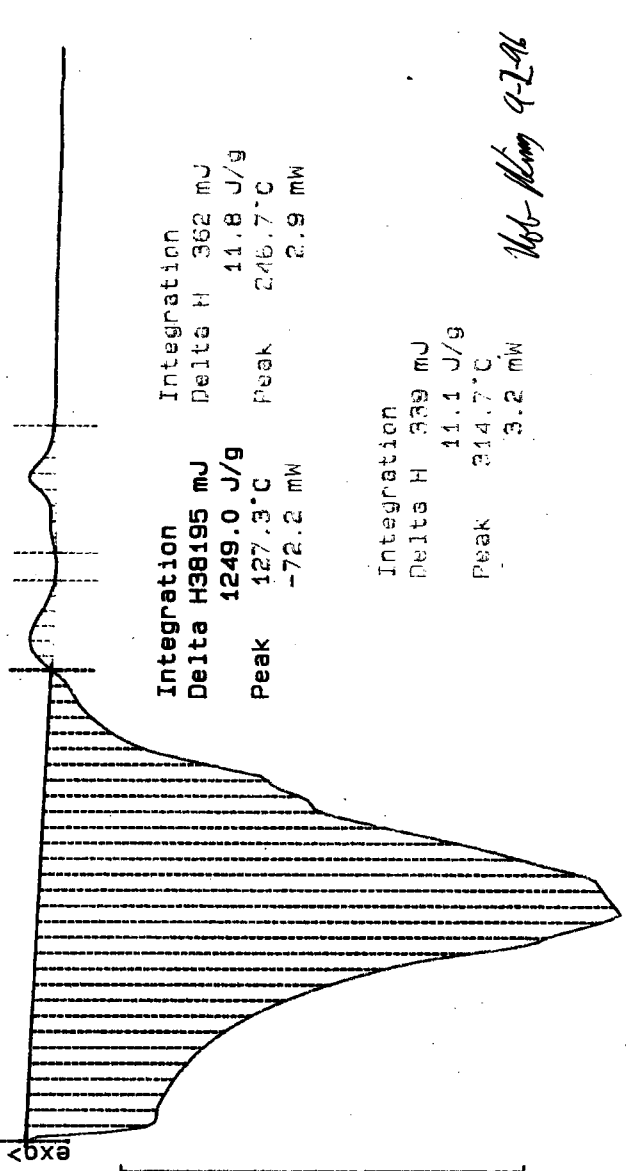
Rate: 10.0 °C/min

File: 00034.001

DSC METTLER

02-Sep-96

Ident: 0.0 222-S Laboratory



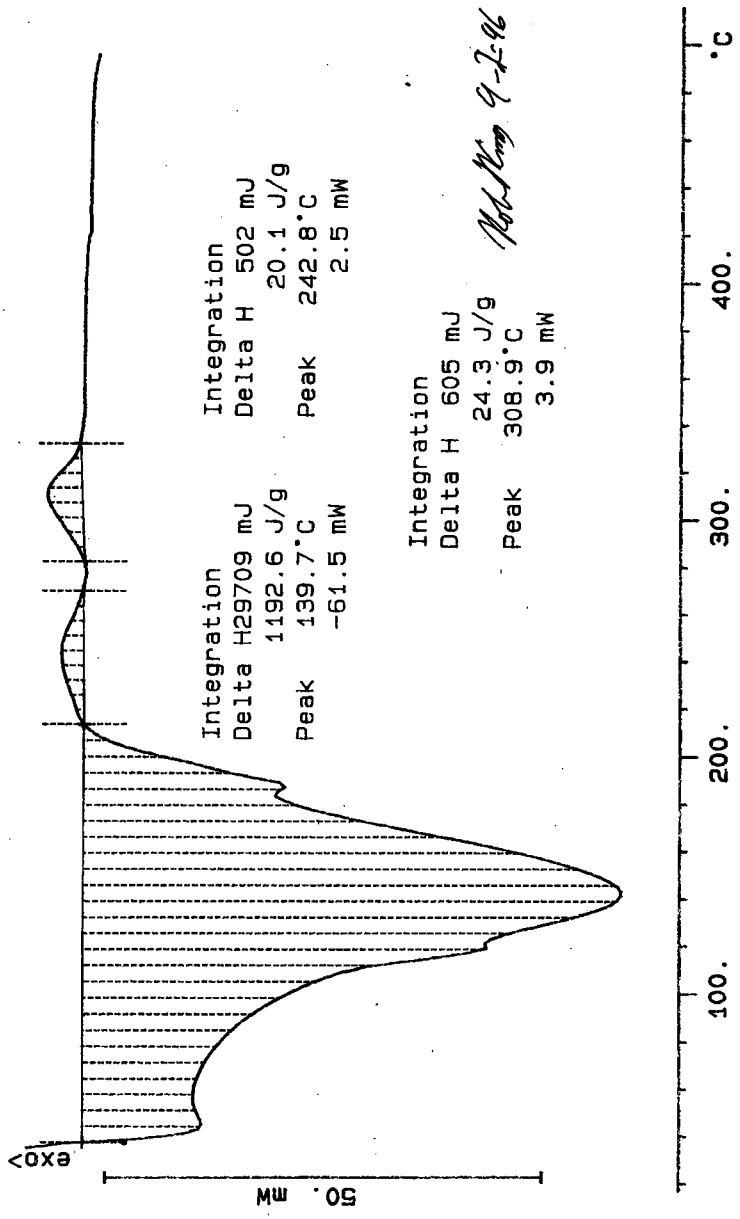
Walt Fleming 9-2-96

S96T004437 DUP N2

24.910 mg

File: 00035.001 DSC METTLER 02-sep-96

Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist# 12330

Analyst: EAL Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				DSC-03	LIQUID	<u>28.45</u>	<u>27.48</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2	SAMPLE	S96T004309	0		DSC-03	LIQUID	<u>N/A</u>	<u>13.55</u>		Joules/g
96000945	AN-105	3	DUP	S96T004309	0		DSC-03	LIQUID	<u>13.55</u>	<u>19.54</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4	SAMPLE	S96T004333	0		DSC-03	LIQUID	<u>N/A</u>	<u>34.8</u>		Joules/g
96000945	AN-105	5	DUP	S96T004333	0		DSC-03	LIQUID	<u>34.8</u>	<u>57.7</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12330

See attached for signatures
Analyst Signature _____ Date 9-5-96

Kevin Light
Analyst Signature _____ Date 9/5/96

Verified/Validated by
Blandina
Valenzuela
Date 9-6-96

S96T004309 results are of the same magnitude but thermograms are very different. The sample exotherm contained the sharp exothermic decomp. that is being seen very often lately.

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# 12330

Analyst: EAL Instrument: DSC0 _____ Book # 12N14-B

Method: LA-514-113 Rev/Mod _____

Worklist Comment: Please run AN-105 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	_____	_____	N/A	Joules/g
96000945	AN-105	2 SAMPLE	S96T004309	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96000945	AN-105	3 DUP	S96T004309	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g
96000945	AN-105	4 SAMPLE	S96T004333	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96000945	AN-105	5 DUP	S96T004333	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g

Final page for worklist # 12330

A. Lambert
Analyst Signature

09-01-96
Date

Analyst Signature

Date

DSC-03 instrument
was used.
9-5-96

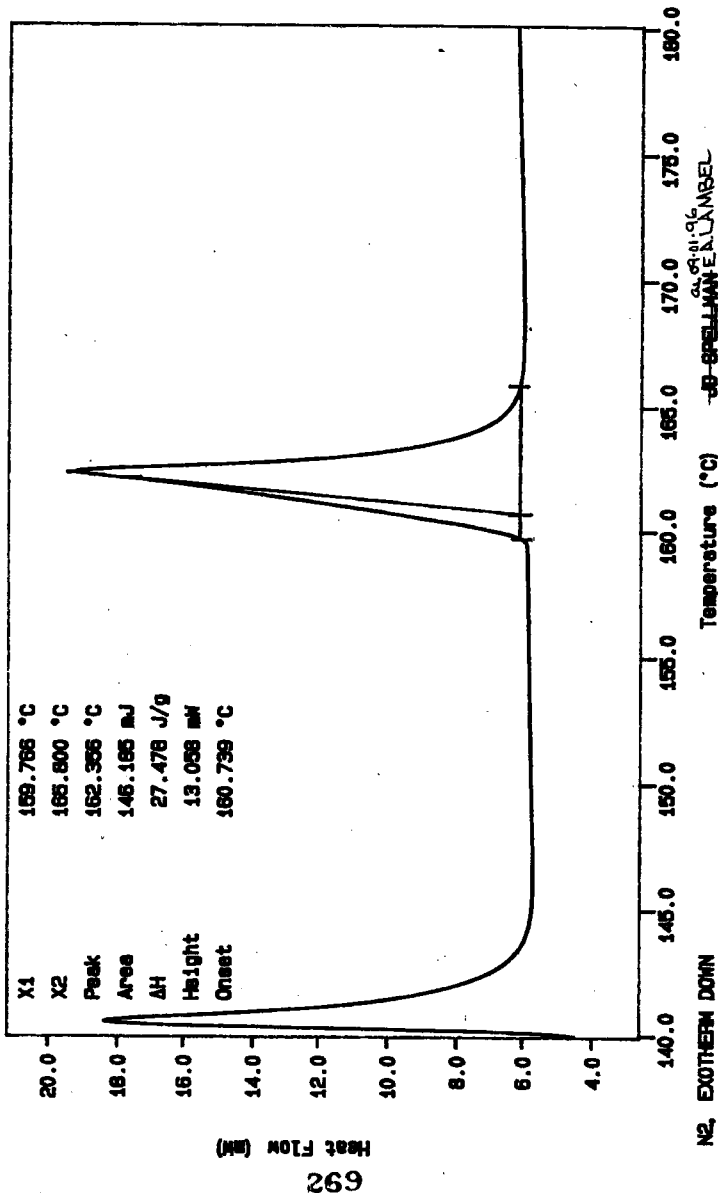
Blandina
Valenzuela

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.

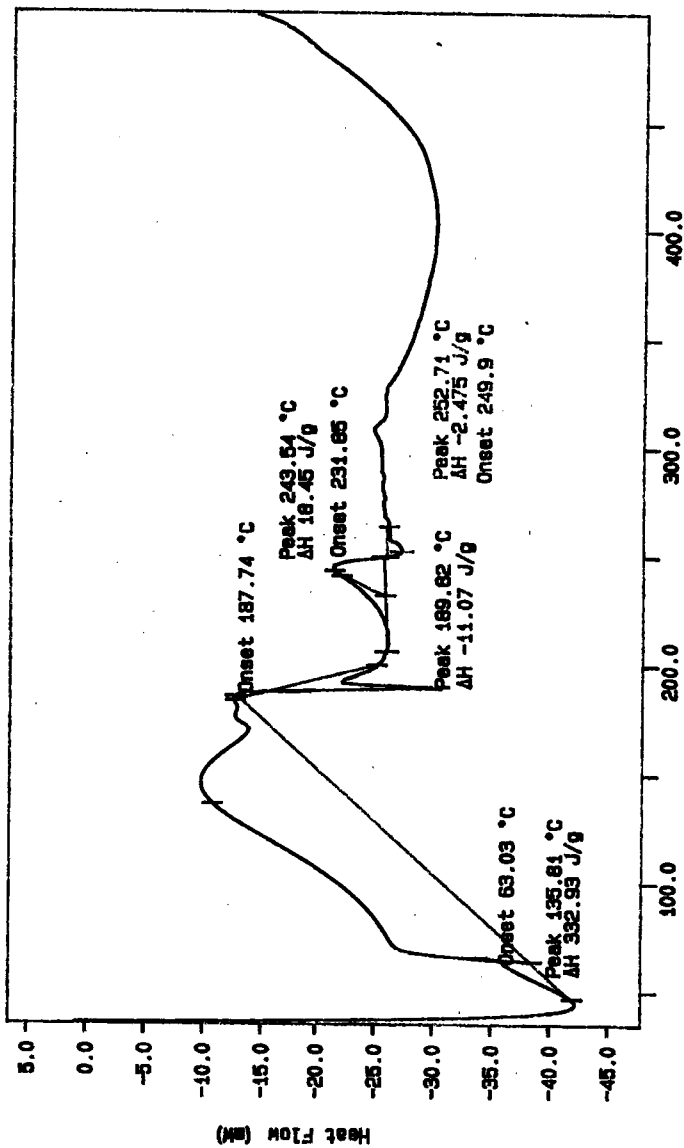
Curve 1: DSC
 File info: IND090101 Sun Sep 1 08:27:57 1986
 Sample Weight: 5.320 mg
 12N14-B INDIUM AT 10C/MIN

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 212 TO 213.



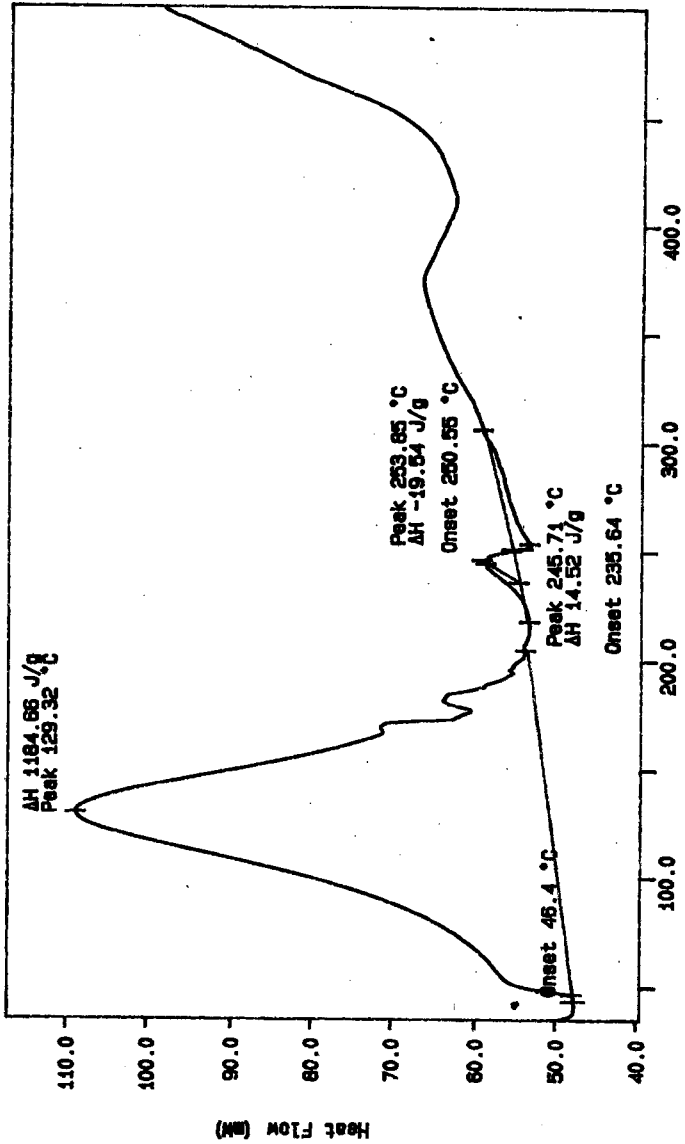
N2, EXOTHERM DOWN
 THERM 160.8 g THERM 0.0 min RATE: 10.0 C/min
 CALORIMETER: 78-SPRELLMAN E. L. LAMBEL
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Sun Sep 1 08:33:19 1986

Curve 1: DSC
 File Info: SAM080102 Sun Sep 1 09:54:17 1996
 Sample Weight: 18.760 mg
 S95T004309



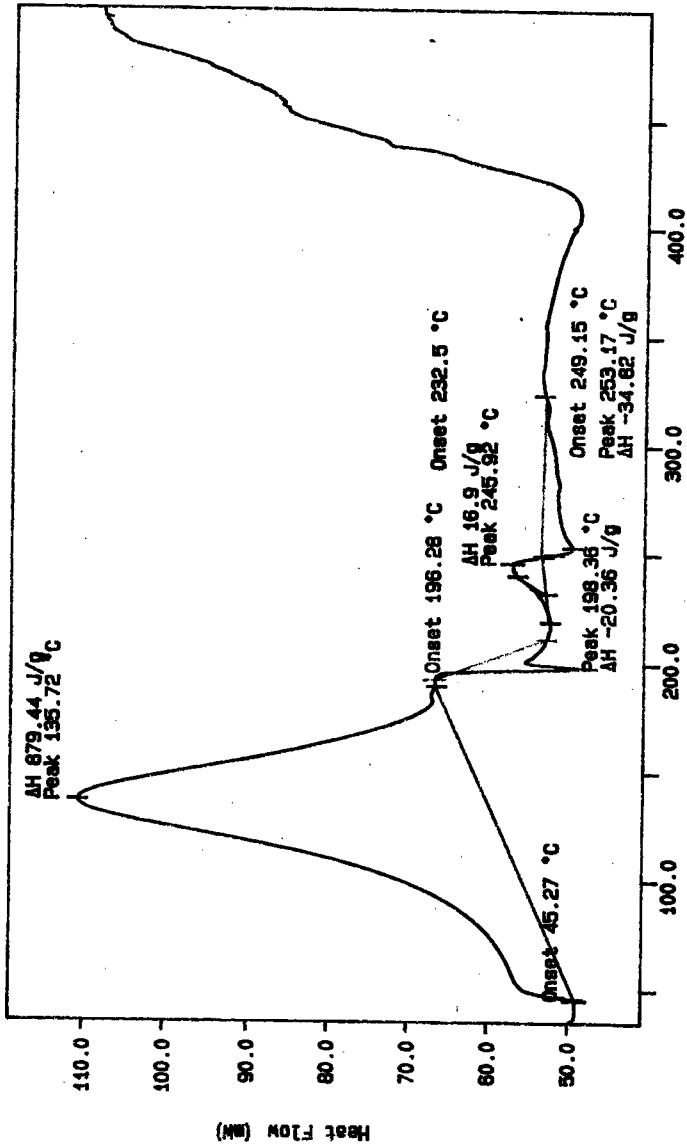
N2 100./min
 TIME 08:08
 THERM 0.0 min RATE: 10.0 C/min
 EA LABEL
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Thu Sep 5 1996

Curve 1: DSC
File Info: SAM060103 Sun Sep 1 10:53:23 1996
Sample Weight: 19.830 mg
996T00-309 DUP



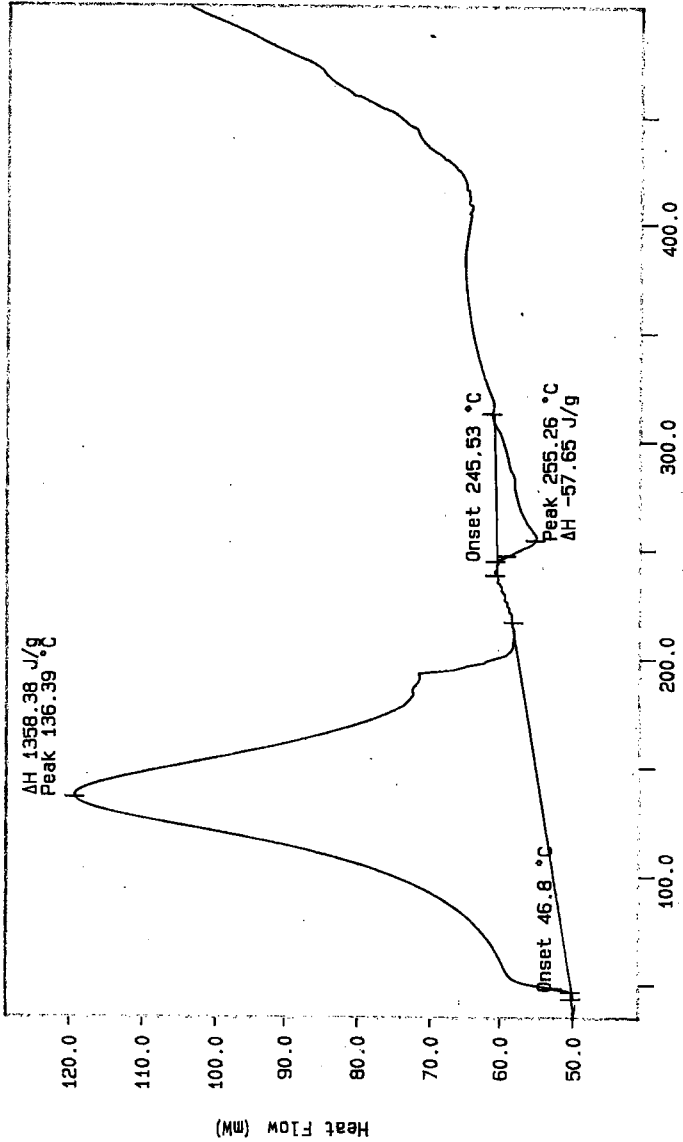
N2 10C/min
TIME 55.8 S
0.0 min RATE 10.0 C/min
EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System

Curve 1: DSC
File Info: SAM090104 Sun Sep 1 13:11:06 1996
Sample Weight: 18.630 mg
S96T004333



NE 10C/min
TEMPERATURE 200.0 300.0 400.0
TIME 0.0 8
0.0 min RATE 10.0 C/min
EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System

Curve 1: DSC
File info: SAM090105 Sun Sep 1 14: 23: 47 1996
Sample Weight: 18.540 mg
S96T004333 DUP



N2 100/min
TEMP: 25.0 °C
TIME: 658.0 s
EA LAMBEL
PERKIN-ELMER
7 Series Thermal Analysis System
Thu Sep 5 08: 41: 46 1996

LABCORE Data Entry Template for Worklist# 12331

Analyst: BJP Instrument: DSC0 1 Book # 121014-B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>28.3</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	S96T004419	0	DSC-01	LIQUID	<u>N/A</u>	<u>18.0</u>		Joules/g
96000945	AN-105	3 DUP	S96T004419	0	DSC-01	LIQUID	<u>18.0</u>	<u>205.2</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	S96T004420	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	5 DUP	S96T004420	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12331

[Signature] 8/30/96
Analyst Signature Date

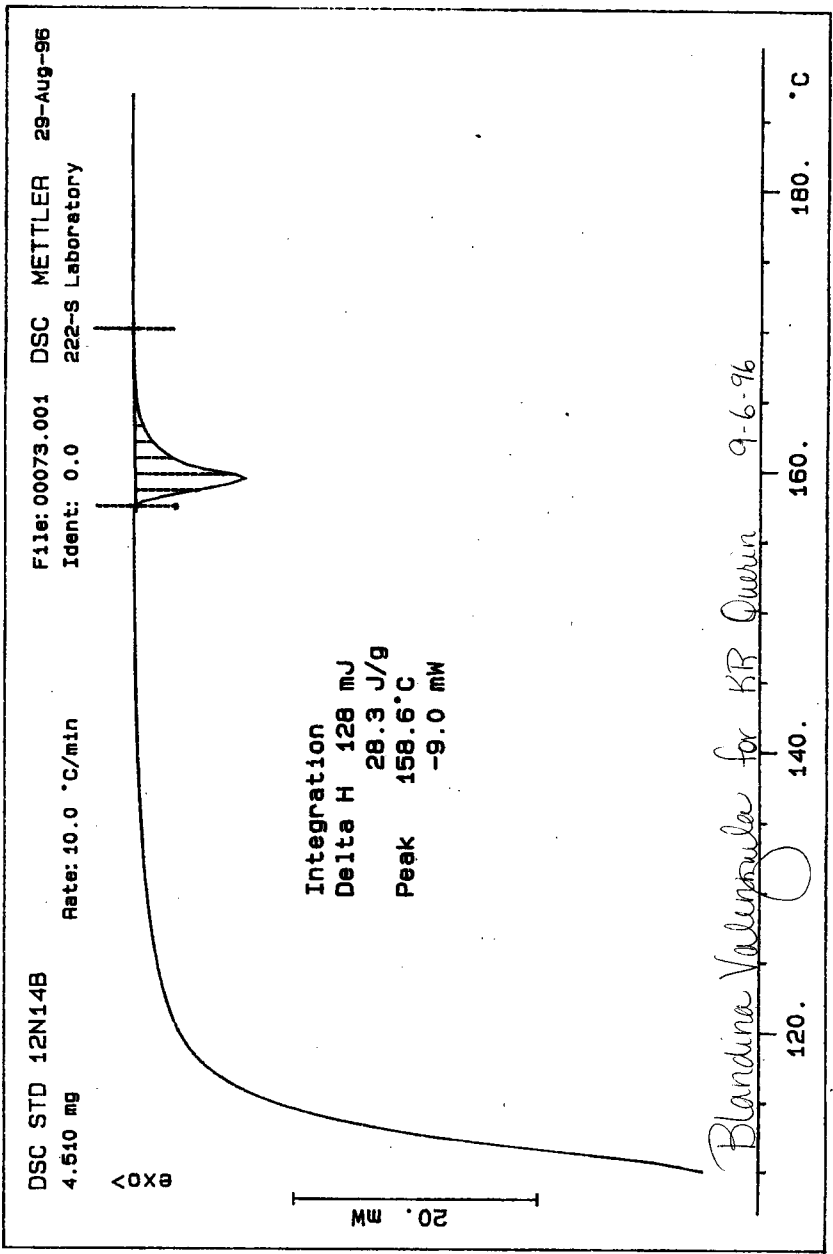
[Signature] 9/5/96
Analyst Signature Date

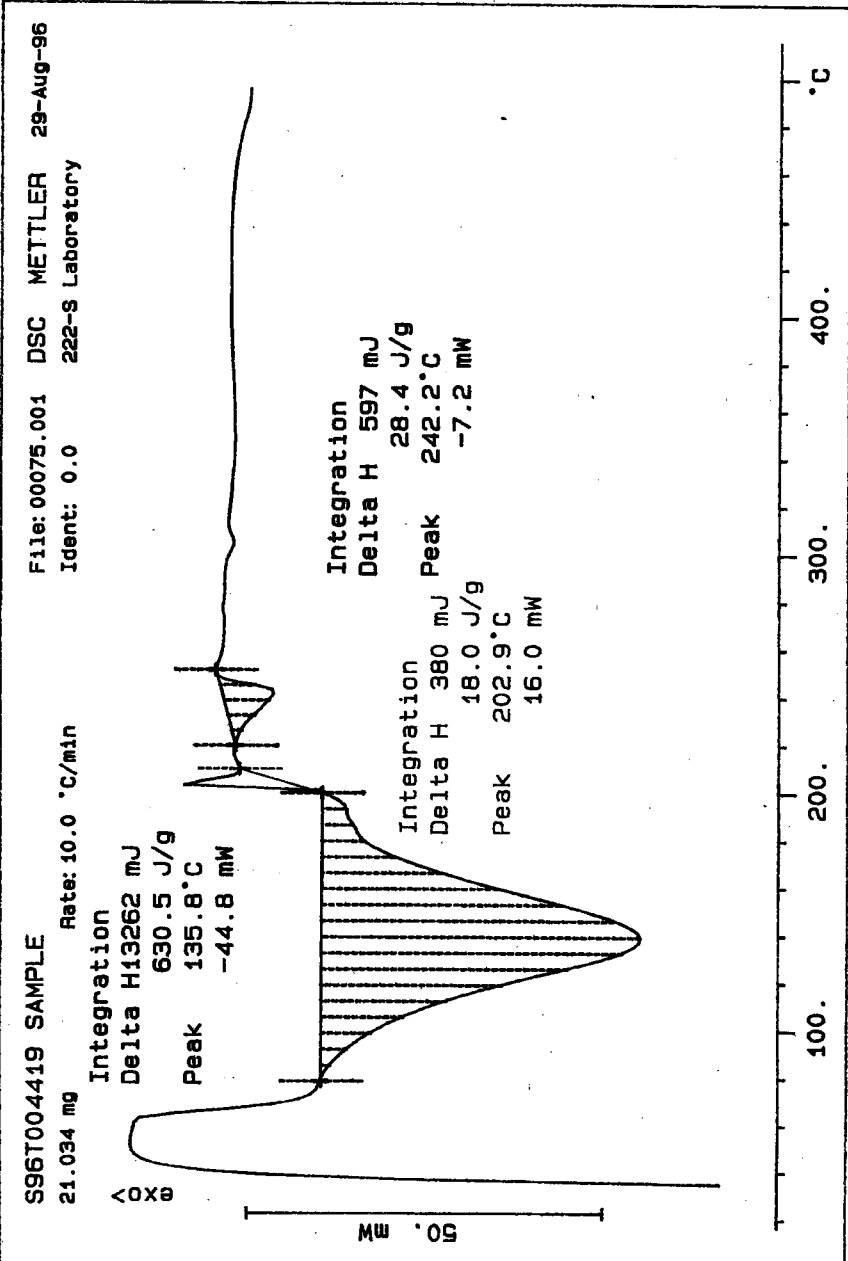
Verified/Validated by
Blandina Valenzuela
9-6-96

Data Entry Comments: S96T004419 thermograms do not look similar. The water endotherm is shifted over to 200°C which is very odd for a liquid sample. This sample should be rerun.

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 275 TO 277.





S96T004419 DUPLICATE

18.082 mg

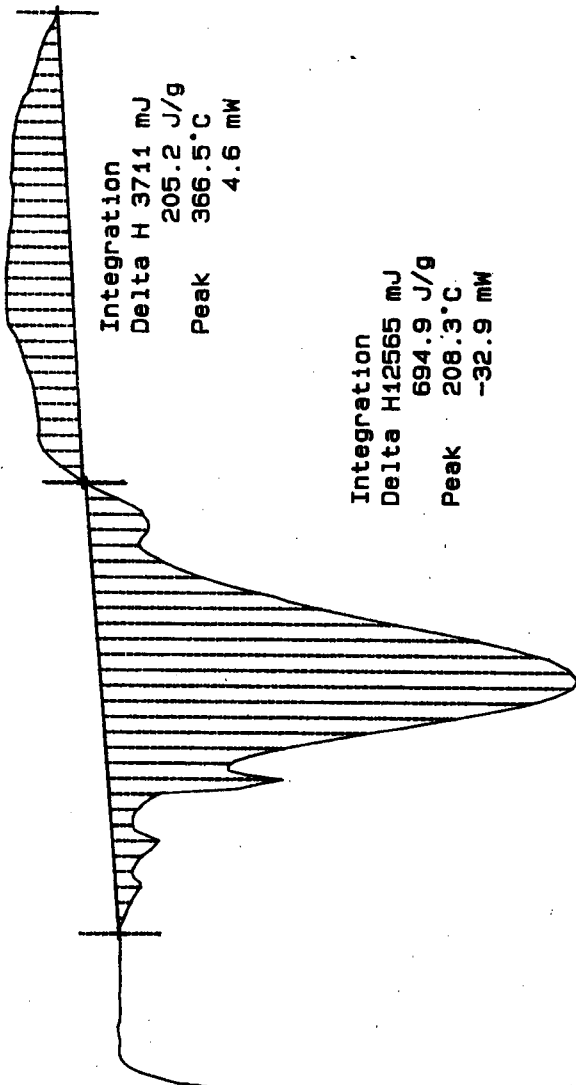
Rate: 10.0 °C/min

File: 00077.001 DSC METTLER 29-Aug-96

Ident: 0.0 222-S Laboratory

exo >

20. mW

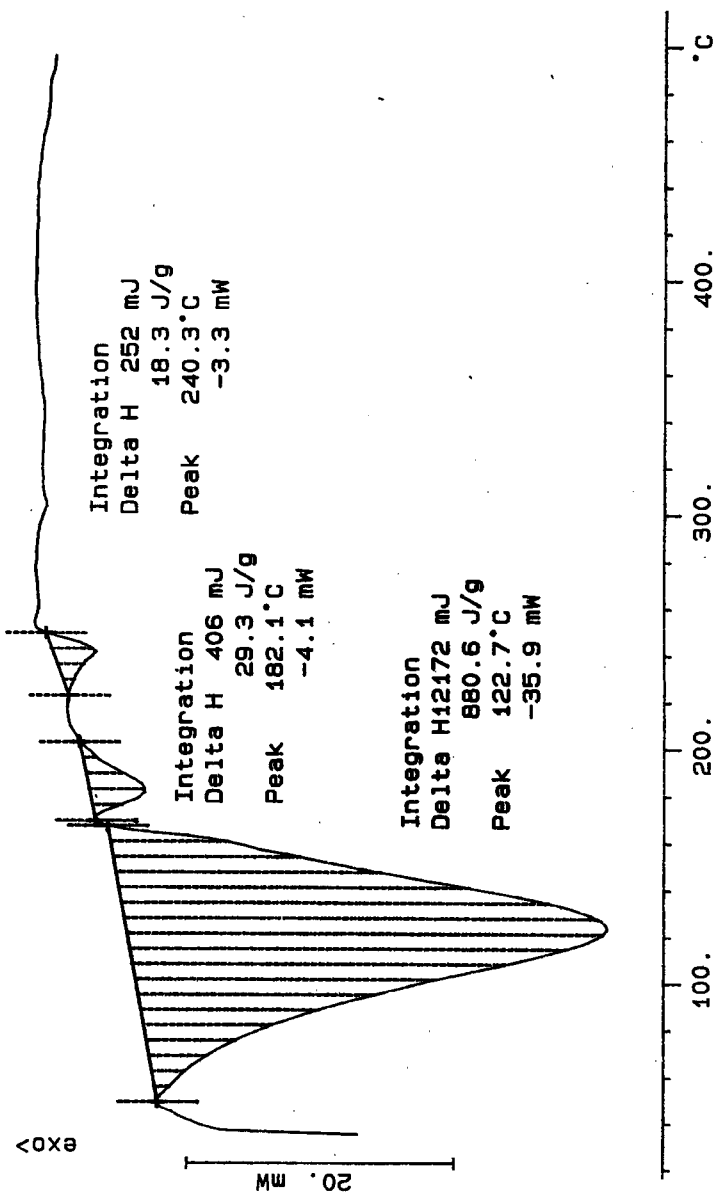


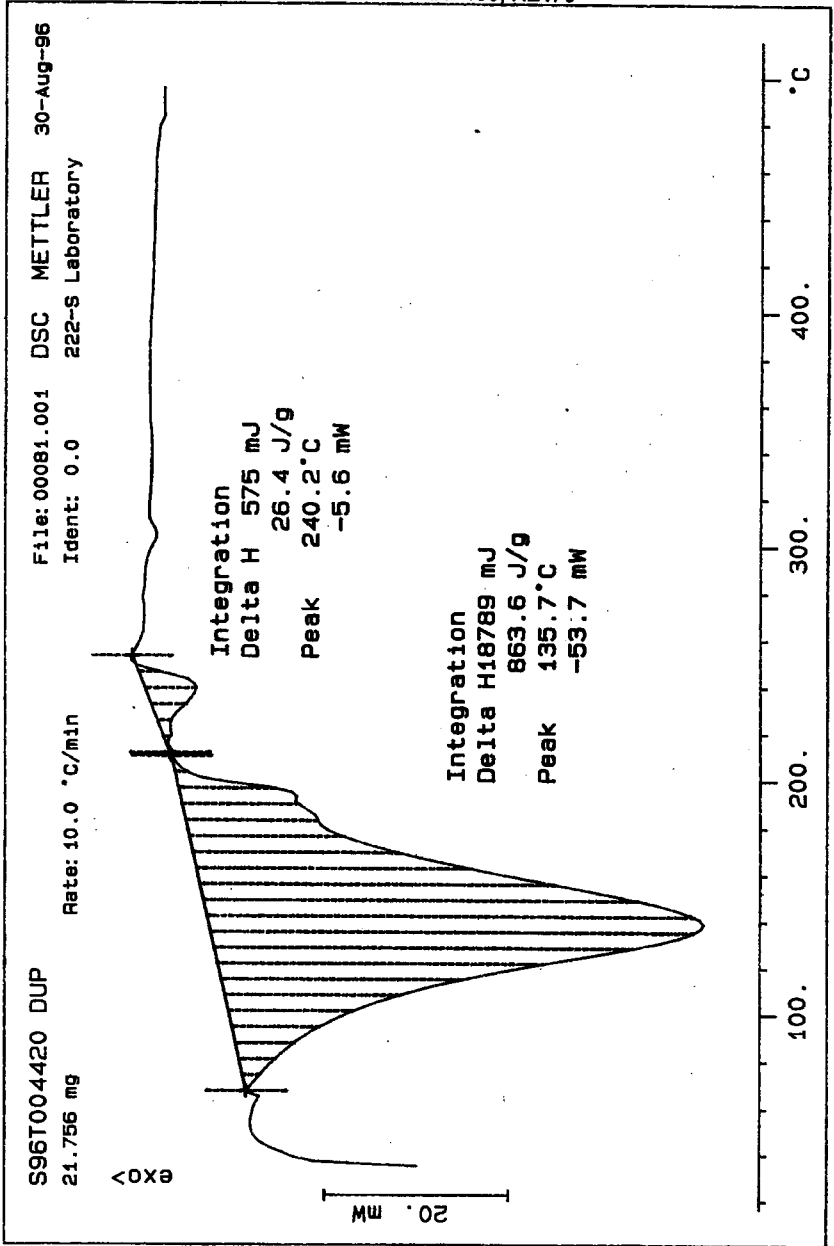
Integration
 Delta H 3711 mJ
 205.2 J/g
 Peak 366.5°C
 4.6 mW

Integration
 Delta H 12565 mJ
 694.9 J/g
 Peak 208.3°C
 -32.9 mW

100. 200. 300. 400. °C

S96T004420 SAMPLE
13.823 mg
Rate: 10.0 °C/min
File: 00079.001 DSC METTLER 30-Aug-96
Ident: 0.0 222-S Laboratory





LABCORE Data Entry Template for Worklist# 12332

Analyst: RWK Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	<u>28.45</u>	<u>28.02</u>	<u>*N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	S96T004421	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
96000945	AN-105	3 DUP	S96T004421	0	DSC-03	LIQUID	<u>Ø</u>	<u>34.54</u>	<u>N/A</u>	Joules/g
96000945	AN-105	4 SAMPLE	S96T004433	0	DSC-03	LIQUID	<u>N/A</u>	<u>12.7</u>		Joules/g
96000945	AN-105	5 DUP	S96T004433	0	DSC-03	LIQUID	<u>12.7</u>	<u>15.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12332

See attached for signatures
Analyst Signature _____ Date 9-3-96

Analyst Signature _____ Date _____

Verified/Validated by BDV
Blandina
Valenzuela

9-6-96

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# 12332

Analyst: RR Instrument: DSC0 _____ Book # 12014-B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	_____	_____	N/A	Joules/g
96000945	AN-105	2 SAMPLE	S96T004421	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96000945	AN-105	3 DUP	S96T004421	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g
96000945	AN-105	4 SAMPLE	S96T004433	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96000945	AN-105	5 DUP	S96T004433	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g

Final page for worklist # 12332

Rob King
Analyst Signature
9-1-96
Date

Reu Juyt
Analyst Signature
9/5/96
Date

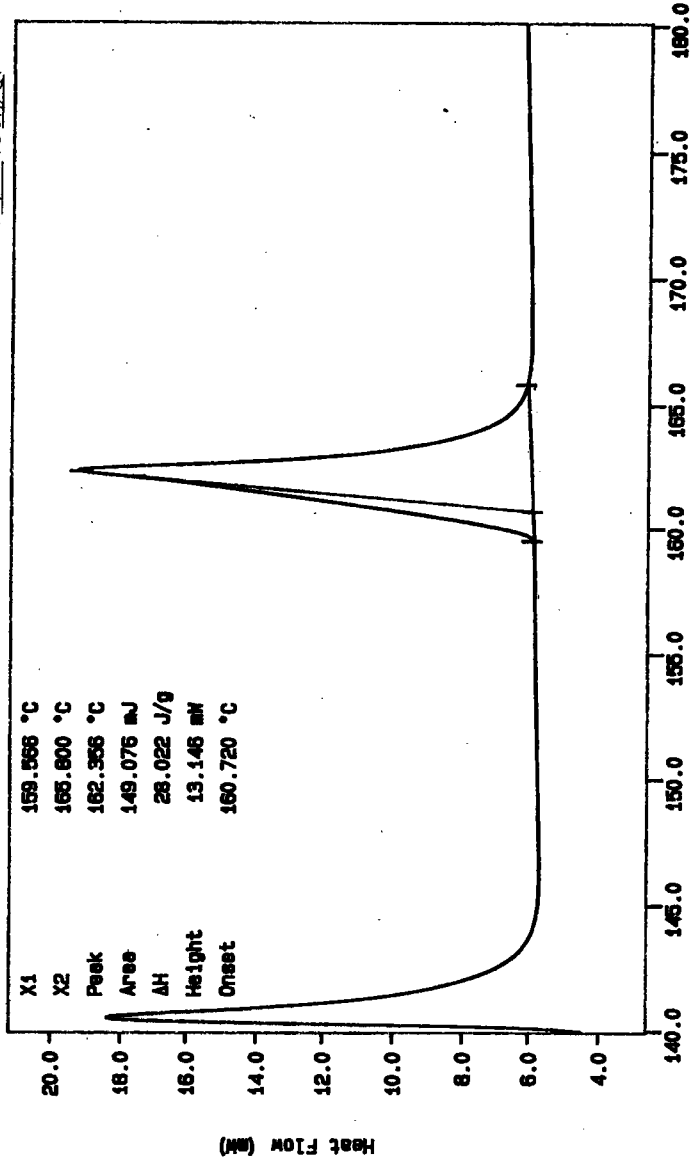
DSC-03 instrument
was used.
Blandina
Valenzuela
9-3-96

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: IND000101 Sun Sep 1 08:27:57 1996
Sample Weight: 5.320 mg
12N14-B INDIUM AT 10C/MIN

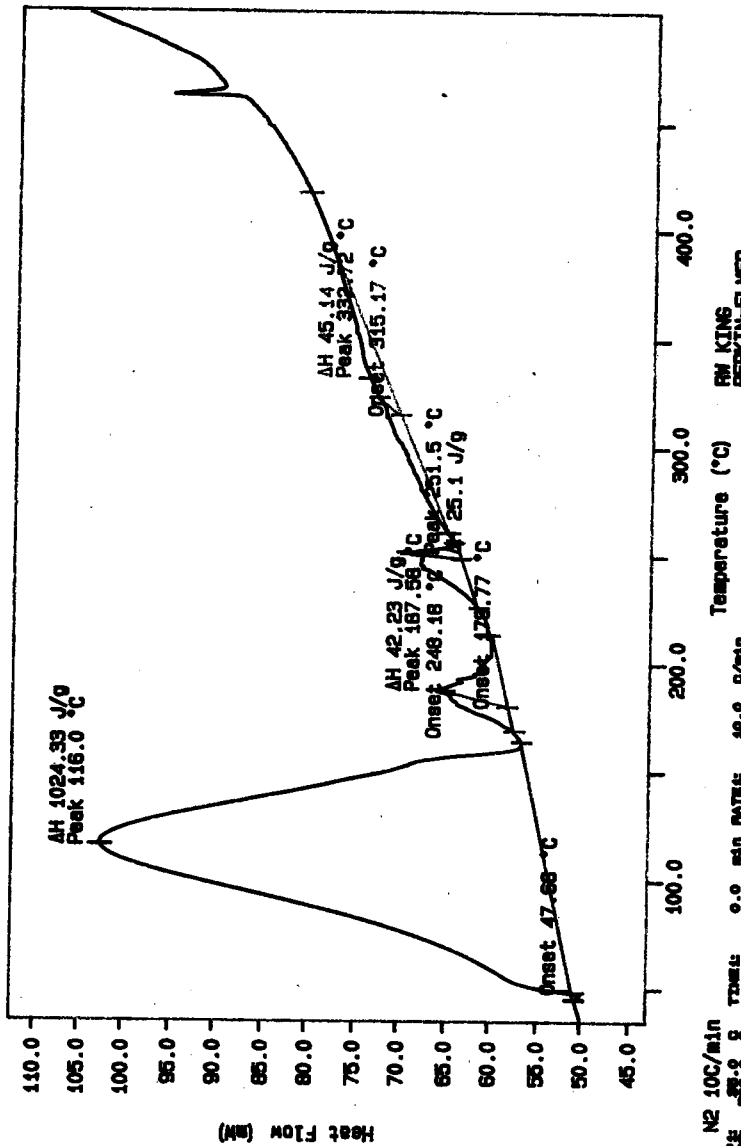
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 282 TO 286



JD SEELMAN
PERKIN-ELMER
7 Series Thermal Analysis System

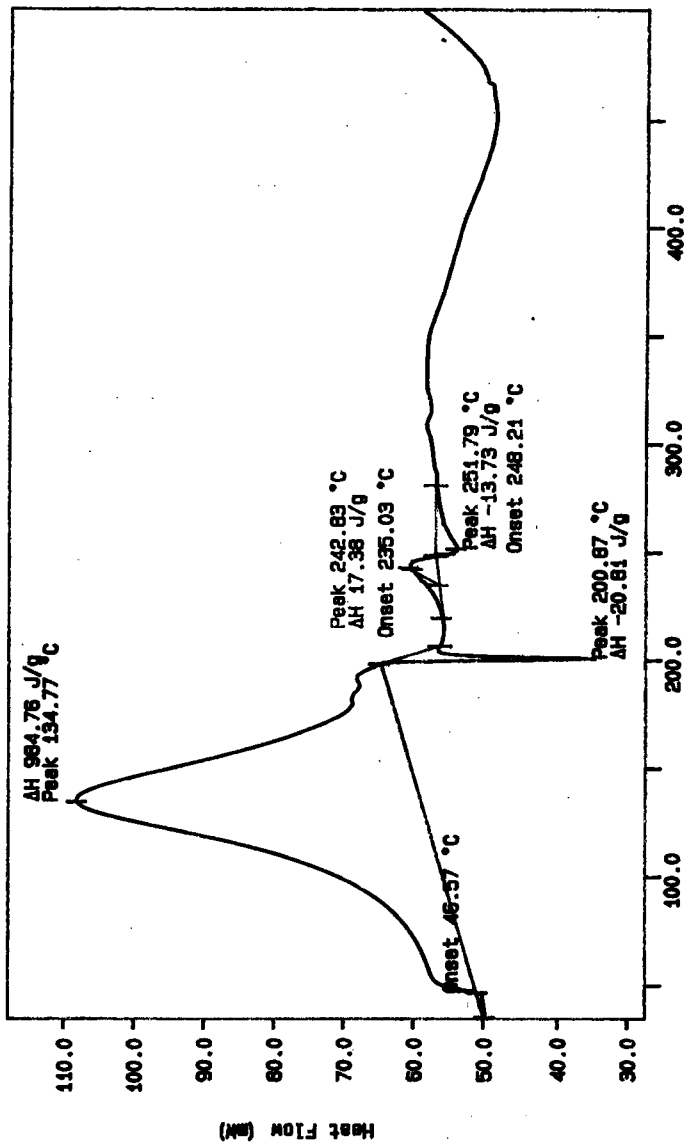
N2, EXOTHERM DOWN
TUBE 168.8 8 THERM 0.0 scan RATE: 10.0 C/min

Curve 1: DSC
 File Info: SANO40106 Sun Sep 1 19:29:38 1988
 Sample Weight: 17.100 mg
 S96T004421



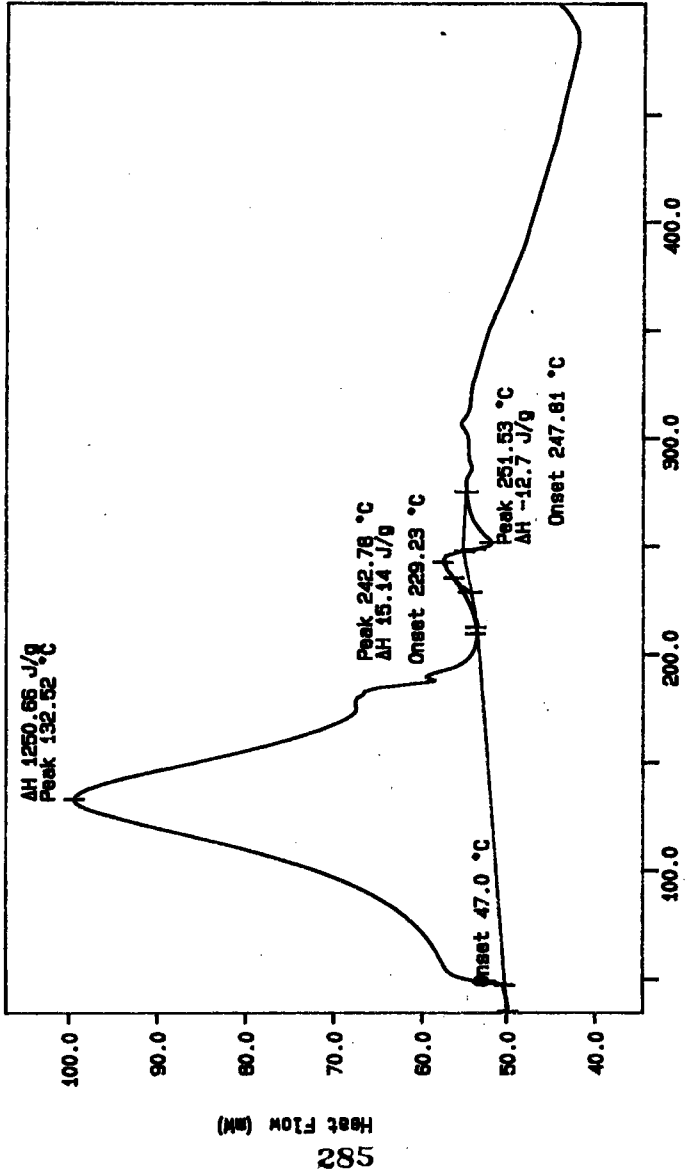
N2 100/min
 TEMPE 65.3 8 TRAVEL: 0.0 min RATE: 40.0 C/min
 RM KINS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Ser: 001

Curve 1: DSC
File info: SAND40107 Sun Sep 1 21:05:15 1998
Sample Weight: 16.810 mg
S96T004421 DUP



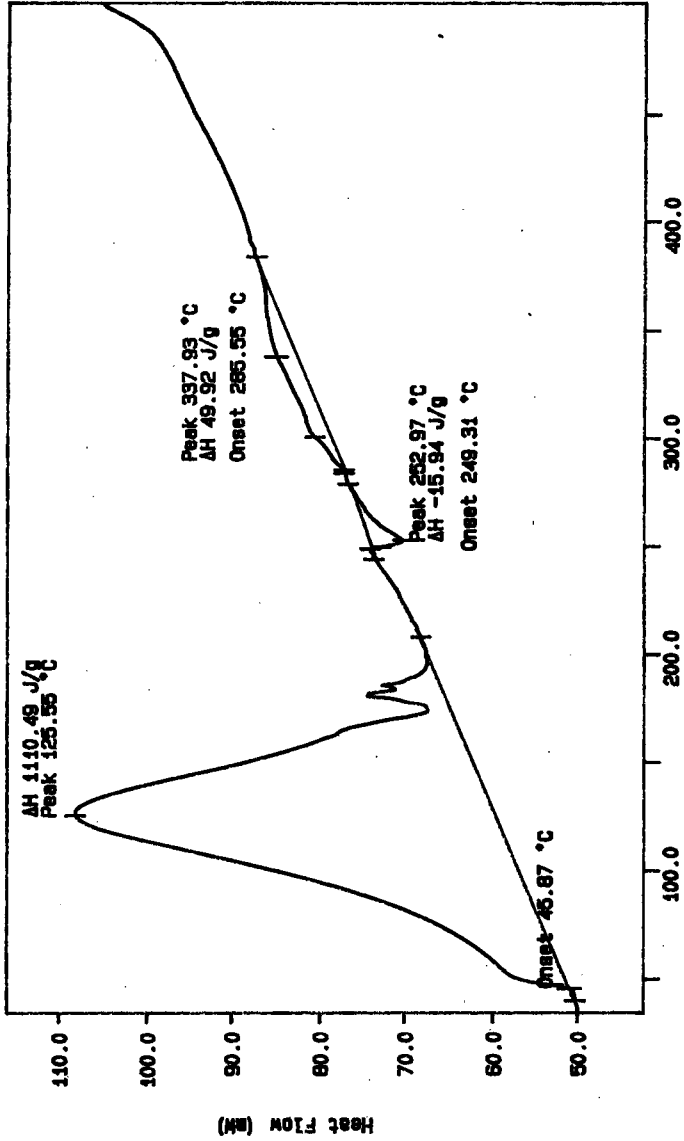
N2 100/ml/min
TRIPLE 55.8 8
TIME: 0.0 min RATE: 10.0 °/min
RM KING
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Sep 1 1998

Curve 1: DSC
File Info: SAM040108 Sun Sep 1 22:07:19 1996
Sample Weight: 15.200 mg
586T004433



N2 100/mln
TIME: 00.8
0.0 mln MATES 10.0 C/min
RM KING PERKIN-ELMER
7 Series Thermal Analysis System

Curve 1: DSC
File info: SAM040201 Sun Sep 1 23:27:37 1988
Sample Weight: 17.050 mg
SS6T004433 DUP



N2 100/min
TRIP 00.0 g
THERM 00.0 g
0.0 min RATE
10.0 C/min
Temperature (°C)
RM KING
PERKIN-ELMER
7 Series Thermal Analysis System

LABCORE Data Entry Template for Worklist# 12333

Analyst: N2 Instrument: DSC0 1 Book # 12N14-B

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

Worklist Comment: Please run AN-105 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	<u>28.45</u>	<u>20.3</u>	<u>N/A</u>	Joules/g
96000945	AN-105	2 SAMPLE	S96T004434 0		DSC-01	LIQUID	<u>N/A</u>	<u>16.8</u>		Joules/g
96000945	AN-105	3 DUP	S96T004434 0		DSC-01	LIQUID	<u>16.8</u>	<u>19.9</u>	<u>N/A</u>	Joules/g

Final page for worklist # 12333

Rae Ann Green 8-31-96
Analyst Signature Date

NE Wright 9/5/96
Analyst Signature Date

Verified/Validated by

Blandina
Valenzuela 9-6-96

Data Entry Comments:

Non-triplicate ⁹⁻⁵⁻⁹⁶ bdv the decomposition occurring

at approximately 200°C is seen on both the sample and

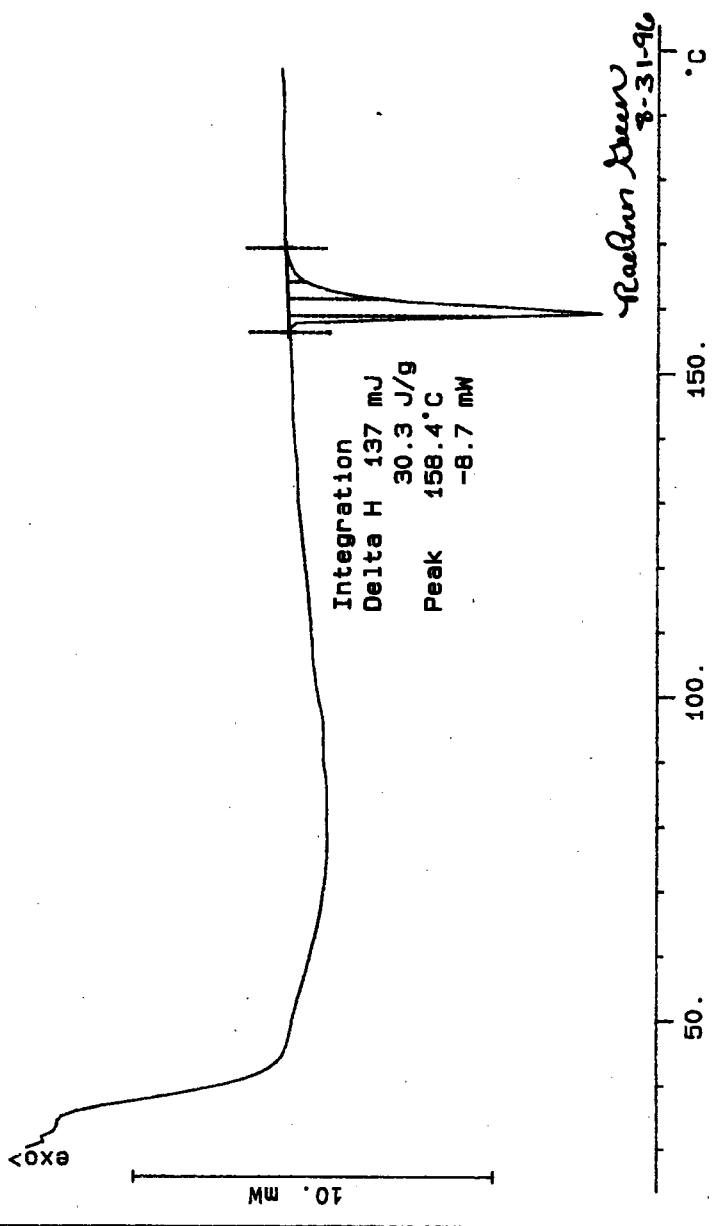
duplicate. However, it is more visible in the sample run.

It is most likely the decomposition of a pure material.

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 888 TO 890.

DSC STD 12N14-B Rate: 10.0 °C/min DSC METTLER 31-Aug-96
4.510 mg Ident: 0.0 222-S Laboratory



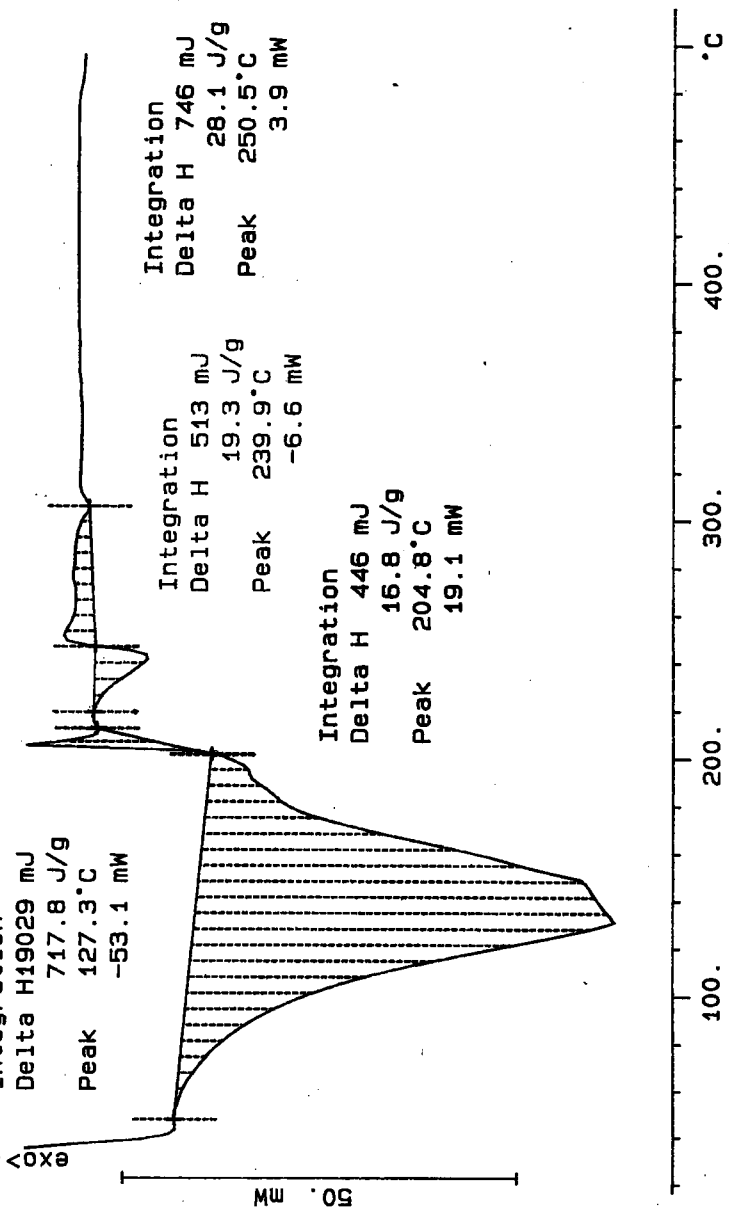
S96T004434 DUP N2
26.511 mg Rate: 10.0 °C/min
SAM
9.5%
File: 00003.001 DSC METTLER 31-Aug-96
Ident: 0.0 222-S Laboratory

Integration
Delta H 19029 mJ
Peak 717.8 J/g
127.3°C
-53.1 mW

Integration
Delta H 513 mJ
Peak 19.3 J/g
239.9°C
-6.6 mW

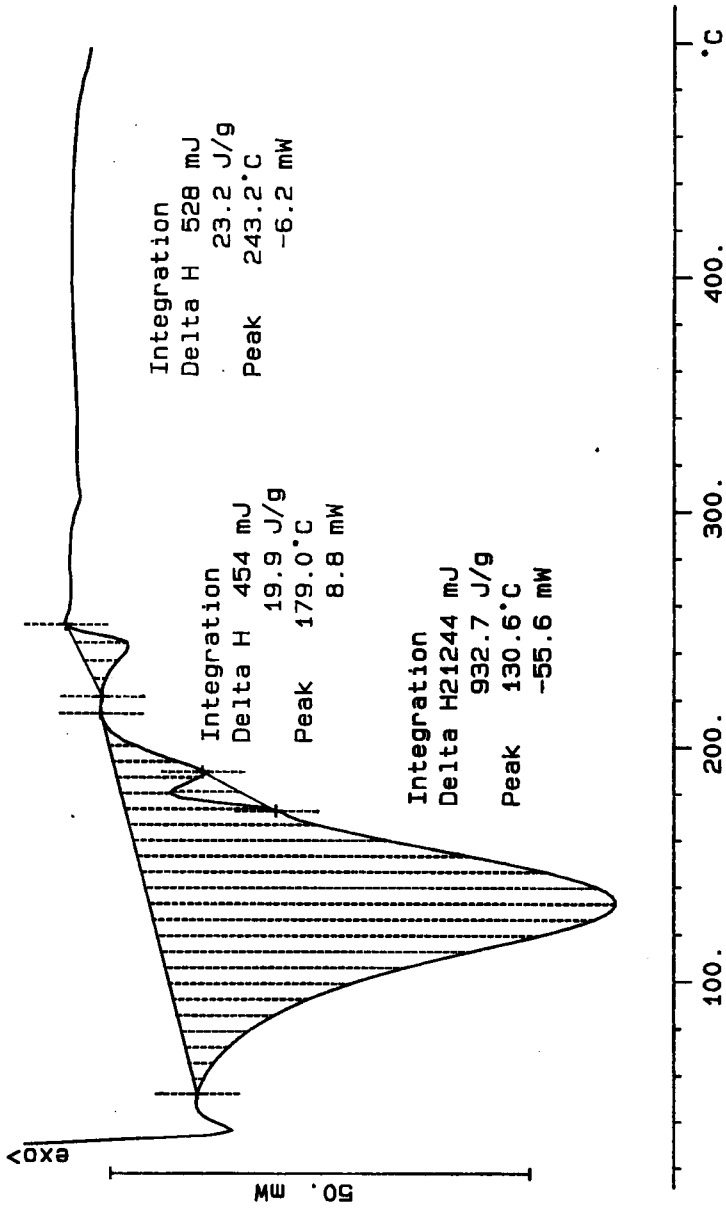
Integration
Delta H 446 mJ
Peak 16.8 J/g
204.8°C
19.1 mW

Integration
Delta H 746 mJ
Peak 28.1 J/g
250.5°C
3.9 mW



S96T004434 TRIP N2
22.776 mg
Rate: 10.0 °C/min
File: 00007.001 DSC METTLER 31-Aug-96
Ident: 0.0 222-S Laboratory

DWP 11-9-96



LABCORE Data Entry Template for Worklist# 12356

Analyst: BOY **Instrument:** DSC01 **Book #**

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for AN-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000832	AN-105	1 SAMPLE	S96T003731	0	DSC-02	SOLID	<u>N/A</u>	<u>8.89</u>		Joules/g Dry
96000832	AN-105	2 DUP	S96T003731	0	DSC-02	SOLID	<u>8.89</u>	<u>13.0</u>	<u>N/A</u>	Joules/g Dry
96000832	AN-105	3 SAMPLE	S96T004254	0	DSC-02	SOLID	<u>N/A</u>	<u>80.5</u>		Joules/g Dry
96000832	AN-105	4 DUP	S96T004254	0	DSC-02	SOLID	<u>80.5</u>	<u>58.4</u>	<u>N/A</u>	Joules/g Dry
96000832	AN-105	5 SAMPLE	S96T003792	0	DSC-02	SOLID	<u>N/A</u>	<u>43.4</u>		Joules/g Dry
96000832	AN-105	6 DUP	S96T003792	0	DSC-02	SOLID	<u>43.4</u>	<u>67.3</u>	<u>N/A</u>	Joules/g Dry
96000832	AN-105	7 SAMPLE	S96T003793	0	DSC-02	SOLID	<u>N/A</u>	<u>48.0</u>		Joules/g Dry
96000832	AN-105	8 DUP	S96T003793	0	DSC-02	SOLID	<u>48.0</u>	<u>49.4</u>	<u>N/A</u>	Joules/g Dry
96000832	AN-105	9 SAMPLE	S96T003794	0	DSC-02	SOLID	<u>N/A</u>	<u>46.9</u>		Joules/g Dry
96000832	AN-105	10 DUP	S96T003794	0	DSC-02	SOLID	<u>46.9</u>	<u>43.0</u>	<u>N/A</u>	Joules/g Dry
96000832	AN-105	11 SAMPLE	S96T003795	0	DSC-02	SOLID	<u>N/A</u>	<u>55.4</u>		Joules/g Dry
96000832	AN-105	12 DUP	S96T003795	0	DSC-02	SOLID	<u>55.4</u>	<u>59.0</u>	<u>N/A</u>	Joules/g Dry
96000832	AN-105	13 SAMPLE	S96T003796	0	DSC-02	SOLID	<u>N/A</u>	<u>70.8</u>		Joules/g Dry
96000832	AN-105	14 DUP	S96T003796	0	DSC-02	SOLID	<u>70.8</u>	<u>73.0</u>	<u>N/A</u>	Joules/g Dry
96000832	AN-105	15 SAMPLE	S96T003797	0	DSC-02	SOLID	<u>N/A</u>	<u>∅</u>		Joules/g Dry
96000832	AN-105	16 DUP	S96T003797	0	DSC-02	SOLID	<u>∅</u>	<u>∅</u>	<u>N/A</u>	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.

LABCORE Data Entry Template for Worklist# 12356

GROUP PROJECT S TYPE SAMPLE# R A -----TEST----- MATRIX ACTUAL FOUND DL UNIT

Final page for worklist # 12356

Bundina Valenzuela 9-10-96
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.

AN-105 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T00 3731	5.0	43.30	5.81
3731D	7.3	43.35	13.0
4254	43.7	45.34	80.5
4254D	21.7	45.44	58.4
4358	NO DSC		—
4358D	18.036		—
3792	24.3	43.94	43.4
3792D	27.2	43.97	67.29
3793	24.2	43.21	48.0
3793D	25.0	43.51	49.4
3794	26.5	43.44	46.9
3794D	24.3	43.44	43.0
3795	30.3	44.53	55.4
3795D	32.7	44.53	59.0
3796	38.5	45.60	70.8
3796D	37.7	45.60	73.0
3797	Ø	47.74	Ø
3797D	Ø	47.74	Ø

LABCORE Data Entry Template for Worklist# 12357

Analyst: BDY **Instrument:** DSC01 **Book #**

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for AN-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000832	AN-105	1 SAMPLE	S96T003798	0	DSC-02	SOLID	<u>N/A</u>	<u>98.1</u>		Joules/g Dry
96000832	AN-105	2 DUP	S96T003798	0	DSC-02	SOLID	<u>98.1</u>	<u>121</u>	<u>N/A</u>	Joules/g Dry
96000832	AN-105	3 SAMPLE	S96T003816	0	DSC-02	SOLID	<u>N/A</u>	<u>53.5</u>		Joules/g Dry
96000832	AN-105	4 DUP	S96T003816	0	DSC-02	SOLID	<u>53.5</u>	<u>45.6</u>	<u>N/A</u>	Joules/g Dry
96000832	AN-105	5 SAMPLE	S96T003817	0	DSC-02	SOLID	<u>N/A</u>	<u>28.9</u>		Joules/g Dry
96000832	AN-105	6 DUP	S96T003817	0	DSC-02	SOLID	<u>28.9</u>	<u>13.7</u>	<u>N/A</u>	Joules/g Dry
96000832	AN-105	7 SAMPLE	S96T004259	0	DSC-02	SOLID	<u>N/A</u>	<u>106</u>		Joules/g Dry
96000832	AN-105	8 DUP	S96T004259	0	DSC-02	SOLID	<u>106</u>	<u>94.5</u>	<u>N/A</u>	Joules/g Dry
96000945	AN-105	9 SAMPLE	S96T003981	0	DSC-02	SOLID	<u>N/A</u>	<u>38.4</u>		Joules/g Dry
96000945	AN-105	10 DUP	S96T003981	0	DSC-02	SOLID	<u>38.4</u>	<u>33.3</u>	<u>N/A</u>	Joules/g Dry
96000945	AN-105	11 SAMPLE	S96T003982	0	DSC-02	SOLID	<u>N/A</u>	<u>106</u>		Joules/g Dry
96000945	AN-105	12 DUP	S96T003982	0	DSC-02	SOLID	<u>106</u>	<u>174</u>	<u>N/A</u>	Joules/g Dry
96000945	AN-105	13 SAMPLE	S96T003983	0	DSC-02	SOLID	<u>N/A</u>	<u>69.4</u>		Joules/g Dry
96000945	AN-105	14 DUP	S96T003983	0	DSC-02	SOLID	<u>69.4</u>	<u>86.3</u>	<u>N/A</u>	Joules/g Dry
96000945	AN-105	15 SAMPLE	S96T004310	0	DSC-02	SOLID	<u>N/A</u>	<u>77.4</u>		Joules/g Dry
96000945	AN-105	16 DUP	S96T004310	0	DSC-02	SOLID	<u>77.4</u>	<u>45.8</u>	<u>N/A</u>	Joules/g Dry
96000945	AN-105	17 SAMPLE	S96T004311	0	DSC-02	SOLID	<u>N/A</u>	<u>71.5</u>		Joules/g Dry
96000945	AN-105	18 DUP	S96T004311	0	DSC-02	SOLID	<u>71.5</u>	<u>118</u>	<u>N/A</u>	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.

LABCORE Data Entry Template for Worklist# 12357

GROUP PROJECT S TYPE SAMPLE# R A -----TEST----- MATRIX ACTUAL FOUND DL UNIT

Final page for worklist # 12357

Blandina Valenzuela 9-10-96
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.

AN-105 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T003798	57.0	39.87	98.1
3798D	53.0	39.57	121
3816	22.4	42.12	53.9
3816D	24.0	42.92	45.6
3817	16.1	44.36	22.9
3817D	7.6	44.36	13.7
4259	60.4	45.44	106
4259D	54.1	45.44	94.5
3981	21.0	45.54	35.4
3981D	12.0	45.30	33.3
3982	57.5	45.54	106
3982D	44.8	45.54	174
3983	31.1	43.66	69.4
3983D	48.6	43.02	88.3
4310	40.4	47.90	77.4
4310D	21.1	47.50	45.8
4311	11.4	51.47	71.5
4311D	57.1	51.47	118

LABCORE Data Entry Template for Worklist# 12358

Analyst: BNV Instrument: DSC01 Book #

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for An-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000945	AN-105	1 SAMPLE	S96T004335	0	DSC-02	SOLID	N/A	57.8		Joules/g Dry
96000945	AN-105	2 DUP	S96T004335	0	DSC-02	SOLID	57.8	72.7	N/A	Joules/g Dry
96000945	AN-105	3 SAMPLE	S96T004435	0	DSC-02	SOLID	N/A	83.2		Joules/g Dry
96000945	AN-105	4 DUP	S96T004435	0	DSC-02	SOLID	83.2	161	N/A	Joules/g Dry
96000945	AN-105	5 SAMPLE	S96T004436	0	DSC-02	SOLID	N/A	28.0		Joules/g Dry
96000945	AN-105	6 DUP	S96T004436	0	DSC-02	SOLID	28.0	34.7	N/A	Joules/g Dry
96000945	AN-105	7 SAMPLE	S96T004437	0	DSC-02	SOLID	N/A	41.9		Joules/g Dry
96000945	AN-105	8 DUP	S96T004437	0	DSC-02	SOLID	41.9	81.3	N/A	Joules/g Dry
96000945	AN-105	9 SAMPLE	S96T004433	0	DSC-02	LIQUID	N/A	25.2		Joules/g Dry
96000945	AN-105	10 DUP	S96T004433	0	DSC-02	LIQUID	25.2	31.5	N/A	Joules/g Dry
96000945	AN-105	11 SAMPLE	S96T004434	0	DSC-02	LIQUID	N/A	34.5		Joules/g Dry
96000945	AN-105	12 DUP	S96T004434	0	DSC-02	LIQUID	34.5	40.8	N/A	Joules/g Dry

Final page for worklist # 12358

Blancina Valenzuela 9-10-96
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# 12359

Analyst: BDV **Instrument:** DSC01 **Book #**

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for AN-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000832	AN-105	1 SAMPLE	S96T003732	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	2 DUP	S96T003732	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	3 SAMPLE	S96T004039	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	4 DUP	S96T004039	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	5 SAMPLE	S96T003739	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	6 DUP	S96T003739	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	7 SAMPLE	S96T003740	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	8 DUP	S96T003740	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	9 SAMPLE	S96T003741	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	10 DUP	S96T003741	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	11 SAMPLE	S96T003742	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	12 DUP	S96T003742	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	13 SAMPLE	S96T003743	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	14 DUP	S96T003743	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	15 SAMPLE	S96T003744	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	16 DUP	S96T003744	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	17 SAMPLE	S96T003745	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	18 DUP	S96T003745	0	DSC-02	LIQUID	Ø	Ø	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.

LABCORE Data Entry Template for Worklist# 12359

GROUP PROJECT S TYPE SAMPLE# R A -----TEST----- MATRIX ACTUAL FOUND DL UNIT

Final page for worklist # 12359

Blandina Valenzuela 9.10.96
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.

AN-105 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T003732	∅	---	∅
3732D	∅	---	∅
4039	∅	---	∅
4039D	∅	---	∅
3739	∅	---	∅
3739D	∅	---	∅
3740	∅	---	∅
3740D	∅	---	∅
3741	∅	---	∅
3741D	∅	---	∅
3742	∅	---	∅
3742D	∅	---	∅
3743	∅	---	∅
3743D	∅	---	∅
3744	∅	---	∅
3744D	∅	---	∅
3745	∅	---	∅
3745D	∅	---	∅

LABCORE Data Entry Template for Worklist# 12360

Analyst: BDY **Instrument:** DSC01 **Book #**

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for AN-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000832	AN-105	1 SAMPLE	S96T003746	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	2 DUP	S96T003746	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	3 SAMPLE	S96T003747	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	4 DUP	S96T003747	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	5 SAMPLE	S96T003748	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	6 DUP	S96T003748	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	7 SAMPLE	S96T003749	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	8 DUP	S96T003749	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	9 SAMPLE	S96T003750	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	10 DUP	S96T003750	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000832	AN-105	11 SAMPLE	S96T003751	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000832	AN-105	12 DUP	S96T003751	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	13 SAMPLE	S96T003974	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	14 DUP	S96T003974	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	15 SAMPLE	S96T003975	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	16 DUP	S96T003975	0	DSC-02	LIQUID	Ø	Ø	N/A	Joules/g Dry
96000945	AN-105	17 SAMPLE	S96T003976	0	DSC-02	LIQUID	N/A	4.44		Joules/g Dry
96000945	AN-105	18 DUP	S96T003976	0	DSC-02	LIQUID	4.44	Ø	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.

LABCORE Data Entry Template for Worklist# 12360

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000945	AN-105	19 SAMPLE	S96T003977	0	DSC-02	LIQUID	N/A	Ø		Joules/g Dry
96000945	AN-105	20 DUP	S96T003977	0	DSC-02	LIQUID	Ø	105	N/A	Joules/g Dry

Final page for worklist # 12360

Blandina Valenzuela 9-10-96
 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.

AN-105 dry DSC.

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T003746	∅	—	∅
3746D	∅	—	∅
3747	∅	—	∅
3747D	∅	—	∅
3748	∅	—	∅
3748D	∅	—	∅
3749	∅	—	∅
3749D	∅	—	∅
3750	∅	—	∅
3750D	∅	—	∅
3751	∅	—	∅
3751D	∅	—	∅
3774	∅	—	∅
3774D	∅	—	∅
3775	∅	—	∅
3775D	∅	—	∅
3776	2.8	50.42	4.44
3776D	∅	50.42	∅
3777	∅	49.42	∅
3777D	52.4	49.42	105

LABCORE Data Entry Template for Worklist# 12361

Analyst: BOY **Instrument:** DSC01 **Book #**

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for AN-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000945	AN-105	1 SAMPLE	S96T003978	0	DSC-02	LIQUID	N/A	∅		Joules/g Dry
96000945	AN-105	2 DUP	S96T003978	0	DSC-02	LIQUID	∅	∅	N/A	Joules/g Dry
96000945	AN-105	3 SAMPLE	S96T003979	0	DSC-02	LIQUID	N/A	∅		Joules/g Dry
96000945	AN-105	4 DUP	S96T003979	0	DSC-02	LIQUID	∅	∅	N/A	Joules/g Dry
96000945	AN-105	5 SAMPLE	S96T003980	0	DSC-02	LIQUID	N/A	∅		Joules/g Dry
96000945	AN-105	6 DUP	S96T003980	0	DSC-02	LIQUID	∅	∅	N/A	Joules/g Dry
96000945	AN-105	7 SAMPLE	S96T004308	0	DSC-02	LIQUID	N/A	∅		Joules/g Dry
96000945	AN-105	8 DUP	S96T004308	0	DSC-02	LIQUID	∅	∅	N/A	Joules/g Dry
96000945	AN-105	9 SAMPLE	S96T004309	0	DSC-02	LIQUID	N/A	26.5		Joules/g Dry
96000945	AN-105	10 DUP	S96T004309	0	DSC-02	LIQUID	26.5	38.2	N/A	Joules/g Dry
96000945	AN-105	11 SAMPLE	S96T004333	0	DSC-02	LIQUID	N/A	69.1		Joules/g Dry
96000945	AN-105	12 DUP	S96T004333	0	DSC-02	LIQUID	69.1	115	N/A	Joules/g Dry
96000945	AN-105	13 SAMPLE	S96T004419	0	DSC-02	LIQUID	N/A	36.4		Joules/g Dry
96000945	AN-105	14 DUP	S96T004419	0	DSC-02	LIQUID	36.4	414	N/A	Joules/g Dry
96000945	AN-105	15 SAMPLE	S96T004420	0	DSC-02	LIQUID	N/A	∅		Joules/g Dry
96000945	AN-105	16 DUP	S96T004420	0	DSC-02	LIQUID	∅	∅	N/A	Joules/g Dry
96000945	AN-105	17 SAMPLE	S96T004421	0	DSC-02	LIQUID	N/A	∅		Joules/g Dry
96000945	AN-105	18 DUP	S96T004421	0	DSC-02	LIQUID	∅	69.0	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.

LABCORE Data Entry Template for Worklist# 12361

GROUP PROJECT S TYPE SAMPLE# R A -----TEST----- MATRIX ACTUAL FOUND DL UNIT

Final page for worklist # 12361

Blandina Valenzuela 9.10.96
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.

AN-105 dry DSC

CALCULATED DRY DSC			
SAMPLE NO.	DSC RESULT (J/g)	TGA RESULT (% water)	DRY DSC RESULT
S96T00 3978	∅	—	∅
3978D	∅	—	∅
3979	∅	—	∅
3979D	∅	—	∅
3980	∅	—	∅
3980D	∅	—	∅
4308 398	∅	—	∅
4308D	∅	—	∅
4309	13.55	48.59	26.5
4309D	19.54	47.72	38.0
4333	24.5	49.64	69.1
4333D	27.7	49.64	114.6
4419	18.0	50.48	26.4
4419D	215.2	50.48	414
4420	∅	—	∅
4420D	∅	—	∅
4421	∅	—	∅
4421D	34.54	47.95	69.0

LABCORE Data Entry Template for Worklist# 13019

Analyst: RDM Instrument: DSC0 3 Book # 12N14B

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

Worklist Comment: AN105 DSC Rerun RUN UNDER N2.

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	LIQUID	28.45	27.41	N/A	Joules/g
96000945	AN-105	2 SAMPLE	S96T004419	1	DSC-03	LIQUID	N/A	0		Joules/g
96000945	AN-105	3 DUP	S96T004419	1	DSC-03	LIQUID	0	4.53	N/A	Joules/g
96000832	AN-105	4 SAMPLE	S96T003749	0	DSC-03	LIQUID	N/A	42.6		Joules/g
96000832	AN-105	5 DUP	S96T003749	0	DSC-03	LIQUID	42.6	64.9	N/A	Joules/g

Final page for worklist # 13019

See attached for signatures

Analyst Signature

Date

9-18-96

Analyst Signature

Date

Verified/Validated by

Blandina

Valenzuela

9-18-96

S96T004419 results are a replicate for this sample. The exotherm found in the ^{duplicate} sample is from the decomposition of a pure substance. It is occurring during ⁸⁻¹⁸⁻¹⁹⁹⁶ the evaporation of water.

Data Entry Comments:

S96T003749 thermograms indicate an exotherm occurring during the evaporation of water. It appears to be from a relatively pure substance. The results are the sum of two exotherms.

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

worklistpt Version 2.1 05/15/95
09/18/96 11:18

WHC-SD-WM-DP-199, Rev. 0

Page: 1

LABCORE Data Entry Template for Worklist# 13067

Analyst: BDV Instrument: DSC0 1 Book #

Method: LA-514-113 Rev/Mod

Worklist Comment: Dry DSC for AN-105. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
96000832	AN-105	1 SAMPLE	S96T003749	1	DSC-02	LIQUID	N/A	85.7		Joules/g Dry
96000832	AN-105	2 DUP	S96T003749	1	DSC-02	LIQUID	85.7	1301	N/A	Joules/g Dry
96000945	AN-105	3 SAMPLE	S96T004419	1	DSC-02	LIQUID	N/A	∅		Joules/g Dry
96000945	AN-105	4 DUP	S96T004419	1	DSC-02	LIQUID	∅	29.34	N/A	Joules/g Dry

Final page for worklist # 13067

Blandina Valenzuela
 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# 13019

Analyst: RDM Instrument: DSC0 _____ Book # 12N/4B

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

Worklist Comment: AN105 DSC Rerun RUN UNDER N2. **RUSH**

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	_____	_____	N/A	Joules/g
96000945	AN-105	2 SAMPLE	S96T004419	1	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96000945	AN-105	3 DUP	S96T004419	1	DSC-01	LIQUID	_____	_____	N/A	Joules/g
96000832	AN-105	4 SAMPLE	S96T003749	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
96000832	AN-105	5 DUP	S96T003749	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g

Final page for worklist # 13019

RDM 9/18/96
Analyst Signature Date

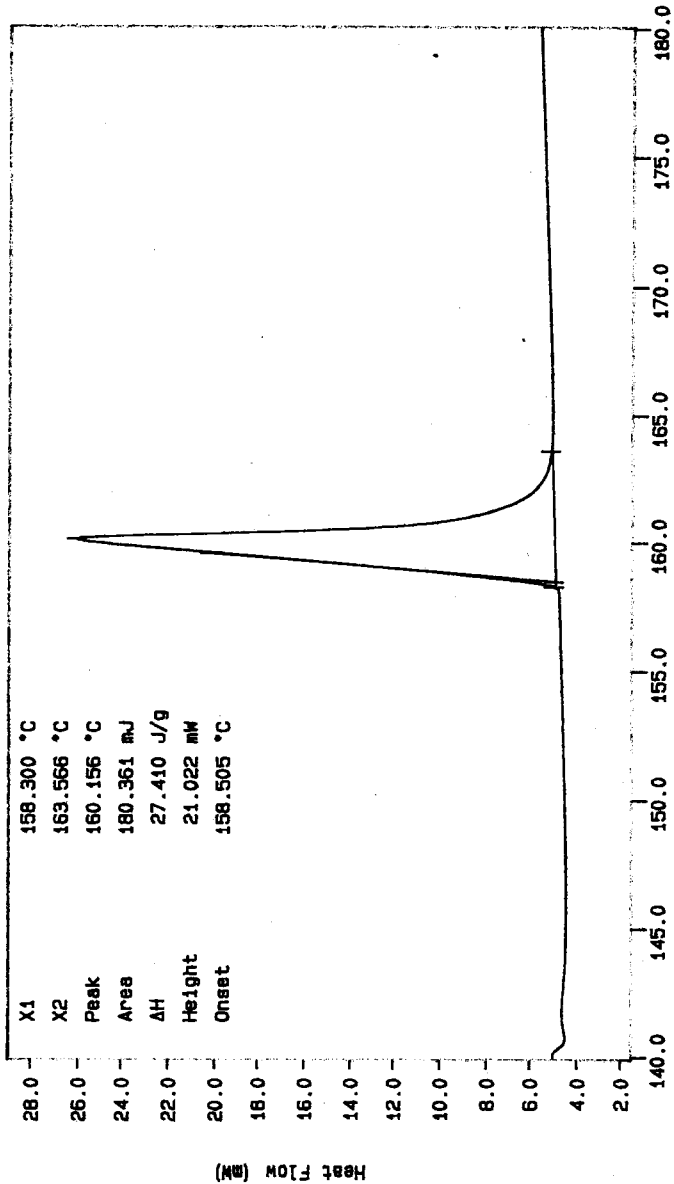
Analyst Signature Date

FLA-0 ⁹⁻¹⁸⁻⁹⁶ _{DDT}
DSC-03 instrument was used.
9-18-96 Blandina Valenzuela

Data Entry Comments:

Curve 1: DSC
File info: ind091701 Tue Sep 17 17:11:15 1996
Sample Weight: 6.980 mg
12N14-B INDIUM AT 10C/MIN

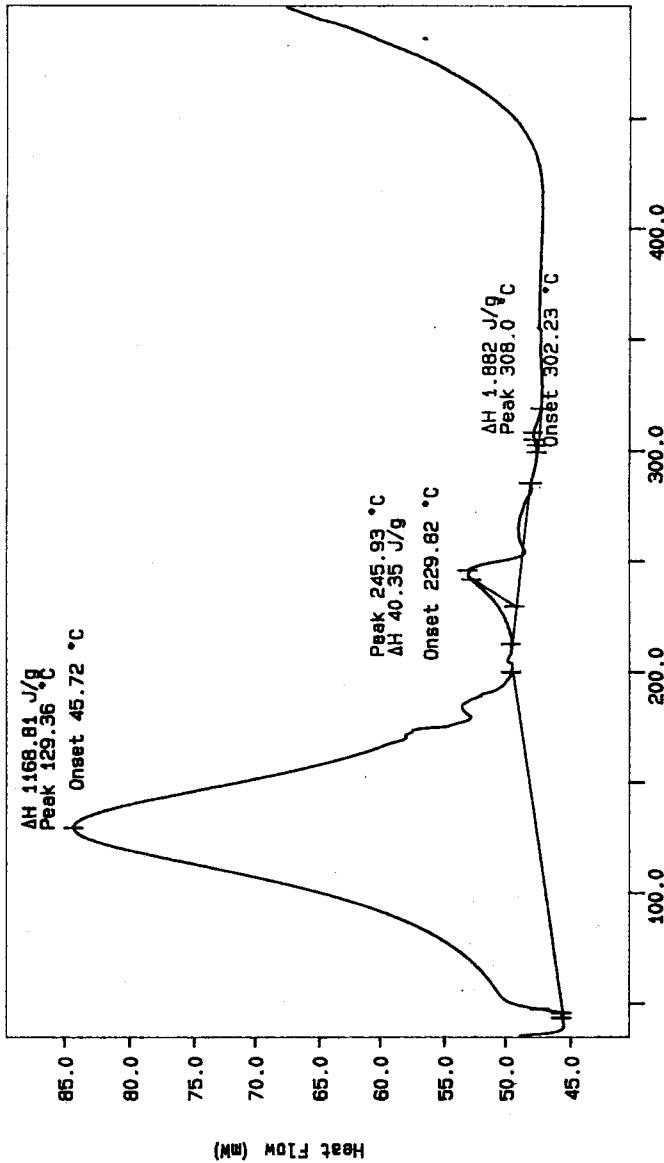
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 311 TO 315.



311

N2, EXOTHERM DOWN
 TEMPERATURE TIMES: 0.0 min RATE: 10.0 c/min
 nd 05498
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Tue Sep 17 17:11 1996

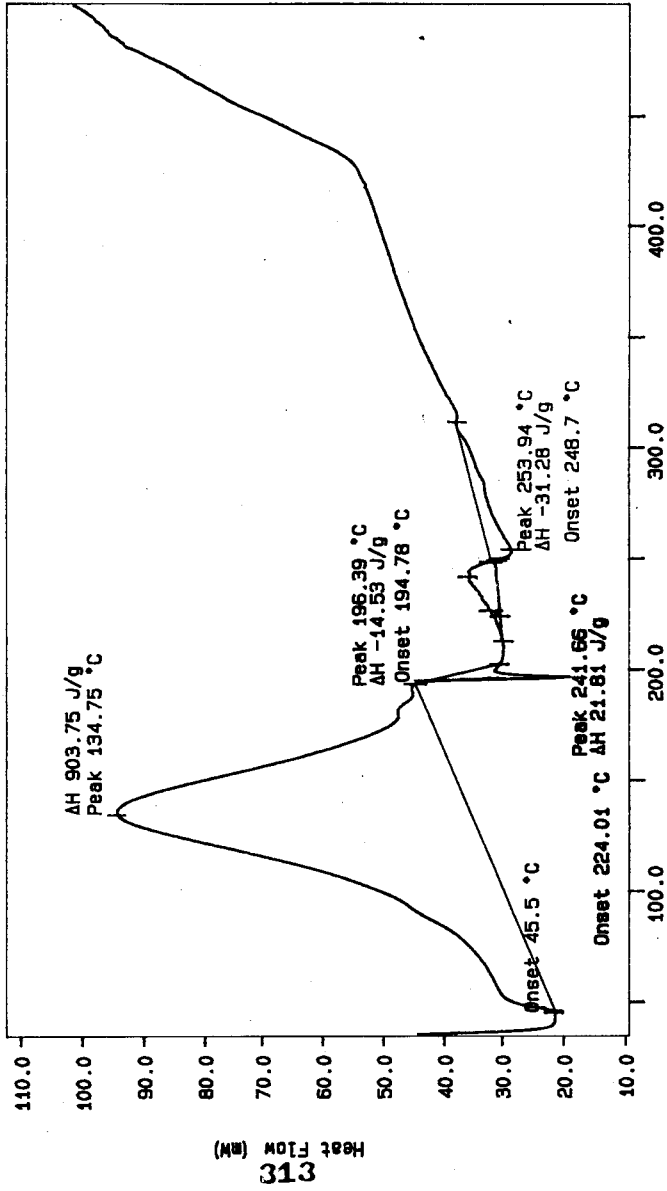
Curve 1: DSC
File info: SAM091801 Wed Sep 18 00:32:49 1996
Sample Weight: 12.060 mg
S96T004419



rd meyers
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 18 08:52:08 1996

N2 10C/min
TEMP: 50.0 °C
TIME: 508.0 s
O.0 min RATE: 10.0 C/min

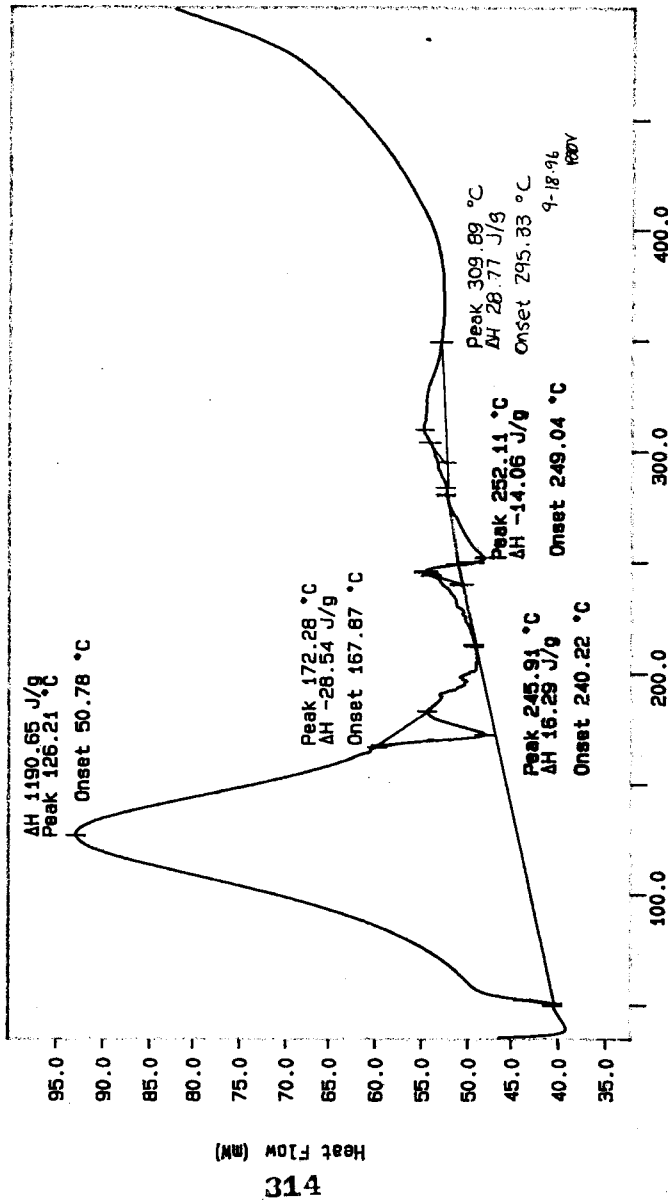
Curve 1: DSC
File Info: SAM091802 Wed Sep 18 01: 46: 57 1996
Sample Weight: 22.680 mg
S96T004419DUP



rd meyers
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 18 01: 02: 19 1996

N2 10C/min
TEMP: 50.8 °C
TIME: 0.0 min RATE: 10.0 C/min

Curve 1: DSC
File Info: sem091701 Tue Sep 17 18:30:52 1996
Sample Weight: 16.000 mg
S98T003B7E 747

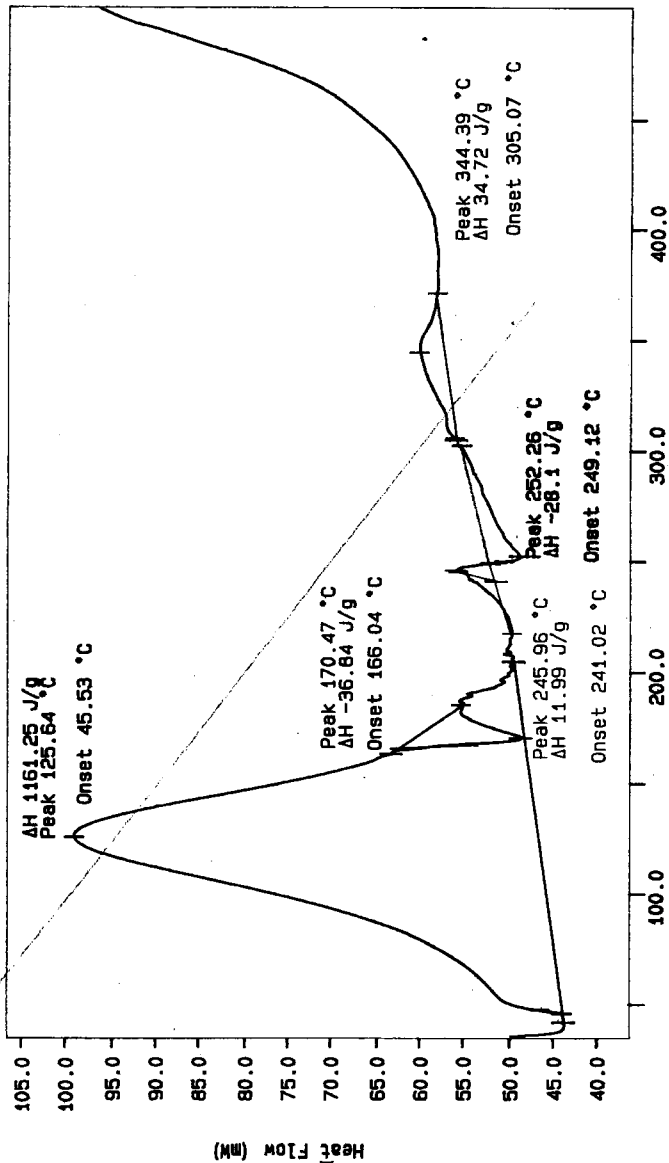


rd meyers
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 18 08:36:10 1996

N2 10C/min
TEMP: 35.0 C
TIME: 0.0 min RATE: 10.0 C/min

314

Curve 1: DSC
File Info: SAM091702 Tue Sep 17 22:13:55 1996
Sample Weight: 17.510 mg
S96T003749DUP



rd meyers
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Sep 16 08:42:17 1996

N2 10C/min
TEMPERATURE 36.0 C
TIME 000.0 S
FLOW RATE 0.0 ml/min
HEATING RATE 10.0 C/min

LABCORE Data Entry Template for Worklist#

11281

Analyst: RDM Instrument: TGA0 1 Book # 92W8R

Method: LA-560-112 Rev/Mod B2 B-1 9/18/96 FS

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	59.04	N/A	%
96000832	AN-105	2 SAMPLE	S96T003732	0	TGA-01	LIQUID	N/A	49.57		%
96000832	AN-105	3 DUP	S96T003732	0	TGA-01	LIQUID	49.57	51.74 50.2	0.3% N/A	%
96000832	AN-105	4 SAMPLE	S96T003739	0	TGA-01	LIQUID	N/A	50.2		%
96000832	AN-105	5 DUP	S96T003739	0	TGA-01	LIQUID	50.2	50.57	N/A	%

Final page for worklist # 11281

RDM 7/31/96
Analyst Signature Date

Frank Mack 8-6-96
Analyst Signature Date

Verified/Validated by
Blondina
Valenzuela 8.7.96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 317 TO 321.

TGA STD 82NB-A

16.580 mg

Rate: 10.0 °C/min

File: 00004.001

TG METTLER

31-JUL-96

Ident: 0.0 222-S Laboratory

Step Analysis

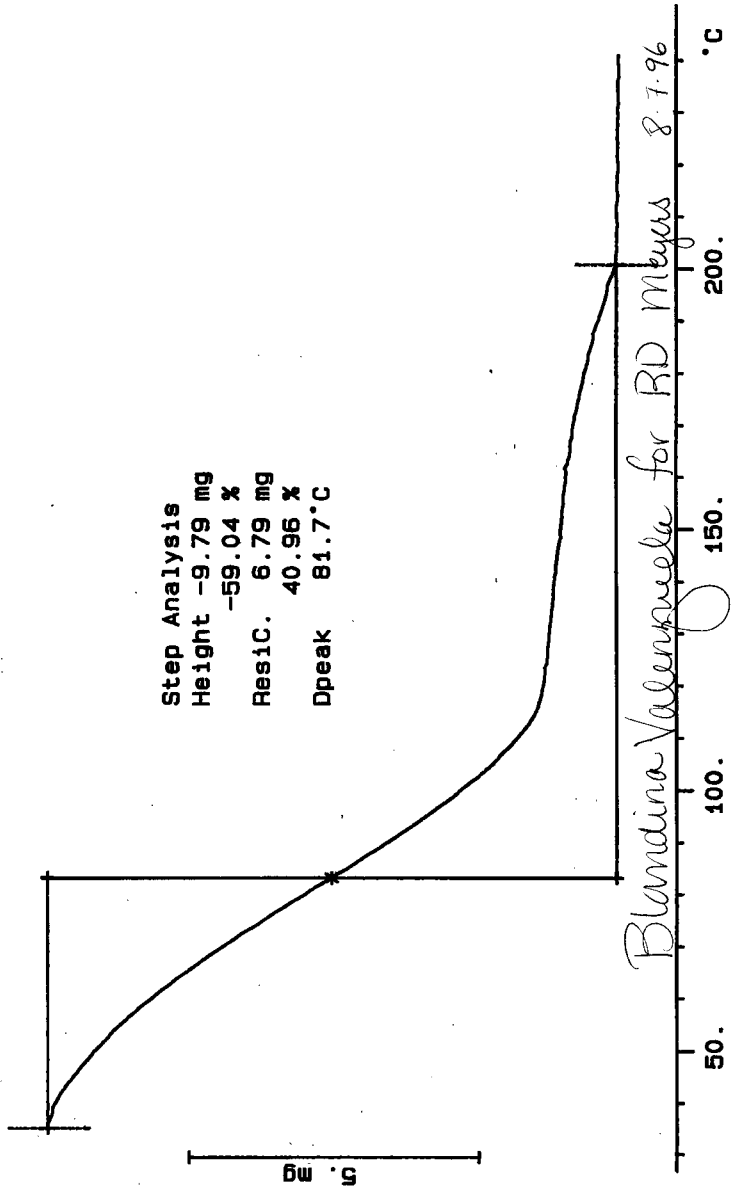
Height -9.79 mg

-59.04 %

Resid. 6.79 mg

40.96 %

Dpeak 81.7 °C



S96T003732 N2

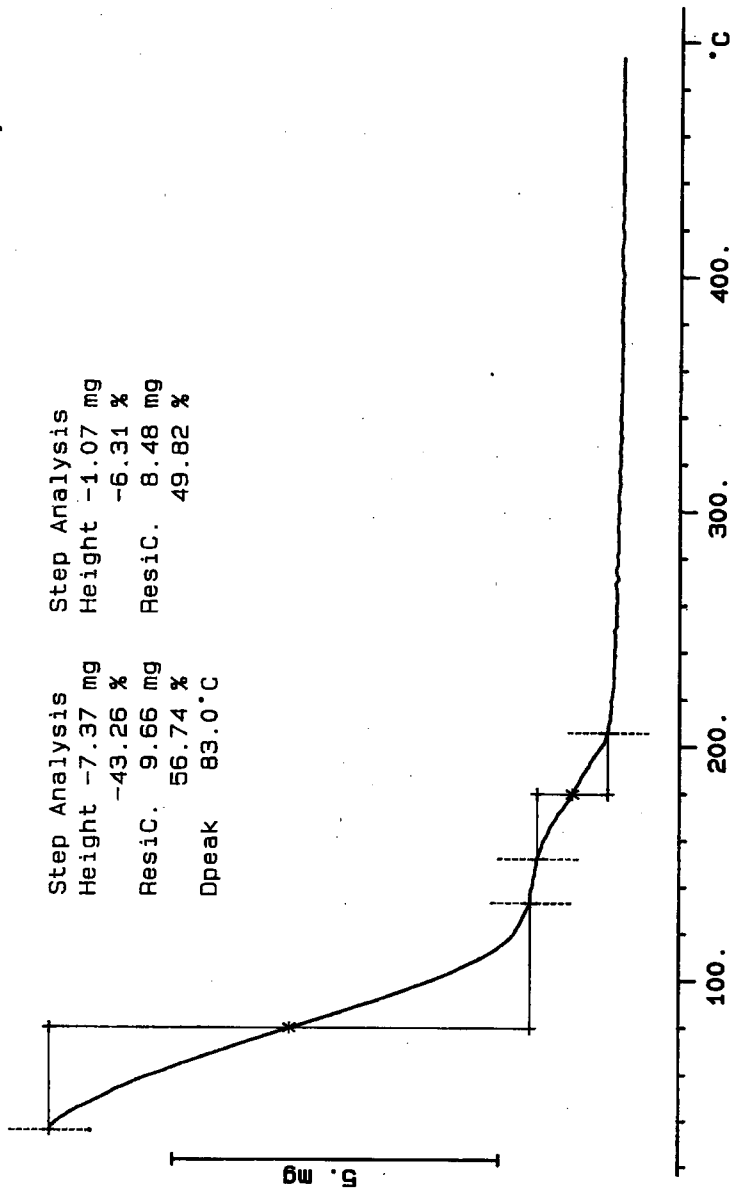
17.029 mg

File: 00010.001 TG METTLER 31-Jul-96
 Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis
 Height -7.37 mg
 -43.26 %
 Resid. 9.66 mg
 56.74 %
 Dpeak 83.0 °C

Step Analysis
 Height -1.07 mg
 -6.31 %
 Resid. 8.48 mg
 49.82 %

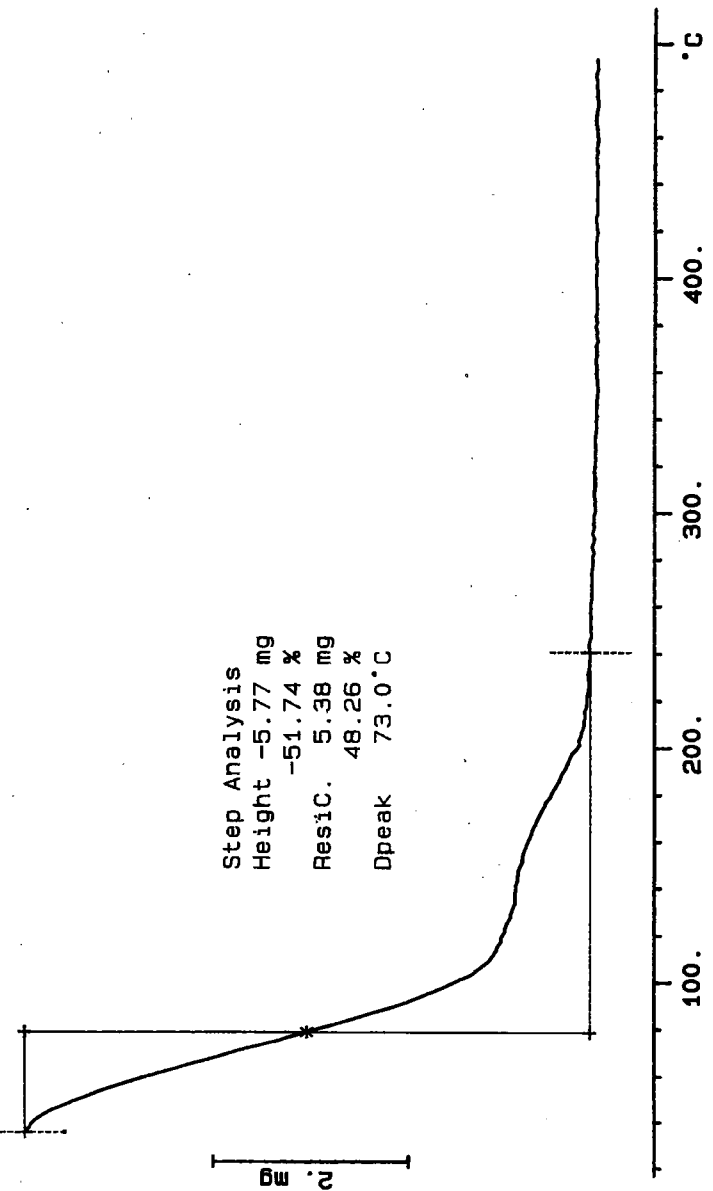


S96T003732 DUP N2
11.145 mg

Rate: 10.0 °C/min

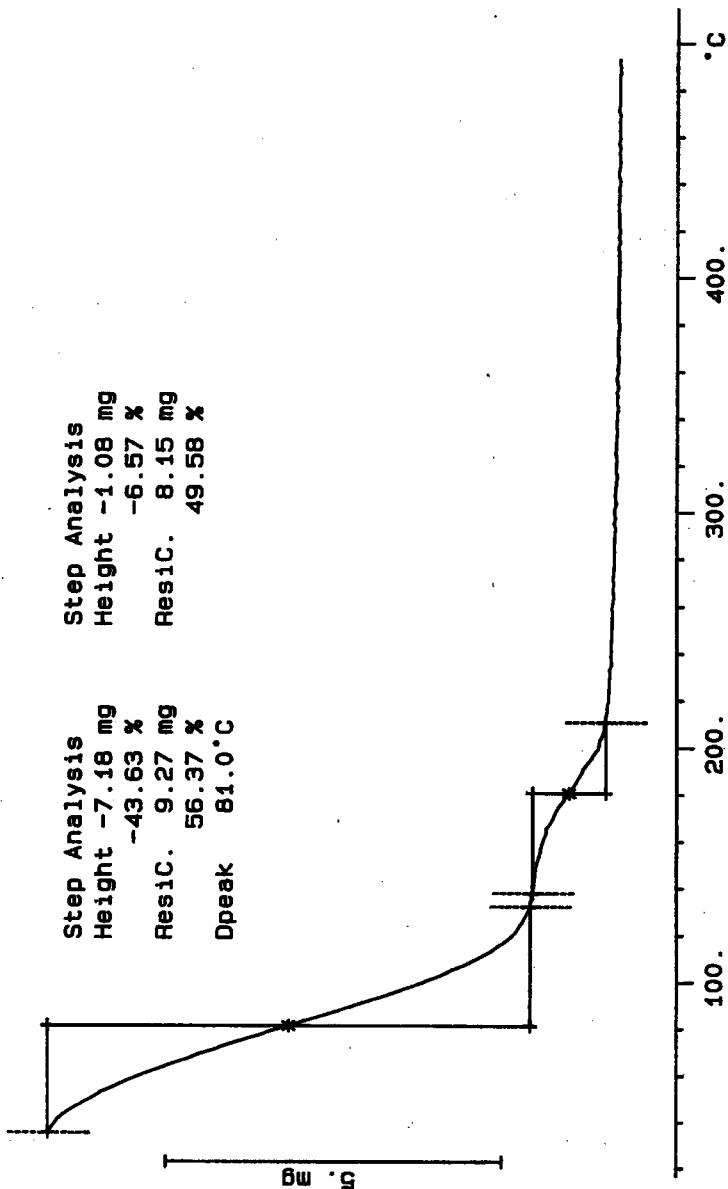
File: 00012.001 TG
Ident: 0.0 222-S Laboratory

31-JUL-96



S96T003739 N2
 16.447 mg
 Rate: 10.0 °C/min
 File: 00006.001 TG METTLER 31-Jul-96
 Ident: 0.0 222-S Laboratory

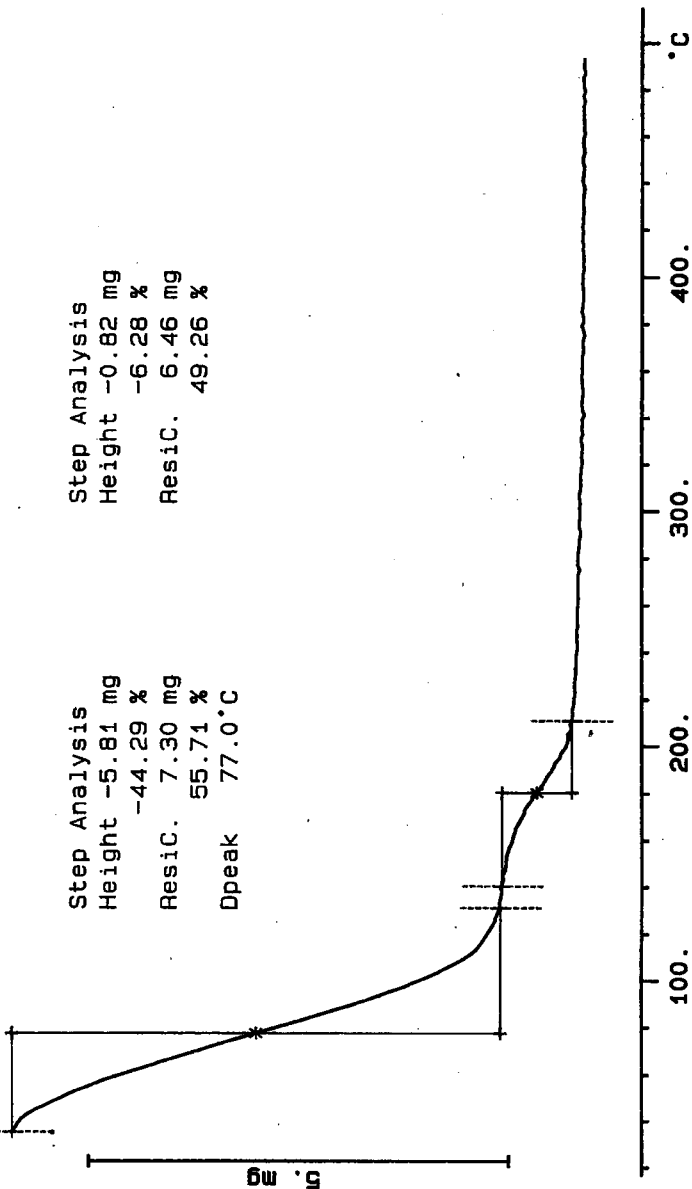
Step Analysis	Step Analysis
Height -7.18 mg	Height -1.08 mg
-43.63 %	-6.57 %
ResidC. 9.27 mg	ResidC. 8.15 mg
56.37 %	49.58 %
Dpeak 81.0°C	



S96T003739DUP N2
13.111 mg
Rate: 10.0 °C/min
File: 00008.001 TG METTLER 31-Jul-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -5.81 mg
-44.29 %
ResiC. 7.30 mg
55.71 %
Dpeak 77.0°C

Step Analysis
Height -0.82 mg
-6.28 %
ResiC. 6.46 mg
49.26 %



LABCORE Data Entry Template for Worklist#

11282

Analyst: RDM **Instrument:** TGA0 3 **Book #** 82N8A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.2</u>	<u>58.77</u>	N/A	%
96000832	AN-105	2 SAMPLE	S96T003740	0	TGA-03	LIQUID	N/A	<u>50.43</u>		%
96000832	AN-105	3 DUP	S96T003740	0	TGA-03	LIQUID	<u>50.43</u>	<u>49.69</u>	N/A	%
96000832	AN-105	4 SAMPLE	S96T003741	0	TGA-03	LIQUID	N/A	<u>50.12</u>		%
96000832	AN-105	5 DUP	S96T003741	0	TGA-03	LIQUID	<u>50.12</u>	<u>50.83</u>	N/A	%

Final page for worklist # 11282

See attached for signatures
Analyst Signature [Signature] **Date** 8-6-96

[Signature] 8-6-96
Analyst Signature **Date**

Verified/Validated by
Blandina Valenzuela
8-7-96

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#

11282


Analyst: _____ Instrument: TGA0 _____ Book # _____

Method: LA-560-112 Rev/Mod _____

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID	_____	_____	N/A	%
96000832	AN-105	2	SAMPLE	S96T003740	0		TGA-01	LIQUID	N/A	_____	_____	%
96000832	AN-105	3	DUP	S96T003740	0		TGA-01	LIQUID	_____	_____	N/A	%
96000832	AN-105	4	SAMPLE	S96T003741	0		TGA-01	LIQUID	N/A	_____	_____	%
96000832	AN-105	5	DUP	S96T003741	0		TGA-01	LIQUID	_____	_____	N/A	%

Final page for worklist # 11282



Analyst Signature Date

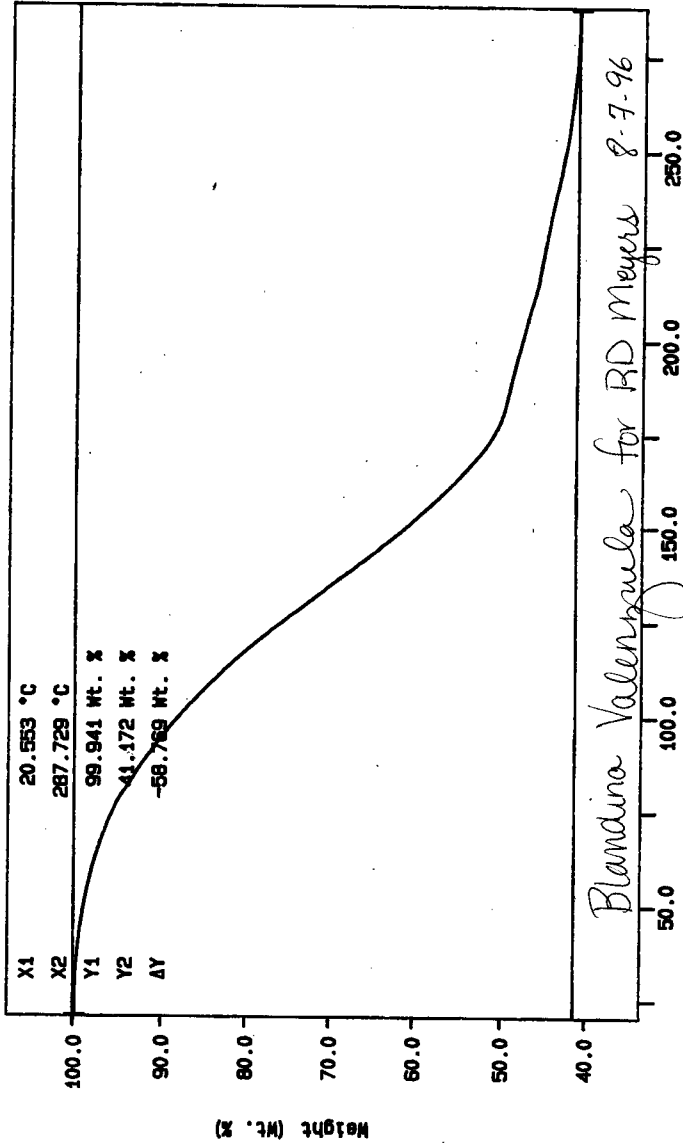
Analyst Signature Date

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: TGA
File info: TER073101 Wed Jul 31 06:07:44 1996
Sample Weight: 18.559 mg
TGA STD 82N8-A

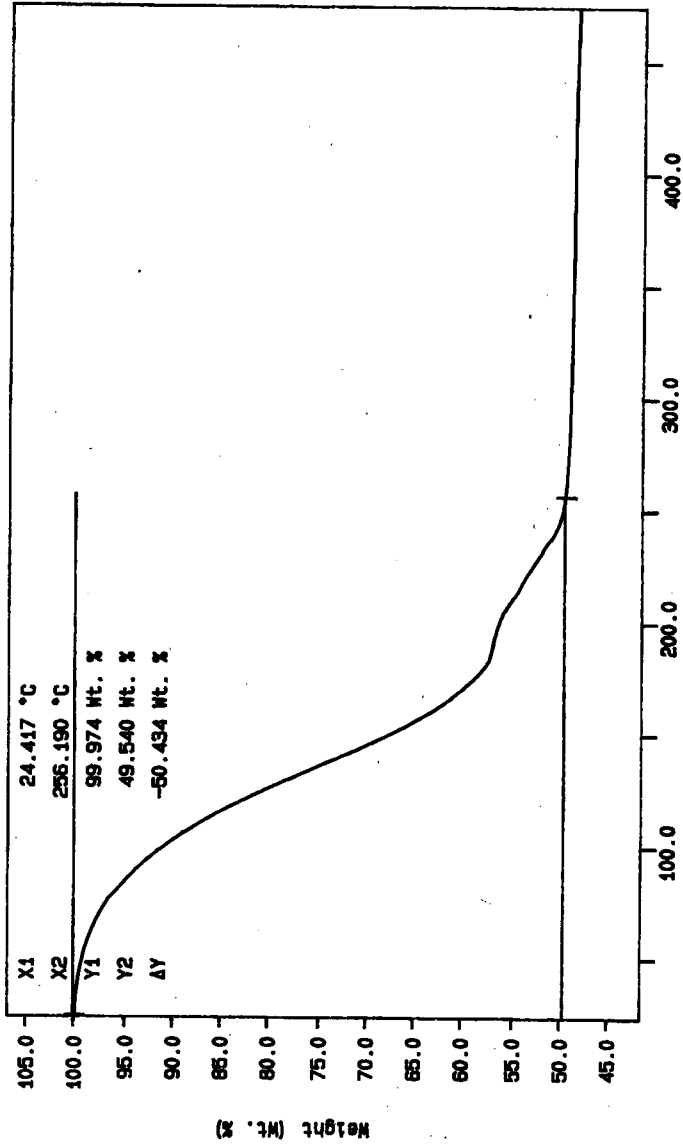
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGISTS/ANALYST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 331 TO 332.



Blandina Valenzuela for RD Meyers 8-7-96

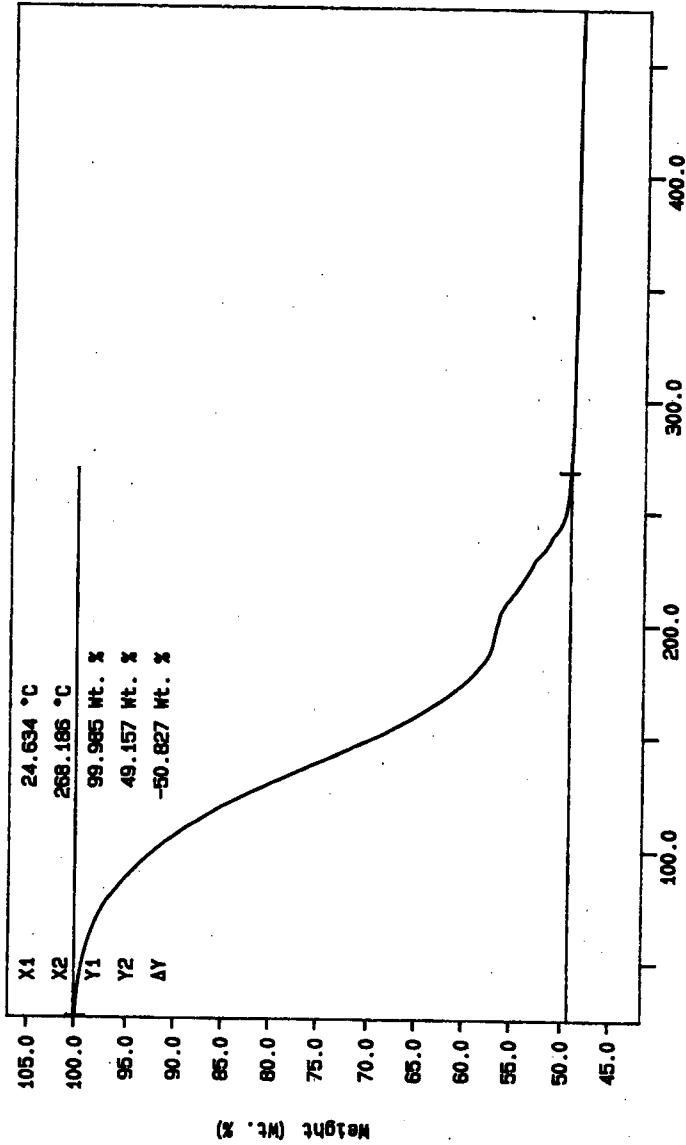
N2 100/MIN
 TIME 308.88
 0.0 min RATE: 10.0 C/min
 Temperature (°C)
 RD MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed Jul 31 07:59:33 1996

Curve 1: TGA
File Info: SAM073103 Wed Jul 31 12:38:16 1996
Sample Weight: 14.066 mg
S98T003740



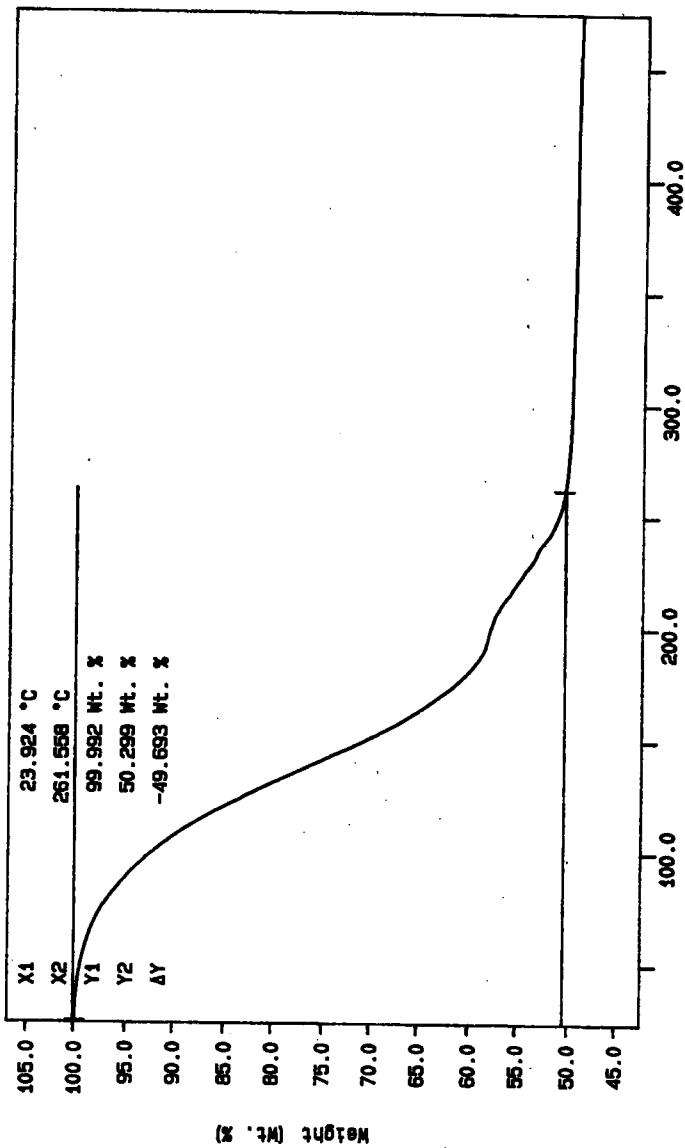
10C/MIN N2
TIME: 8.98
RATE: 0.0 min RATE: 10.0 C/min
Temperature (°C)
RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Jul 31 13:22:01 1996

Curve 1: TGA
File Info: SAM073104 Wed Jul 31 16:06:32 1996
Sample Weight: 15.343 mg
S96T0037400JP



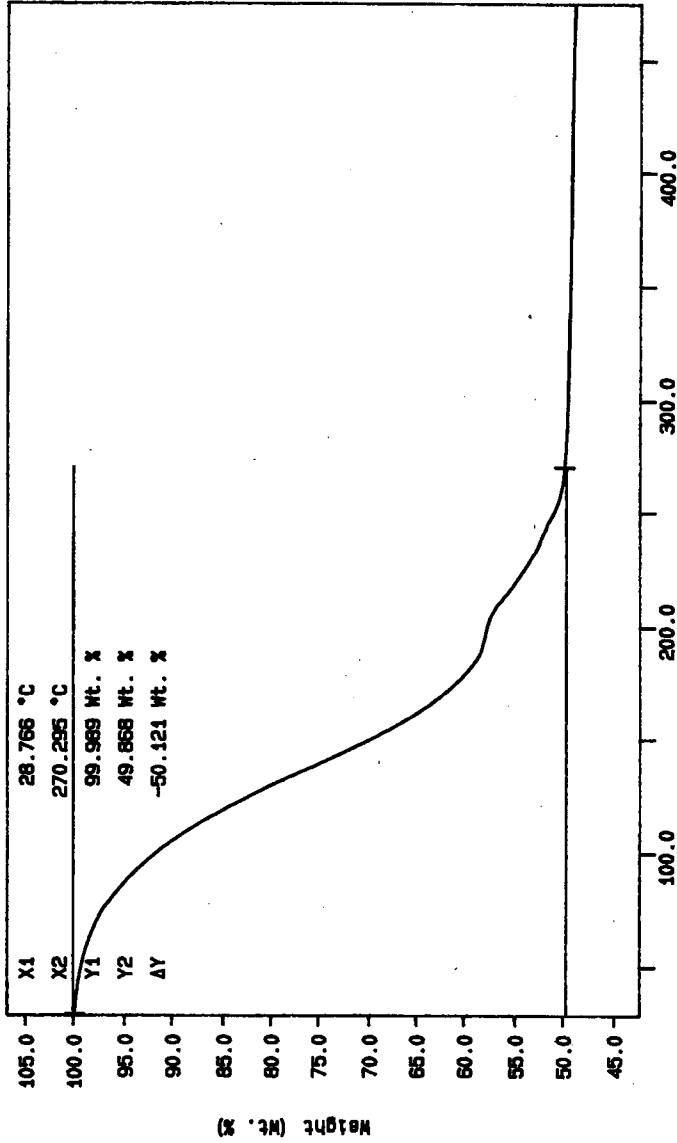
100/MIN N2
TEMP: 000.0 8
TIME: 00.0 8
0.0 min RATE: 10.0 C/min
Temperature (°C)
FD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Jul 31 16:01:33 1996

Curve 1: T6A
File info: SAM073101 Wed Jul 31 08:52:52 1996
Sample Weight: 15.115 mg
S96T003741



10C/MIN N2
TIME 08:08
0.0 min RATE: 10.0 C/min
RO MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Jul 31 09:03:05 1996

Curve 1: T6A
File Infor: SAM073102 Wed Jul 31 10:01:24 1996
Sample Weight: 14.975 mg
S96T003741DLP



828

100/MIN N2
TIME 00:00
TIME 00:00
0.0 MIN RATE: 10.0 C/MIN
RD MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Wed Jul 31 11:37:19 1996

LABCORE Data Entry Template for Worklist#

11283

Analyst: SMF Instrument: TGA0 1 Book # 82N8A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>59.06</u>	<u>N/A</u>	<u>X</u>
96000832	AN-105	2 SAMPLE	S96T003742	0	TGA-01	LIQUID	<u>N/A</u>	<u>50.5</u>		<u>X</u>
96000832	AN-105	3 DUP	S96T003742	0	TGA-01	LIQUID	<u>50.5</u>	<u>50.85</u>	<u>N/A</u>	<u>X</u>
96000832	AN-105	4 SAMPLE	S96T003743	0	TGA-01	LIQUID	<u>N/A</u>	<u>50.07</u>		<u>X</u>
96000832	AN-105	5 DUP	S96T003743	0	TGA-01	LIQUID	<u>50.07</u>	<u>50.4</u>	<u>N/A</u>	<u>X</u>

Final page for worklist # 11283

Sm Fulson 8-1-96
Analyst Signature Date

Luis Munk 8-6-96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela
8-7-96

S96T003742 results are the sum of two weight loss steps.

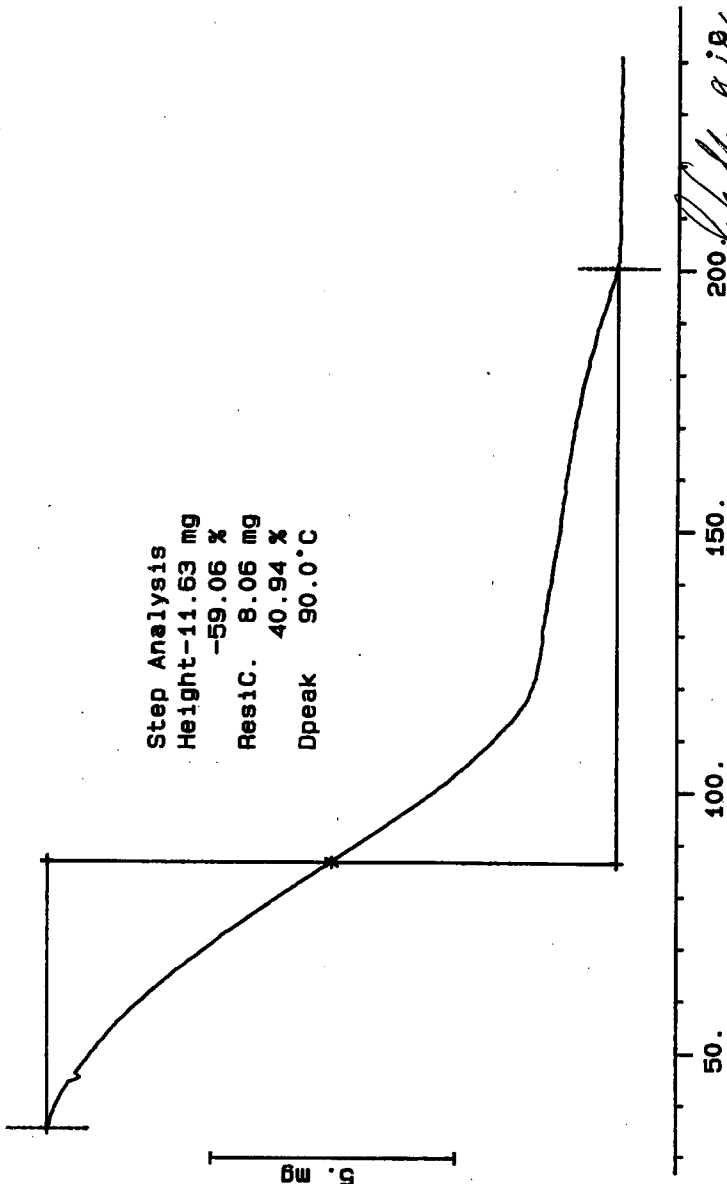
Data Entry Comments: S96T003743 results are the sum of two weight loss steps.

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 32 TO 34.

TGA STD 82N8A Rate: 10.0 °C/min File: 00027.001 TG METTLER 30-JUL-86
19.690 mg Ident: 0.0 222-S Laboratory

Step Analysis
Height-11.63 mg
-59.06 %
ResidC. 8.06 mg
40.94 %
Dpeak 90.0°C



John A. P. J.P.

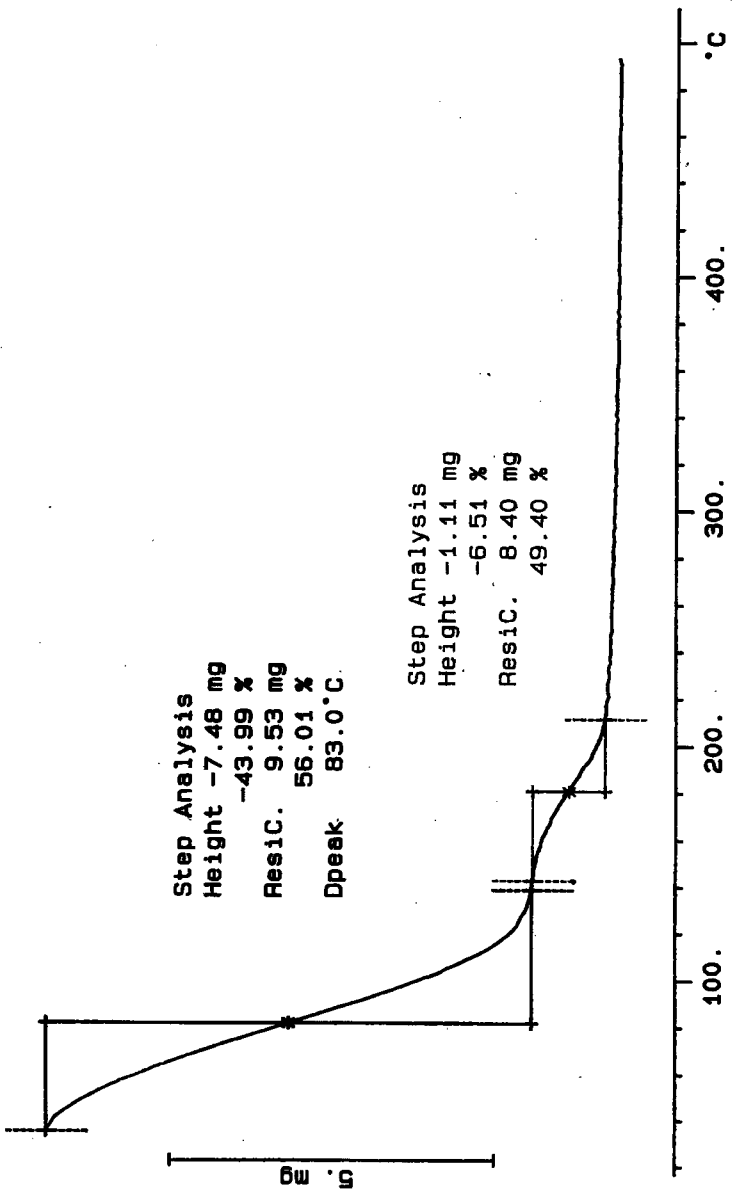
S96T003742 N2
17.014 mg

Rate: 10.0 °C/min

File: 00029.001 TG METTLER 30-Jul-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -7.48 mg
-43.99 %
Res1C. 9.53 mg
56.01 %
Dpeak 83.0 °C.

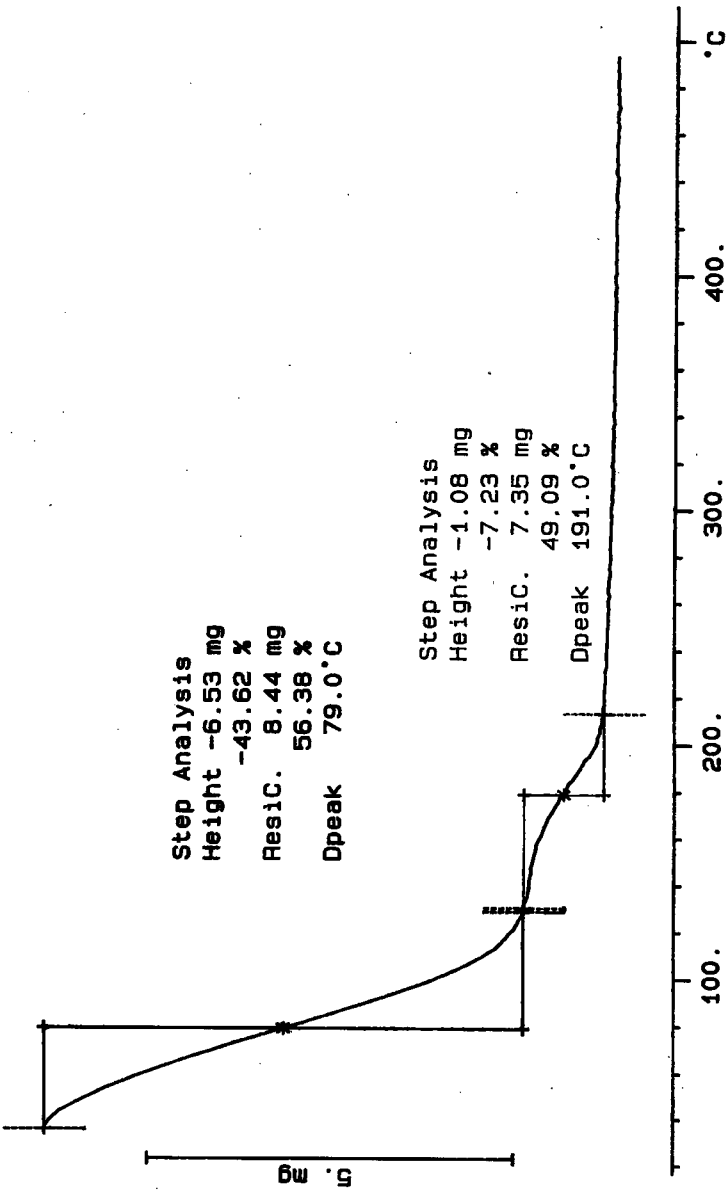
Step Analysis
Height -1.11 mg
-6.51 %
Res1C. 8.40 mg
49.40 %



S96T003742 DUP N2
14.966 mg

File: 00041.001 TG METTLER 30-Jul-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



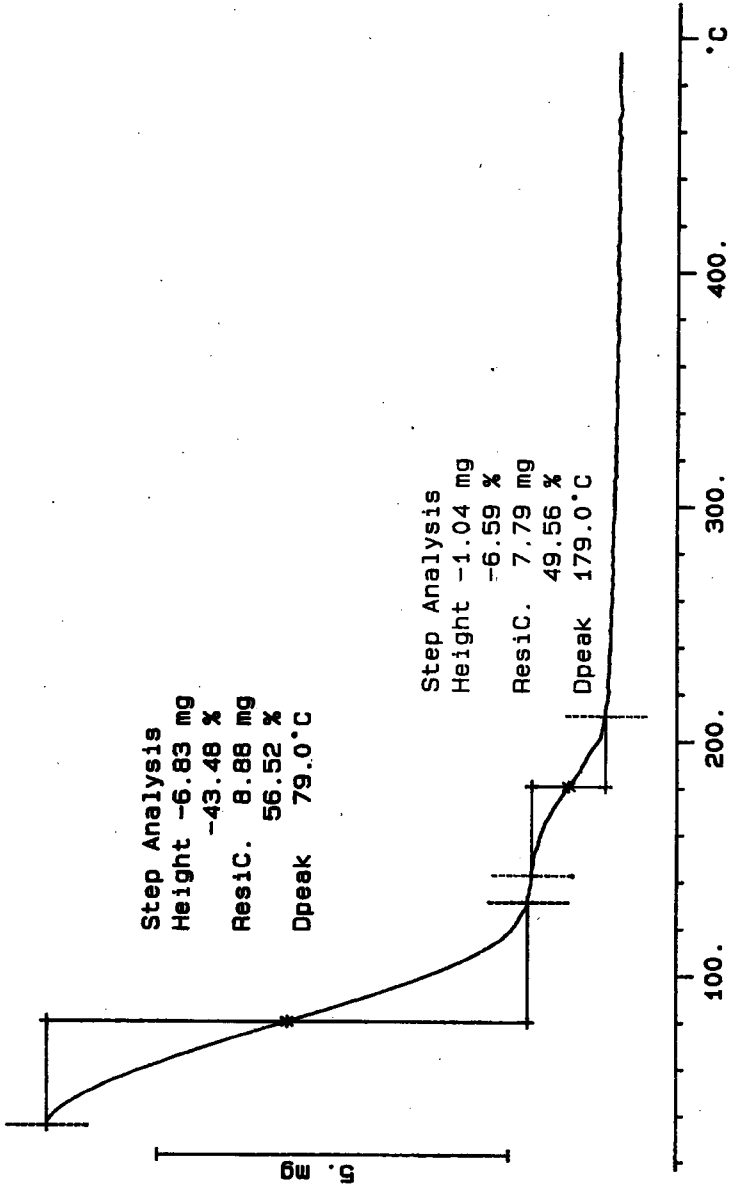
S96T003743 N2
15.718 mg

File: 00049.001 TG METTLER 31-Jul-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis
Height -6.83 mg
-43.48 %
ResiC. 8.88 mg
56.52 %
Dpeak 79.0 °C

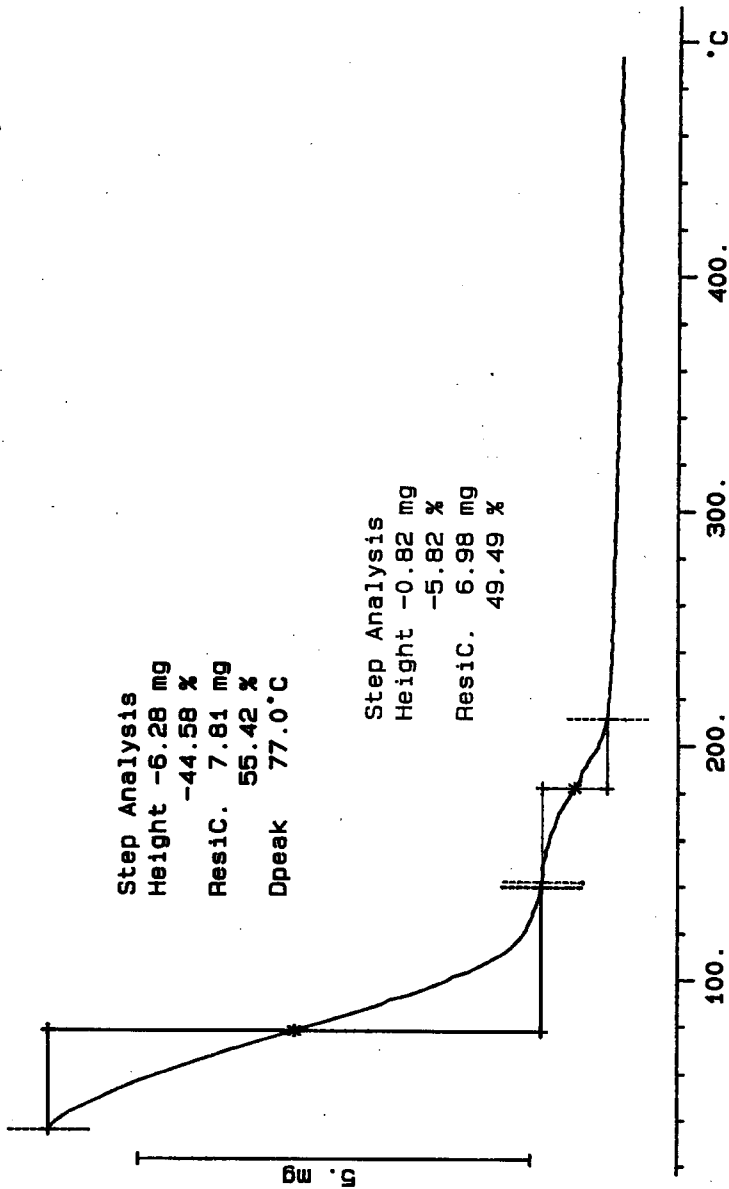
Step Analysis
Height -1.04 mg
-6.59 %
ResiC. 7.79 mg
49.56 %
Dpeak 179.0 °C



S96T003743 DUP N3
14.096 mg
Rate: 10.0 °C/min
File: 00045.001 TG METTLER 31-JUL-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -6.28 mg
-44.58 %
ResiC. 7.81 mg
56.42 %
Dpeak 77.0 °C

Step Analysis
Height -0.82 mg
-5.82 %
ResiC. 6.98 mg
49.49 %



LABCORE Data Entry Template for Worklist#

11284

Analyst: SME/ADP Instrument: TGA0 1 Book # 82W8A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>59.07</u> *	N/A	%
96000832	AN-105	2 SAMPLE	S96T003744	0	TGA-01	LIQUID	N/A	⁸⁻⁵⁻⁹⁶ <u>150.91</u>		%
96000832	AN-105	3 DUP	S96T003744	0	TGA-01	LIQUID	<u>50.91</u>	<u>50.37</u>	N/A	%
96000832	AN-105	4 SAMPLE	S96T003745	0	TGA-01	LIQUID	N/A	<u>50.42</u>		%
96000832	AN-105	5 DUP	S96T003745	0	TGA-01	LIQUID	<u>50.42</u>	<u>52.16</u>	N/A	%

Final page for worklist # 11284

S. Sullivan 8-2-96
Analyst Signature Date

Frank Mueck 8-6-96
Analyst Signature Date

Anthony Purumbo 8-2-96

Verified/Validated by
Blandina Valenzuela
8-7-96

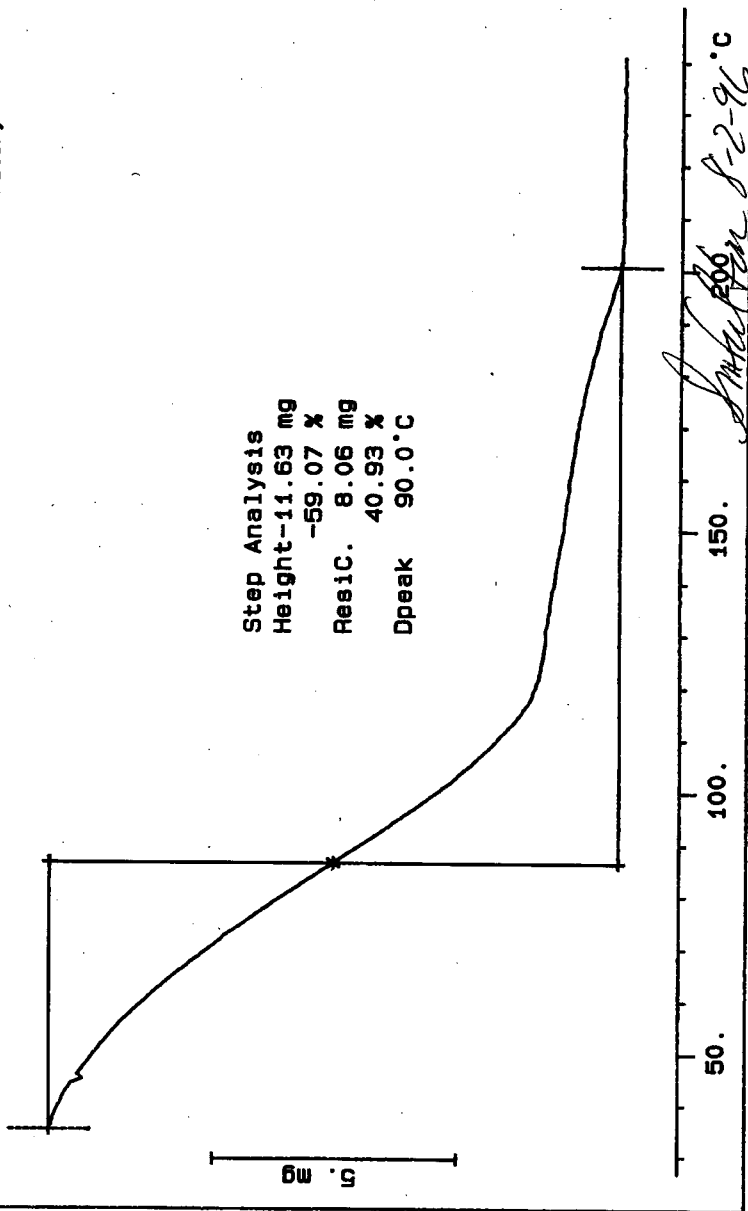
Data Entry Comments:

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 324 TO 340.

TGA STD 82N8A File: 00027.001 TG METTLER 30-Jul-96
19.690 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

Step Analysis
Height--11.63 mg
-59.07 %
Resid. 8.06 mg
40.93 %
Dpeak 90.0 °C



S96T003744 N2

11.453 mg

Rate: 10.0 °C/min

File: 00047.001 TG

METTLER

31-Jul-98

Ident: 0.0 222-S Laboratory

Step Analysis

Height -5.21 mg

-45.48 %

Resid. 6.24 mg

54.52 %

Dpeak 71.0 °C

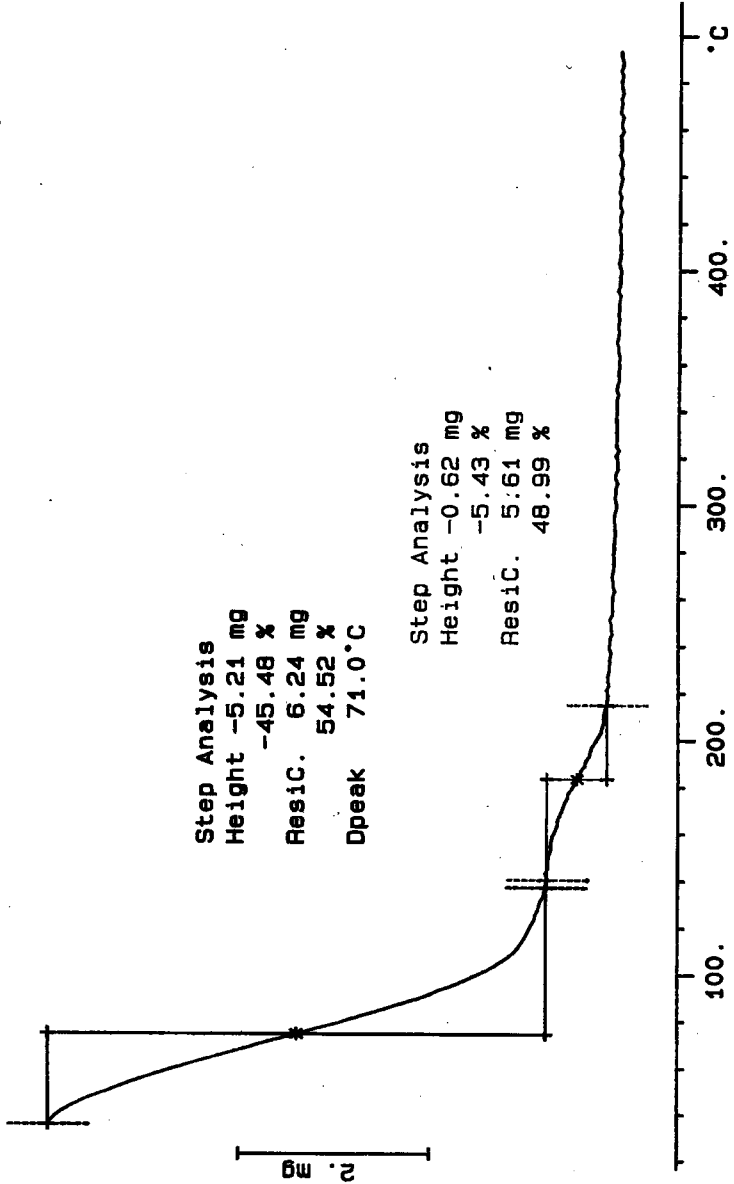
Step Analysis

Height -0.62 mg

-5.43 %

Resid. 5.61 mg

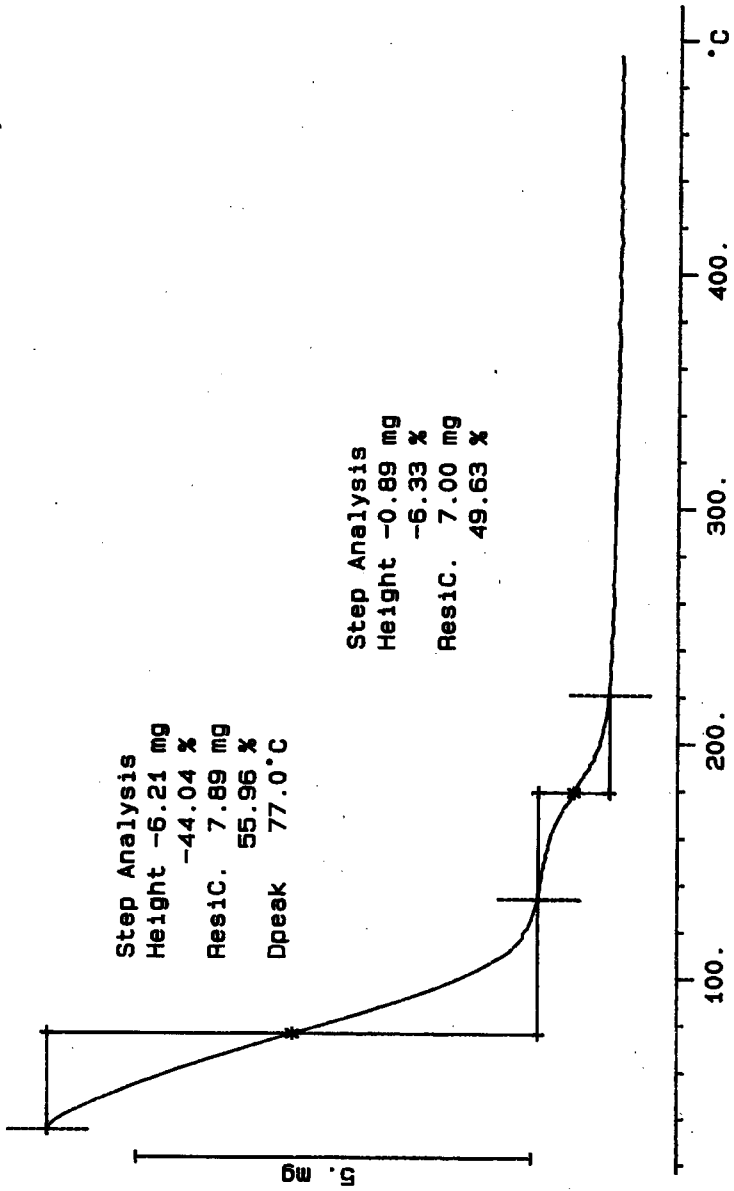
48.99 %



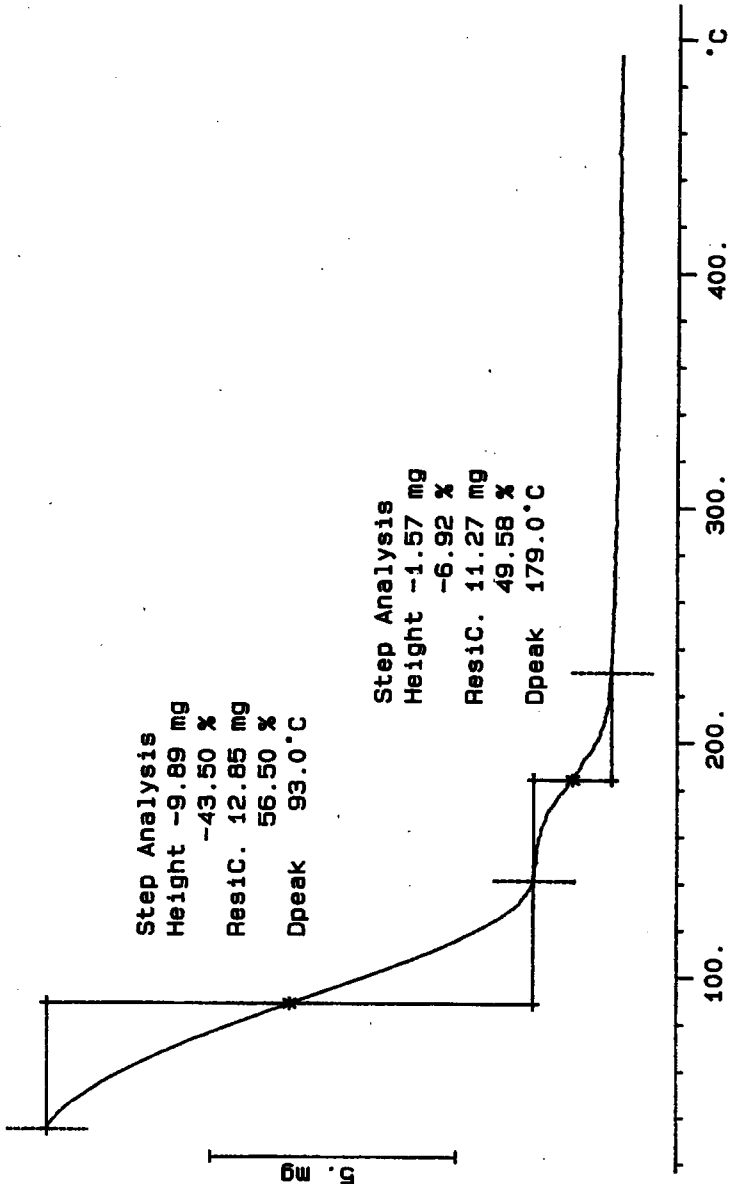
S96T003744 DUP N2
14.098 mg
Rate: 10.0 °C/min
File: 00049.001 TG METTLER 31-JUL-86
Ident: 0.0 222-S Laboratory

Step Analysis
Height -6.21 mg
-44.04 %
Resid. 7.89 mg
55.96 %
Dpeak 77.0 °C

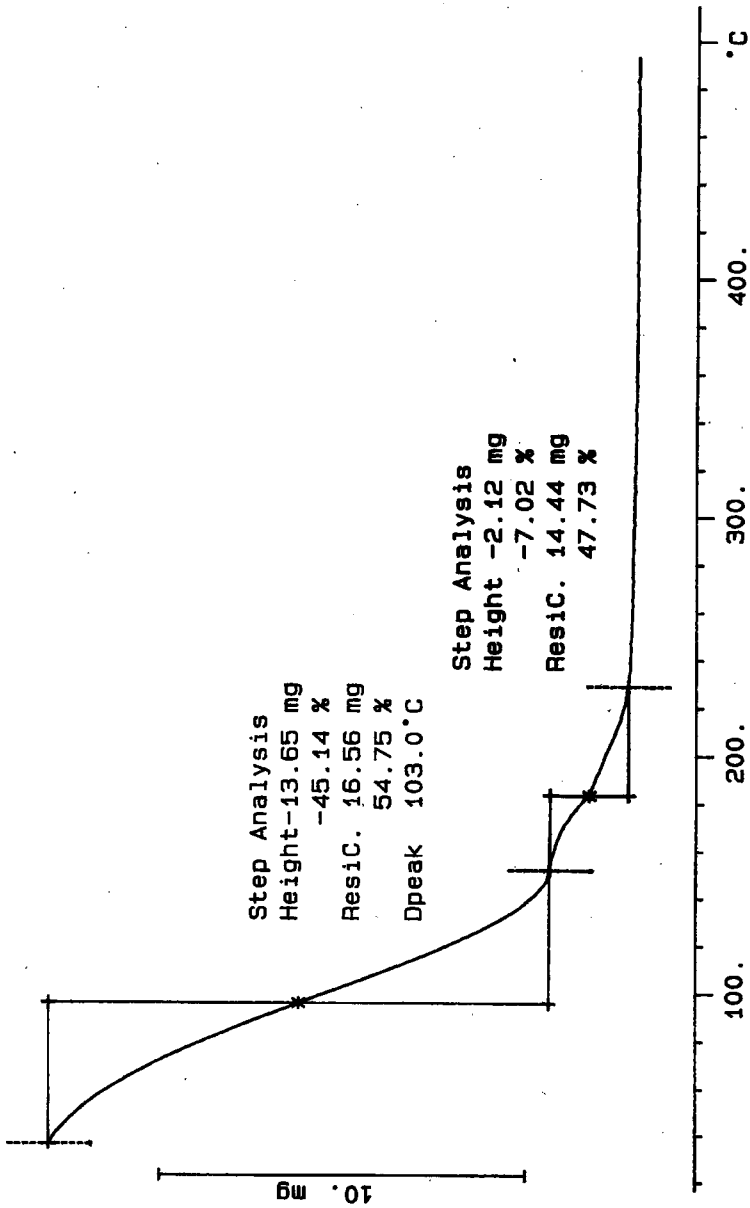
Step Analysis
Height -0.89 mg
-6.33 %
Resid. 7.00 mg
49.63 %



S96T003745 SAM N2
 22.736 mg
 Rate: 10.0 °C/min
 File: 00053.001 TG METTLER 31-Jul-96
 Ident: 0.0 222-S Laboratory



S96T003475 DUP N2
30.248 mg
Rate: 10.0 °C/min
File: 00055.001 TG METTLER 31-Jul-96
Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

11285

Analyst: ADD Instrument: TGA0 3 Book # 82A8A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.2</u>	<u>58.79</u>	N/A	%
96000832	AN-105	2 SAMPLE	S96T003746	0	TGA-03	LIQUID	N/A	<u>50.80</u>		%
96000832	AN-105	3 DUP	S96T003746	0	TGA-03	LIQUID	<u>50.80</u>	<u>50.03</u>	N/A	%
96000832	AN-105	4 SAMPLE	S96T003747	0	TGA-03	LIQUID	N/A	<u>50.12</u>		%
96000832	AN-105	5 DUP	S96T003747	0	TGA-03	LIQUID	<u>50.12</u>	<u>49.66</u>	N/A	%

Final page for worklist # 11285

See attached for signatures
Analyst Signature Date 8.5.96

[Signature] 8-6-96
Analyst Signature Date

Verified/Validated
by Blandina
Valenzuela
8-7-96

Blandina
Valenzuela

Data Entry Comments: S96T003746 results are the sum of several weight loss
steps.

S96T003747 results are the sum of several weight loss
steps.

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#

11285

Analyst: ADD Instrument: TGA0 _____ Book # 82N8A

Method: LA-560-112 Rev/Mod C1

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	%
96000832	AN-105	2 SAMPLE	S96T003746	0	TGA-01	LIQUID	N/A			%
96000832	AN-105	3 DUP	S96T003746	0	TGA-01	LIQUID			N/A	%
96000832	AN-105	4 SAMPLE	S96T003747	0	TGA-01	LIQUID	N/A			%
96000832	AN-105	5 DUP	S96T003747	0	TGA-01	LIQUID			N/A	%

Final page for worklist # 11285

[Signature]
Analyst Signature Date 8-2-96

Analyst Signature Date

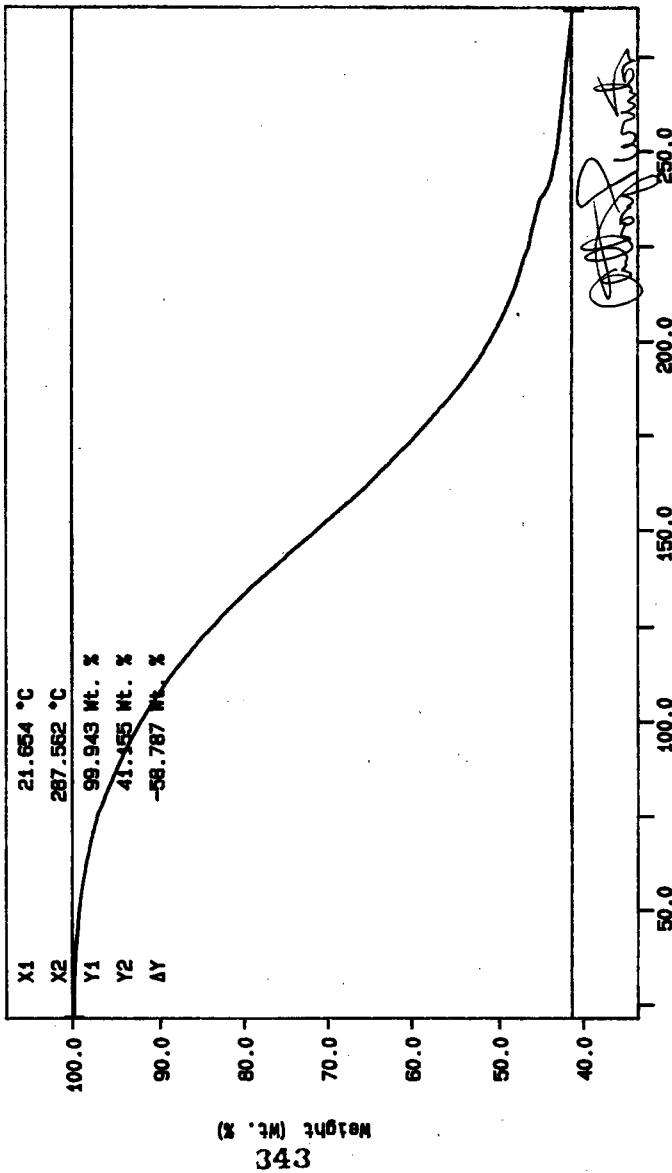
TGA-03 instrument
was used.
8.5.96
Blandina
Valenzuela

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: TER080102 Fri Aug 2 05: 34: 42 1996
Sample Weight: 30.648 mg
TGA STD 82N8-A

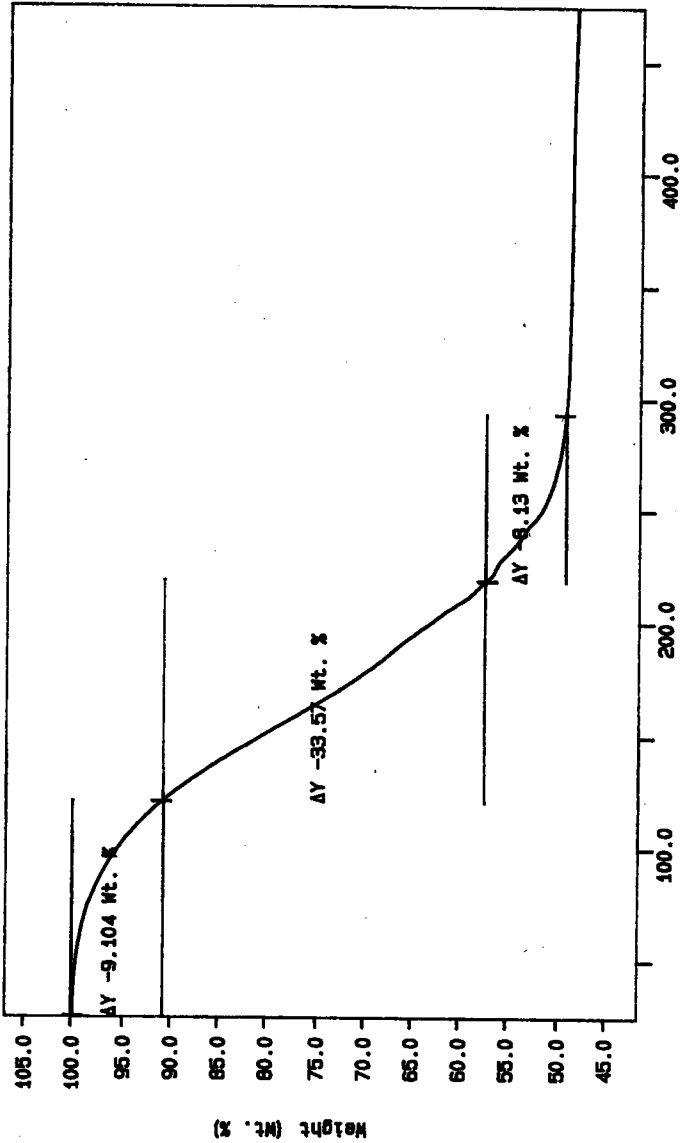
SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 343 TO 347.



Weight (Wt. %)
343

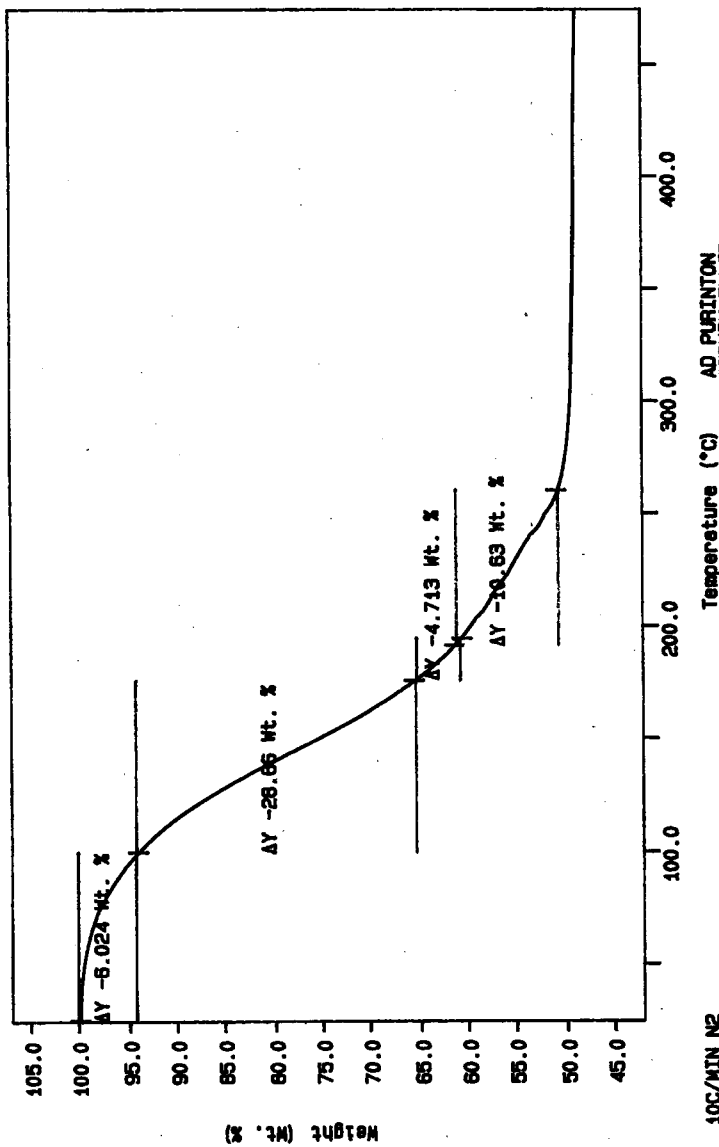
N2 100/MIN
 THERM 300.8 8
 TIME: 0.0 min RATE: 10.0 C/min
 Temperature (°C)
 AD PURINTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Fri Aug 2 05: 48: 32 1996

Curve 1: TGA
File info: SAM080201 Fri Aug 2 08:46:54 1996
Sample Weight: 30.528 mg
S96T003746 SAM



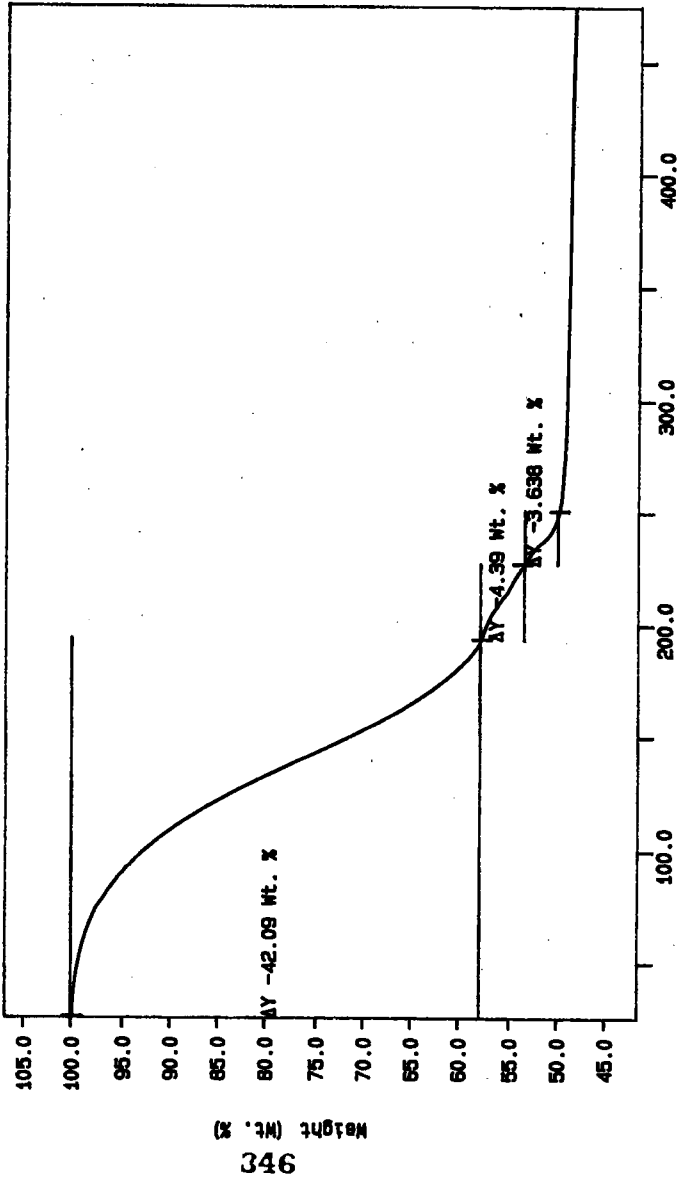
10C/MIN N2
TEMP 000.0 C
TIME 000.0 S
TURNS 0.0
MIN RATE: 30.0 C/MIN
AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Aug 2 08:49:02 1996

Curve 1: TGA
File Info: SAM080201 Fri Aug 2 10:31:49 1996
Sample Weight: 21.770 mg
996T003746 DUP



10C/MIN N2
TIME: 65.8 S
0.0 MIN RATE: 10.0 C/MIN
AD PURINGTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Aug 2 11:35:45 1996

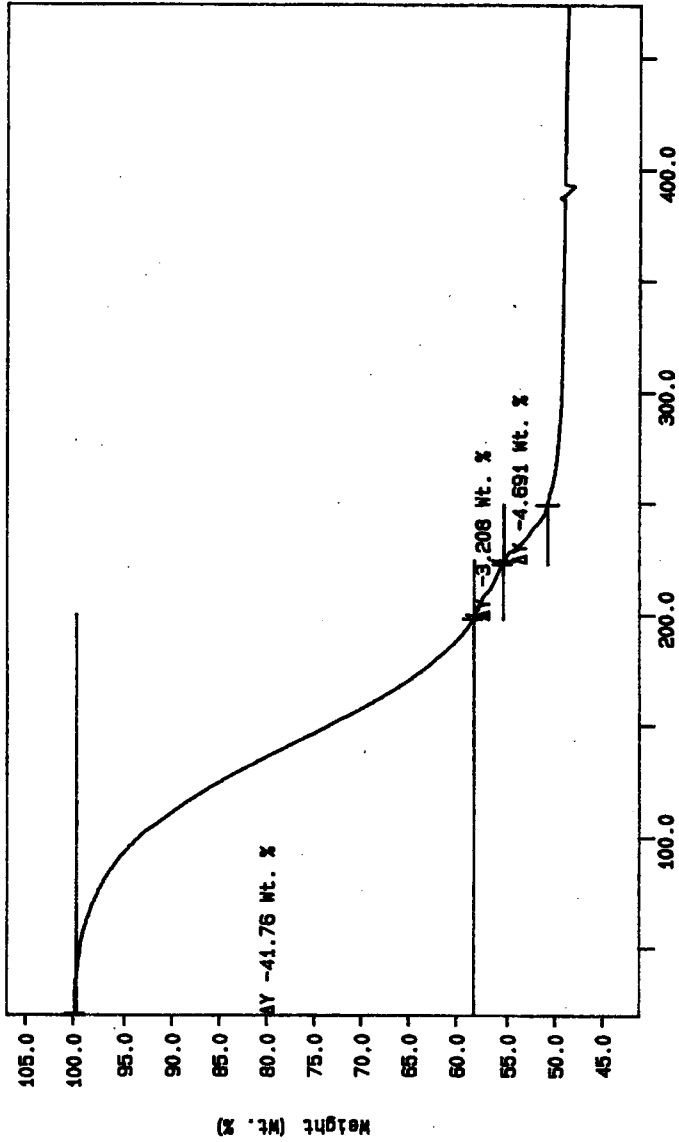
Curve 1: T6A
File Info: SAM080203 Fri Aug 2 12:34:29 1996
Sample Weight: 16.960 mg
S96T003747 SAM



946

10C/MIN N2
TEMP 300.0 S
TIME 0.0 S
0.0 min RATE: 10.0 C/min
Temperature (°C)
AD FURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Aug 2 12:35:24 1996

Curve 1: TGA
File Info: SAM080204 Fri Aug 2 13:55:33 1996
Sample Weight: 19.538 mg
996T003747 DJP



10C/MIN N2
THERM: 800.0 THERM: 0.0 min RATE: 10.0 C/min
AD. PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Aug 2 14:16:10 1996

LABCORE Data Entry Template for Worklist#

11286

Analyst: ADD Instrument: TGA0 1 Book # 82N87


Method: LA-560-112 Rev/Mod P-13-1

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.55x</u>	<u>N/A</u>	%
96000832	AN-105	2 SAMPLE	S96T003748	0	TGA-01	LIQUID	<u>N/A</u>	<u>49.75</u>		%
96000832	AN-105	3 DUP	S96T003748	0	TGA-01	LIQUID	<u>49.75</u>	<u>30.12</u>	<u>N/A</u>	%
96000832	AN-105	4 SAMPLE	S96T003749	0	TGA-01	LIQUID	<u>N/A</u>	<u>50.07</u>		%
96000832	AN-105	5 DUP	S96T003749	0	TGA-01	LIQUID	<u>50.07</u>	<u>50.46</u>	<u>N/A</u>	%

Final page for worklist # 11286


Analyst Signature 8-2-96
Date


Analyst Signature 8-6-96
Date

Verified/Validated by
Blandina
Valenzuela
8-7-96

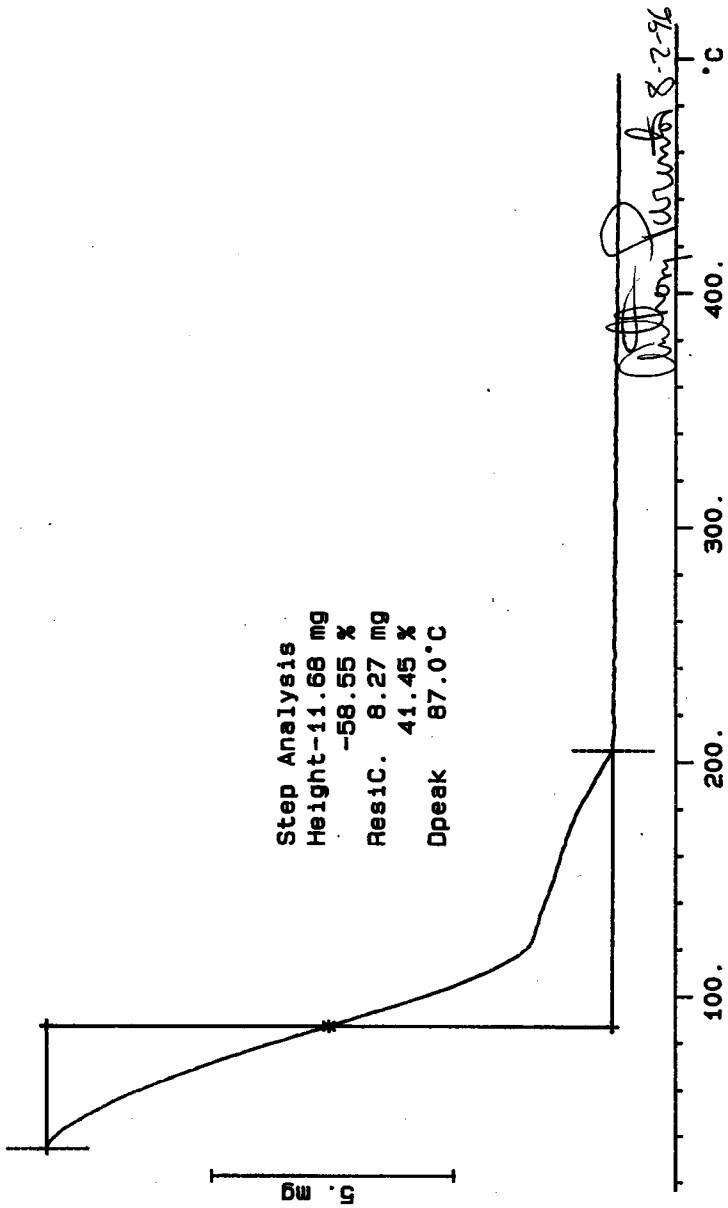
⁸⁻⁵⁻⁹⁶
S96T003748 results are the sum of ~~to~~ several weight loss steps. The high RPD are unusual for a liquid sample and should be rerun.

Data Entry Comments: S96T003749 results are the sum of several weight loss steps.

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 317 TO 322.

TER 82N8-A N2
19.949 mg
Rate: 10.0 °C/min
File: 00051.001 TG
Ident: 0.0 222-S Laboratory
31-JUL-96



Anthony Parvato 8-2-96

S96T00374B SAM N2
22.362 mg

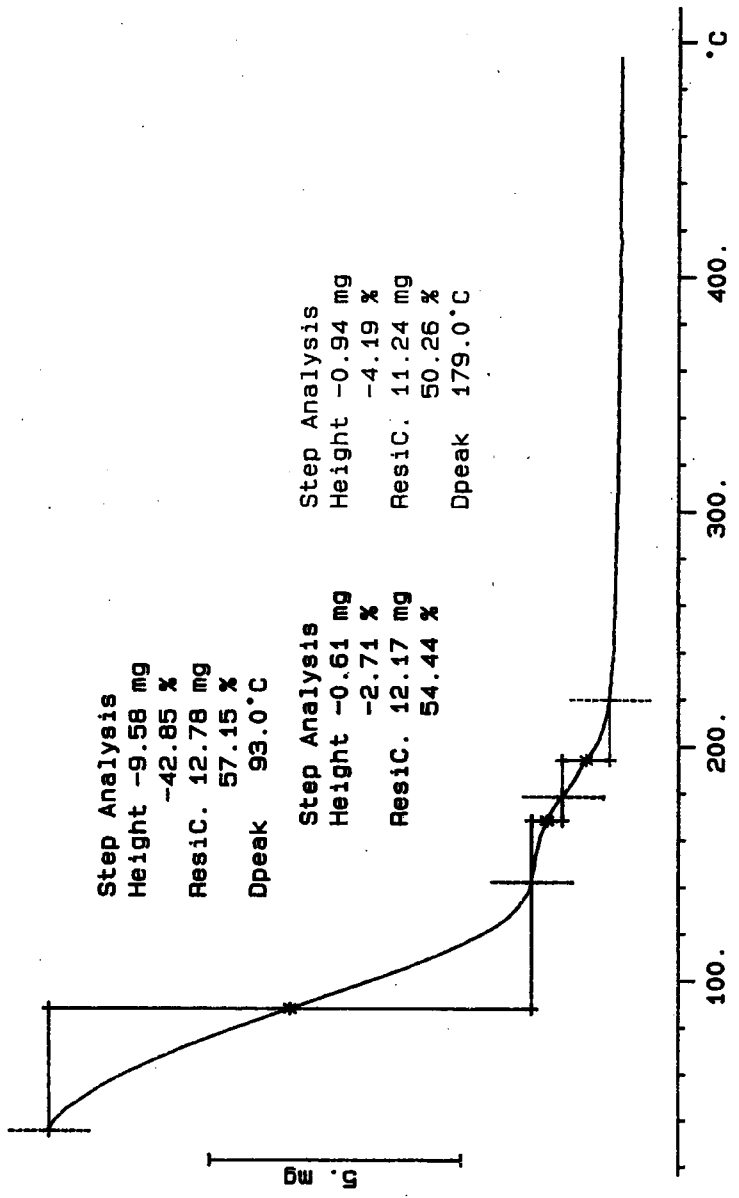
File: 00057.001 TG METTLER 31-Jul-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

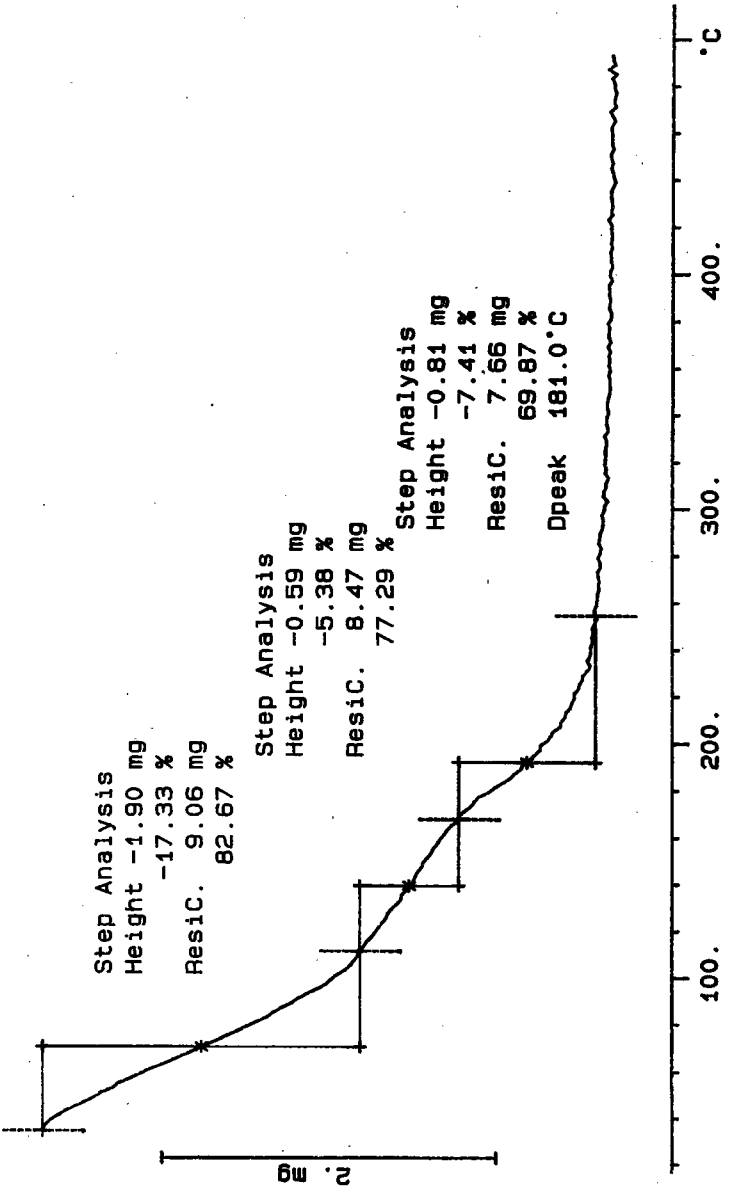
Step Analysis
Height -9.58 mg
-42.85 %
Resic. 12.78 mg
57.15 %
Dpeak 93.0 °C

Step Analysis
Height -0.61 mg
-2.71 %
Resic. 12.17 mg
54.44 %

Step Analysis
Height -0.94 mg
-4.19 %
Resic. 11.24 mg
50.26 %
Dpeak 179.0 °C



S96T003748 DUP N2
10.957 mg
Rate: 10.0 °C/min
File: 00059.001 TG METTLER 31-Jul-96
Ident: 0.0 222-S Laboratory

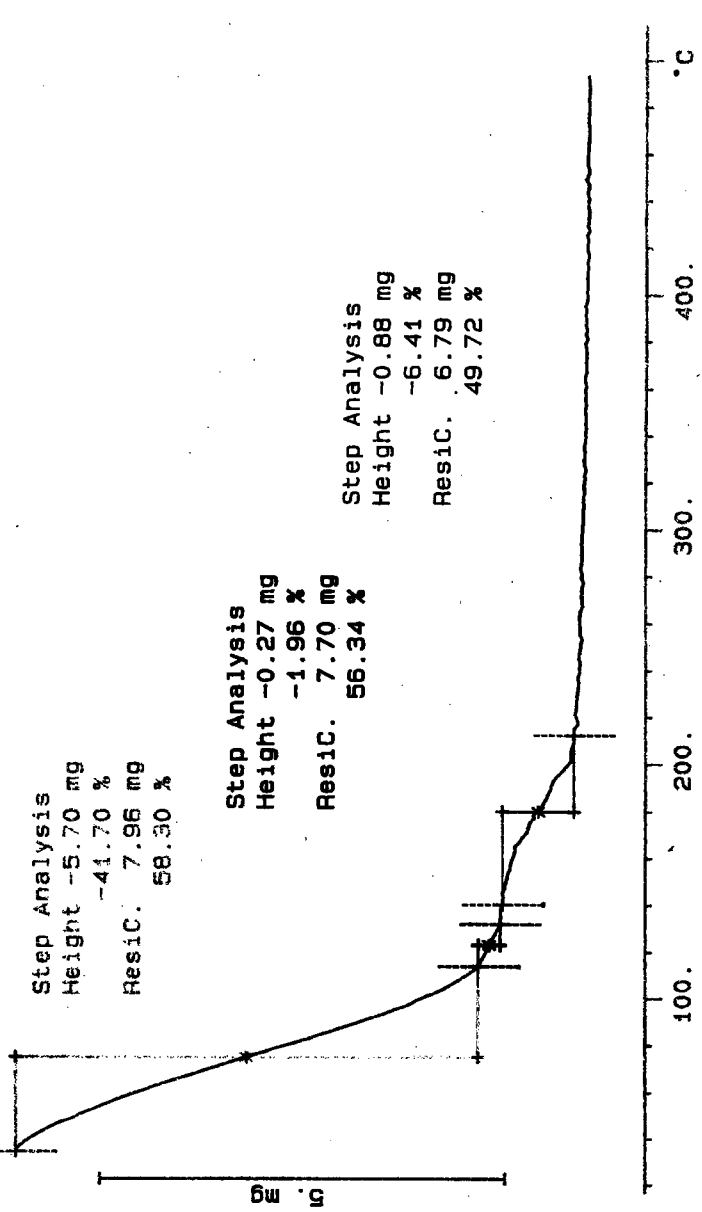


S96T003749 SAM N2
13.660 mg

Rate: 10.0 °C/min

File: 00061.001 TG
Ident: 0.0 222-S Laboratory

31-JUL-96



S96T003749 DUP N2

13.690 mg

Rate: 10.0 °C/min

File: 00065.001 TG METTLER 01-Aug-96

Ident: 0.0 222-S Laboratory

Step Analysis

Height -5.88 mg

-42.92 %

Resid. 7.81 mg

57.08 %

Step Analysis

Height -0.36 mg

-2.60 %

Resid. 7.46 mg

54.48 %

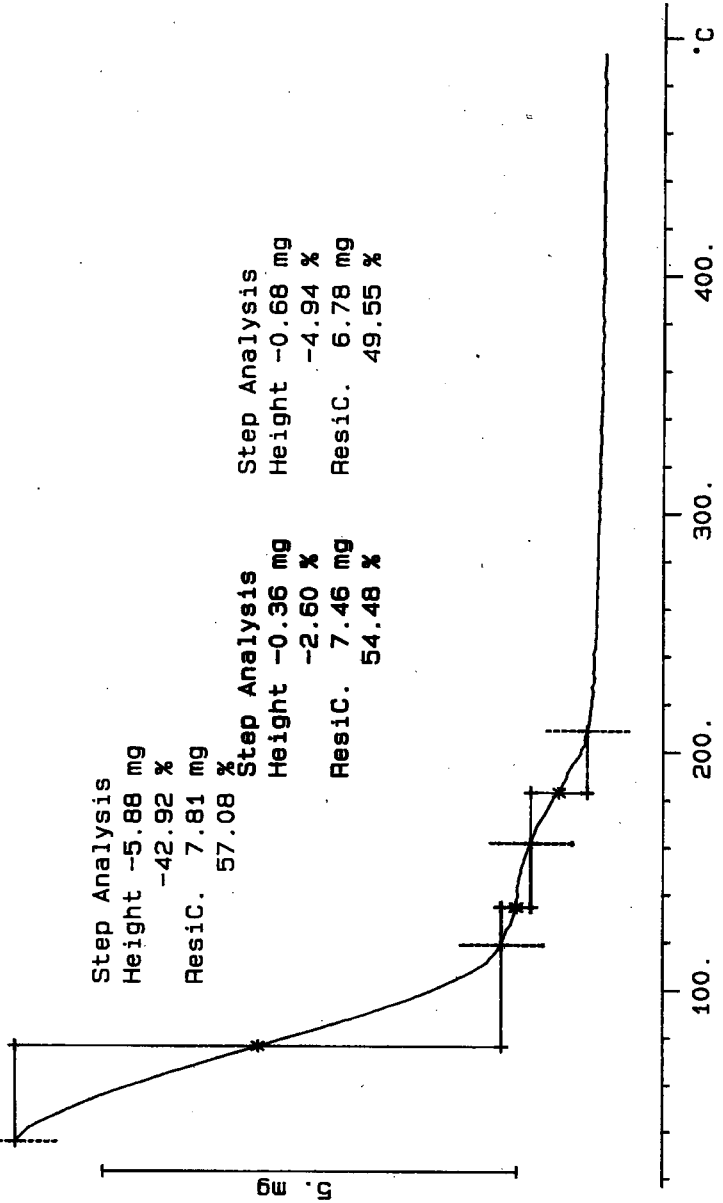
Step Analysis

Height -0.68 mg

-4.94 %

Resid. 6.78 mg

49.55 %



LABCORE Data Entry Template for Worklist#

11287

Analyst: ADD Instrument: TGA0 3 Book # 82N8A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.2</u>	<u>58.99*</u>	<u>N/A</u>	%
96000832	AN-105	2 SAMPLE	S96T003750	0	TGA-03	LIQUID	<u>N/A</u>	<u>48.76</u>		%
96000832	AN-105	3 DUP	S96T003750	0	TGA-03	LIQUID	<u>48.96</u>	<u>50.22</u>	<u>N/A</u>	%
96000832	AN-105	4 SAMPLE	S96T003751	0	TGA-03	LIQUID	<u>N/A</u>	<u>51.31</u>		%
96000832	AN-105	5 DUP	S96T003751	0	TGA-03	LIQUID	<u>51.31</u>	<u>50.95</u>	<u>N/A</u>	%

Final page for worklist # 11287

See attached for signatures
Analyst Signature Date 8-5-96

[Signature] 8-6-96
Analyst Signature Date

Verified/Validated
by Blandina Valenzuela 8-7-96

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#

11287

Analyst: ADP Instrument: TGA0 Book # 82N8A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	%
96000832	AN-105	2 SAMPLE	S96T003750	0	TGA-01	LIQUID	N/A			%
96000832	AN-105	3 DUP	S96T003750	0	TGA-01	LIQUID			N/A	%
96000832	AN-105	4 SAMPLE	S96T003751	0	TGA-01	LIQUID	N/A			%
96000832	AN-105	5 DUP	S96T003751	0	TGA-01	LIQUID			N/A	%

Final page for worklist # 11287

Anthony Purinton 8-2-96
Analyst Signature Date

Analyst Signature Date

TGA-03 instrument
was used.

8-5-96

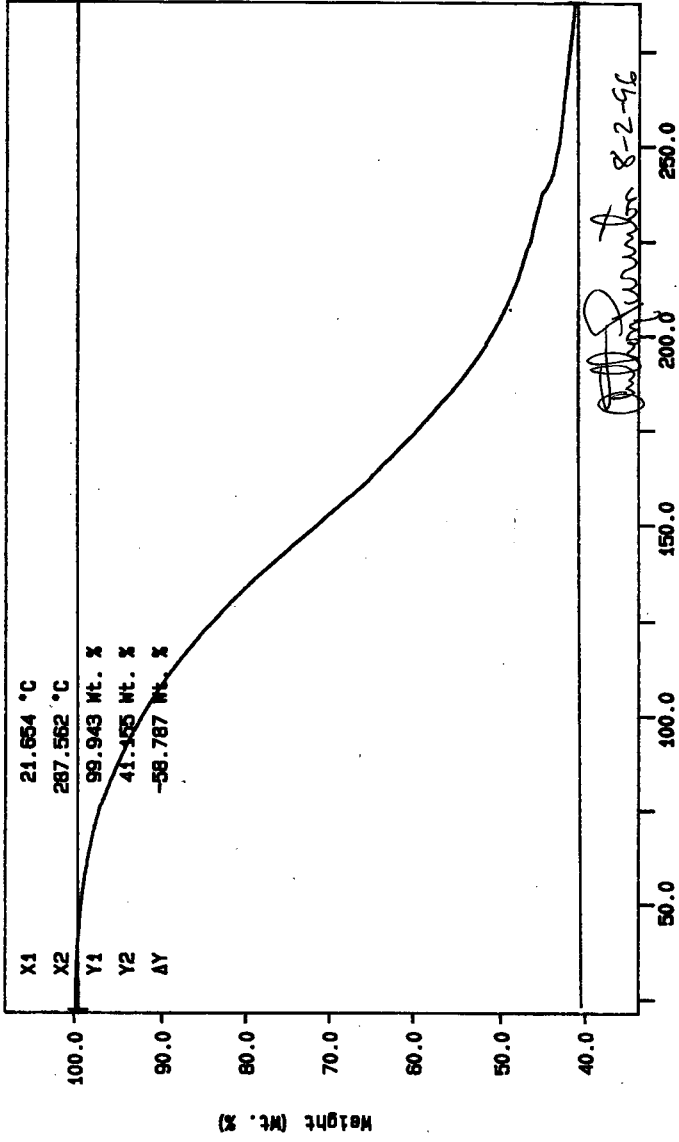
Blandina
Valenzuela

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: TERO80102 Fri Aug 2 05:34:42 1996
Sample Weight: 30.648 mg
TGA STD 82NB-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 36 TO 360

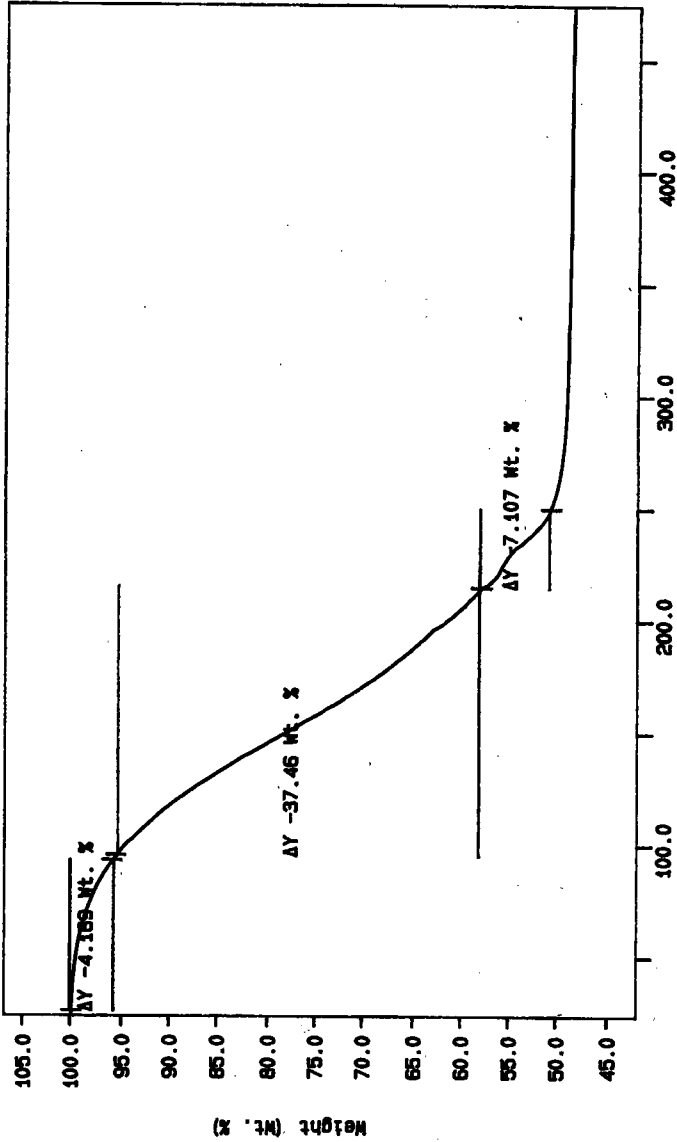


Phillip J. ... 8-2-96

N2 100/MIN
 THERM 38.0 G
 TIME 306.8 G
 0.0 mLN RATE: 10.0 C/min
 Temperature (°C)
 AD PURINTON
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Fri Aug 2 06:01:09 1996

Curve 1: TGA
File info: SAM080205 Fri Aug 2 15:15:30 1986
Sample Weight: 28.124 mg
S087003750 SAM

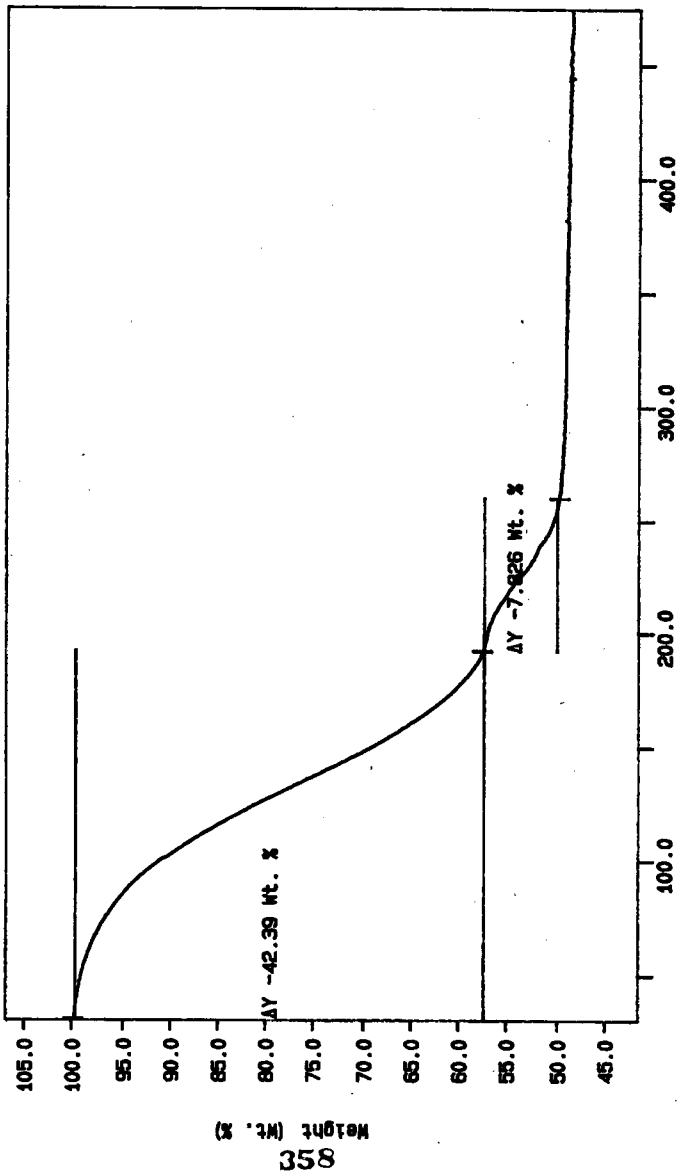
8-24-86
596T



357

10C/MIN N2
TIME: 88.8 8
TIMES: 0.0 min RATES: 10.0 g/min
AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Aug 2 15:19:01 1986

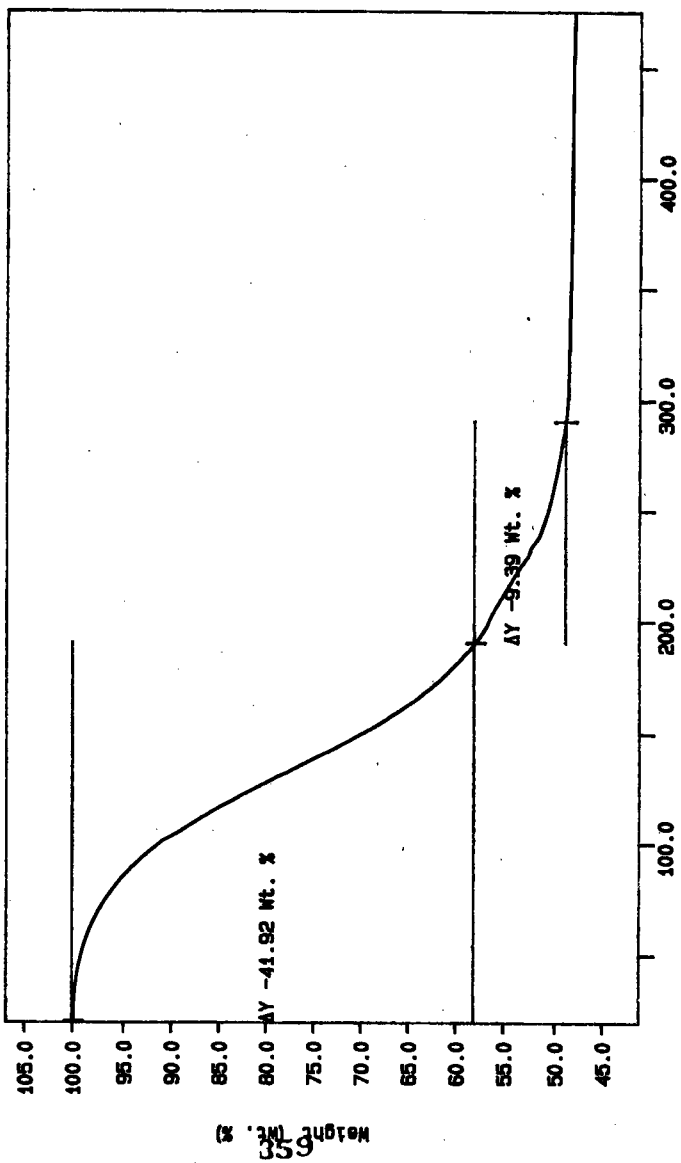
Curve 1: TGA
File Info: SAM080206 Fri Aug 2 16:22:00 1996
Sample Weight: 17.586 mg
996T003750 DUP



853
358

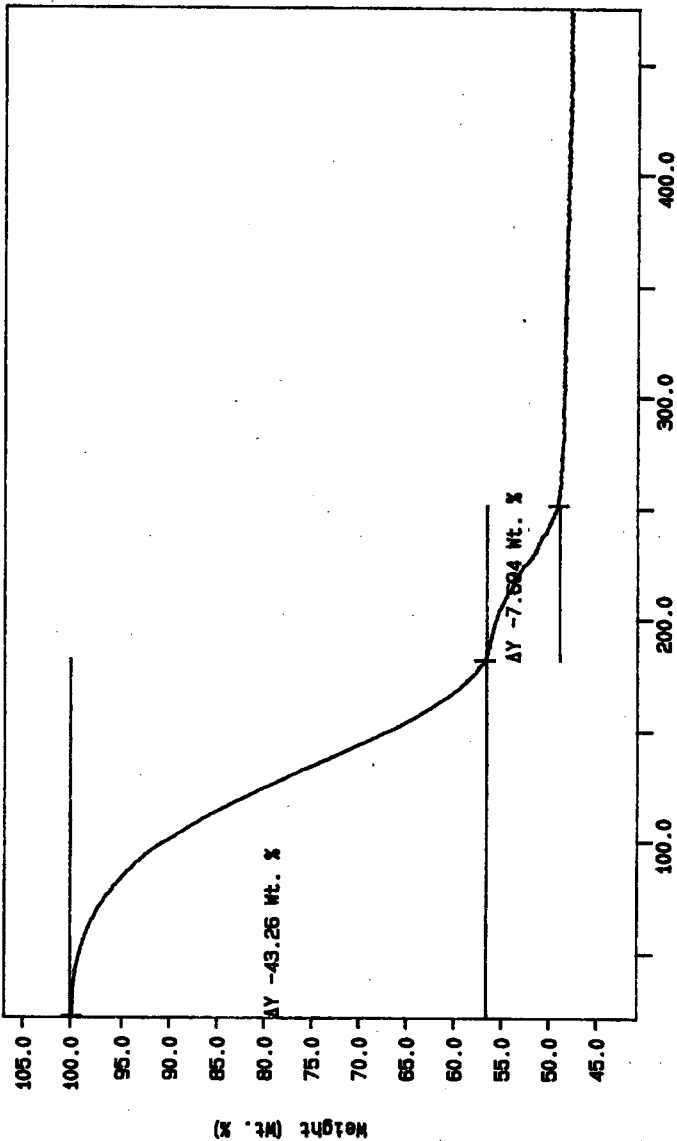
10C/MIN N2
TIME: 08.8 8
TMR: 0.0 min RATE: 10.0 C/min
AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Aug 2 17:17:31 1996

Curve 1: TGA
File Infr: SAM060301 Sat Aug 3 09:12:42 1996
Sample Weight: 19.123 mg
SS6T003751 SAM



10C/MIN N2
TIME 8:08
TIME 8:08
0.0 MIN RATE 10.0 C/MIN
AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Aug 3 09:32:28 1996

Curve 1: TGA
File Info: SAM060302 Set Aug 3 10:48:41 1996
Sample Weight: 17.122 mg
S96T003751 DUP



10C/MIN N2
TEMP: 200.0 C TIME: 0.0 min RATE: 10.0 C/min
AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Sat Aug 3 11:54:12 1996

LBCORE Data Entry Template for Worklist#

11305

Analyst: KRM Instrument: TGA0 1 Book # 8218A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>59.75</u>	<u>*N/A</u>	%
96000832	AN-105	2 SAMPLE	S96T003731	0	TGA-01	SOLID	<u>N/A</u>	<u>46.68</u>		%
96000832	AN-105	3 DUP	S96T003731	0	TGA-01	SOLID	<u>46.68</u>	<u>40.81</u>	<u>N/A</u>	%

Final page for worklist # 11305

[Signature] 8-5-96
Analyst Signature Date

[Signature] 8-6-96
Analyst Signature Date

Rae Ann Green 8-5-96

[Signature] 8-7-96
Date

Verified/Validated by

Blandina Valenzuela 8-7-96

Data Entry Comments:

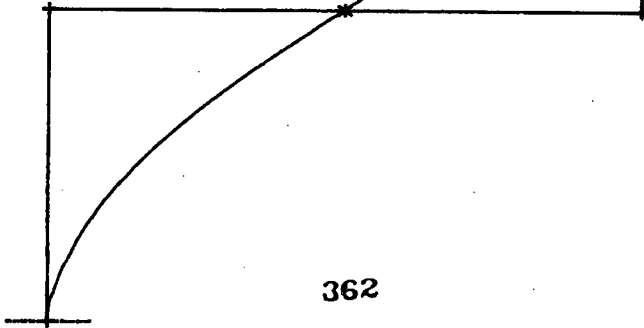
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 363 TO 364.

TGA STD 82NBA
20.179 mg

File: 00079.001 TG METTLER 03-AUG-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



Step Analysis
Height-12.06 mg
-59.75 %
Resid. 8.12 mg
40.24 %
Dpeak 95.0 °C

Blandina Valenzuela for KR Montañez

50. 100. 150. 200. 8-7-96 °C

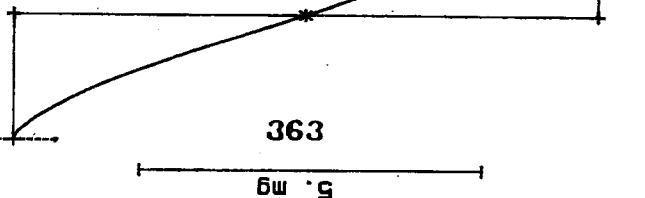
5.0 mg

S96T003731 SAM N2
16.253 mg

File: 00089.001 TG METTLER 03-Aug-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis
Height -8.52 mg
-46.68 %
Resid. 9.73 mg
53.32 %
Dpeak 81.0 °C



S96T003731 DUP N2
14.258 mg

File: 00091.001 TG METTLER 03-Aug-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

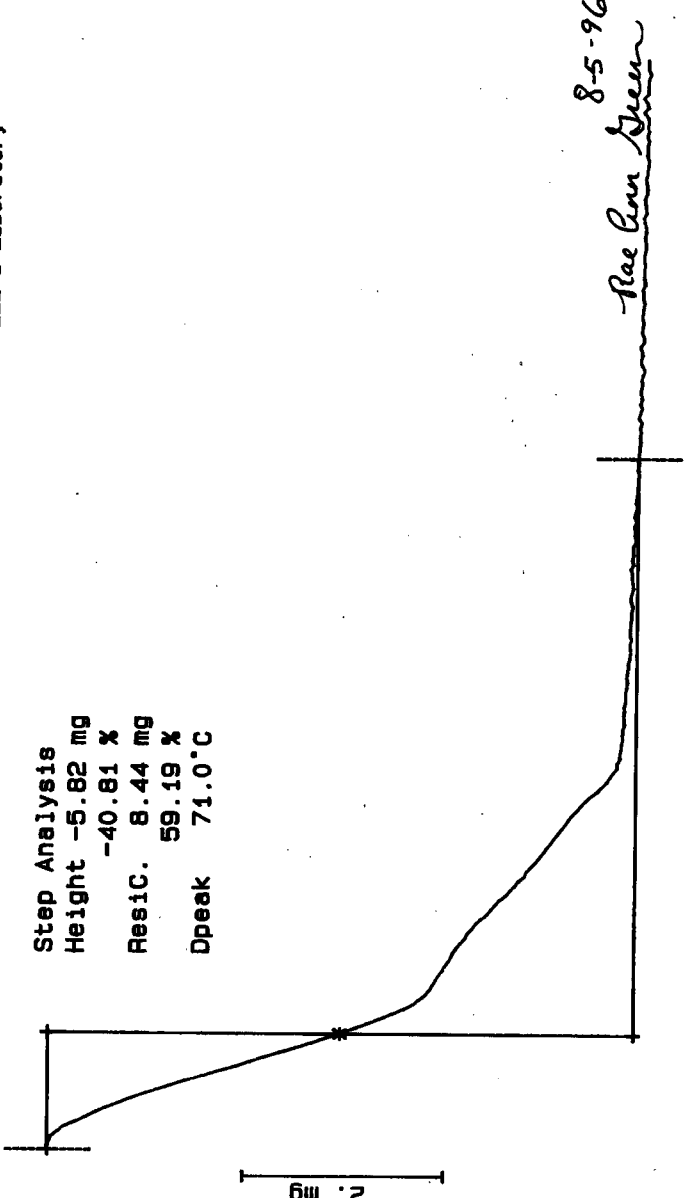
Step Analysis
Height -5.82 mg
-40.81 %
Resic. 8.44 mg
59.19 %
Dpeak 71.0 °C

2. mg

364

8-5-96
Rae Ann Green

100. 200. 300. 400. °C



LABCORE Data Entry Template for Worklist#

11493


Analyst: KRM Instrument: TGA0 1 Book # 82NBA


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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>59.80</u>	<u>N/A</u>	%
96000832	AN-105	2 SAMPLE	S96T003792	0	TGA-01	SOLID	<u>N/A</u>	<u>44.31</u>		%
96000832	AN-105	3 DUP	S96T003792	0	TGA-01	SOLID	<u>44.31</u>	<u>43.63</u>	<u>N/A</u>	%
96000832	AN-105	4 SAMPLE	S96T003793	0	TGA-01	SOLID	<u>N/A</u>	<u>42.04</u>		%
96000832	AN-105	5 DUP	S96T003793	0	TGA-01	SOLID	<u>42.04</u>	<u>44.58</u>	<u>N/A</u>	%

Final page for worklist # 11493


Analyst Signature Date 8-5-96


Analyst Signature Date 8-6-96

Verified/Validated by
Blandina Valenzuela
8-7-96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 344 TO 346.

TGA STD 82N8A

20.179 mg

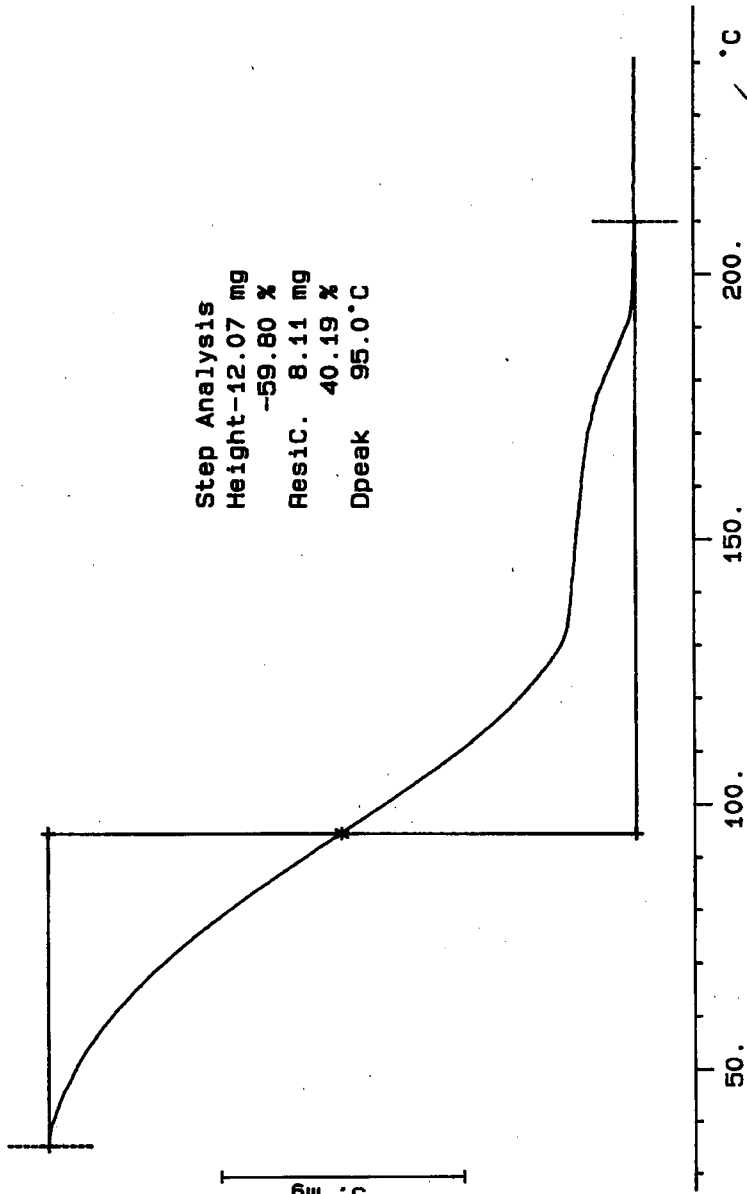
File: 00079.001 TG METTLER 03-Aug-96

Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis

Height	-12.07 mg
	-59.80 %
Resid.	8.11 mg
	40.19 %
Dpeak	95.0 °C

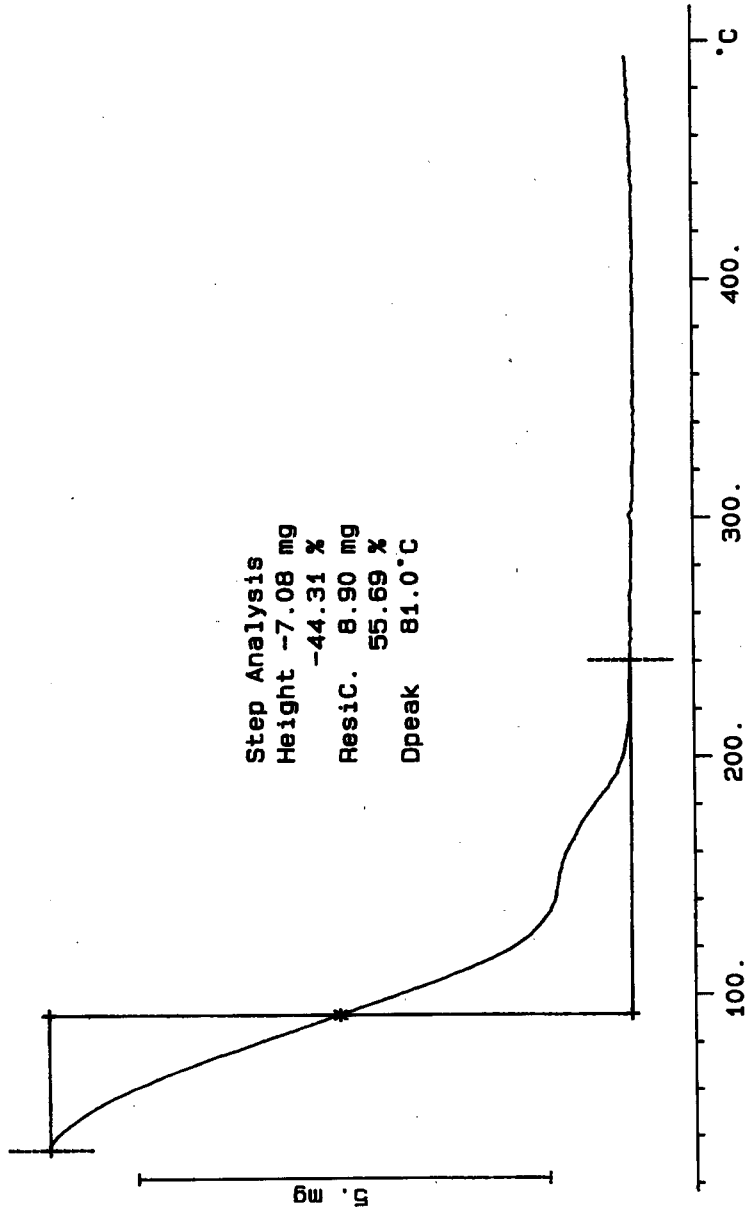


John M. White
 9-17-96
 Hie

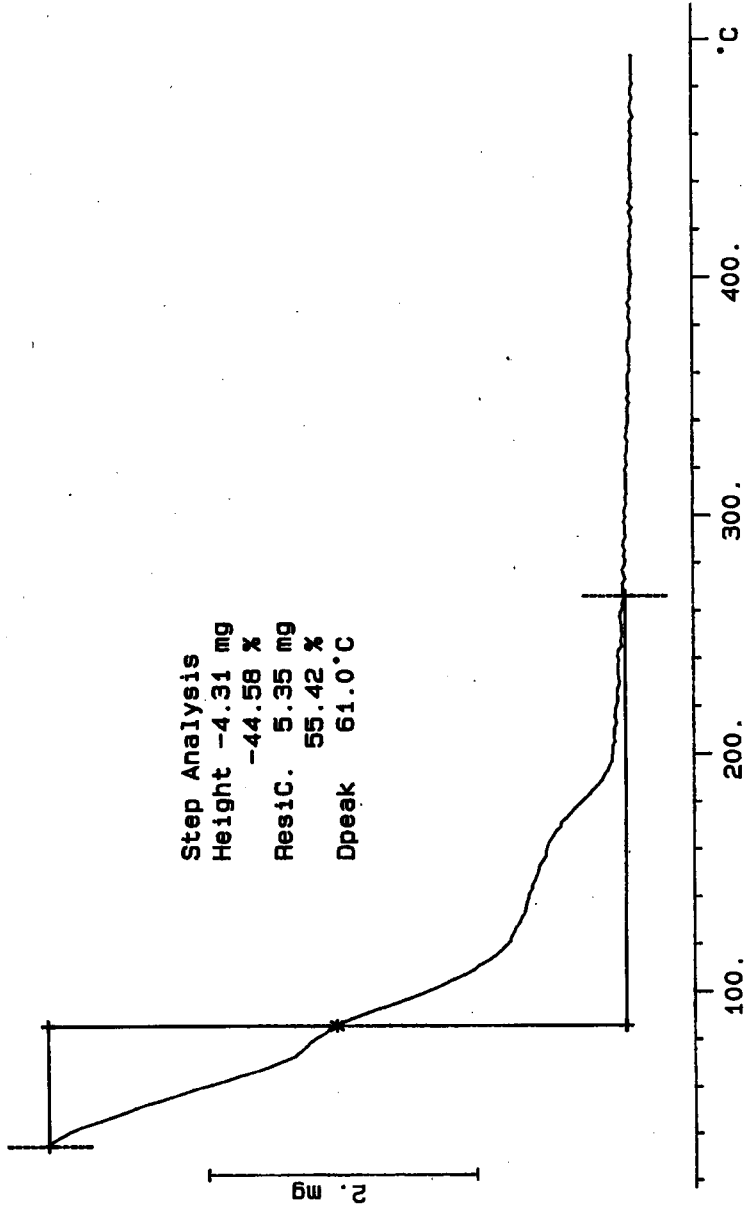
S96T003792 SAM N2
15.986 mg

Rate: 10.0 °C/min

File: 00081.001 TG METTLER 03-Aug-96
Ident: 0.0 222-S Laboratory



S96T003793 DUP N2
9.660 mg
Rate: 10.0 °C/min
File: 00087.001 TG METTLER 03-Aug-96
Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

11494

Analyst: RJ Instrument: TGA0 1 Book # 82N8-A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>59.73</u>	<u>*N/A</u>	X
96000832	AN-105	2 SAMPLE	S96T003794 0		TGA-01	SOLID	<u>N/A</u>	<u>42.46</u>		X
96000832	AN-105	3 DUP	S96T003794 0		TGA-01	SOLID	<u>42.46</u>	<u>44.41</u>	<u>N/A</u>	X
96000832	AN-105	4 SAMPLE	S96T003795 0		TGA-01	SOLID	<u>N/A</u>	<u>43.23</u>		X
96000832	AN-105	5 DUP	S96T003795 0		TGA-01	SOLID	<u>43.23</u>	<u>45.83</u>	<u>N/A</u>	X

Final page for worklist # 11494

Rae Ann Green 8-6-96
Analyst Signature Date

St. Rita 8-6-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 8-7-96

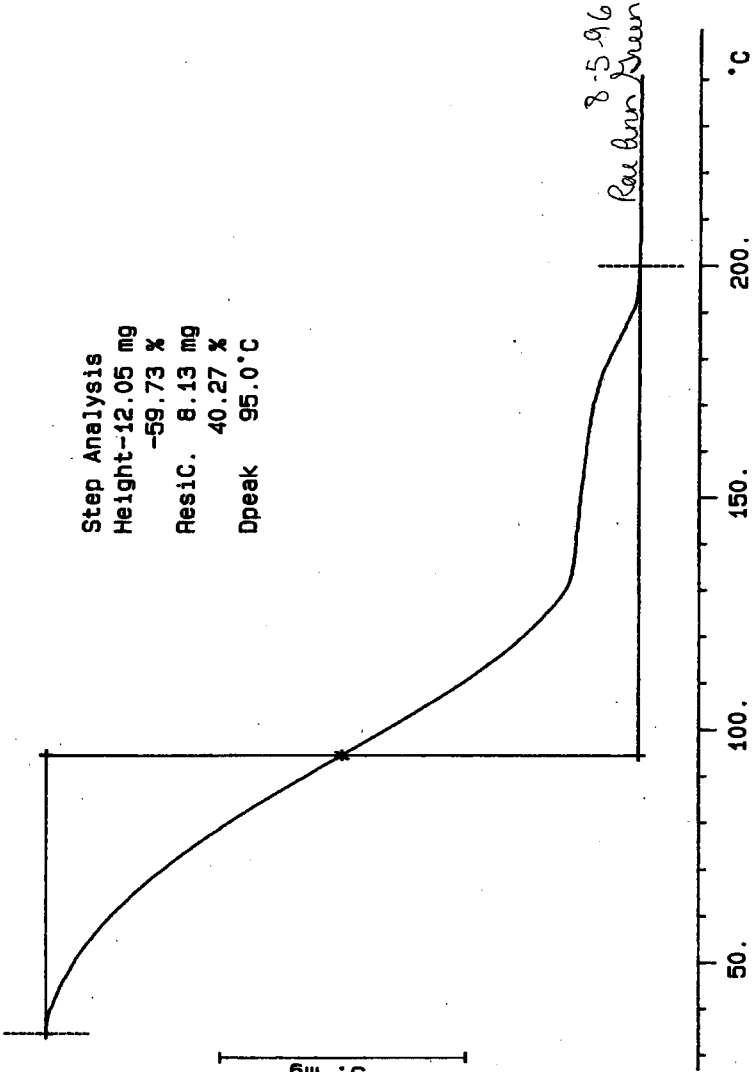
Data Entry Comments:

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 32 TO 37

TGA STD 82NBA
20.179 mg
Rate: 10.0 °C/min
File: 00079.001 TG METTLER 09-Aug-96
Ident: 0.0 222-S Laboratory

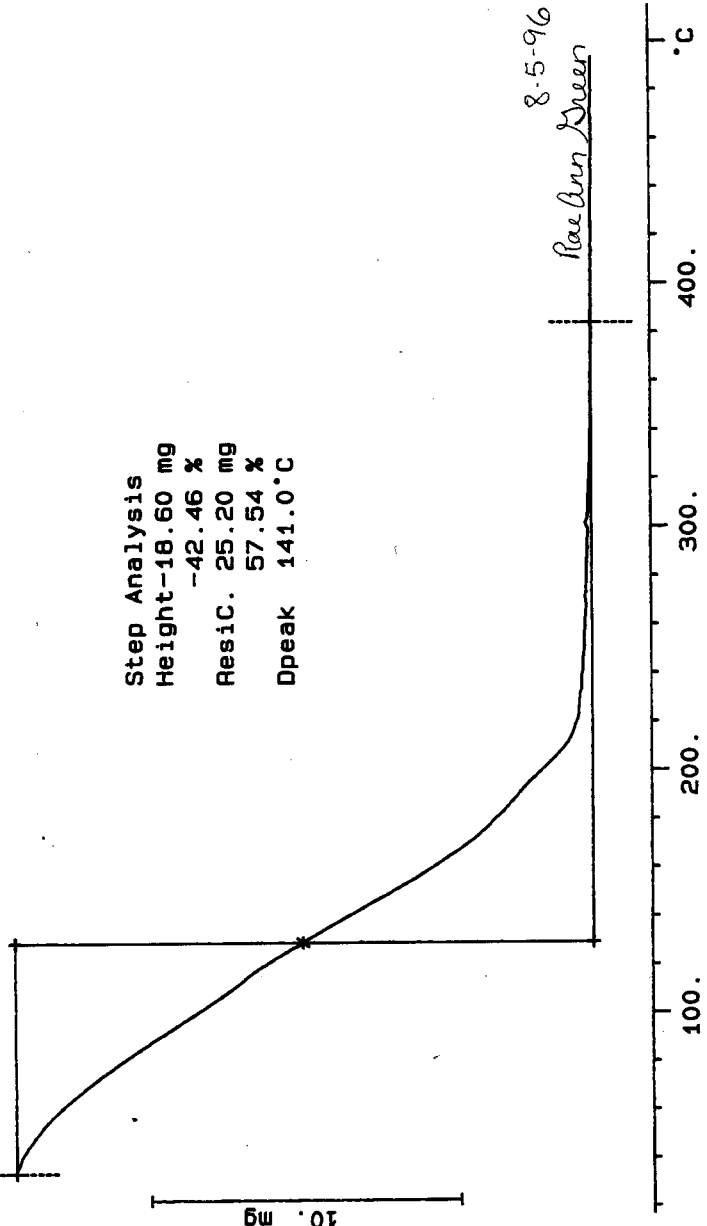
Step Analysis
Height -12.05 mg
-59.73 %
Resic. 8.13 mg
40.27 %
Dpeak 95.0 °C



WHC-SD-WM-DP-199, REV. 0

S96T003794 SAM N2
43.798 mg
Rate: 10.0 °C/min
File: 00093.001 TG METTLER 03-Aug-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height-18.60 mg
-42.46 %
ResidC. 25.20 mg
57.54 %
Dpeak 141.0 °C



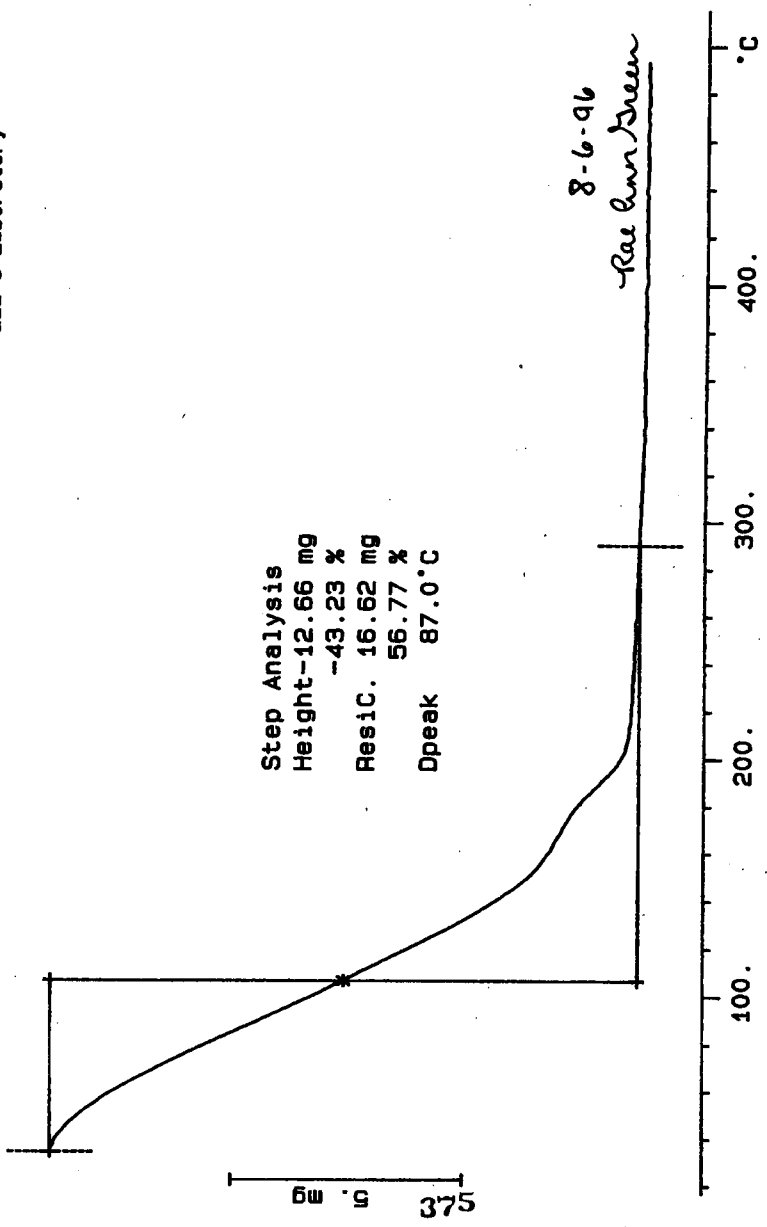
372

S96T003795 SAM N2
29.272 mg

Rate: 10.0 °C/min

File: 00097.001 TG METTLER
Ident: 0.0 222-S Laboratory

06/21
04-Aug-96



375

S96T003795 DUP N2

21.045 mg

Rate: 10.0 °C/min

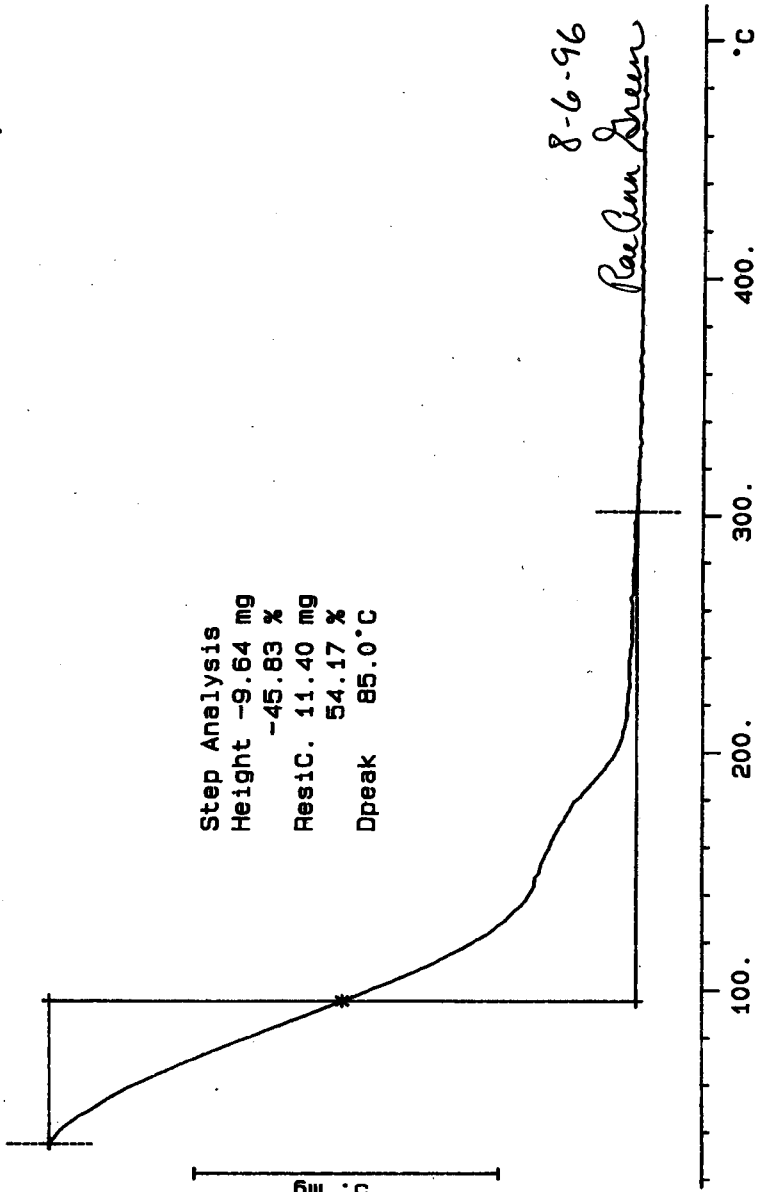
File: 00099.001 TG

Ident: 0.0 222-S Laboratory

06
94-Aug-96

Step Analysis

Height	-9.64 mg
	-45.83 %
ResidC.	11.40 mg
	54.17 %
Dpeak	85.0 °C



8-6-96
Pac Can Green

6w 5 376

LABCORE Data Entry Template for Worklist#

11495

Analyst: SME Instrument: TGA0 1 Book # 82287

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	28.45 59.2	59.34	N/A	%
96000832	AN-105	2 SAMPLE	S96T003796	0	TGA-01	SOLID	N/A	45.15		%
96000832	AN-105	3 DUP	S96T003796	0	TGA-01	SOLID	45.15	46.04	N/A	%
96000832	AN-105	4 SAMPLE	S96T003797	0	TGA-01	SOLID	N/A	36.14		%
96000832	AN-105	5 DUP	S96T003797	0	TGA-01	SOLID	36.14	39.33	N/A	%

Final page for worklist # 11495

Susie M. Dutton 8-7-96
Analyst Signature Date

Shirley 8-12-96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
8/14/96

Data Entry Comments:

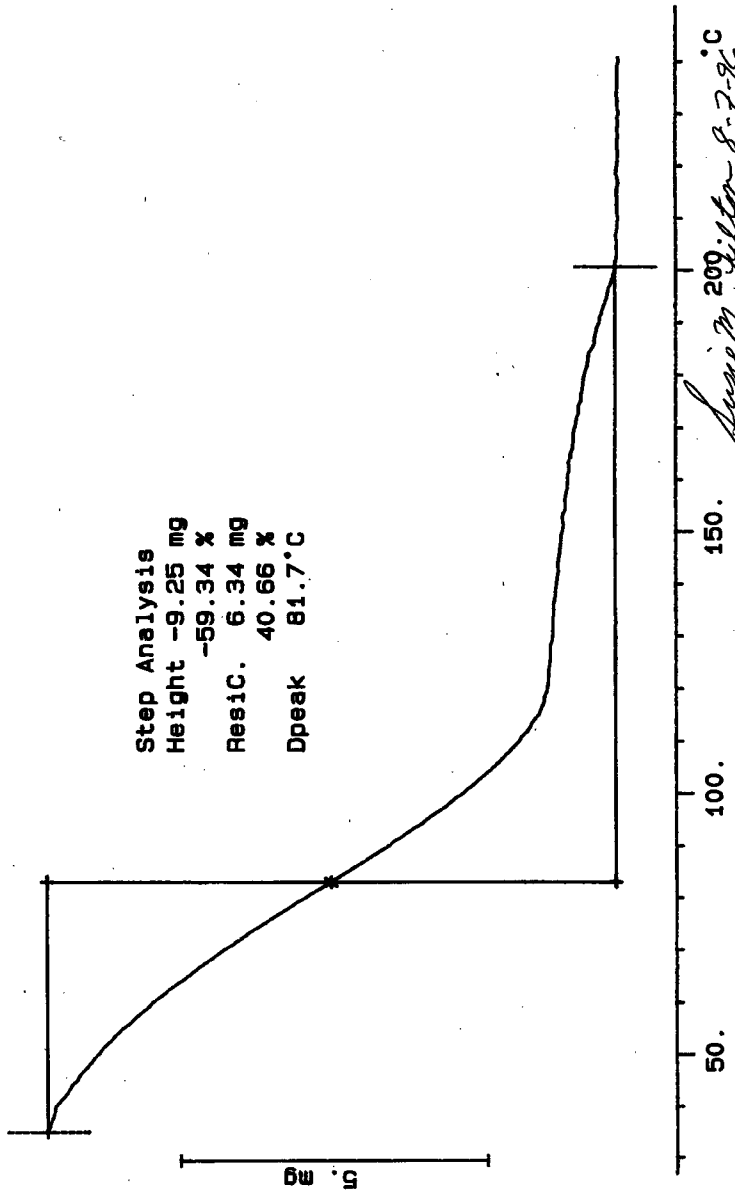
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 322 TO 322.

TGA STD 82N8A
15.583 mg

File: 00018.001 TG METTLER 05-Aug-96
Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

Step Analysis
Height -9.25 mg
-59.34 %
Resid. 6.34 mg
40.66 %
Dpeak 81.7°C

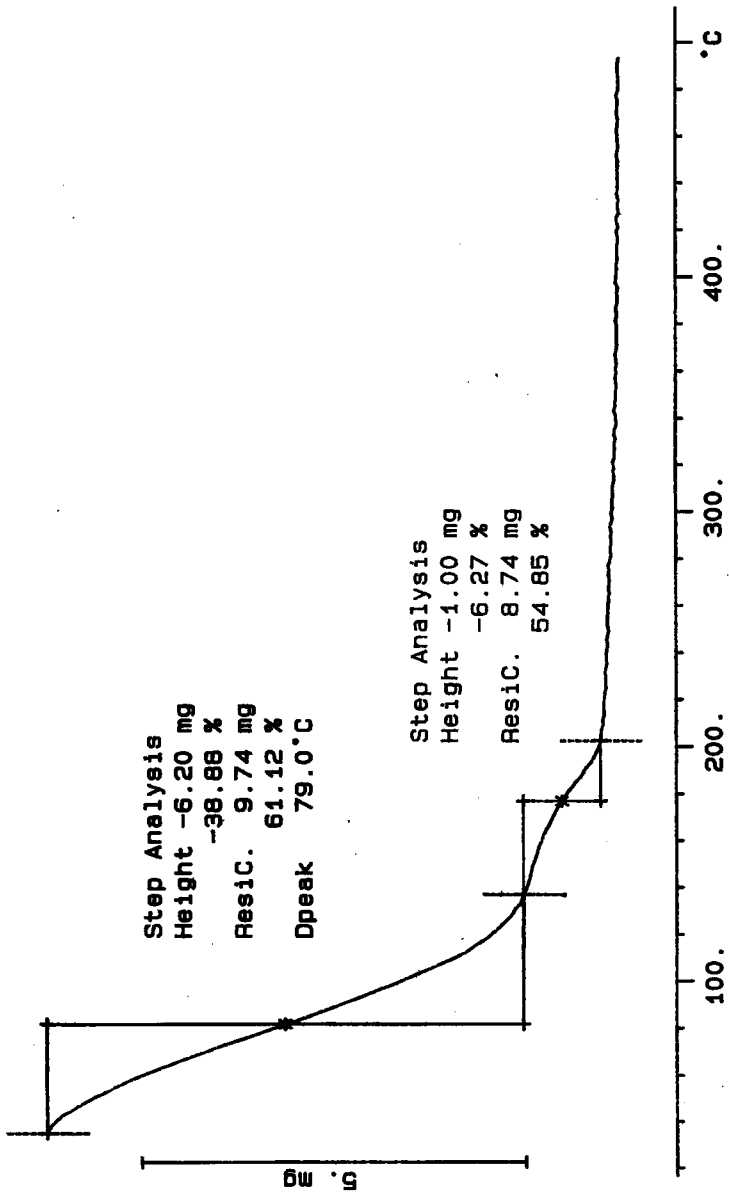


James M. Wilton 8-7-96

S96T003796 N2
15.944 mg

Rate: 10.0 °C/min

File: 00024.001 TG METTLER 05-Aug-96
Ident: 0.0 222-S Laboratory



S96T003796 DUP N2

35.608 mg

Rate: 10.0 °C/min

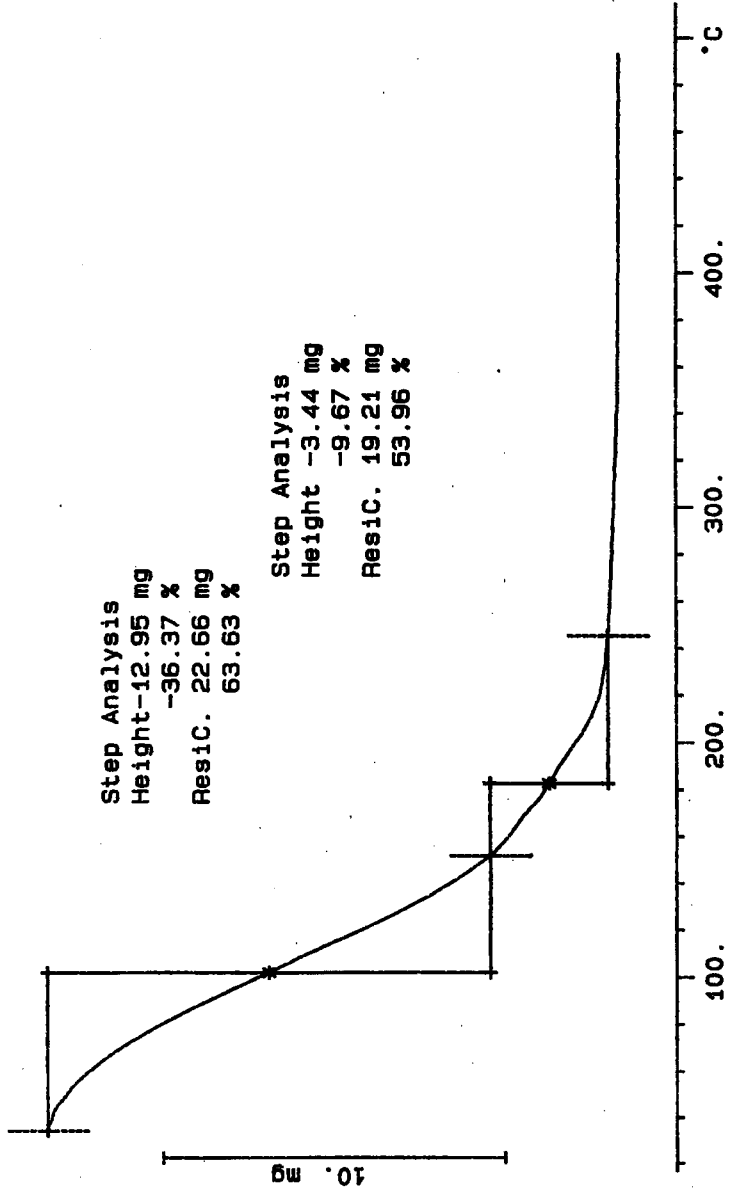
File: 00031.001

TG

METTLER

08-Aug-96

Ident: 0.0 222-S Laboratory



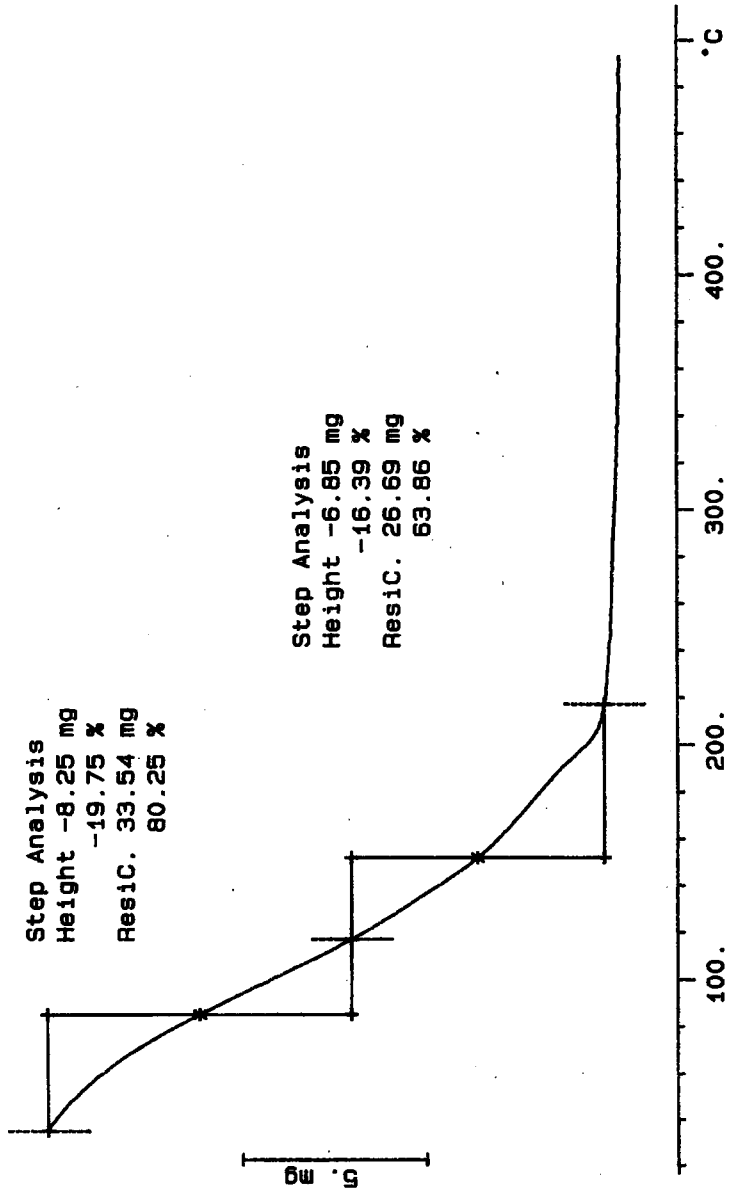
S96T003797 SAM N2
41.790 mg

Rate: 10.0 °C/min

File: 00028.001 TG METTLER 07-Aug-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -8.25 mg
-19.75 %
Resid. 33.54 mg
80.25 %

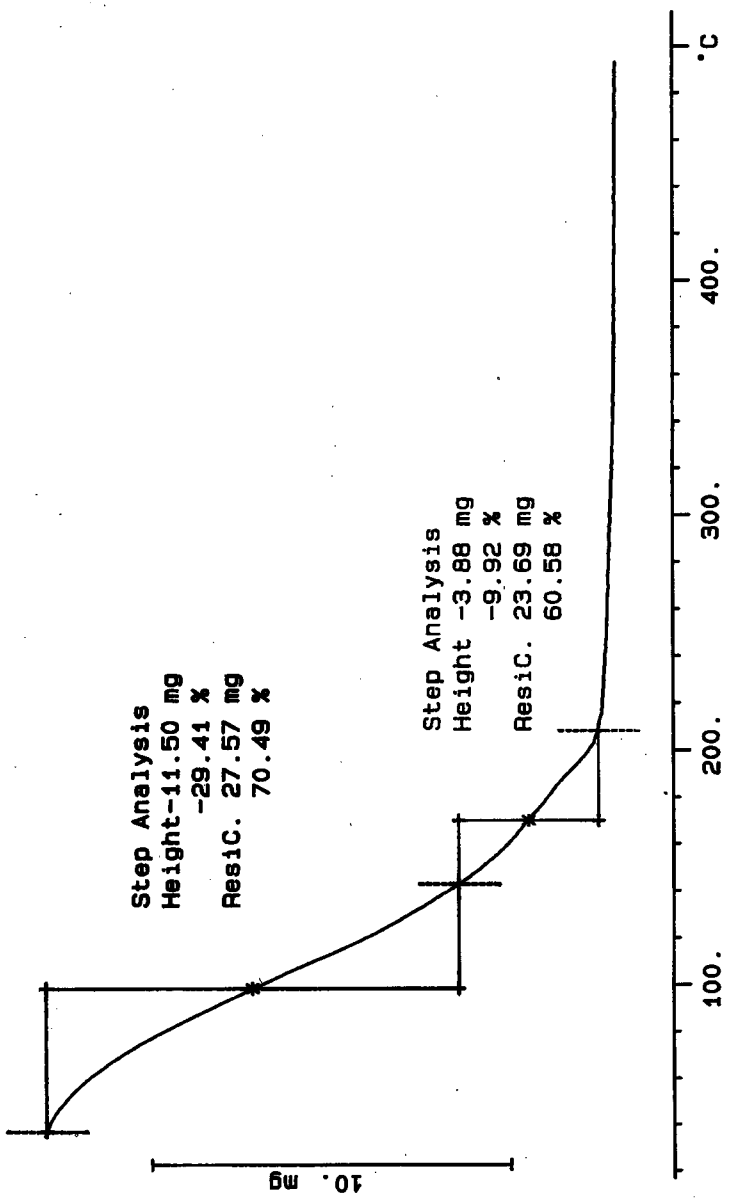
Step Analysis
Height -6.85 mg
-16.39 %
Resid. 26.69 mg
63.86 %



S96T003797 DUP N2
39.110 mg

File: 00030.001 TG METTLER 08-Aug-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



LABCORE Data Entry Template for Worklist#

11496

Analyst: SMF Instrument: TGA0 1 Book # 82N8A

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

Worklist Comment: AN-105 TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.91</u>	<u>N/A</u>	%
96000832	AN-105	2 SAMPLE	S96T003798	0	TGA-01	SOLID	<u>N/A</u>	<u>38.88</u>	<u> </u>	%
96000832	AN-105	3 DUP	S96T003798	0	TGA-01	SOLID	<u>38.88</u>	<u>40.86</u>	<u>N/A</u>	%
96000832	AN-105	4 SAMPLE	S96T003816	0	TGA-01	SOLID	<u>N/A</u>	<u>47.82</u>	<u> </u>	%
96000832	AN-105	5 DUP	S96T003816	0	TGA-01	SOLID	<u>47.82</u>	<u>46.02</u>	<u>N/A</u>	%

Final page for worklist # 11496

Susie M. Tilton 8-8-96
Analyst Signature Date

J. Peto 8-12-96
Analyst Signature Date

A. Lambel 8-8-96

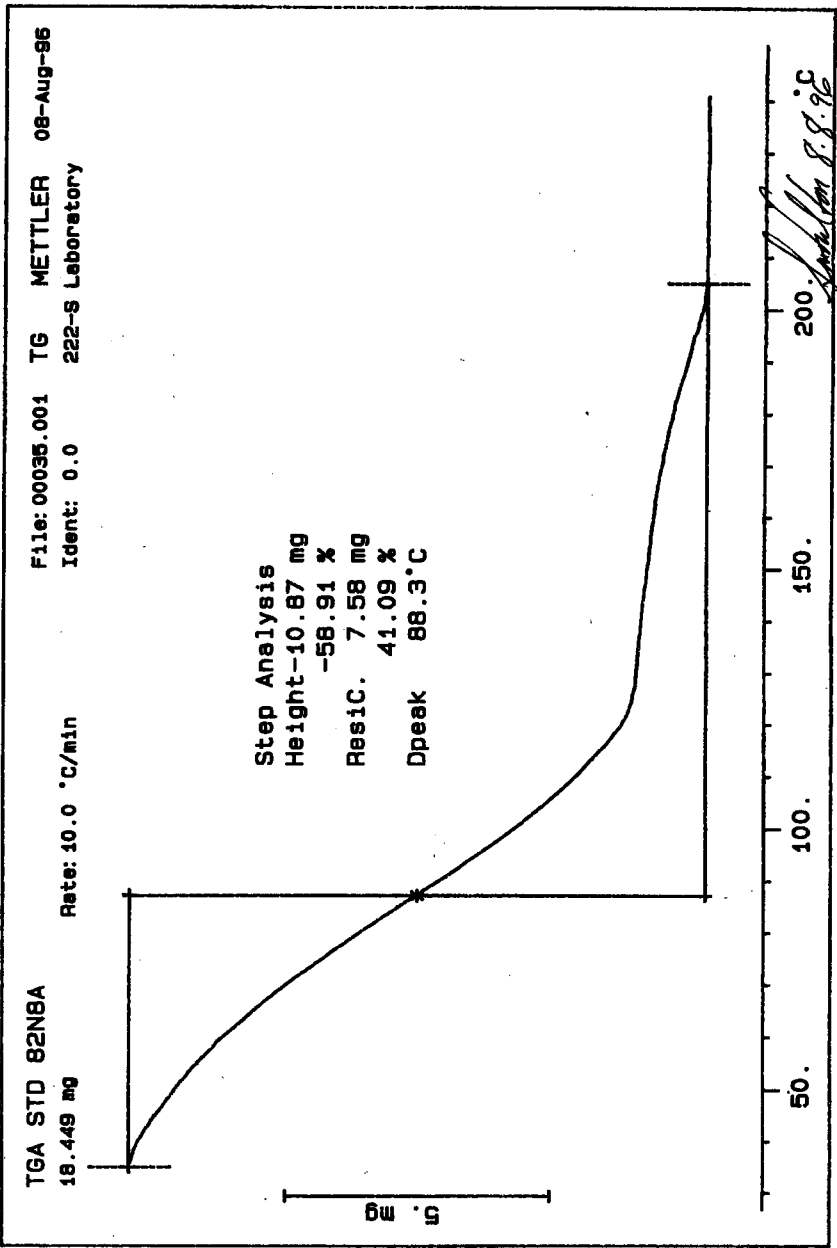
Verified/Validated by
Blandina Valenzuela
8-14-96

Data Entry Comments:

Sample Dup #41 was lost! Who knows?... Dup was
return under sample # 54. at 08/08/96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 384 TO 388.



S96T003798 N2

36.706 mg

Rate: 10.0 °C/min

File: 00033.001

TG METTLER

08-Aug-96

Ident: 0.0 222-S Laboratory

Step Analysis

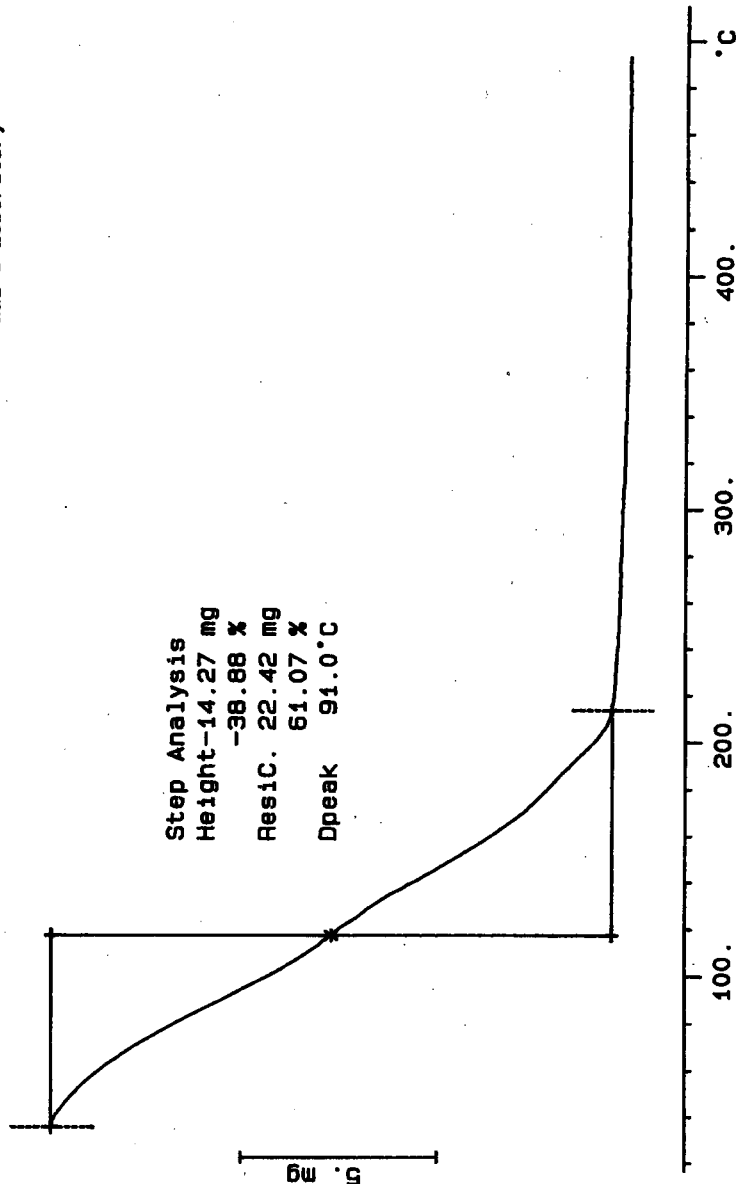
Height-14.27 mg

-36.88 %

Res1C. 22.42 mg

51.07 %

Dpeak 91.0 °C



S96T003798 DUP N2

15.124 mg

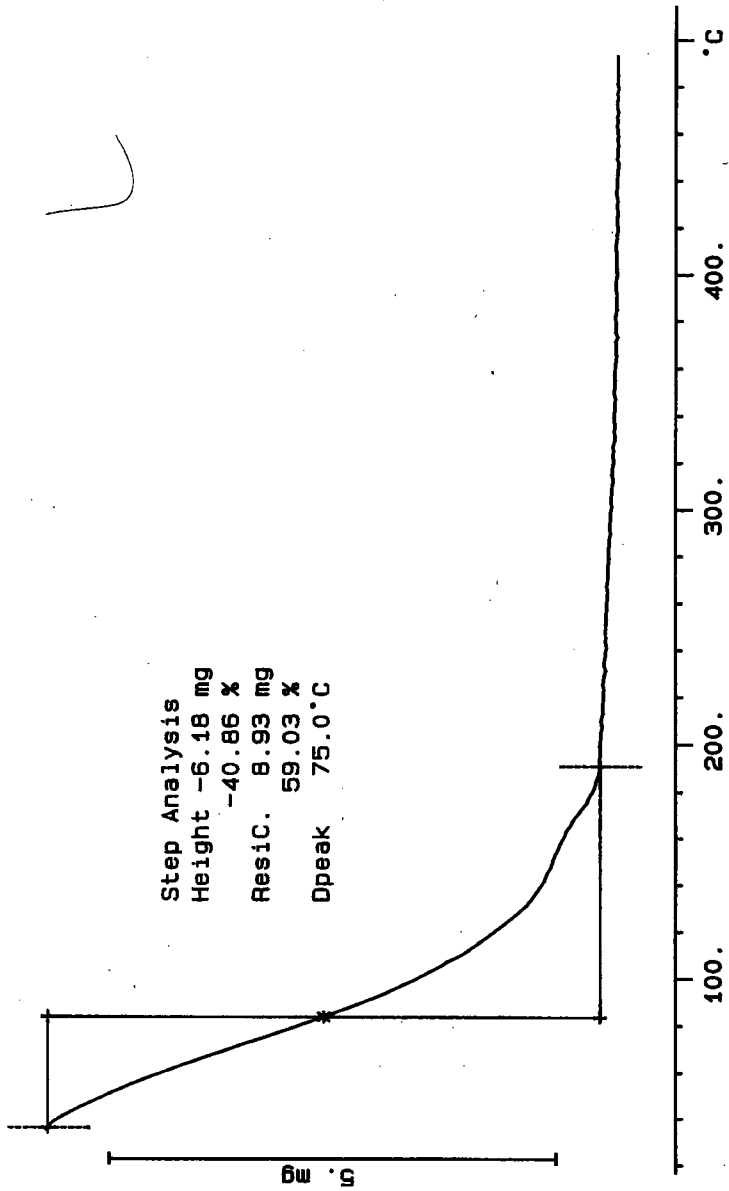
Rate: 10.0 °C/min

File: 00037.001 TG

METTLER

08-Aug-96

222-S Laboratory



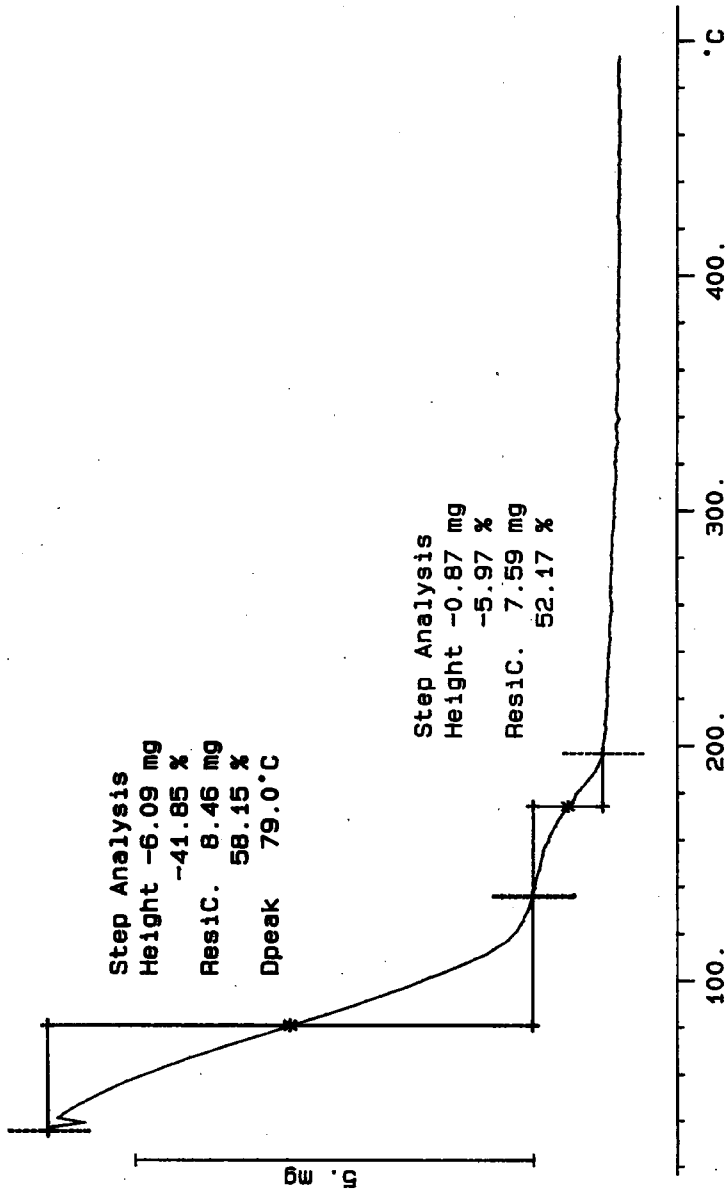
S96T003816 N2
14.554 mg

Rate: 10.0 °C/min

File: 00039.001 TG METTLER 08-Aug-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -6.09 mg
-41.85 %
Res1C. 8.46 mg
58.15 %
Dpeak 79.0 °C

Step Analysis
Height -0.87 mg
-5.97 %
Res1C. 7.59 mg
52.17 %



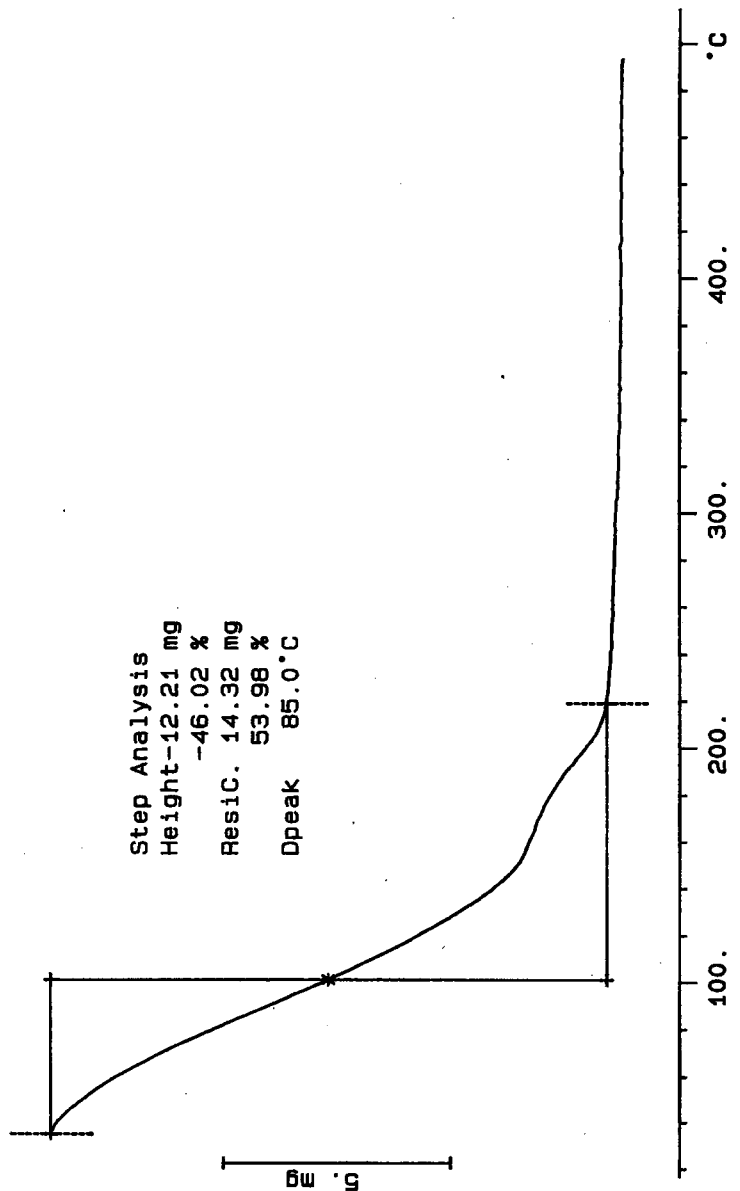
S96T003816 DUP N2
26.527 mg

Rate: 10.0 °C/min

File: 00054.001
Ident: 0.0

TG METTLER 09-Aug-96
222-S Laboratory

Step Analysis
Height-12.21 mg
-46.02 %
Resid. 14.32 mg
53.98 %
Dpeak 85.0 °C



WHC-SD-WM-DP-199, REV. 0
LABCORE Data Entry Template for Worklist#

11497

Analyst: RLC Instrument: TGA0 1 Book # 12N11-B au 8896
82N8-A

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

Worklist Comment: AN-105 ^{105 9/17/96 JS} TGA, RUN UNDER N2. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.89</u>	N/A	%
96000832	AN-105	2 SAMPLE	S96T003817	0	TGA-01	SOLID	N/A	<u>44.82</u>		%
96000832	AN-105	3 DUP	S96T003817	0	TGA-01	SOLID	<u>44.82</u>	<u>43.89</u>	N/A	%

Final page for worklist # 11497

A. Lambel 08-08-96
Analyst Signature Date

Analyst Signature Date

Verified by J Anasto 9.17.96

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.

389

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 5 TO 8

A. Gamber 08-08-96

TGA STD 82N8A

18.449 mg

Rate: 10.0 °C/min

File: 00035.001

TG METTLER

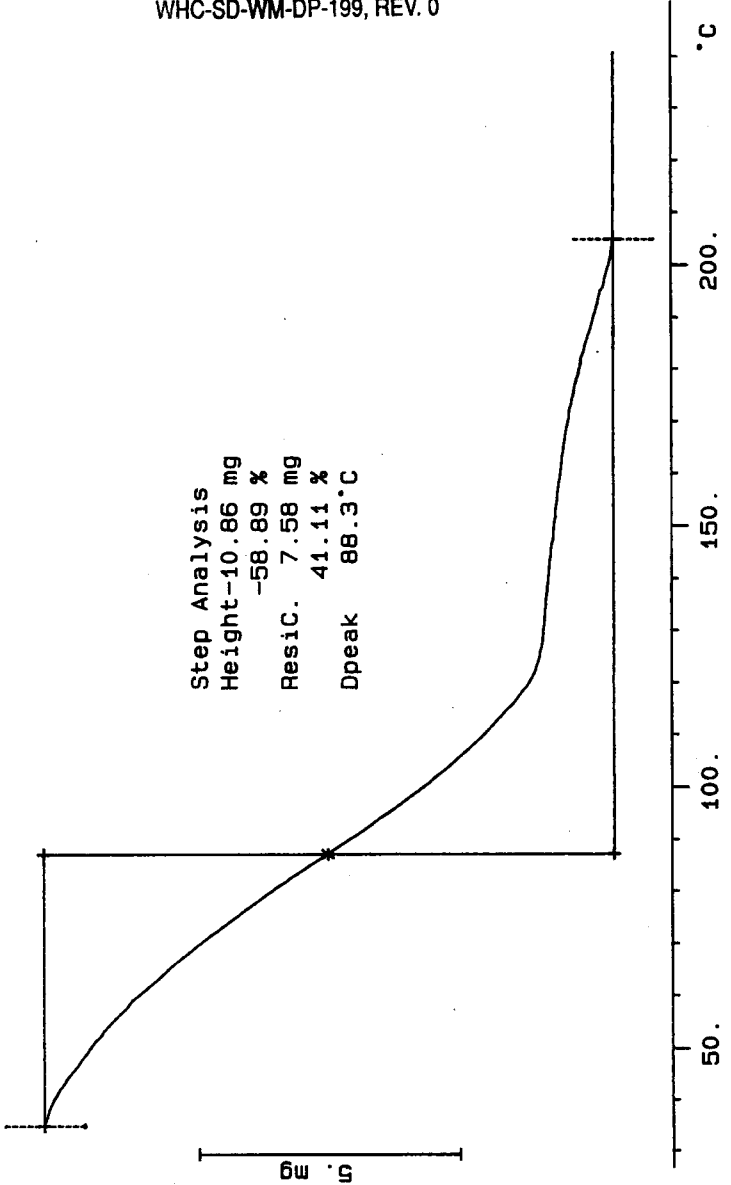
08-Aug-96

Ident: 0.0

222-S Laboratory

WHC-SD-WM-DP-199, REV. 0

Step Analysis
Height -10.86 mg
-58.89 %
Resid. 7.58 mg
41.11 %
Dpeak 88.3 °C



390

S96T003817 SAM N2

29.666 mg

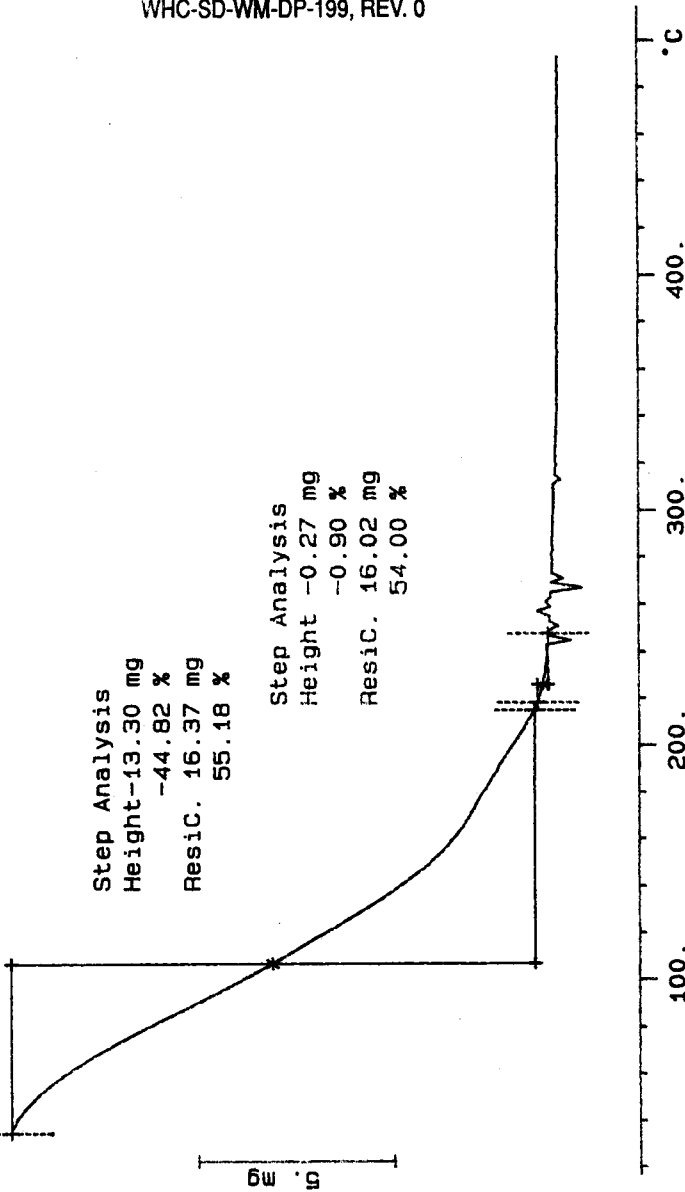
Rate: 10.0 °C/min

File: 00043.001

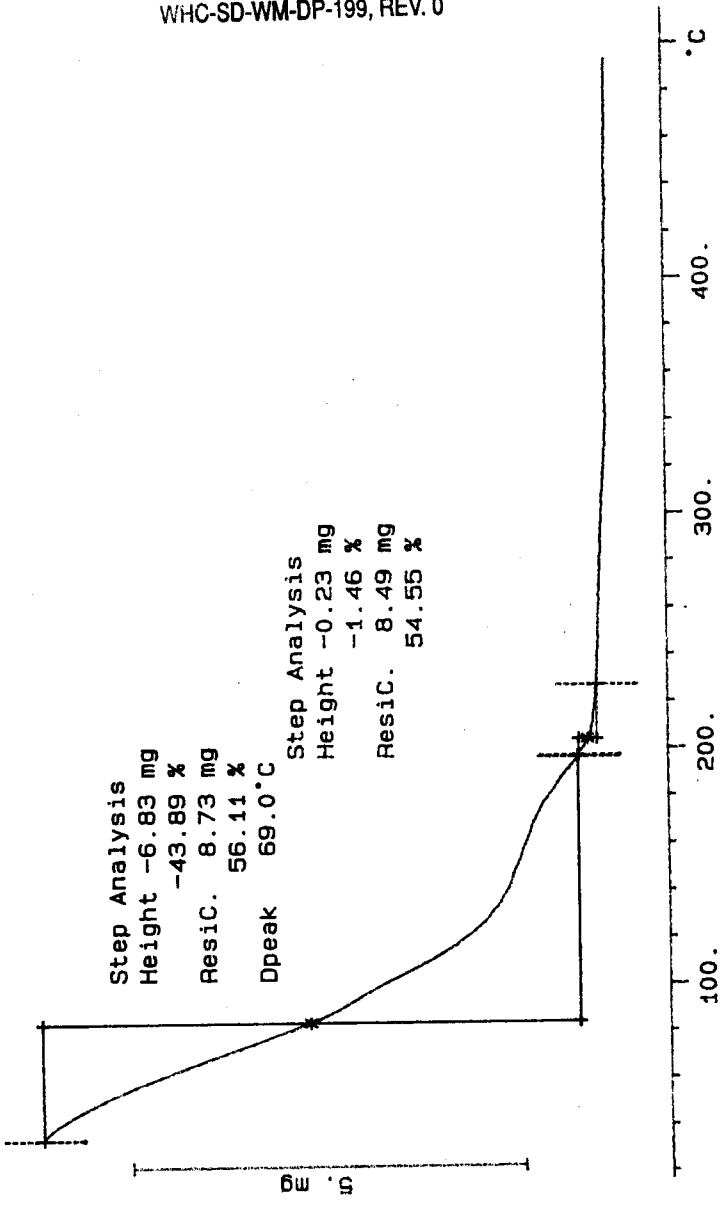
TG METTLER 08-Aug-96

Ident: 0.0 222-S Laboratory

WHC-SD-WM-DP-199, REV. 0



S96T003817 DUP N2
15.568 mg
Rate: 10.0 °C/min
File: 00045.001 TG METTLER 08-Aug-96
Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

11651

Analyst: JM **Instrument:** TGA0 1 **Book #** B2N8-A

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

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.89</u>	<u>N/A</u>	%
96000945	AN-105	2 SAMPLE	S96T003974	0	TGA-01	LIQUID	<u>N/A</u>	<u>99.77</u>		%
96000945	AN-105	3 DUP	S96T003974	0	TGA-01	LIQUID	<u>99.77</u>	<u>99.76</u>	<u>N/A</u>	%
96000945	AN-105	4 SAMPLE	S96T003975	0	TGA-01	LIQUID	<u>N/A</u>	<u>49.99</u>		%
96000945	AN-105	5 DUP	S96T003975	0	TGA-01	LIQUID	<u>49.99</u>	<u>50.16</u>	<u>N/A</u>	%

Final page for worklist # 11651

A. Lambel 08-08-96
Analyst Signature Date

J. P. [Signature] 8-12-96
Analyst Signature Date

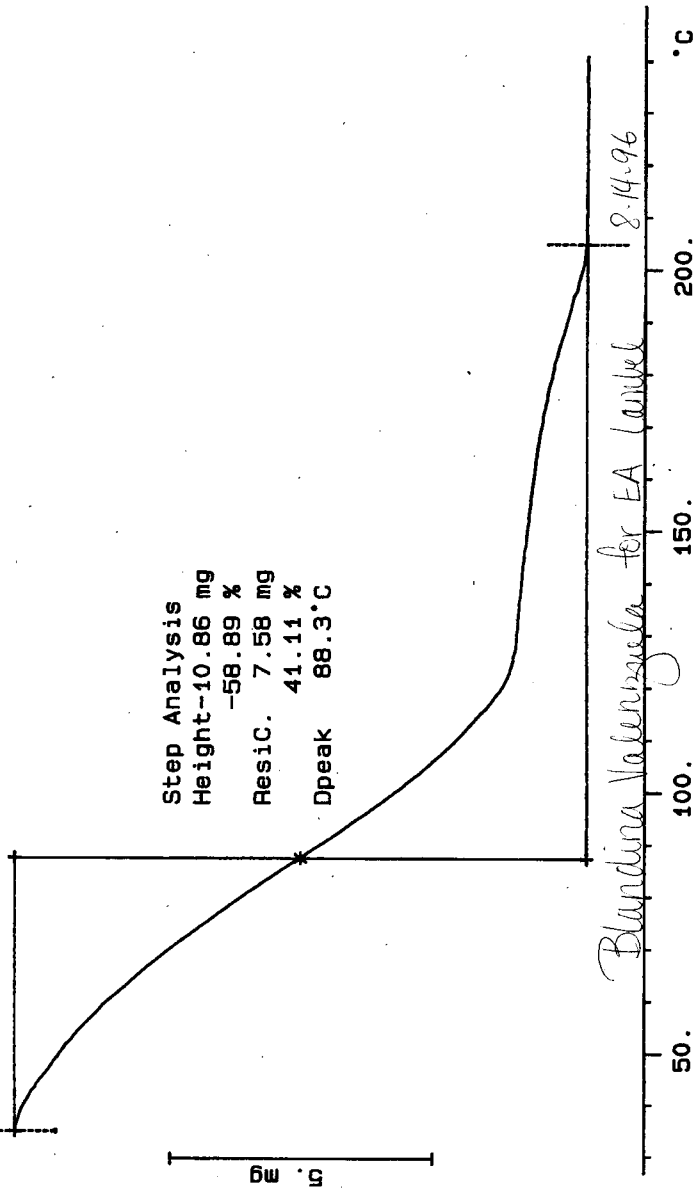
Verified/Validated by
Blandina Valenzuela
8.14.96

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 314 TO 318.

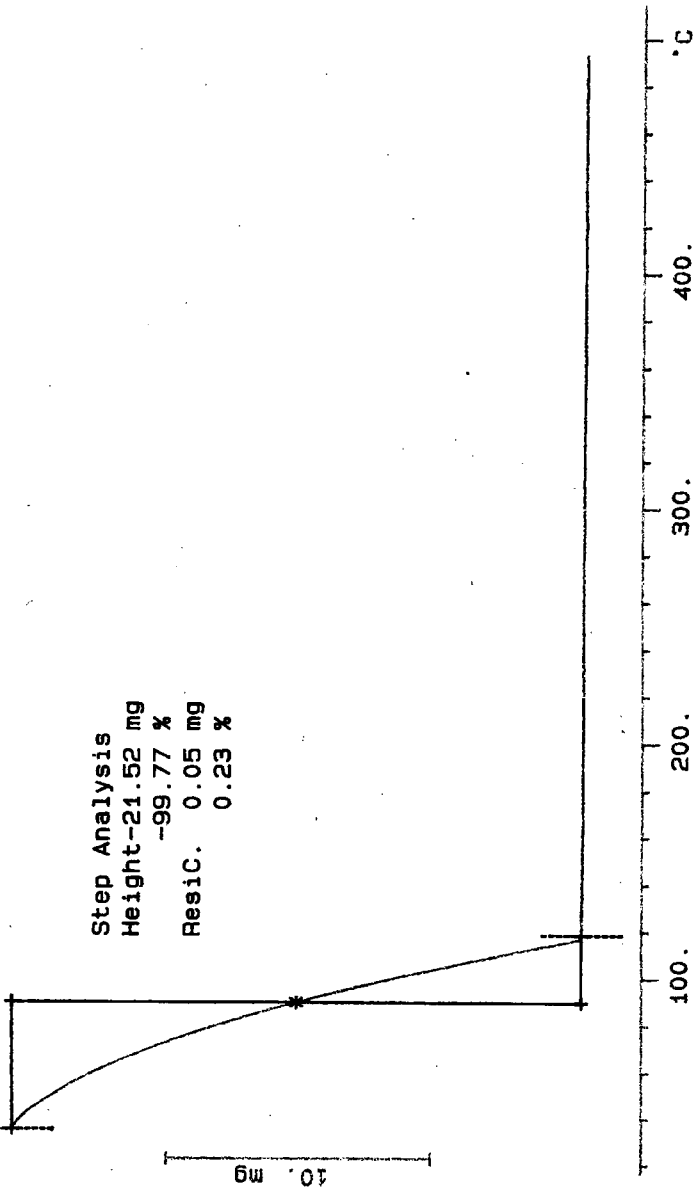
TGA STD 82N8A Rate: 10.0 °C/min F11e: 00035.001 TG METTLER 08-Aug-96
18.449 mg Ident: 0.0 222-S Laboratory



50. 100. 150. 200. °C

S96T003974 SAM N2
21.575 mg
Rate: 10.0 °C/min
File: 00047.001 TG METTLER 08-Aug-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height-21.52 mg
-99.77 %
Resic. 0.05 mg
0.23 %



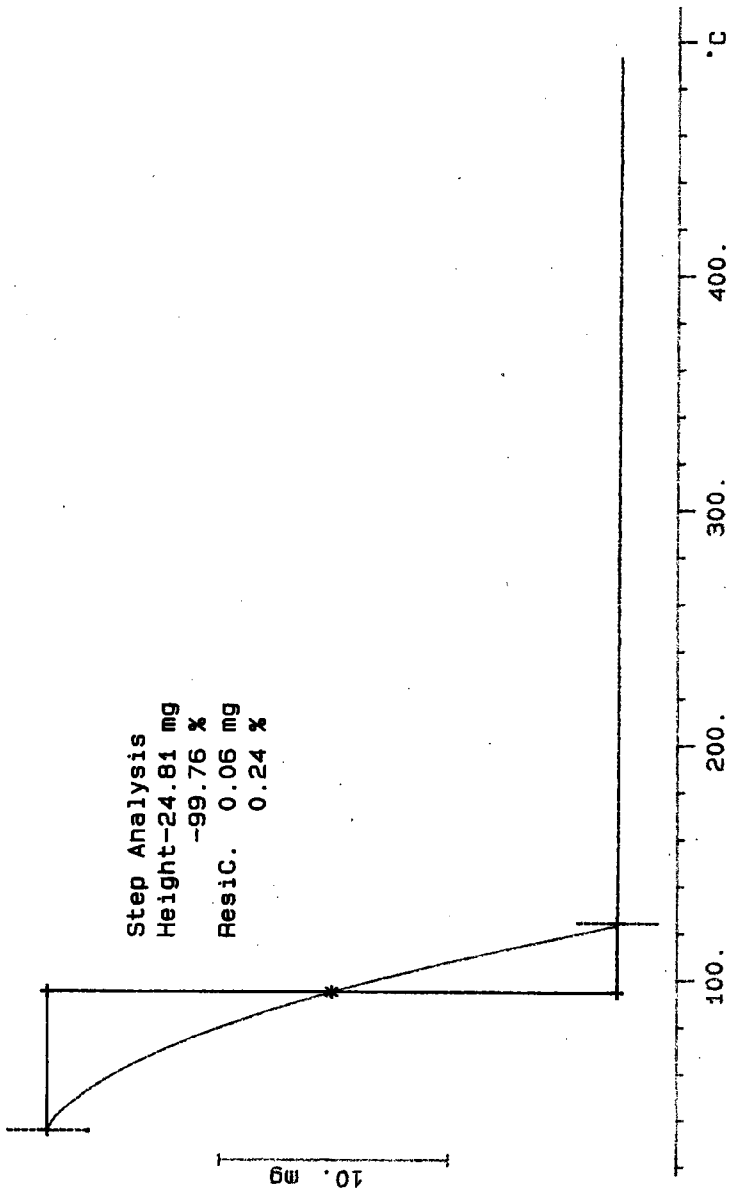
S96T003974 DUP N2
24.871 mg

Rate: 10.0 °C/min

File: 00049.001 TG

Ident: 0.0 222-S Laboratory

08-Aug-96



S96T003975 SAM N2

20.641 mg

Rate: 10.0 °C/min

File: 00051.001

Ident: 0.0

TG METTLER

09-Aug-96

222-S Laboratory

Step Analysis

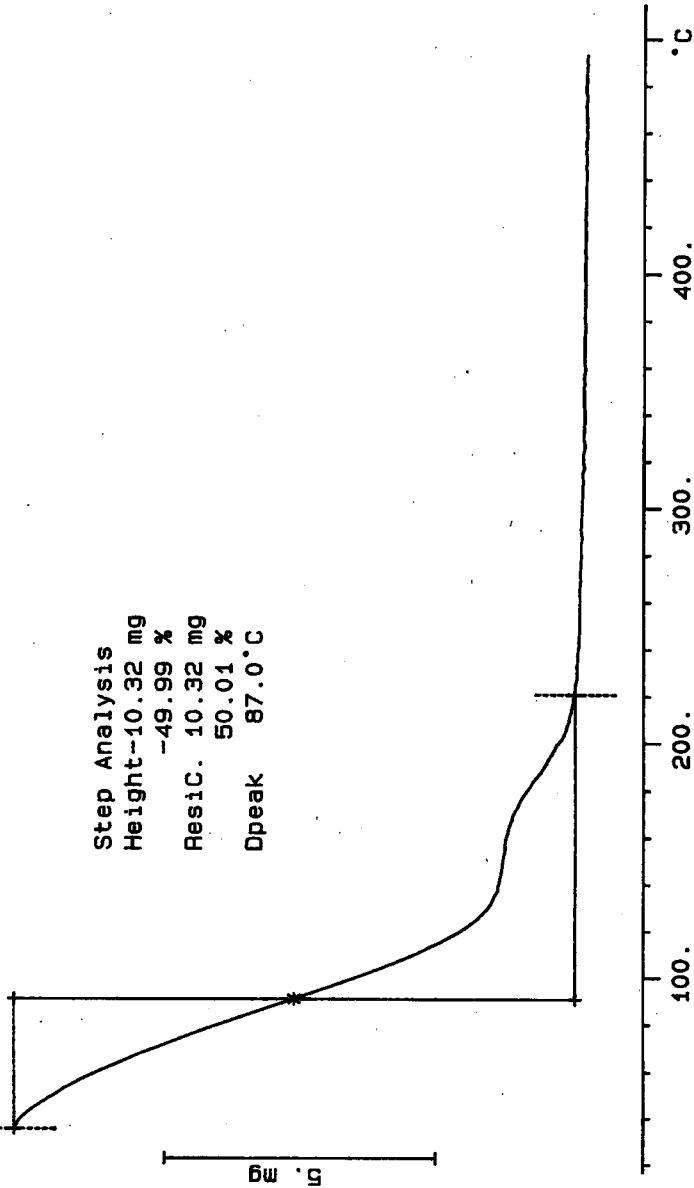
Height-10.32 mg

-49.99 %

Res1C. 10.32 mg

50.01 %

Dpeak 87.0 °C

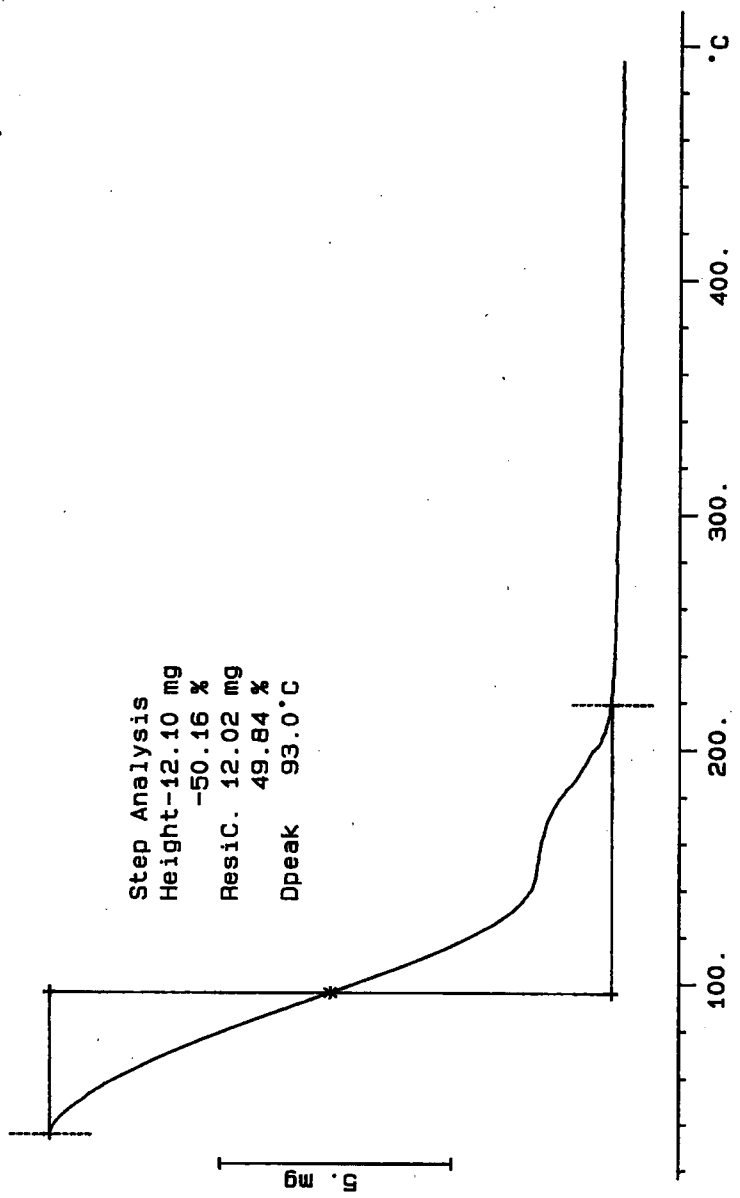


S96T003975 DUP N2
24.121 mg

File: 00053.001 TG METTLER 09-Aug-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis
Height-12.10 mg
-50.16 %
ResiC. 12.02 mg
49.84 %
Dpeak 93.0 °C



LABCORE Data Entry Template for Worklist#

11652

Analyst: RLM Instrument: TGA0 1 Book # 82USA

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

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	LIQUID	<u>59.2</u>	<u>58.92</u>	<u>N/A</u>	%
96000945	AN-105	2	SAMPLE	S96T003976	0		TGA-01	LIQUID	<u>N/A</u>	<u>50.51</u>		%
96000945	AN-105	3	DUP	S96T003976	0		TGA-01	LIQUID	<u>50.51</u>	<u>50.33</u>	<u>N/A</u>	%
96000945	AN-105	4	SAMPLE	S96T003977	0		TGA-01	LIQUID	<u>N/A</u>	<u>49.68</u>		%
96000945	AN-105	5	DUP	S96T003977	0		TGA-01	LIQUID	<u>49.68</u>	<u>50.25</u>	<u>N/A</u>	%

Final page for worklist # 11652

RLM
Analyst Signature
8/9/96
Date

R. Jones
Analyst Signature
8-14-96
Date

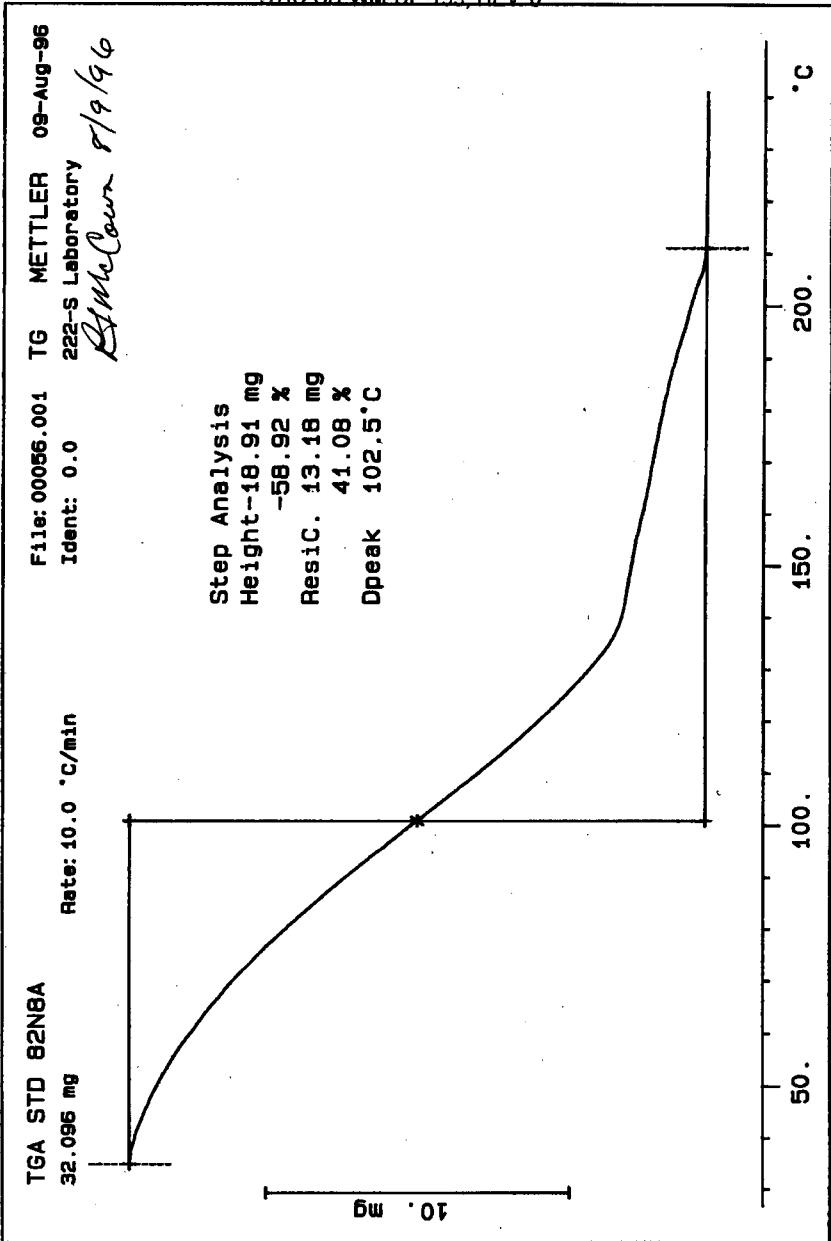
Verified/Validated by
Blancina
Valenzuela
8.14.96

Data Entry Comments: S96T003976 results are the sum of two weight loss steps

S96T003977 results are the sum of two weight loss steps.

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 400 TO 404.



S96T003976 N2

41.403 mg

Rate: 10.0 °C/min

File: 00059.001 TG METTLER 09-AUG-96
Ident: 0.0 222-S Laboratory

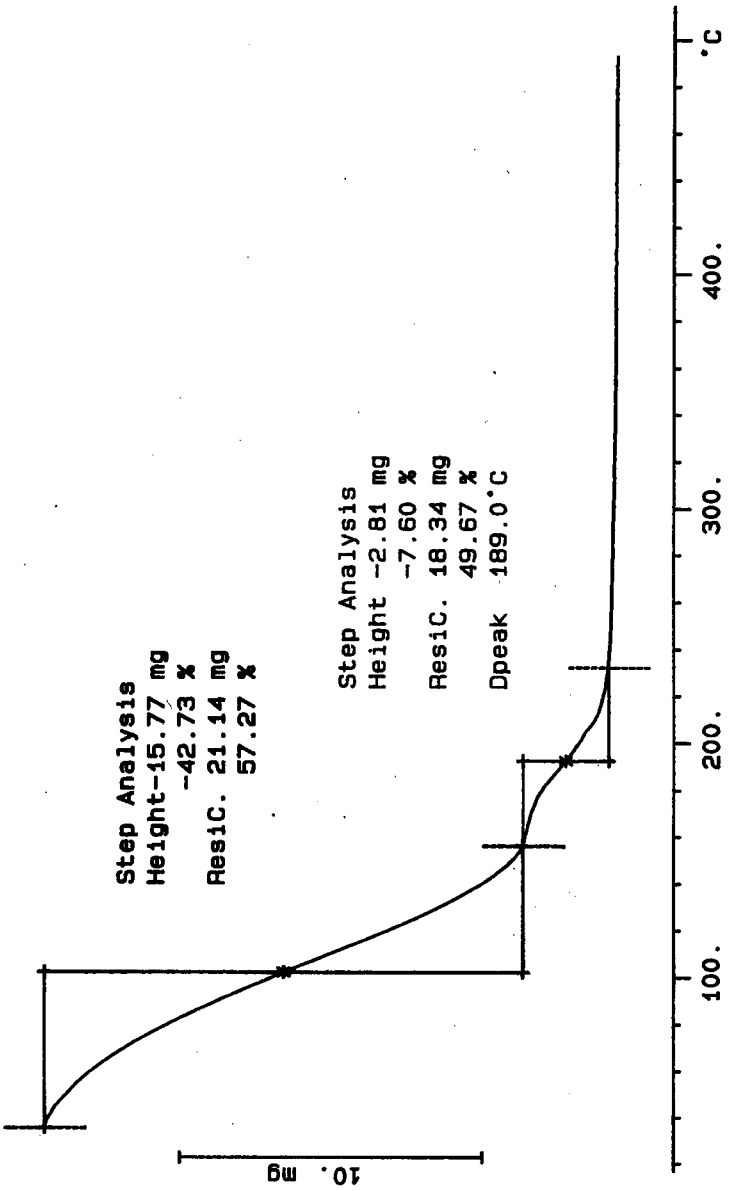
Step Analysis
Height-17.51 mg
-42.29 %
Resic. 23.89 mg
57.71 %

Step Analysis
Height -3.40 mg
-8.22 %
Resic. 20.49 mg
49.49 %

10. mg

100. 200. 300. 400. °C

S96T003976 DUP N2
36.916 mg
Rate: 10.0 °C/min
File: 00061.001 TG METTLER 09-Aug-96
Ident: 0.0 222-S Laboratory



Step Analysis
Height-15.77 mg
-42.73 %
Resid. 21.14 mg
57.27 %

Step Analysis
Height -2.81 mg
-7.60 %
Resid. 10.73 mg
29.05 %
Dpeak 189.0 °C

10.0 mg

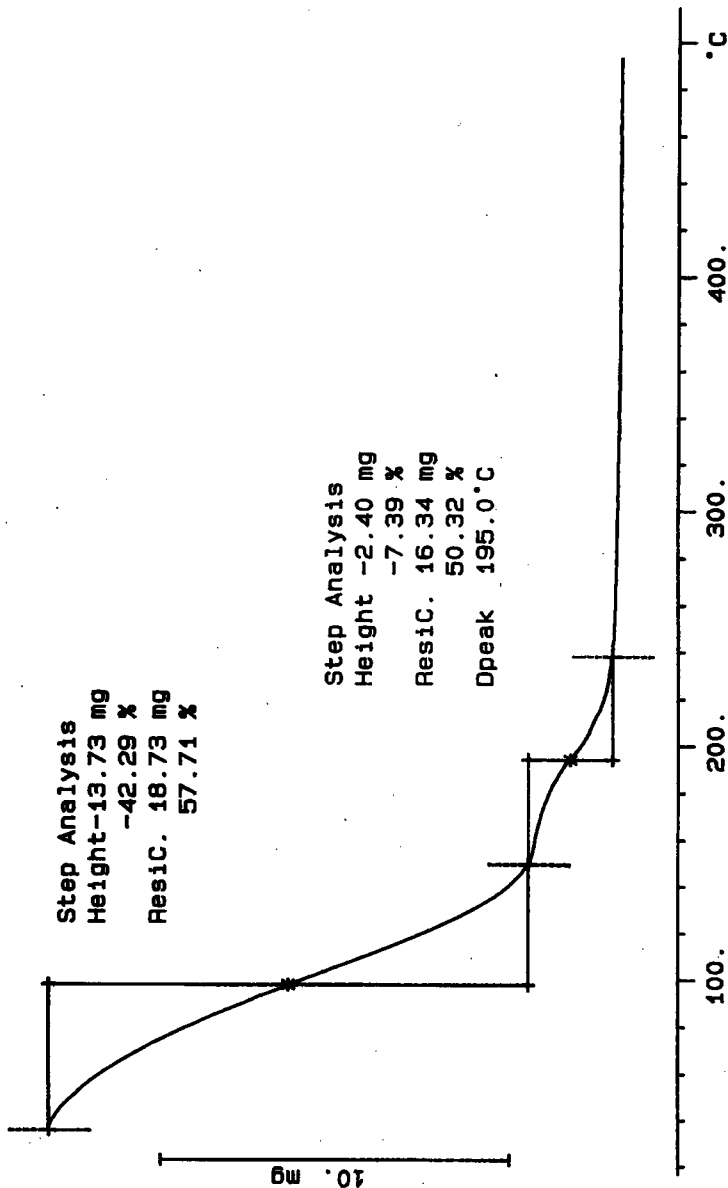
S96T003977 N2
32.460 mg

File: 00063.001 TG METTLER 09-Aug-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis
Height -13.73 mg
-42.29 %
ResiC. 18.73 mg
57.71 %

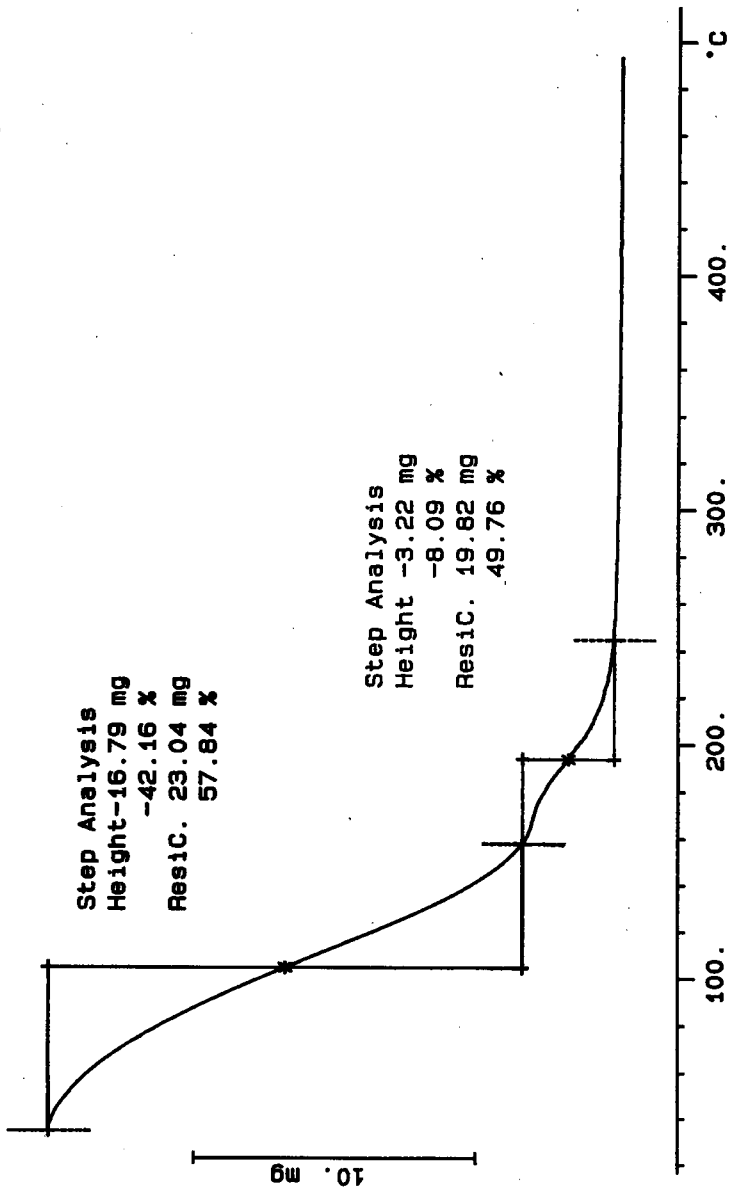
Step Analysis
Height -2.40 mg
-7.39 %
ResiC. 16.34 mg
50.32 %
Dpeak 195.0 °C



S96T003977 DUP N2
39.837 mg
Rate: 10.0 °C/min
File: 00665.001 TG METTLER 09-Aug-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height-16.79 mg
-42.16 %
Res1C. 23.04 mg
57.84 %

Step Analysis
Height -3.22 mg
-8.09 %
Res1C. 19.62 mg
49.76 %



LABCORE Data Entry Template for Worklist#

11653

Analyst: EAL Instrument: TGA0 3 Book # 82N8A

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

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	59.2	58.81	N/A	%
96000945	AN-105	2 SAMPLE	596T003978	0	TGA-03	LIQUID	N/A	53.90	49.41	%
96000945	AN-105	3 DUP	596T003978	0	TGA-03	LIQUID	49.41	50.44	N/A	%
96000945	AN-105	4 SAMPLE	596T003979	0	TGA-03	LIQUID	N/A	50.03		%
96000945	AN-105	5 DUP	596T003979	0	TGA-03	LIQUID	50.03	50.06	N/A	%
96000945	AN-105	6 SAMPLE	596T003980	0	TGA-03	LIQUID	N/A	53.90		%
96000945	AN-105	7 DUP	596T003980	0	TGA-03	LIQUID	53.90	54.21	N/A	%

Final page for worklist # 11653

See attached for signatures
Analyst Signature EAL Date 8-13-96

[Signature] 8-14-96
Analyst Signature Date

Verified/Validated by
Blandina Valenzuela 8-14-96

596T003978 is the result of two weight loss steps.
596T003979 results are the sum of two weight loss steps
596T003980 results are the sum of two weight loss steps.

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#

11653

Analyst: *[Signature]* Instrument: TGA0 _____ Book # *22187A*

Method: LA-560-112 Rev/Mod _____

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	_____	_____	N/A	%
96000945	AN-105	2 SAMPLE	S96T003978	0	TGA-01	LIQUID	N/A	_____	_____	%
96000945	AN-105	3 DUP	S96T003978	0	TGA-01	LIQUID	_____	_____	N/A	%
96000945	AN-105	4 SAMPLE	S96T003979	0	TGA-01	LIQUID	N/A	_____	_____	%
96000945	AN-105	5 DUP	S96T003979	0	TGA-01	LIQUID	_____	_____	N/A	%
96000945	AN-105	6 SAMPLE	S96T003980	0	TGA-01	LIQUID	N/A	_____	_____	%
96000945	AN-105	7 DUP	S96T003980	0	TGA-01	LIQUID	_____	_____	N/A	%

Final page for worklist # 11653

[Signature] 08-12-96
Analyst Signature Date
[Signature] 8/13/96

Analyst Signature Date

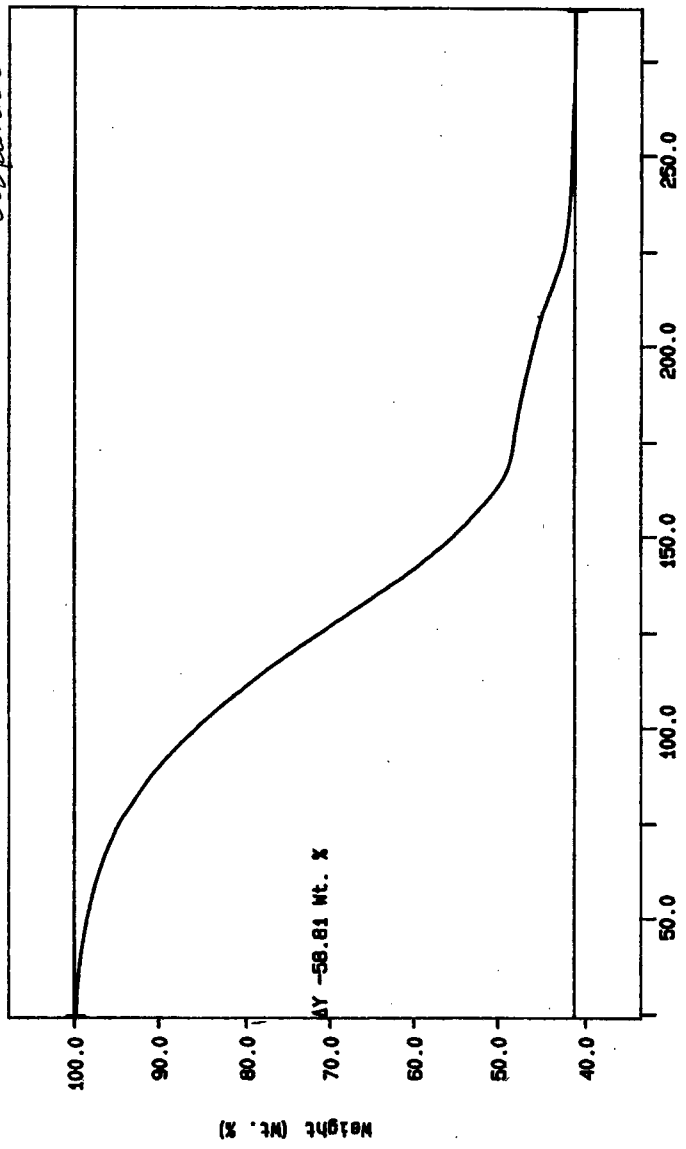
TGA-03 instrument
was used.
8-13-96
[Signature]

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.

Curve 1: TGA
File info: TER081201 Mon Aug 12 09: 19: 07 1996 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 402 TO 412
Sample Weight: 14.182 mg
TGA STD 82NB-A

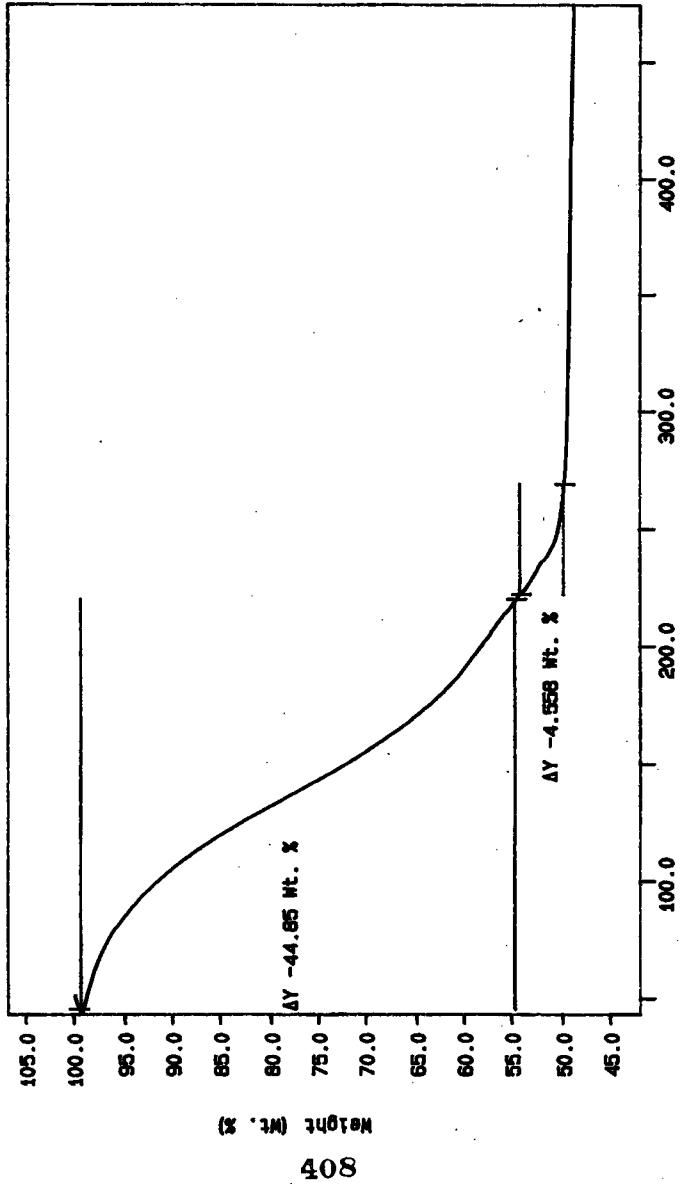
A. Langel



N2 10C/MIN
 TIME 58.8 S
 TIME 58.8 S
 0.0 min RATE: 10.0 C/min
 EA LANGEL
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Mon Aug 12 09: 45: 16 1996

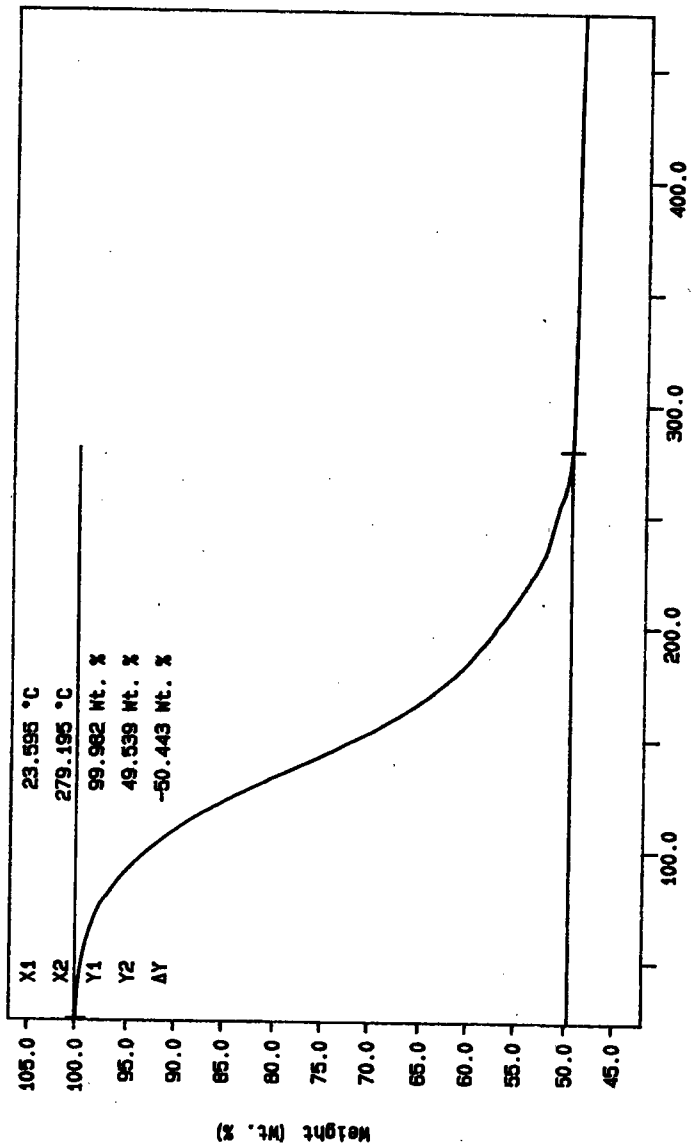
405

Curve 1: TGA
File info: SAM081204 Mon Aug 12 14:02:40 1996
Sample Weight: 22.972 mg
SS6T003978



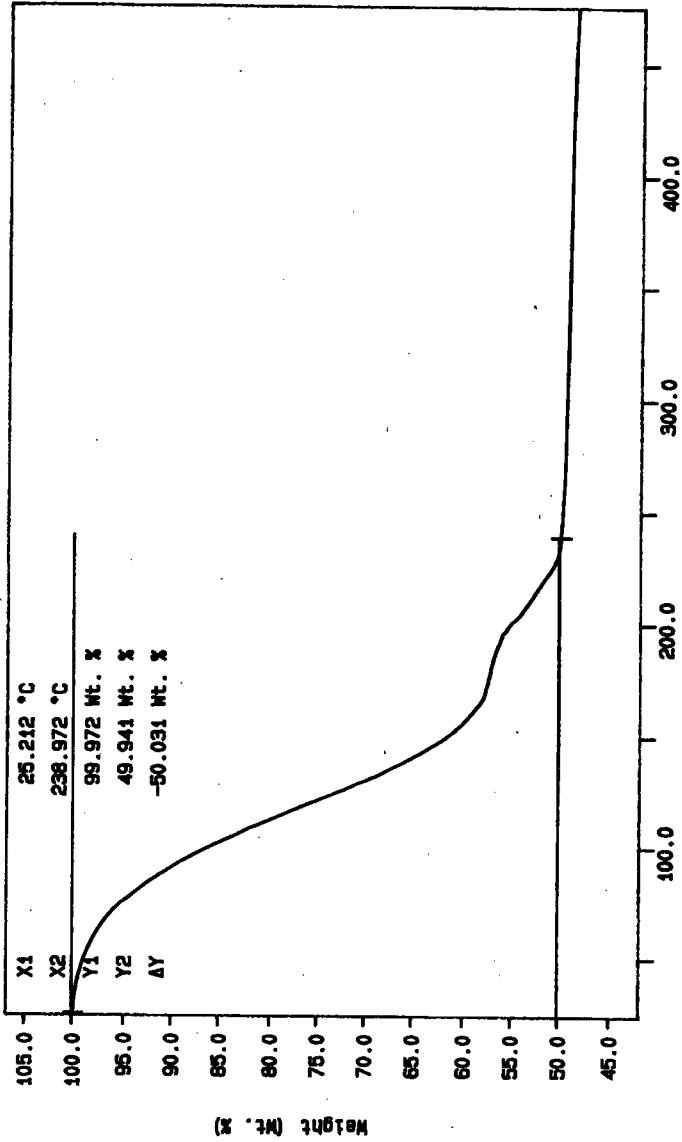
100/MIN N2
TIME: 03:08
EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 15:12:56 1996

Curve 1: TGA
 File Info: SAM081205 Mon Aug 12 16: 08: 13 1996
 Sample Weight: 18.259 mg
 S96T003978 DUP



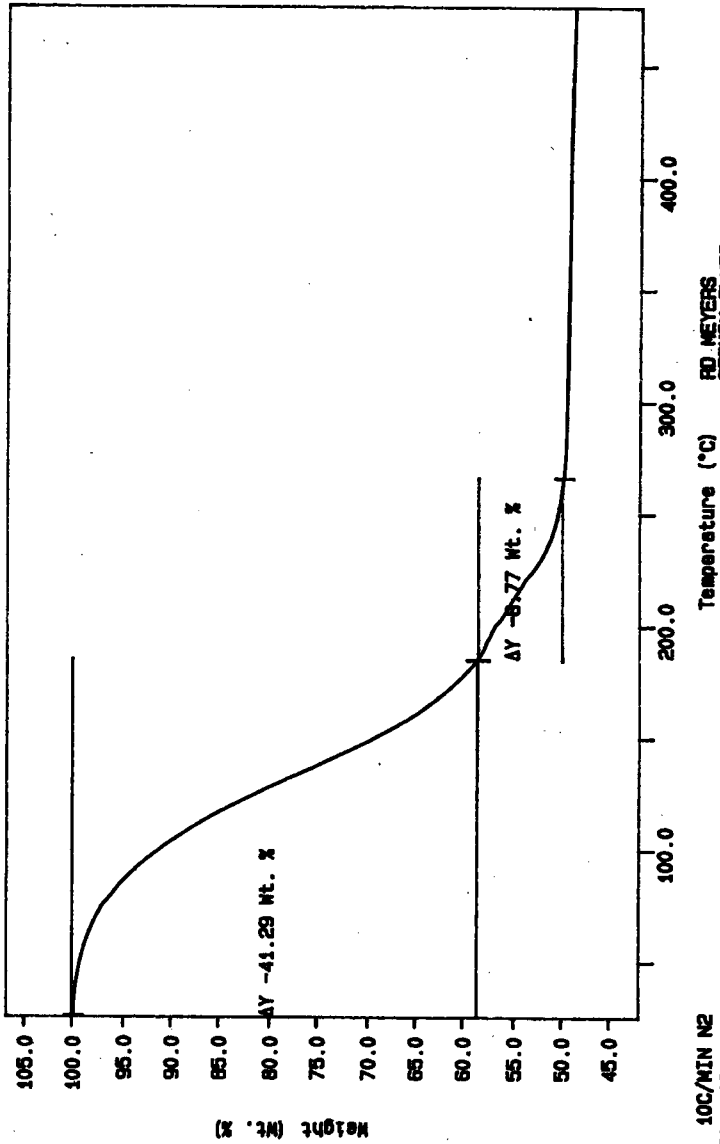
10C/MIN N2
 TIME: 00:08 TIME: 0:0 min RATE: 10.0 C/min
 EA LABEL
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Mon Aug 12 20: 49: 37 1996

Curve 1: TGA
File info: SAM081206 Mon Aug 12 22:42:54 1996
Sample Weight: 7.690 mg
SS6T003979



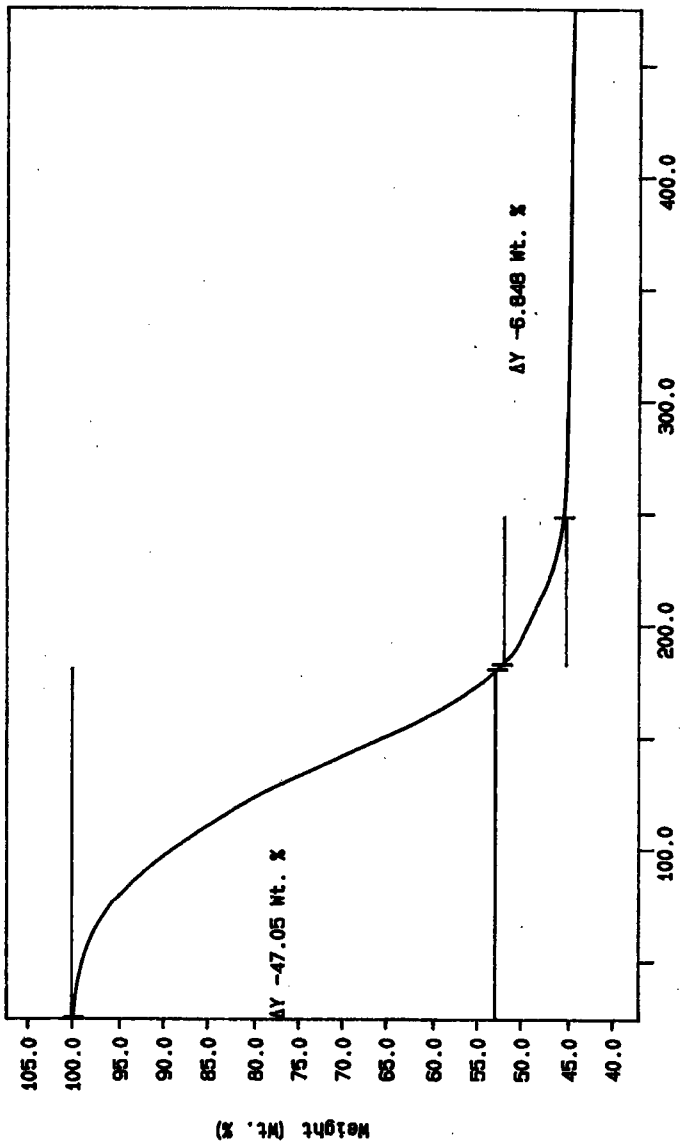
10C/MIN N2
 TGA# 88.8 8
 TOW# 0.0 min RATE# 10.0 C/min
 RO MEYERS
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Mon Aug 12 23:59:00 1996

Curve 1: TGA
File Info: SAN0813DUP Tue Aug 13 00:49:28 1996
Sample Weight: 17.603 mg
S96T003979DUP



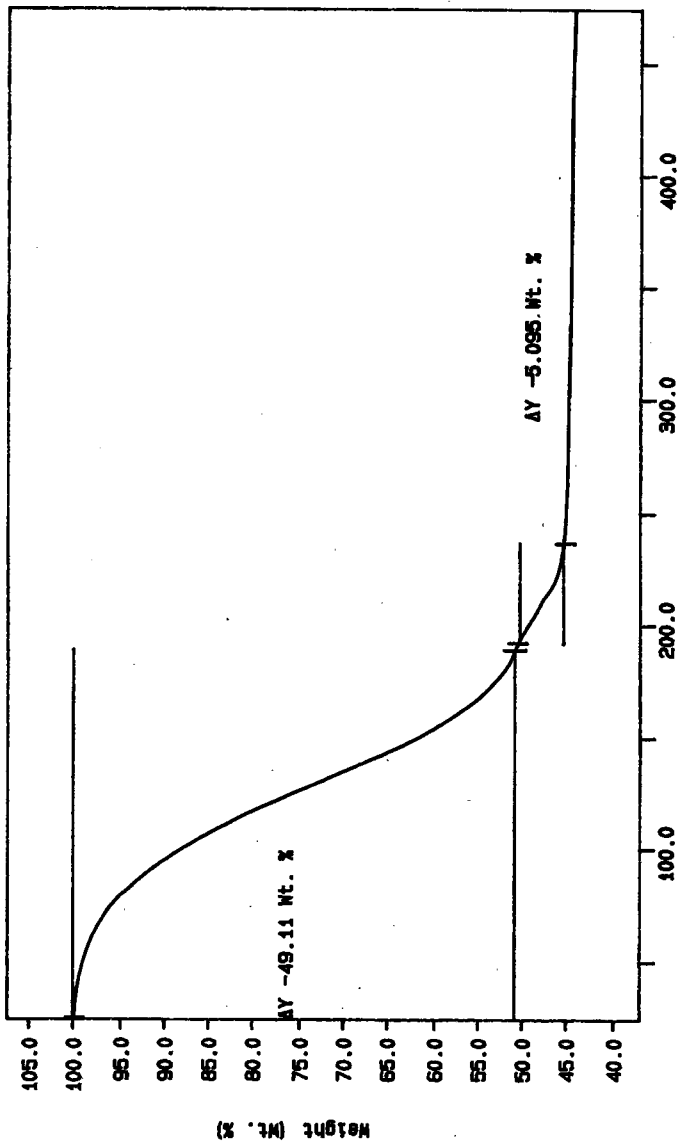
100./MIN N2
TIME 08:38 TMISS: 0.0 min RATE1: 10.0 C/min
ED MEYERS
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Aug 13 14:57:47 1996

Curve 1: TGA
File info: SAM081202 Mon Aug 12 10:48:40 1996
Sample Weight: 18.230 mg
S96T003960



100/MIN N2
TEMP: 65.0 8
TIME: 0.0 min RATE: 10.0 C/min
EA LABEL
PERKIN-ELMER
7, Series Thermal Analysis System
Mon Aug 12 11:55:36 1996

Curve 1: TGA
File info: SAM061203 Mon Aug 12 13:02:03 1996
Sample Weight: 14.562 mg
S96T003980 DUP



100C/MIN N2
TEMP: 658.8
TIME: 8
EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Aug 12 13:07:28 1996

LABCORE Data Entry Template for Worklist#

11656

Analyst: EAL Instrument: TGA0 1 Book # 82N8A

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

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.92</u>	<u>N/A</u>	<u>%</u>
96000945	AN-105	2 SAMPLE	S96T003981	0	TGA-01	SOLID	<u>N/A</u>	<u>44.99</u>		<u>%</u>
96000945	AN-105	3 DUP	S96T003981	0	TGA-01	SOLID	<u>44.99</u>	<u>45.6</u>	<u>N/A</u>	<u>%</u>
96000945	AN-105	4 SAMPLE	S96T003982	0	TGA-01	SOLID	<u>N/A</u>	<u>45.87</u>		<u>%</u>
96000945	AN-105	5 DUP	S96T003982	0	TGA-01	SOLID	<u>45.87</u>	<u>45.01</u>	<u>N/A</u>	<u>%</u>
96000945	AN-105	6 SAMPLE	S96T003983	0	TGA-01	SOLID	<u>N/A</u>	<u>44.17</u>		<u>%</u>
96000945	AN-105	7 DUP	S96T003983	0	TGA-01	SOLID	<u>44.17</u>	<u>43.15</u>	<u>N/A</u>	<u>%</u>

Final page for worklist # 11656

See attached for signatures
Analyst Signature Date 8.14.96

Analyst Signature _____ Date _____

Verified/Validated by
Blandina
Valenzuela
8.14.96

Data Entry Comments: S96T003981 results are the sum of two weight loss steps.

S96T003983 duplicate thermogram produced a peak due to the instrument being touched.
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# 11656

Analyst: Instrument: TGA0 Book# 8208A

Method: LA-560-112 Rev/Mod

Worklist Comment: TGA FOR AN-105 PLEASE RUN UNDER N2

S Type	Sample#	R A	Test	Matrix	Group#	Project
1 STD			TGA-01	SOLID		
2 SAMPLE	S96T003981 0		TGA-01	SOLID	96000945	AN-105
	Analytes Requested: TGA-01					
3 DUP	S96T003981 0		TGA-01	SOLID		
4 SAMPLE	S96T003982 0		TGA-01	SOLID	96000945	AN-105
	Analytes Requested: TGA-01					
5 DUP	S96T003982 0		TGA-01	SOLID		
6 SAMPLE	S96T003983 0		TGA-01	SOLID	96000945	AN-105
	Analytes Requested: TGA-01					
7 DUP	S96T003983 0		TGA-01	SOLID		

Final page for worklist # 11656

A. Sammel 08-12-96
Analyst Signature Date

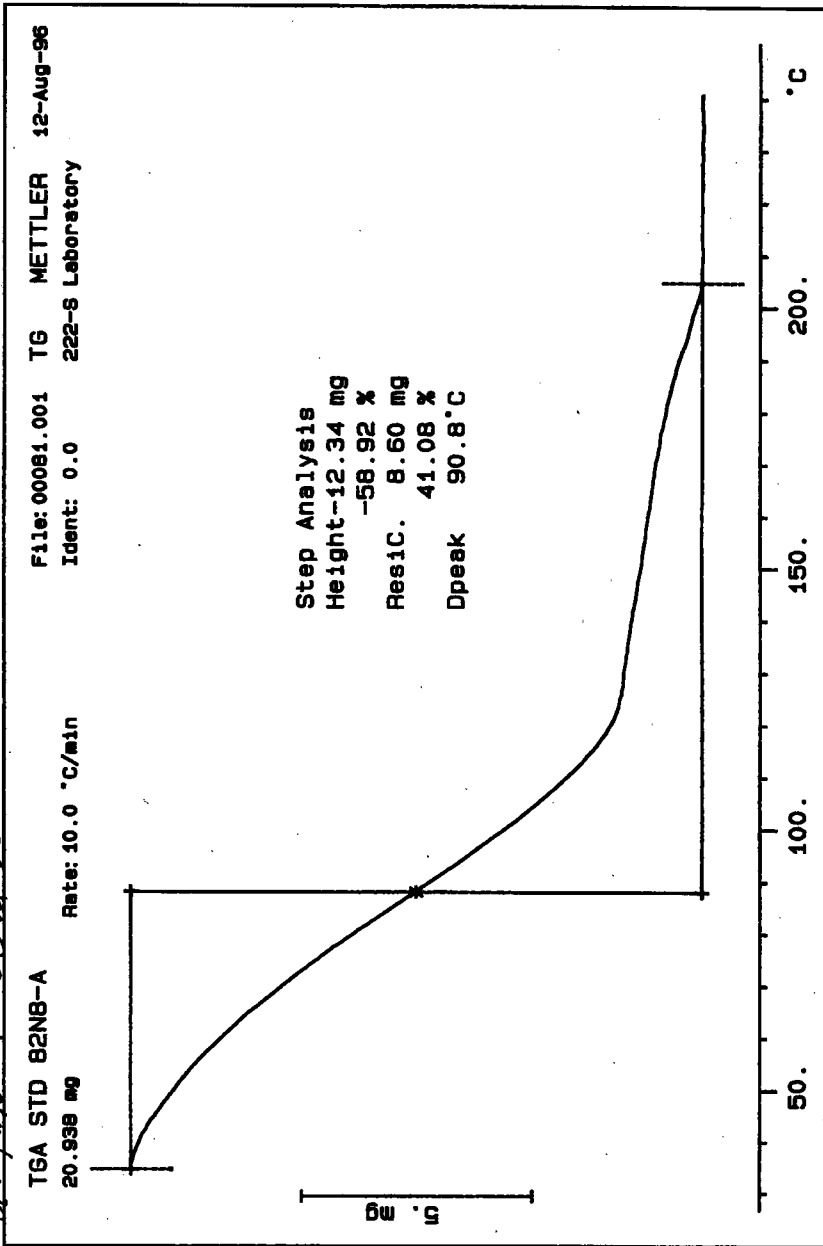
 8/14/96
Analyst Signature Date

Data Entry Comments:

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

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 411c TO 422.

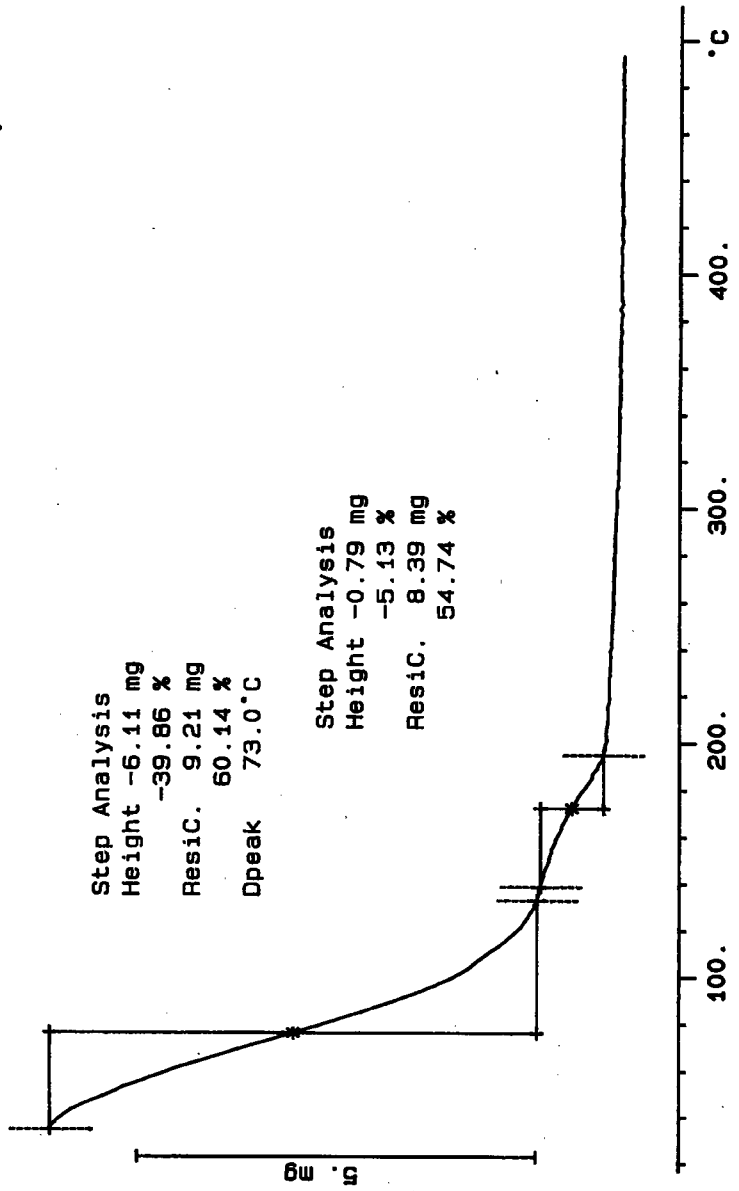
A. Lambert 08.12.96



S96T003981 SAM N2
15.322 mg
Rate: 10.0 °C/min
File: 00083.001 TG METTLER 12-Aug-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -6.11 mg
-39.86 %
ResiC. 9.21 mg
60.14 %
Dpeak 73.0 °C

Step Analysis
Height -0.79 mg
-5.13 %
ResiC. 8.39 mg
54.74 %



S96T003981 DUP N2
20.852 mg

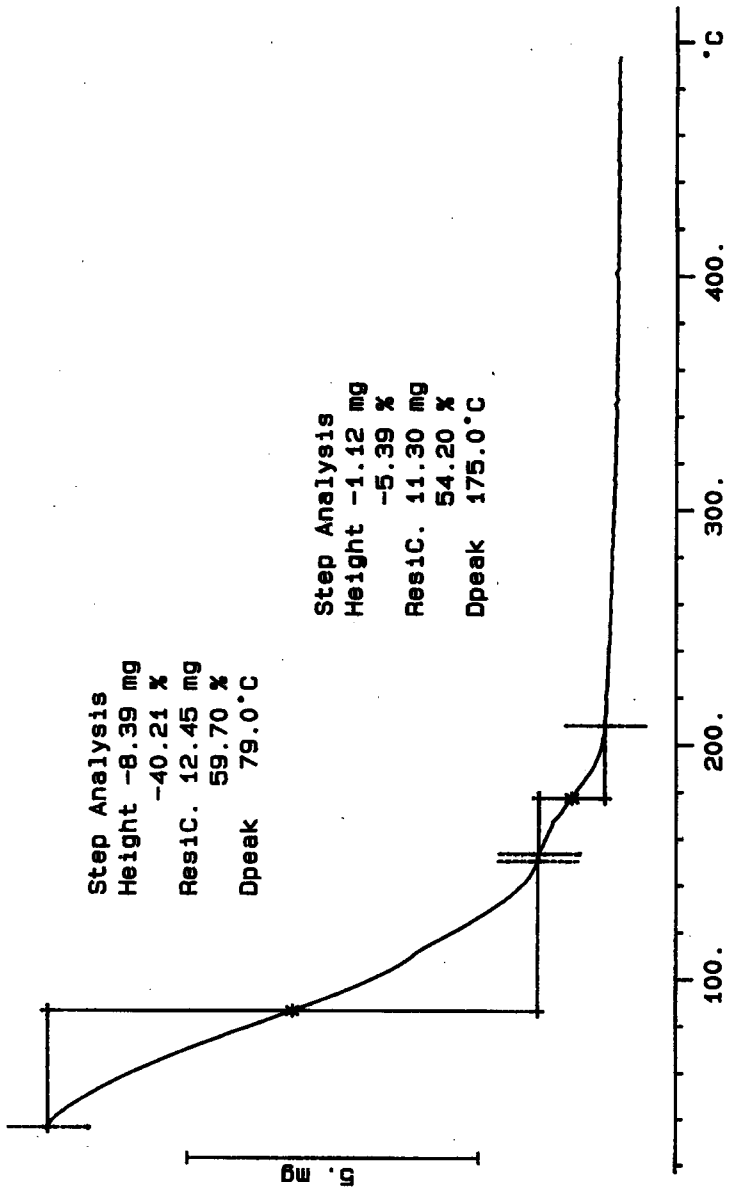
File: 00085.001 TG
Ident: 0.0

Rate: 10.0 °C/min

METTLER 12-Aug-96
222-S Laboratory

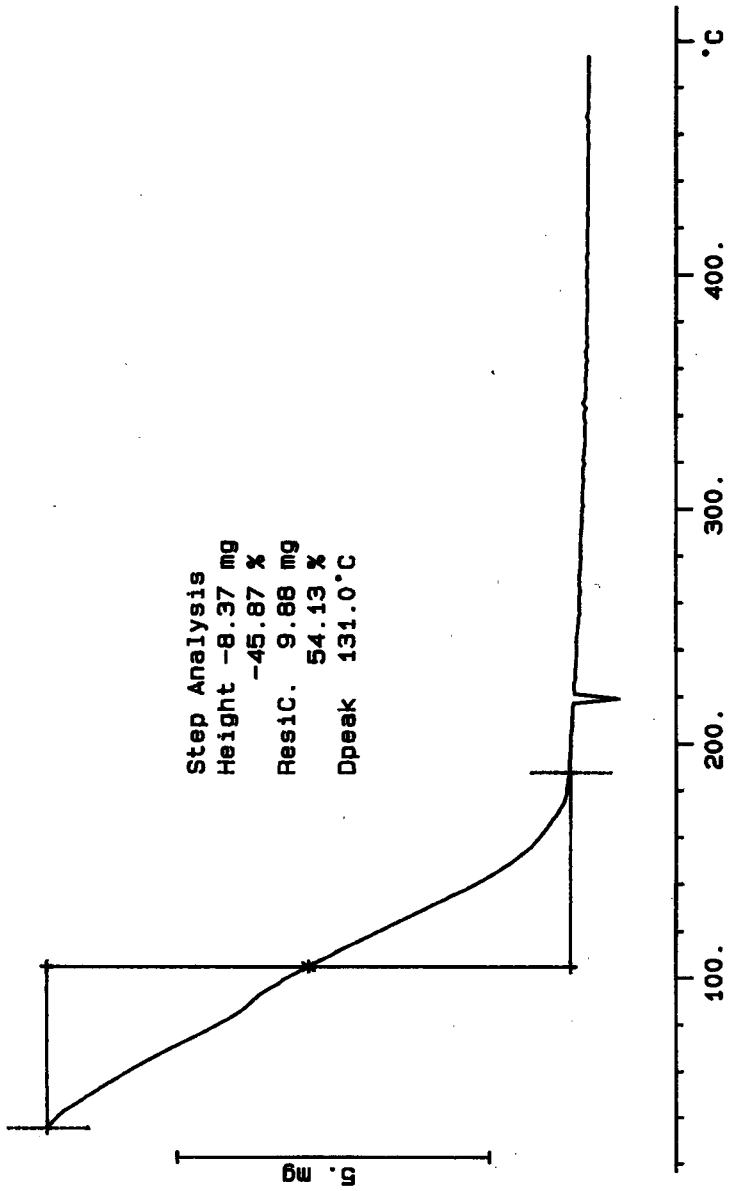
Step Analysis
Height -8.39 mg
-40.21 %
Res1C. 12.45 mg
59.70 %
Dpeak 79.0 °C

Step Analysis
Height -1.12 mg
-5.39 %
Res1C. 11.30 mg
54.20 %
Dpeak 175.0 °C

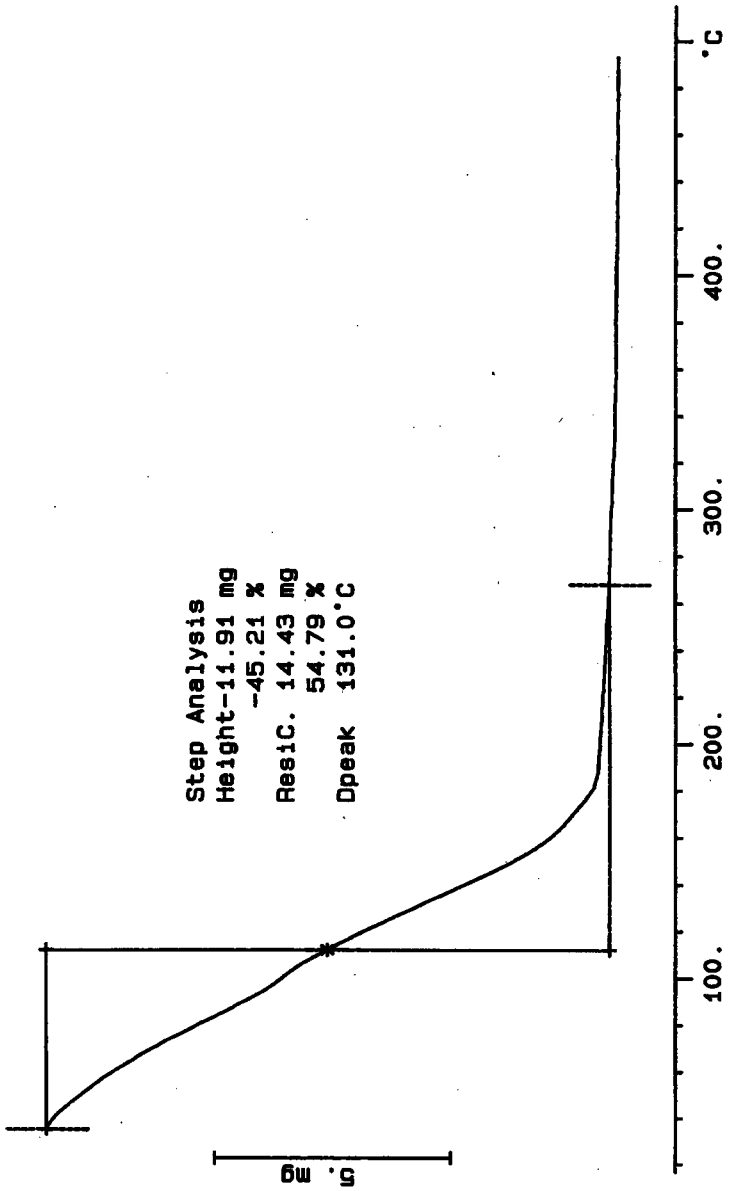


S96T003982 SAM N2
18.251 mg
Rate: 10.0 °C/min
File: 00087.001 TG METTLER 12-Aug-96
Ident: 0.0 222-S Laboratory

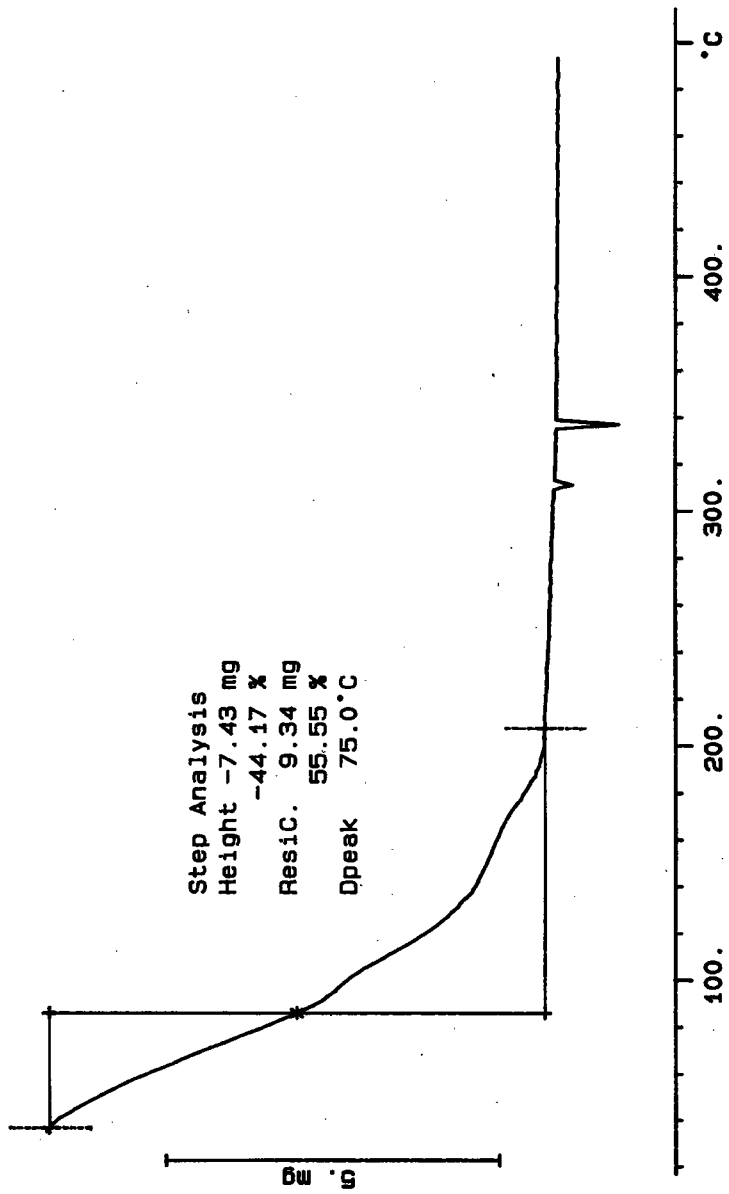
Step Analysis
Height -8.37 mg
-45.87 %
Resic. 9.88 mg
54.13 %
Dpeak 131.0 °C



S96T003982 DUP N2
26.341 mg
Rate: 10.0 °C/min
File: 00002.001 TG METTLER 12-AUG-96
Ident: 0.0 222-S Laboratory



S96T003983 SAM N2
16.814 mg
Rate: 10.0 °C/min
File: 00089.001 TG METTLER 12-Aug-96
Ident: 0.0 222-S Laboratory

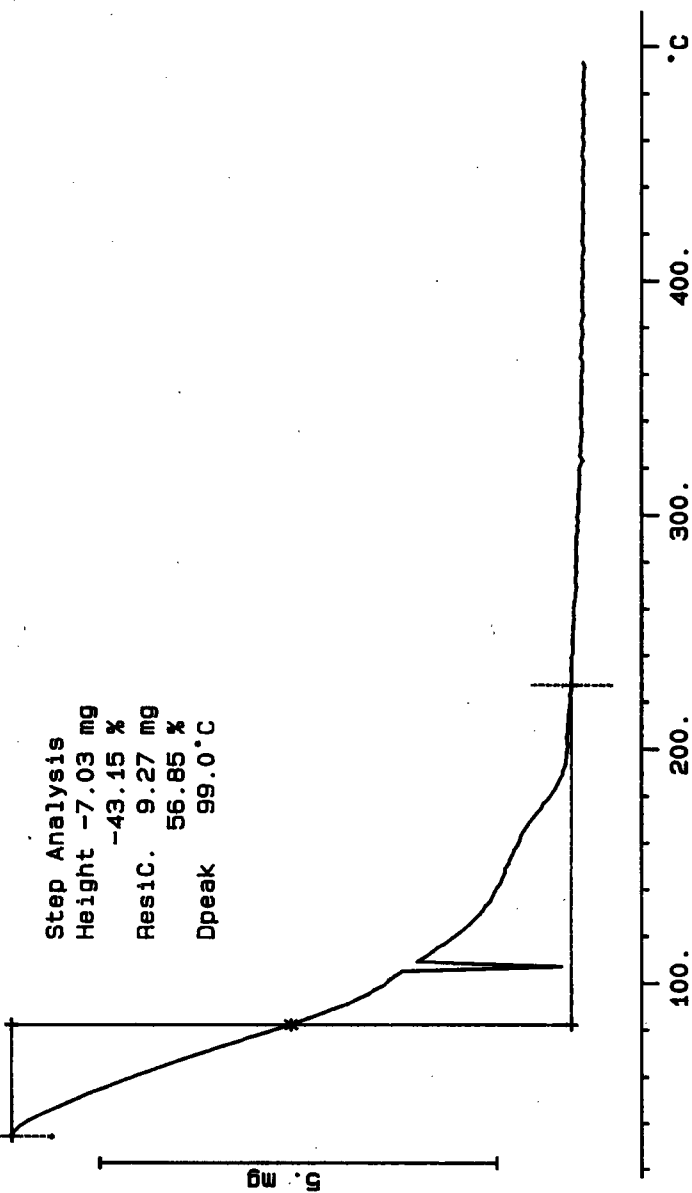


S96T003983 DUP N2
16.302 mg

File: 00008.001 TG METTLER 13-Aug-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis
Height -7.03 mg
-43.15 %
Res1C. 9.27 mg
56.85 %
Dpeak 99.0 °C



LABCORE Data Entry Template for Worklist# 12278

Analyst: (RM) Instrument: TGA0 1 Book # 82N8A

Method: LA-560-112 Rev/Mod et B-1 9/18/96

Worklist Comment: Please run AN-105 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	89.2 50.4	58.44	N/A	%
96000832	AN-105	2 SAMPLE	S96T004039	0	TGA-01	LIQUID	N/A	53.57 50.38	N/A	%
96000832	AN-105	3 DUP	S96T004039	0	TGA-01	LIQUID	53.57 50.38	46.67 50.23	N/A	%
96000945	AN-105	4 SAMPLE	S96T004308	0	TGA-01	LIQUID	N/A	53.57	N/A	%
96000945	AN-105	5 DUP	S96T004308	0	TGA-01	LIQUID	53.57 50.38	46.67 50.23	N/A	%

Final page for worklist # 12278

(RM) 8/26/96
Analyst Signature Date

Jinda Mack 8/29/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela 9-3-96

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 Completed Worklist Report for Worklist# 12278

Analyst: rdm

Instrument: TGA01

Book# E2NEA

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

Worklist Comment: Please run AN-105 TGAs under N2. bdv

Seq Type	Sample# R A	Test	Matrix	Actual	Found	DL or Yield	Unit
1 STD	0	TGA-01	LIQUID	5.92e01	58.44	98.716 %	Recovery
2 SAMPLE	S96T004039 0	TGA-01	LIQUID	N/A	53.57		%
3 DUP	S96T004039 0	TGA-01	LIQUID	53.57	46.67	13.767	RPD
4 SAMPLE	S96T004308 0	TGA-01	LIQUID	N/A	50.38		%
5 DUP	S96T004308 0	TGA-01	LIQUID	50.38	50.23	0.298	RPD

Final page for worklist# 12278

Blanchina Valenzuela for RDMeyer
Analyst Signature Date 9-6-96

Analyst Signature Date

Blanchina Valenzuela
Reviewer Signature Date 9-6-96

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 425 TO 426

TGA STD 82NB-A
14.926 mg
Rate: 10.0 °C/min
File: 00052.001 TG METTLER 26-Aug-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -8.72 mg
-58.44 %
Resic. 6.20 mg
41.56 %
Dpeak 84.2°C

5 mg

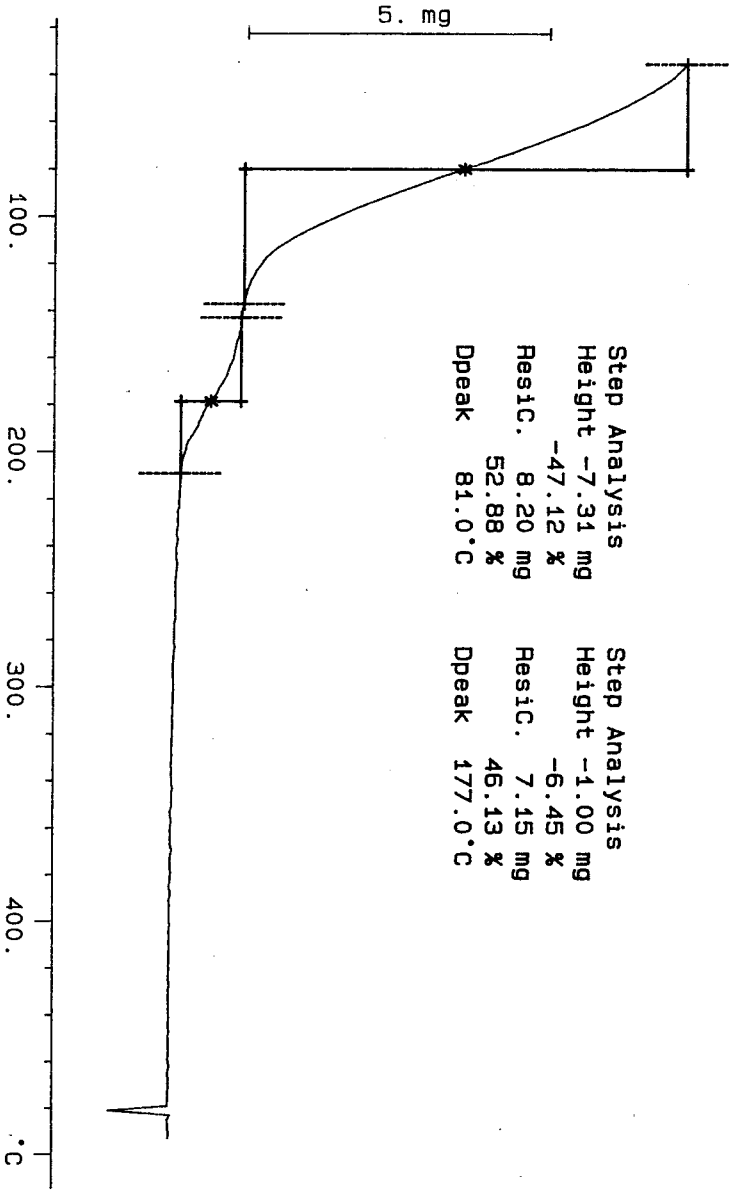
Blandina Valenzuela for RD Meyers 9-3-96

50. 100. 150. 200. °C

S96T004039 N2
15.507 mg

Rate: 10.0 °C/min

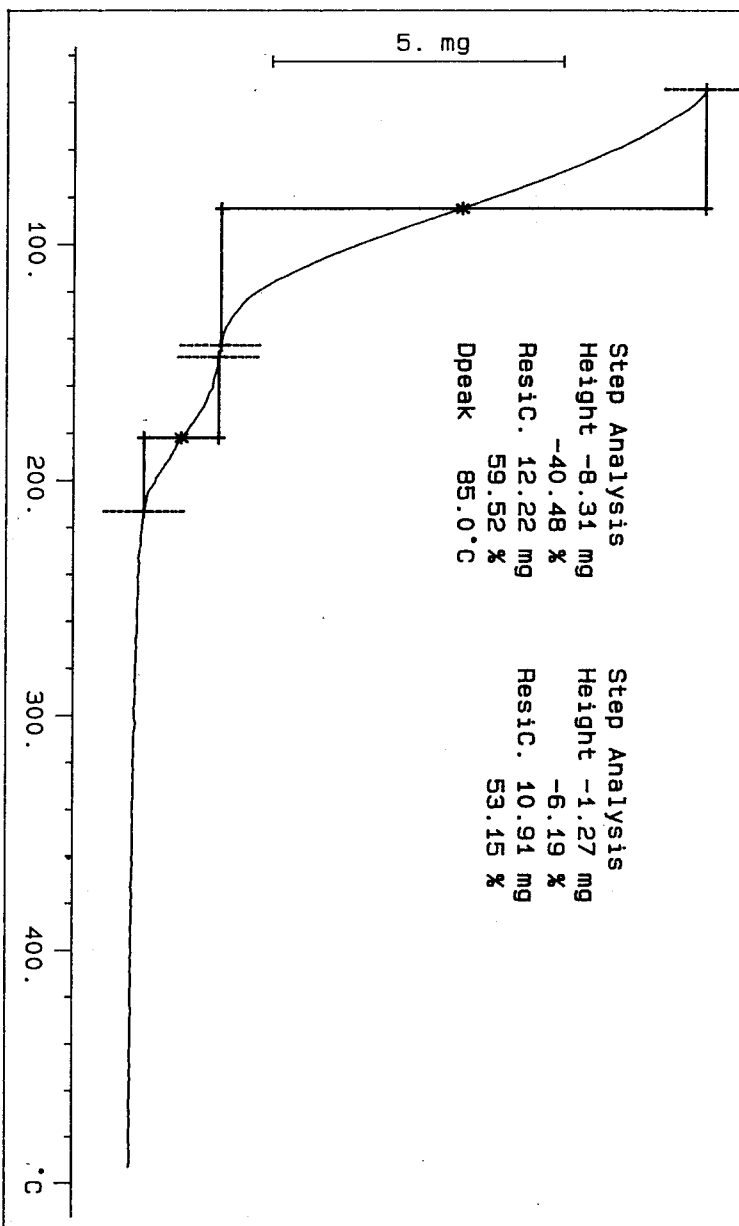
File: 00060.001 TG METTLER 27-Aug-96
Ident: 0.0 222-S Laboratory



S96T004039 DUP N2
20.533 mg
Rate: 10.0 °C/min
File: 00062.001 TG
Ident: 0.0 222-S Laboratory
METTLER 27-Aug-96

Step Analysis
Height -8.31 mg
-40.48 %
Resic. 12.22 mg
59.52 %
Dpeak 85.0 °C

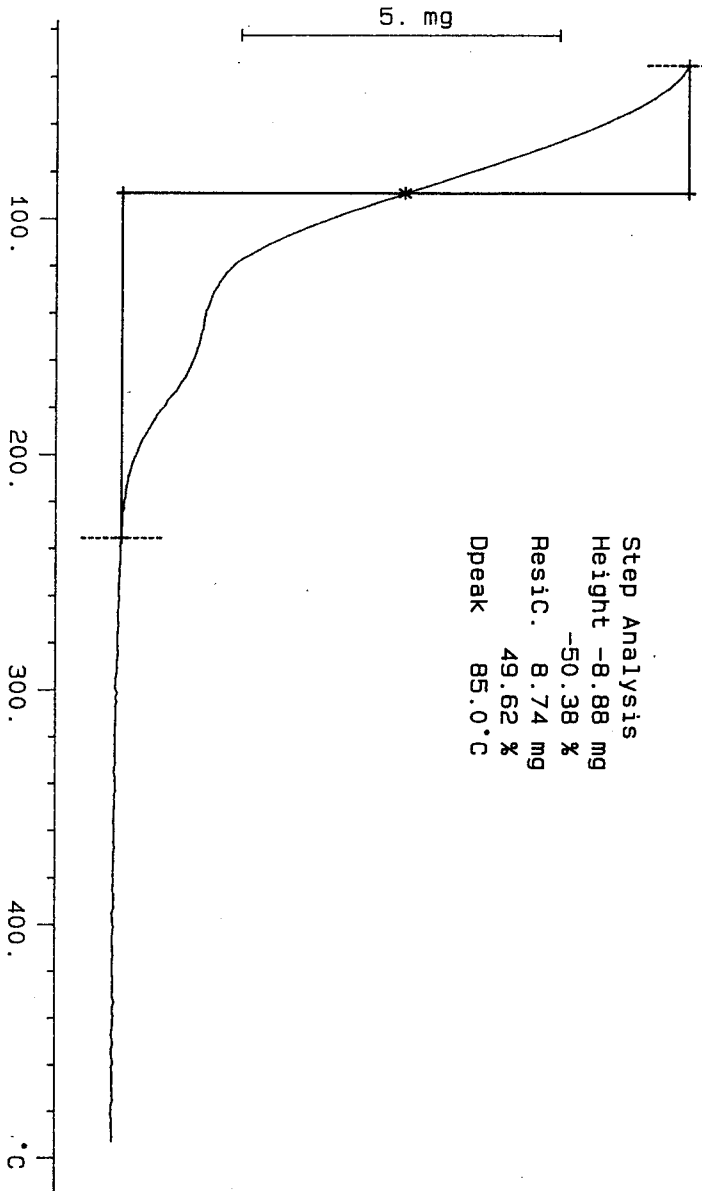
Step Analysis
Height -1.27 mg
-6.19 %
Resic. 10.91 mg
53.15 %



S96T004308 N2
17.623 mg

Rate: 10.0 °C/min

File: 00054.001 TG METTLER 26-Aug-96
Ident: 0.0 222-S Laboratory

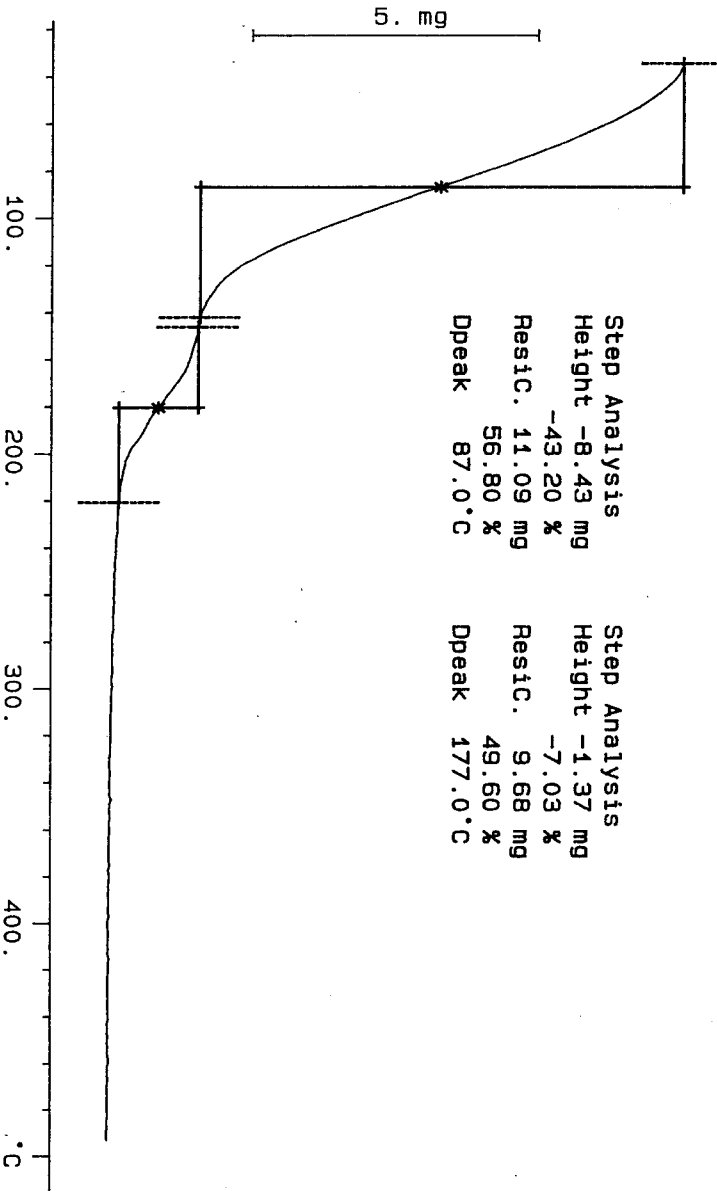


Step Analysis
Height -8.88 mg
-50.38 %
Resid. 8.74 mg
49.62 %
Dpeak 85.0 °C

S96T004308DUP N2
19.519 mg

Rate: 10.0 °C/min

File: 00058.001 TG METTLER 27-Aug-96
Ident: 0.0 222-S Laboratory



Step Analysis
Height -8.43 mg
-43.20 %
Resic. 11.09 mg
56.80 %
Dpeak 87.0 °C

Step Analysis
Height -1.37 mg
-7.03 %
Resic. 9.68 mg
49.60 %
Dpeak 177.0 °C

WHC-SD-WM-DP-199-REV 0
LABCORE Data Entry Template for Worklist# 12336

Analyst: RJ Instrument: TGA0 1 Book # 82N8A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-01	SOLID	<u>59.2</u>	<u>58.2</u>	<u>N/A</u>	%
96000945	AN-105	2	SAMPLE	S96T004310	0		TGA-01	SOLID	<u>N/A</u>	<u>47.55</u>		%
96000945	AN-105	3	DUP	S96T004310	0		TGA-01	SOLID	<u>47.55</u>	<u>48.04</u>	<u>N/A</u>	%
96000945	AN-105	4	SAMPLE	S96T004311	0		TGA-01	SOLID	<u>N/A</u>	<u>52.82</u>		%
96000945	AN-105	5	DUP	S96T004311	0		TGA-01	SOLID	<u>52.82</u>	<u>50.12</u>	<u>N/A</u>	%

Final page for worklist # 12336

Rae Ann Green 9-1-96
Analyst Signature Date

A. Kumbel 9-1-96

Rae Ann Green 9/5/96
Analyst Signature Date

Verified/Validated by

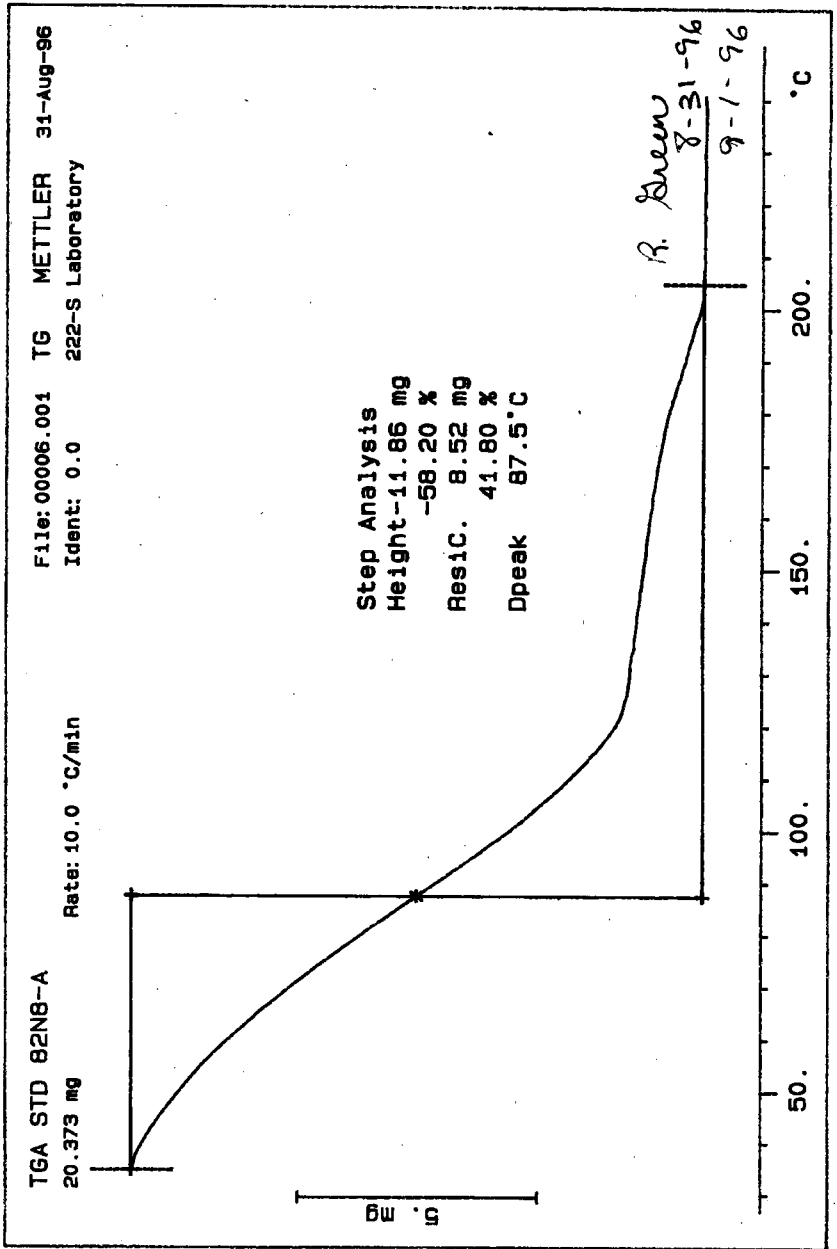
Blandina
Valenzuela
9-6-96

Data Entry Comments: S96T004310 thermogram does indicate there is some
hydrated compounds.

S96T004311 thermograms do indicate there are some hydrated compounds.

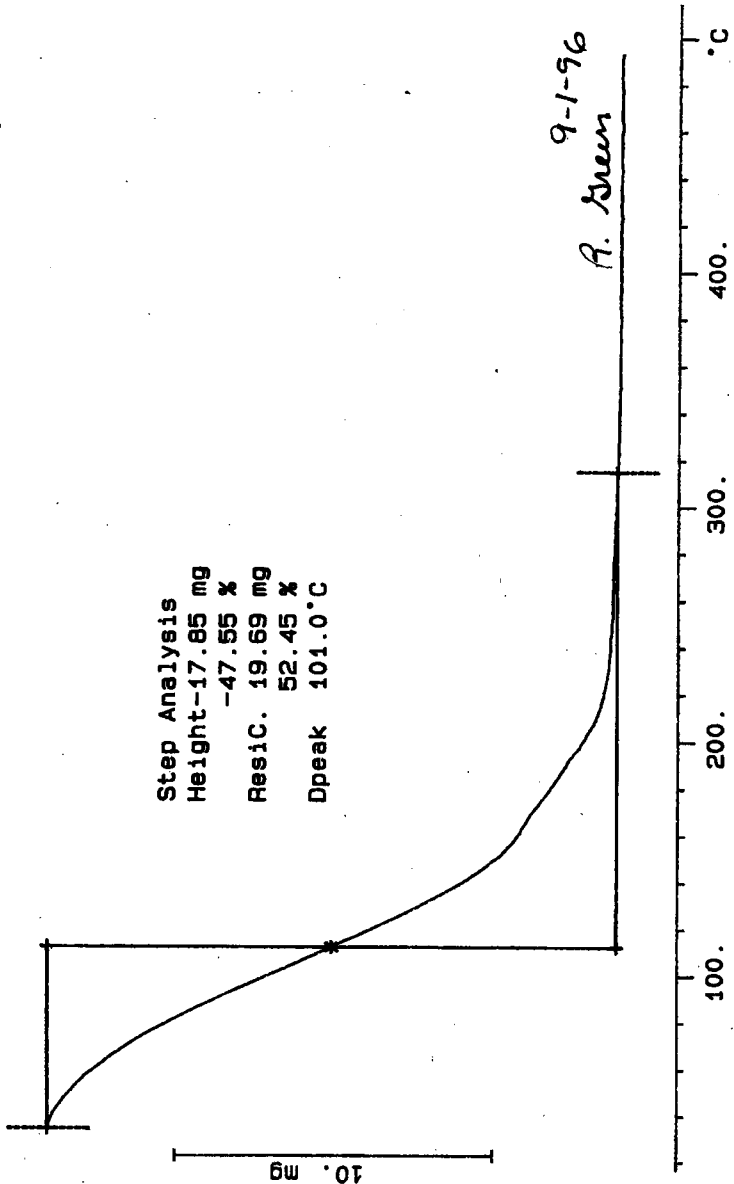
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 431 TO 435.



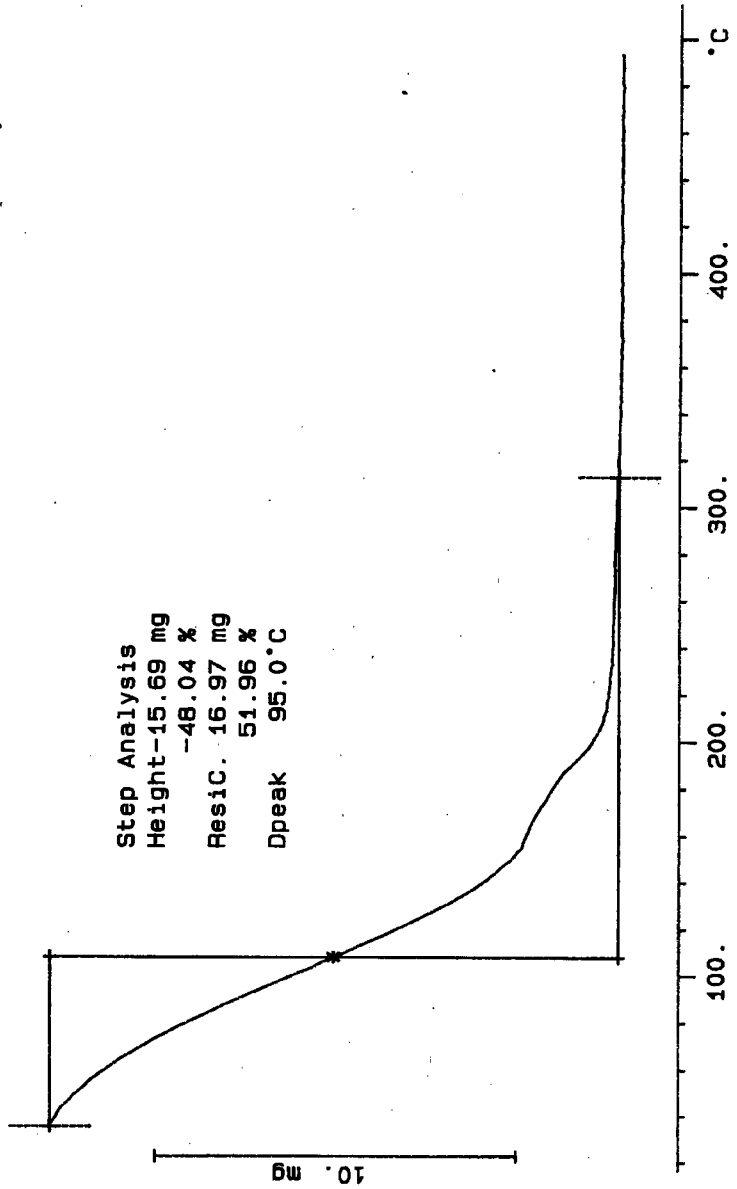
S96T004310 SAM N2
37.545 mg
Rate: 10.0 °C/min
File: 00009.001 TG METTLER 01-Sep-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height-17.85 mg
-47.55 %
Resic. 19.69 mg
52.45 %
Dpeak 101.0 °C



S96T004310 DUP N2
32.662 mg
Rate: 10.0 °C/min
File: 00011.001 TG METTLER 01-Sep-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height-15.69 mg
-48.04 %
Res1C. 16.97 mg
51.96 %
Dpeak 95.0 °C



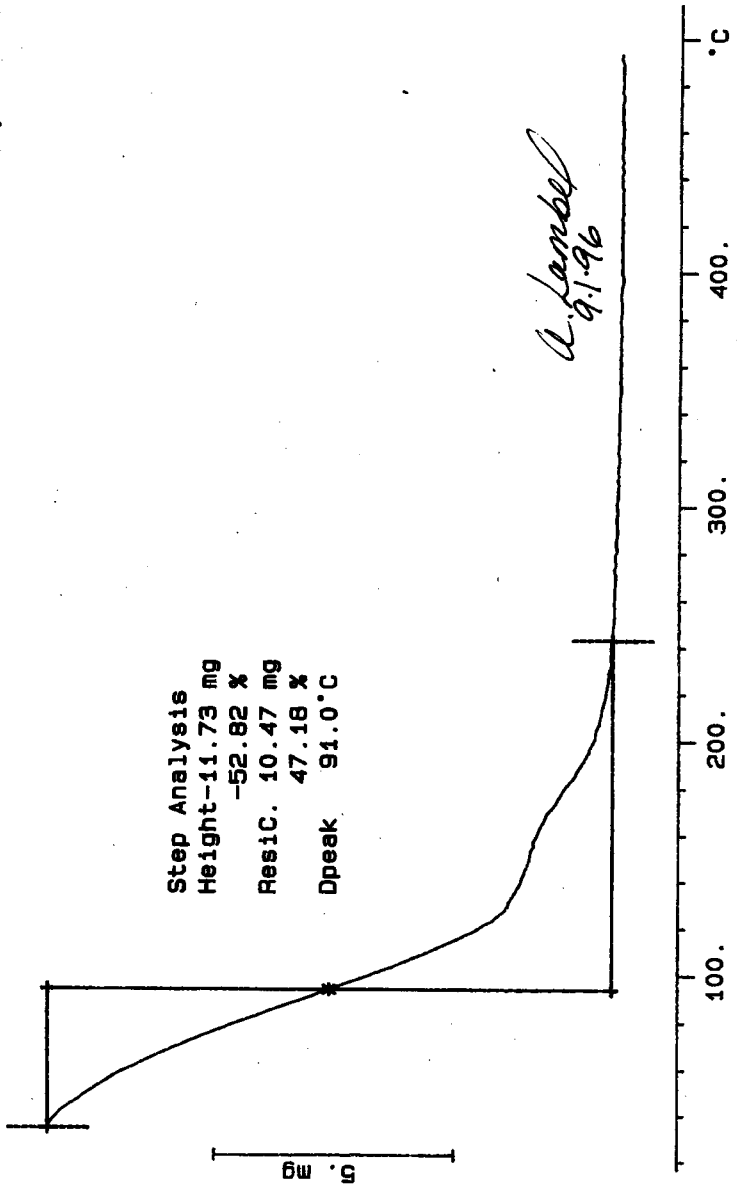
S96T004311 SAM N2
22.203 mg

Rate: 10.0 °C/min

File: 00013.001 TG

METTLER 01-Sep-96
222-S Laboratory

Step Analysis
Height-11.73 mg
-52.82 %
Resid. 10.47 mg
47.18 %
Dpeak 91.0 °C

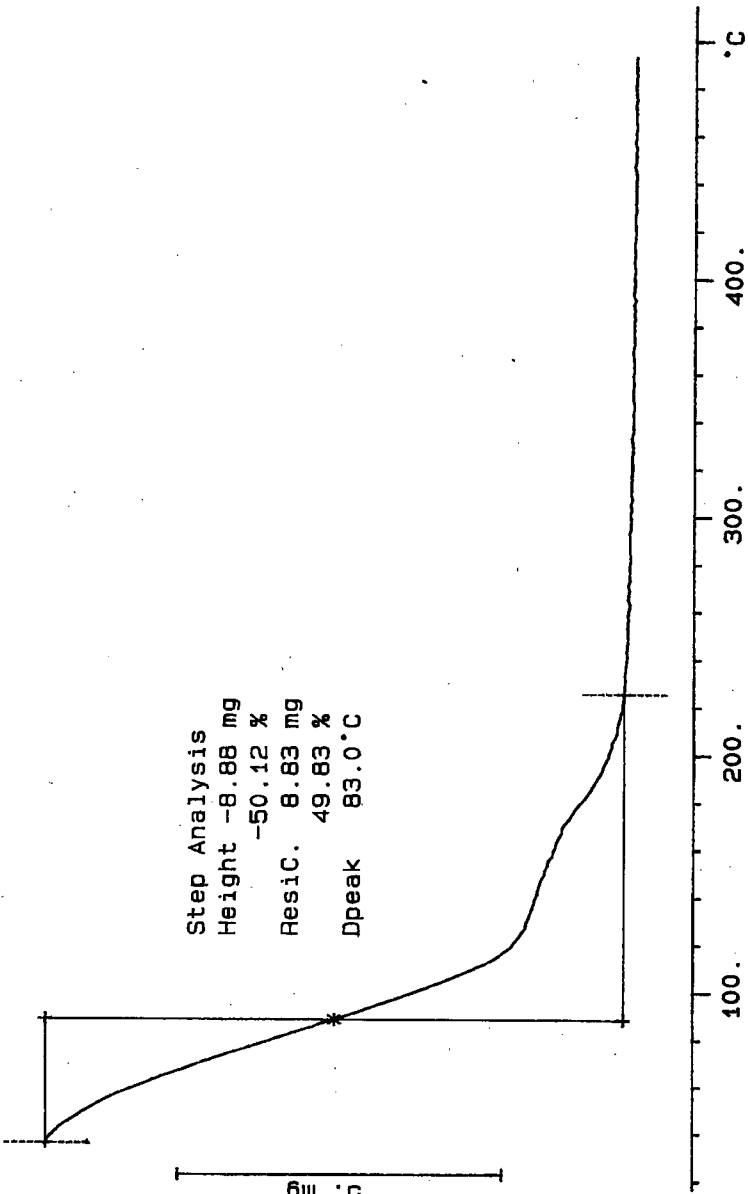


S96T004311 DUP N2
17.720 mg

File: 00015.001 TG METTLER 01-Sep-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis
Height -8.88 mg
-50.12 %
Resid. 8.83 mg
49.83 %
Dpeak 83.0 °C



LABCORE Data Entry Template for Worklist# 12337

Analyst: EAL Instrument: TGA0 1 Book # 8N2B-A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.18</u>	<u>N/A</u>	%
96000945	AN-105	2 SAMPLE	S96T004335	0	TGA-01	SOLID	<u>N/A</u>	<u>46.87</u>		%
96000945	AN-105	3 DUP	S96T004335	0	TGA-01	SOLID	<u>46.87</u>	<u>45.88</u>	<u>N/A</u>	%
96000945	AN-105	4 SAMPLE	S96T004435	0	TGA-01	SOLID	<u>N/A</u>	<u>44.7</u>		%
96000945	AN-105	5 DUP	S96T004435	0	TGA-01	SOLID	<u>44.7</u>	<u>38.2</u>	<u>N/A</u>	%

Final page for worklist # 12337

A Lambel 09-01-96
Analyst Signature Date

Neelich 9/5/96
Analyst Signature Date

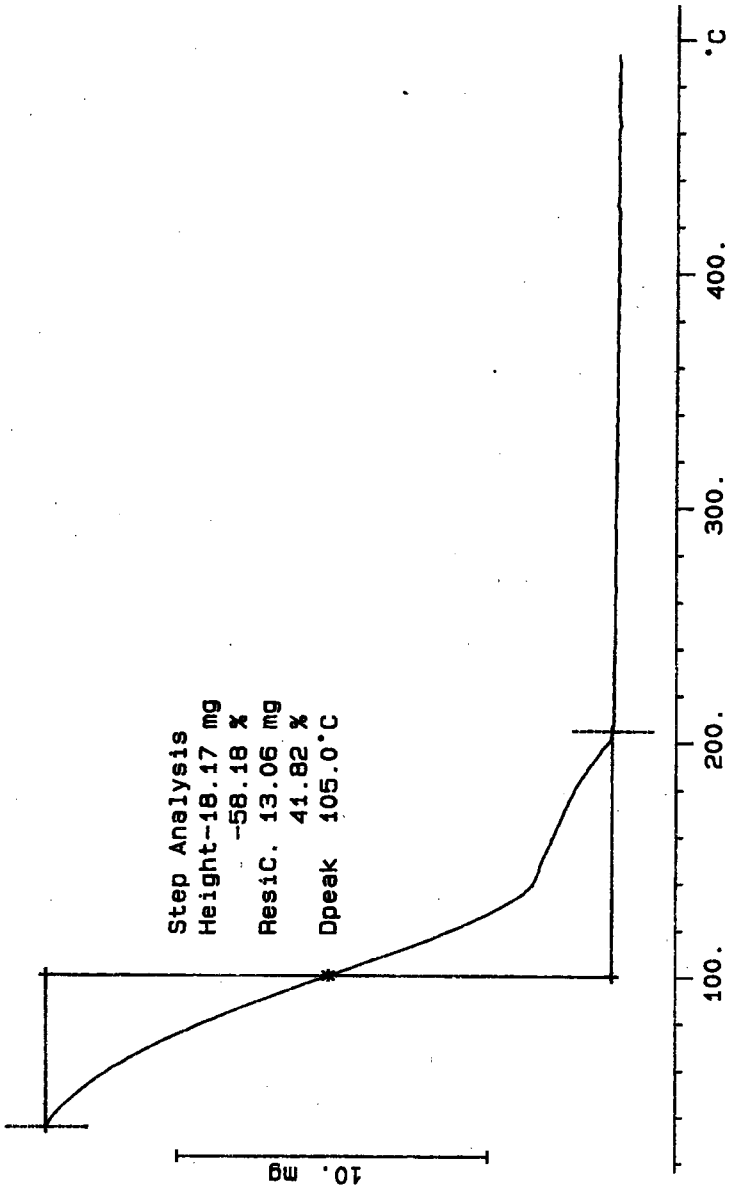
Verified/Validated by:
Blandina Valenzuela
9-6-96

Data Entry Comments: S96T004335 results are the sum of two weight loss step. The peaks seen on the thermogram is from a ^{movement to} bumping the instrument
S96T004435 results are the sum of two weight loss steps. The peaks seen on the thermogram is from a sharp movement of the instrument.
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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 437 TO 444.

A. Lambert 09-21-96

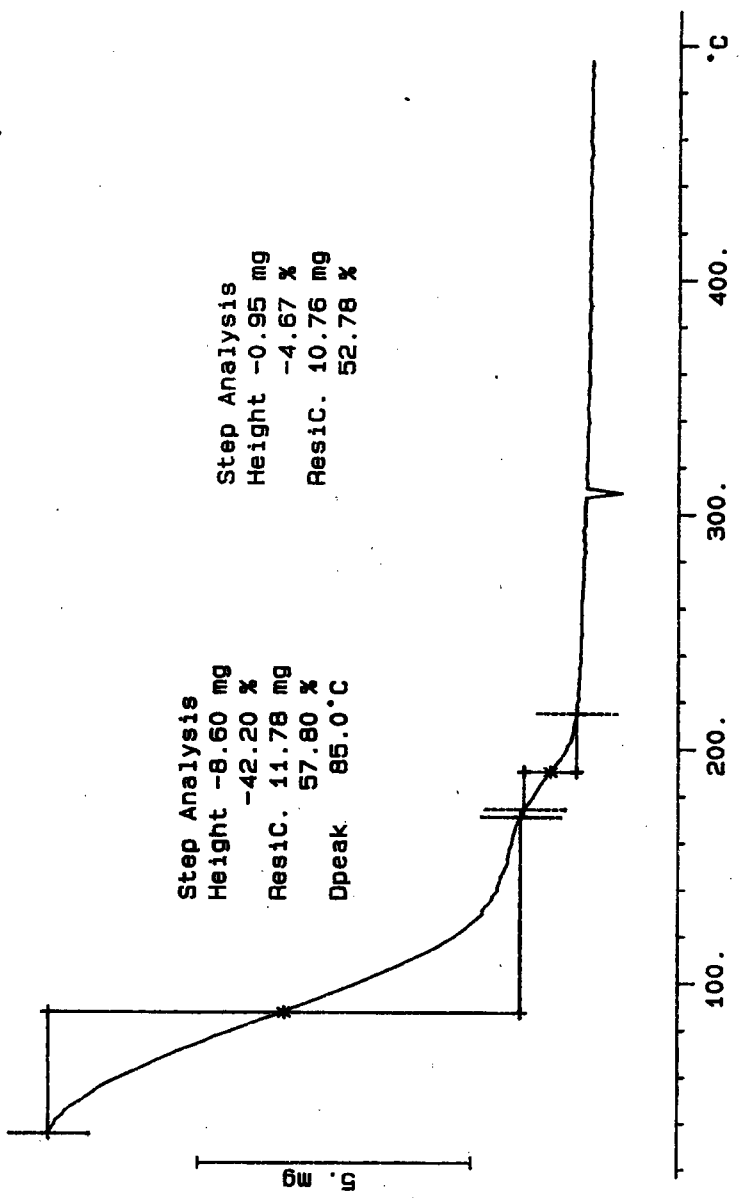
TGA STD 82N8-A Rete: 10.0 °C/min File: 00017.001 TG METTLER 01-Sep-96
31.228 mg Ident: 0.0 222-S Laboratory



S96T004335 SAM N2
20.381 mg
Rate: 10.0 °C/min
File: 00019.001 TG METTLER 01-Sep-86
Ident: 0.0 222-S Laboratory

Step Analysis
Height -8.60 mg
-42.20 %
Resid. 11.78 mg
57.80 %
Dpeak 85.0 °C

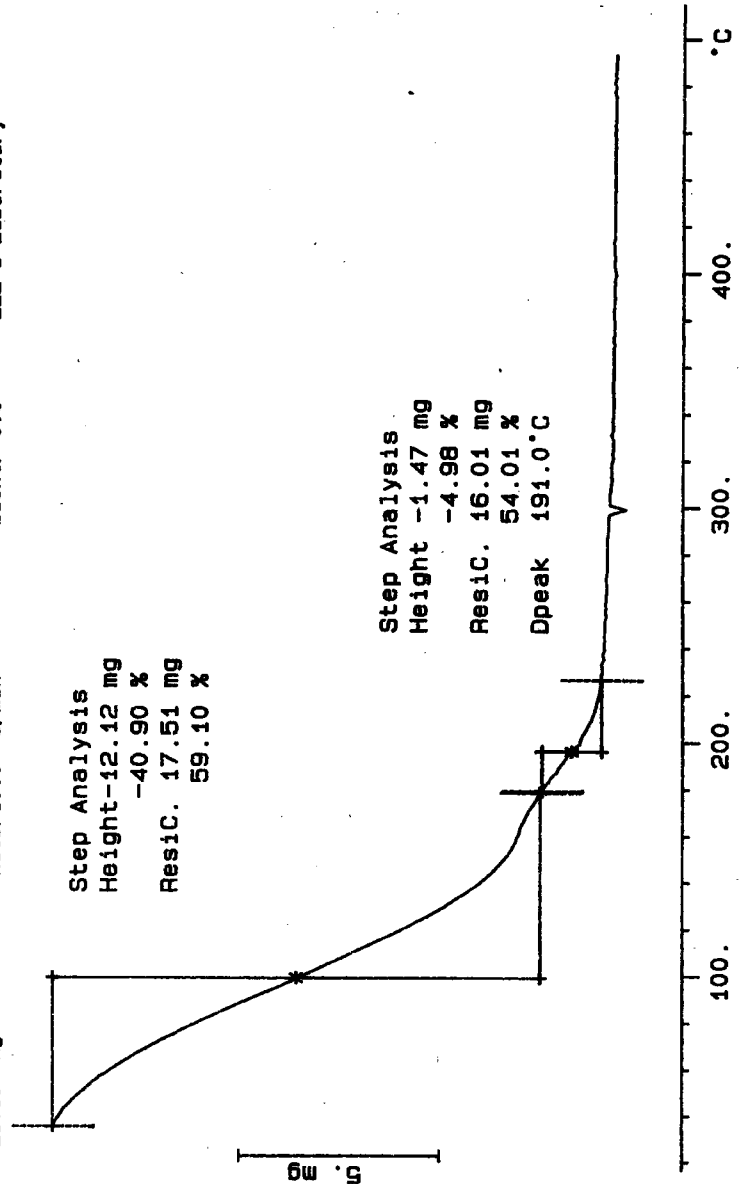
Step Analysis
Height -0.95 mg
-4.67 %
Resid. 10.76 mg
52.78 %



S96T004335 DUP N2
29.634 mg
Rate: 10.0 °C/min
File: 00021.001 TG METTLER 01-Sep-86
Ident: 0.0 222-S Laboratory

Step Analysis
Height-12.12 mg
-40.90 %
ResidC. 17.51 mg
59.10 %

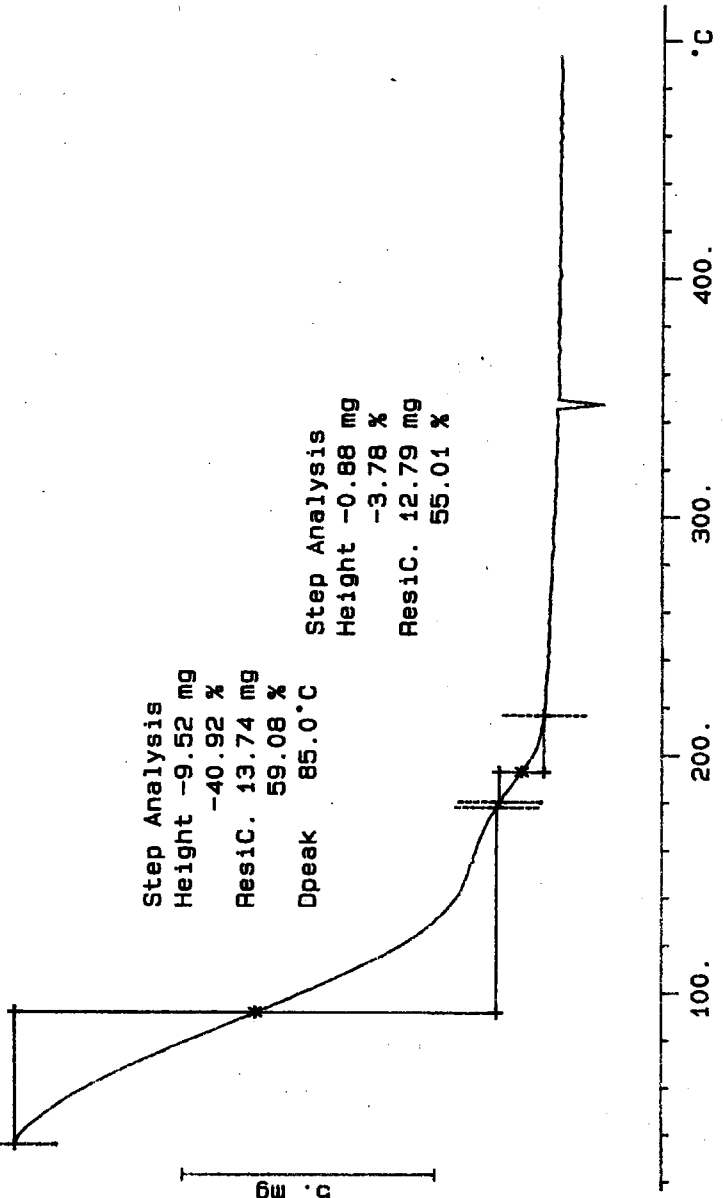
Step Analysis
Height -1.47 mg
-4.98 %
ResidC. 16.01 mg
54.01 %
Dpeak 191.0°C



S96T004435 SAM N2
23.253 mg

File: 00023.001 TG METTLER 01-Sep-96
Ident: 0.0 222-S Laboratory

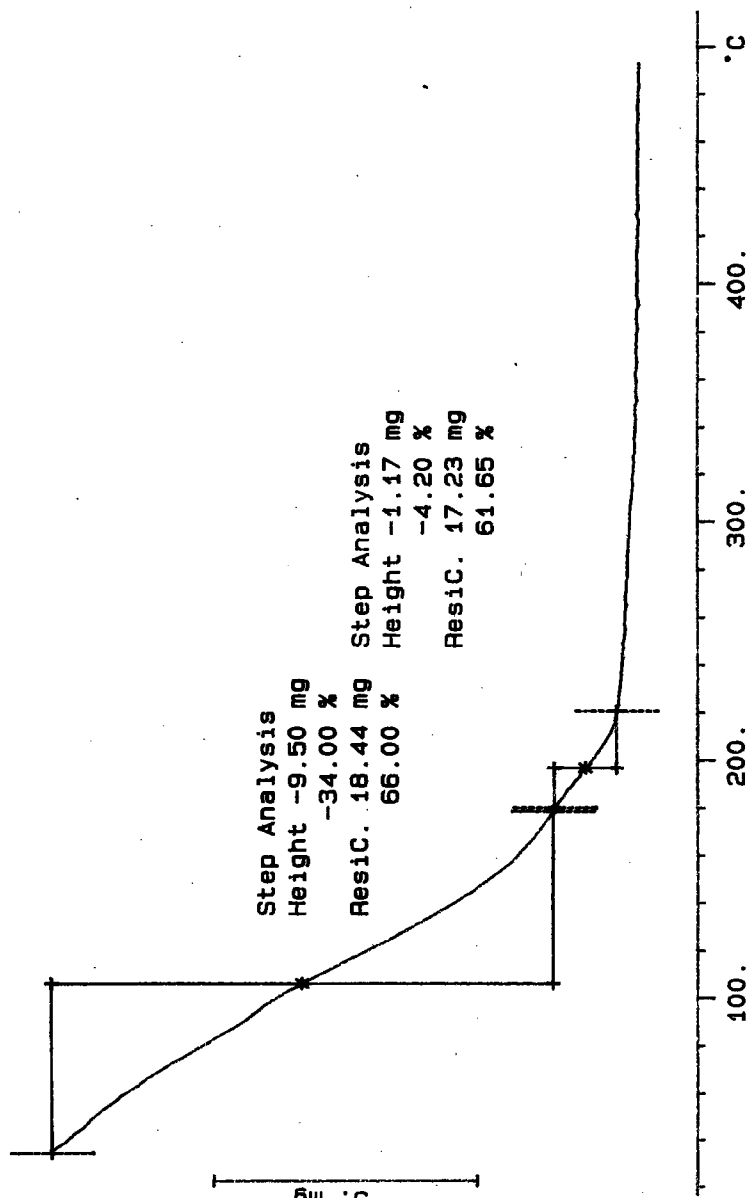
Rate: 10.0 °C/min



S96T004435 DUP N2
27.942 mg

Rate: 10.0 °C/min

File: 00025.001 TG METTLER 01-Sep-96
Ident: 0.0 222-S Laboratory



50 %

LABCORE Data Entry Template for Worklist# 12338

Analyst: NRK Instrument: TGA0 1 Book # 8278-A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.2</u>	<u>58.13*</u>	<u>N/A</u>	%
96000945	AN-105	2 SAMPLE	S96T004436	0	TGA-01	SOLID	<u>N/A</u>	<u>44.54</u>		%
96000945	AN-105	3 DUP	S96T004436	0	TGA-01	SOLID	<u>44.54</u>	<u>42.57</u>	<u>N/A</u>	%
96000945	AN-105	4 SAMPLE	S96T004437	0	TGA-01	SOLID	<u>N/A</u>	<u>46.16</u>		%
96000945	AN-105	5 DUP	S96T004437	0	TGA-01	SOLID	<u>46.16</u>	<u>44.59</u>	<u>N/A</u>	%

Final page for worklist # 12338

NRK 9-1-96
Analyst Signature Date

NRK 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9-6-96

Data Entry Comments: S96T004436 results are the sum of three weight loss steps).

S96T004437 results are the sum of two weight loss steps.

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 443 TO 447.

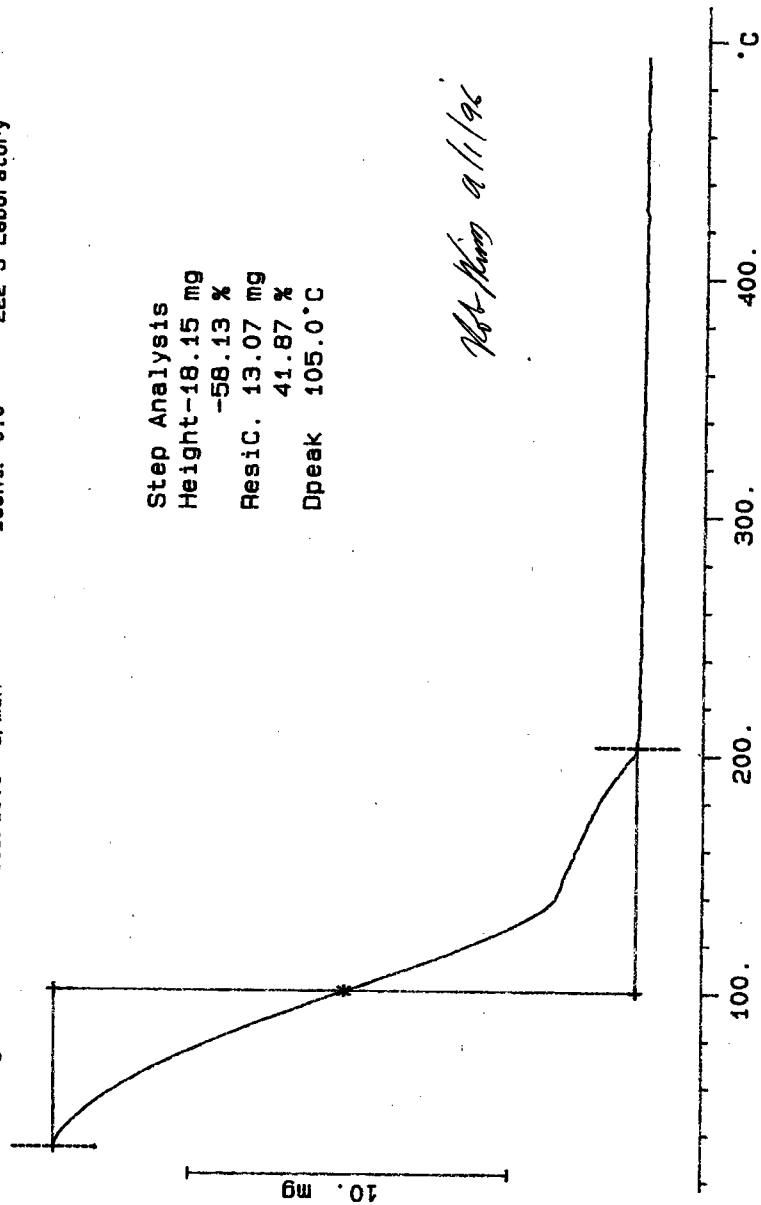
TGA STD 82N8-A
31.226 mg

File: 00017.001 TG METTLER 01-Sep-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis
Height-18.15 mg
-58.13 %
Resid. 13.07 mg
41.87 %
Dpeak 105.0 °C

Not done 9/11/96

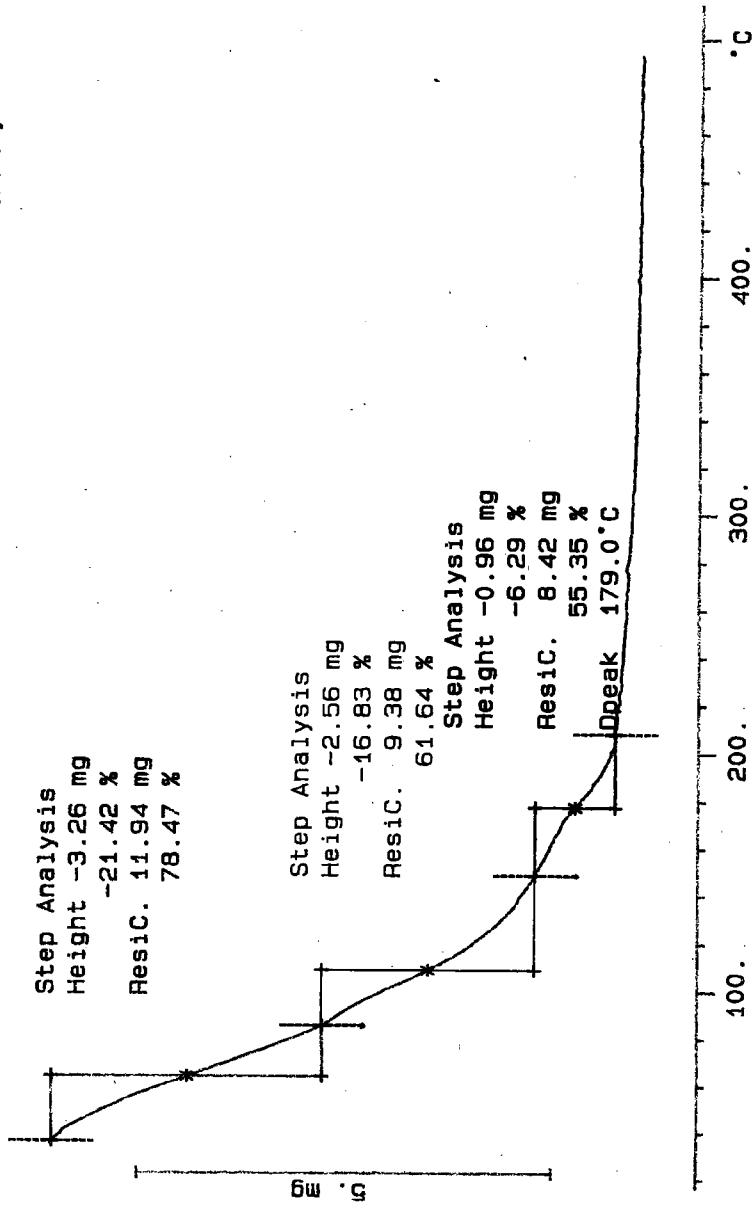


S96T004436 SAM N2
15.218 mg
Rate: 10.0 °C/min
File: 00027.001 TG METTLER 01-Sep-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -3.26 mg
-21.42 %
Resid. 11.94 mg
78.47 %

Step Analysis
Height -2.56 mg
-16.83 %
Resid. 9.38 mg
61.64 %

Step Analysis
Height -0.96 mg
-6.29 %
Resid. 8.42 mg
55.35 %
Dpeak 179.0 °C



S96T004436 DUP N2

26.081 mg

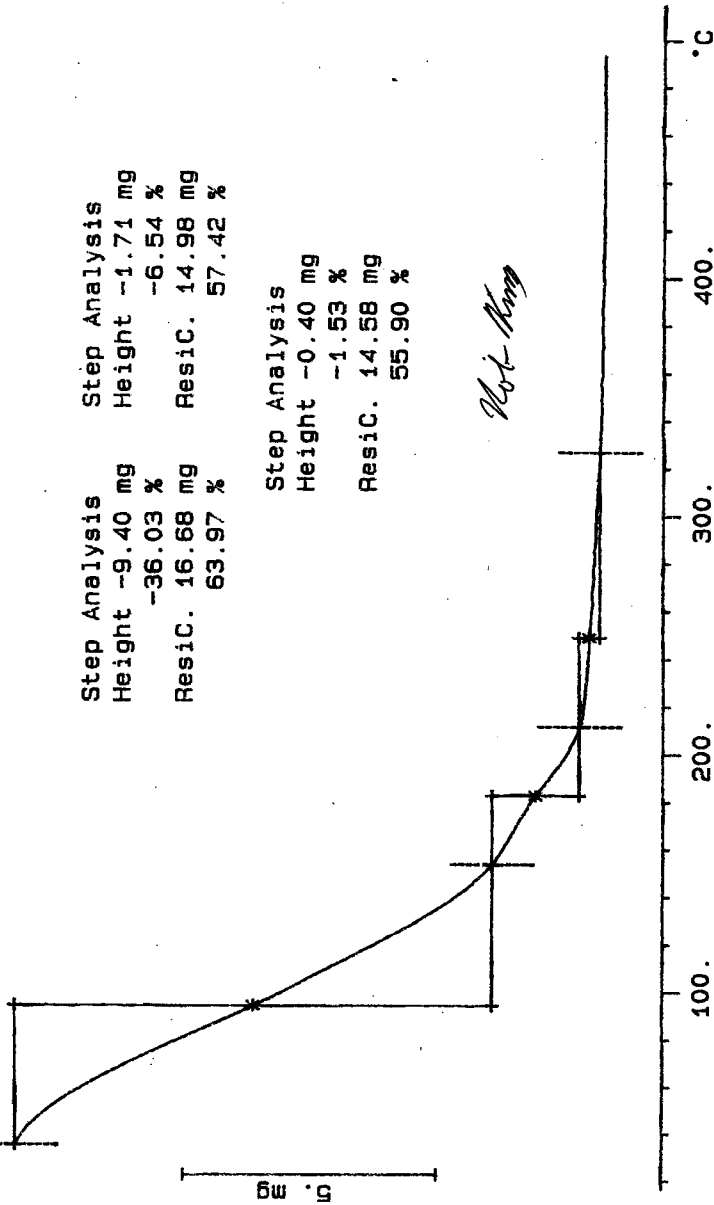
Rate: 10.0 °C/min

File: 00029.001 TG

METTLER

01-Sep-96

Ident: 0.0 222-S Laboratory



S96T004437 SAM N2

20.092 mg

Rate: 10.0 °C/min

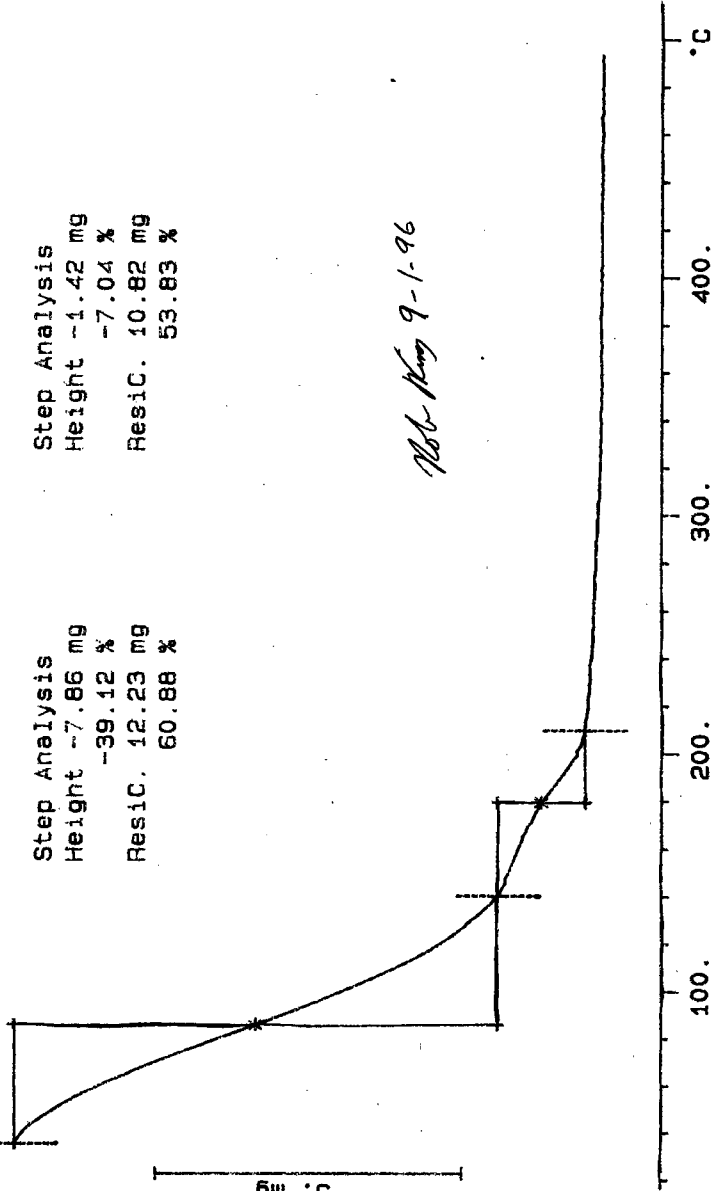
File: 00031.001

Ident: 0.0

TG METTLER

01-Sep-96

222-S Laboratory

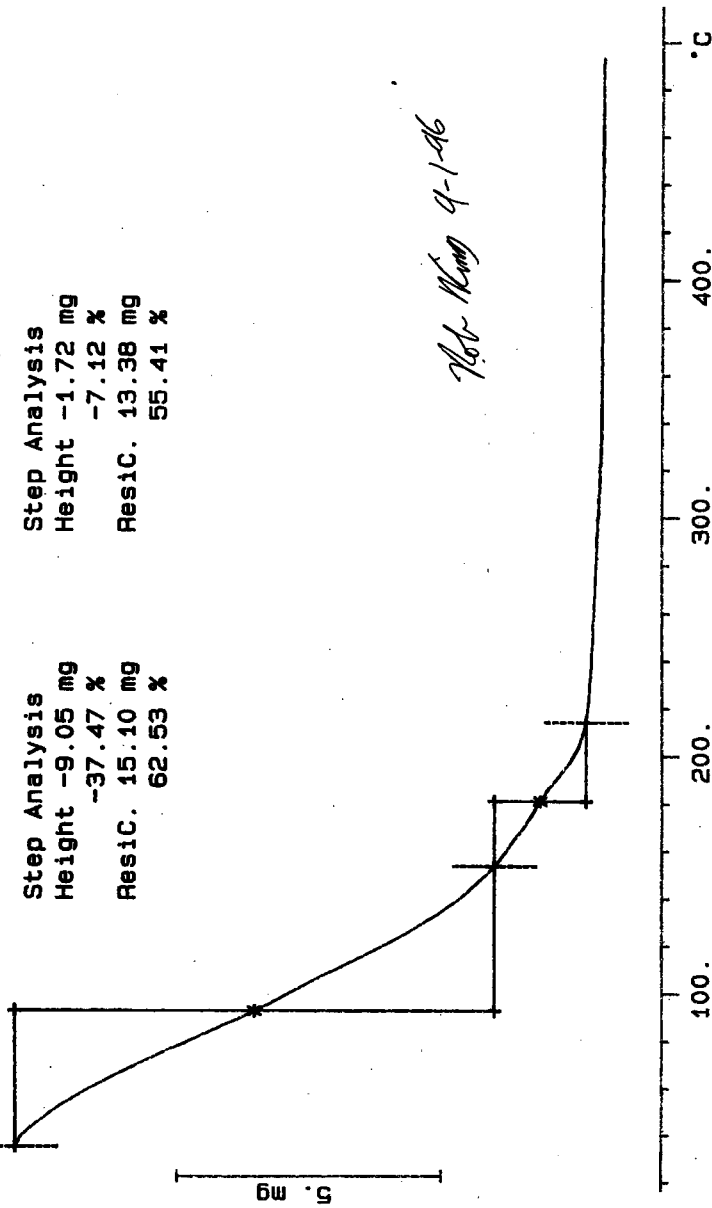


5 mg

S96T004437 DUP N2
24.147 mg
Rate: 10.0 °C/min
File: 00033.001 TG METTLER 02-Sep-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -9.05 mg
-37.47 %
ResidC. 15.10 mg
62.53 %

Step Analysis
Height -1.72 mg
-7.12 %
ResidC. 13.38 mg
55.41 %



LABCORE Data Entry Template for Worklist# 12339

Analyst: EAL Instrument: TGA0 3 Book # 82N18A

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

Worklist Comment: Please run AN-105 TGAs under N2, bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	<u>59.2</u>	<u>58.66</u>	<u>N/A</u>	<u>%</u>
96000945	AN-105	2 SAMPLE	S96T004309	0	TGA-03	LIQUID	<u>N/A</u>	<u>48.12</u>		<u>%</u>
96000945	AN-105	3 DUP	S96T004309	0	TGA-03	LIQUID	<u>48.12</u>	<u>49.52</u>	<u>N/A</u>	<u>%</u>
96000945	AN-105	4 SAMPLE	S96T004333	0	TGA-03	LIQUID	<u>N/A</u>	<u>49.62</u>		<u>%</u>
96000945	AN-105	5 DUP	S96T004333	0	TGA-03	LIQUID	<u>49.62</u>	<u>49.65</u>	<u>N/A</u>	<u>%</u>

Final page for worklist # 12339

See attached for signatures

Analyst Signature [Signature] Date 9-3-96

Analyst Signature _____ Date _____

Verified/Validated by
Blandina Valenzuela
9-6-96

S96T004309 results are the sum of three weight loss steps.

Data Entry Comments: S96T004333 results are the sum of three weight loss steps.

LABCORE Data Entry Template for Worklist# 12339

Analyst: EAL Instrument: TGA0 _____ Book # 82N8-A

Method: LA-560-112 Rev/Mod _____

Worklist Comment: Please run AN-105 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	_____	_____	N/A	%
96000945	AN-105	2 SAMPLE	S96T004309	0	TGA-01	LIQUID	N/A	_____	_____	%
96000945	AN-105	3 DUP	S96T004309	0	TGA-01	LIQUID	_____	_____	N/A	%
96000945	AN-105	4 SAMPLE	S96T004333	0	TGA-01	LIQUID	N/A	_____	_____	%
96000945	AN-105	5 DUP	S96T004333	0	TGA-01	LIQUID	_____	_____	N/A	%

Final page for worklist # 12339

A. Lambal 09-01-96
Analyst Signature Date

Reichert 9/5/96
Analyst Signature Date

TGA-03 instrument
was used.

9-3-96

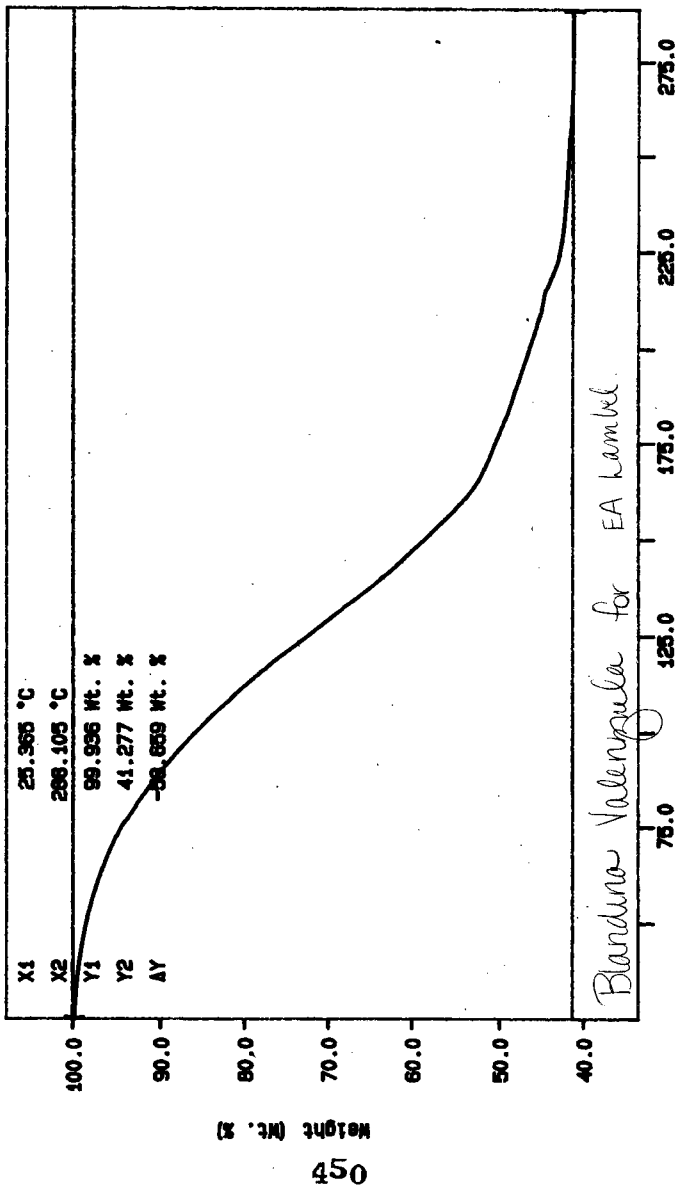
Blandina
Valenzuela

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.

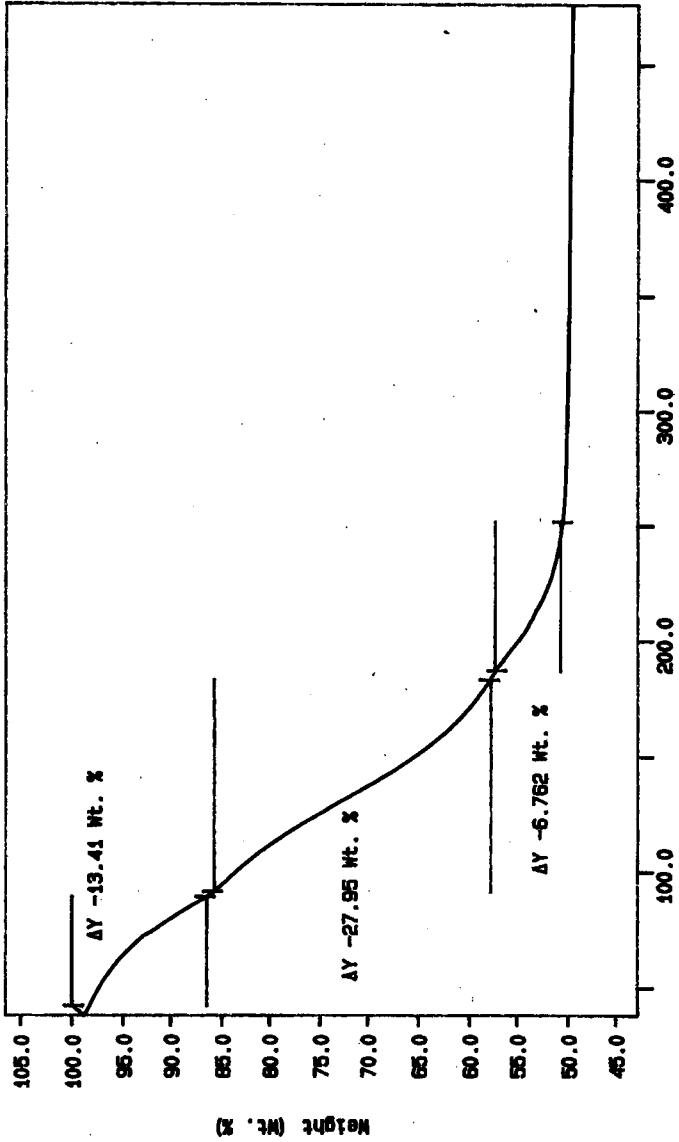
Curve 1: TGA
 File Info: TER090106 Sun Sep 1 18:52:55 1996
 Sample Weight: 21.394 mg
 TGA STD 62W6-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 450 TO 454.



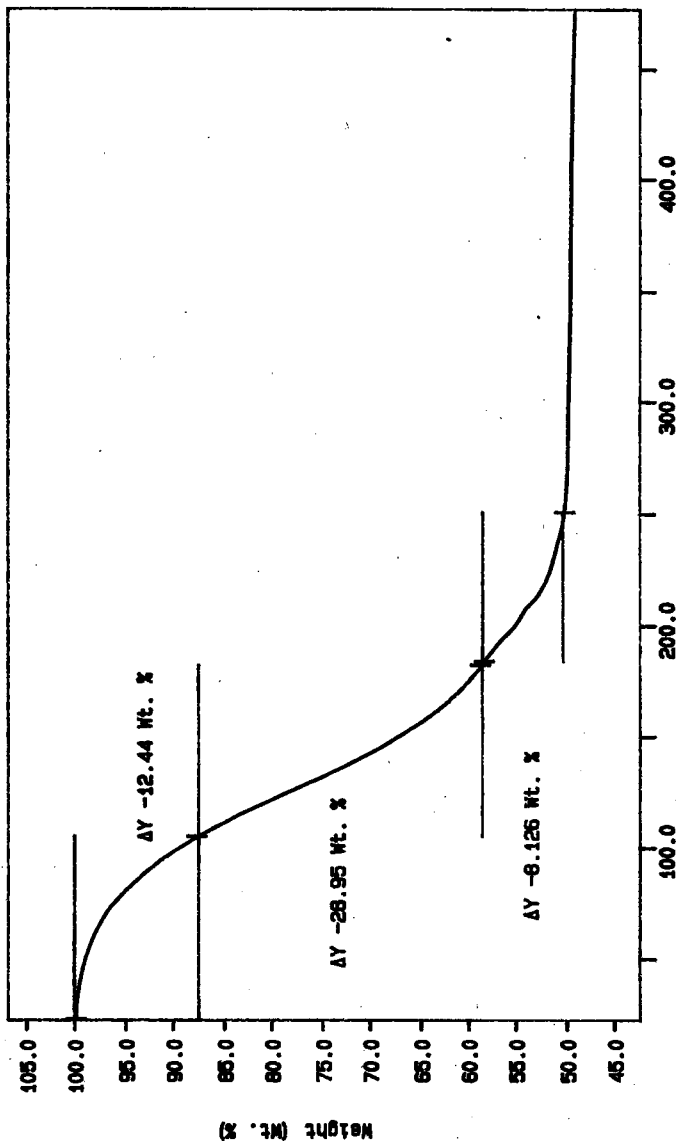
N2 10C/MIN
 THERM 385.8 8 THERM 0.0 min RATE: 10.0 C/min
 EA LAMBEL
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Tue Sep 3 08:55:00 1996

Curve 1: TGA
File Info: SAM090102 Sun Sep 1 08:47:39 1986
Sample Weight: 17.860 mg
896T004309



10C/MIN N2
THERM 85.8 8
TDS: 0.0 min RATE: 10.0 C/min
EA LANGE
PERKIN-ELMER
7 Series Thermal Analysis System

Curve 1: TGA
File Infr: SAM090103 Sun Sep 1 11:08:35 1966
Sample Weight: 15.900 mg
SS6T004309 DUP



EA LABEL
PERKIN-ELMER
7 Series Thermal Analysis System
SER 567

Temperature (°C)

10.0 C/min

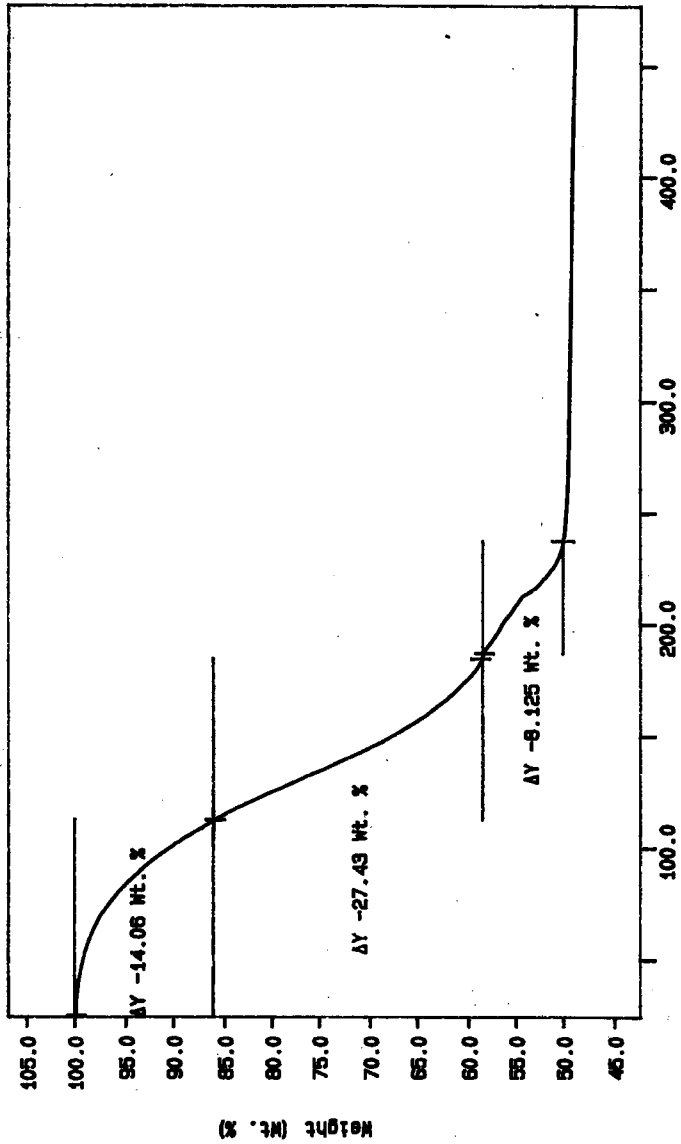
0.0 min RATE

TDRSS

10C/MIN N2

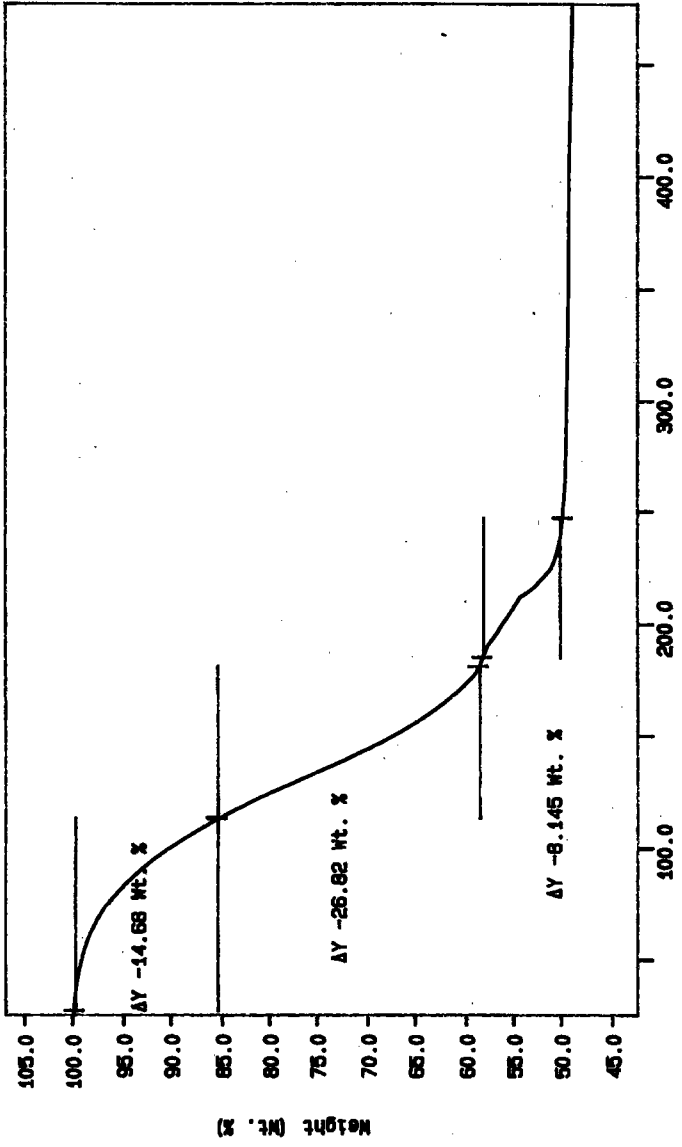
TRAP 55.8 8

Curve 1: TGA
File info: SAM090104 Sun Sep 1 13:06:50 1996
Sample Weight: 17.099 mg
896T004333



100/MIN N2
TEMP: 50.0 °C
TIME: 0.0 min RATE: 10.0 C/min
EA LANGE
PERKIN-ELMER
7 Series Thermal Analysis System

Curve 1: TGA
File info: SAM090105 Sun Sep 1 14:19:10 1996
Sample Weight: 17.391 mg
S96T004353 DUP



100/MIN N2
TEMPERATURE 250.0
RATES 0.0 min RATE: 50.0 C/min
EA LABEL PERKIN-ELMER 7 Series Thermal Analysis System

LABCORE Data Entry Template for Worklist# 12340

Analyst: ABD Instrument: TGA0 1 Book # 8208-A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	59.2	59.21	N/A	%
96000945	AN-105	2 SAMPLE	S96T004419	0	TGA-01	LIQUID	N/A	50.41		%
96000945	AN-105	3 DUP	S96T004419	0	TGA-01	LIQUID	50.41	50.54	N/A	%
96000945	AN-105	4 SAMPLE	S96T004420	0	TGA-01	LIQUID	N/A	50.1		%
96000945	AN-105	5 DUP	S96T004420	0	TGA-01	LIQUID	50.1	51.02	N/A	%

Final page for worklist # 12340

[Signature]
Analyst Signature Date 8/20/96

[Signature]
Analyst Signature Date 9/5/96

Verified/Validated by
Blandina
Valenzuela
9-6-96

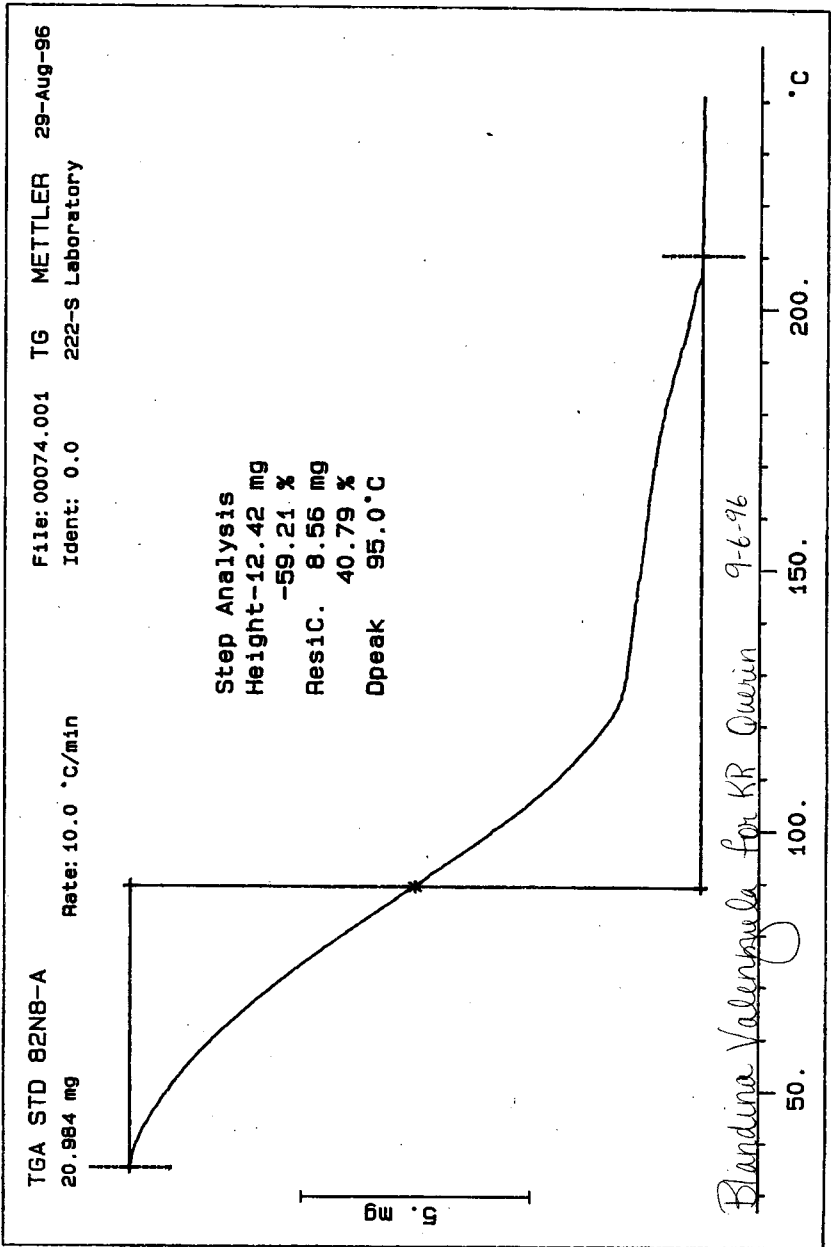
Data Entry Comments: S96T004419 results are the sum of two weight loss

Steps

S96T004420 results are the sum of two weight loss steps.

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 454 TO 460.



S96T004419 SAMPLE
17.338 mg

Rate: 10.0 °C/min

File: 00076.001 TG METTLER 29-Aug-96

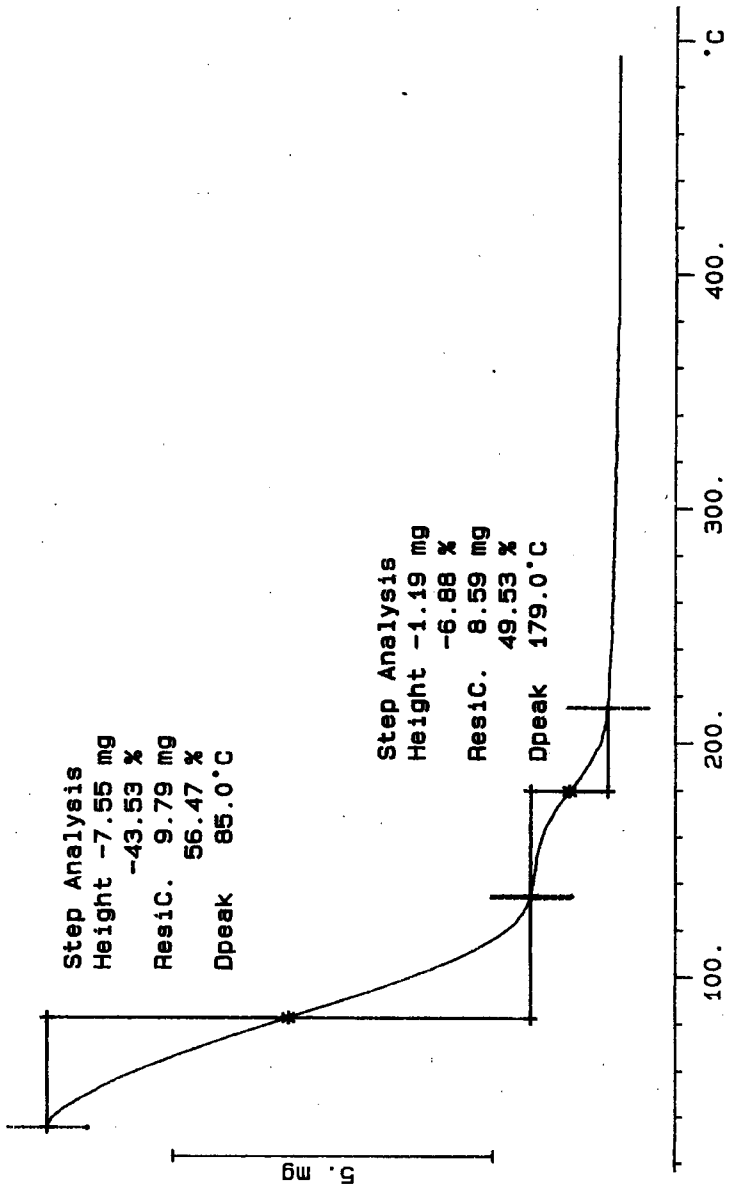
Ident: 0.0 222-S Laboratory

Step Analysis

Height	-7.55 mg
ResidC.	-43.53 %
Dpeak	9.79 mg
	56.47 %
	85.0 °C

Step Analysis

Height	-1.19 mg
ResidC.	-6.88 %
Dpeak	8.59 mg
	49.53 %
	179.0 °C



S96T004419 DUP

17.230 mg

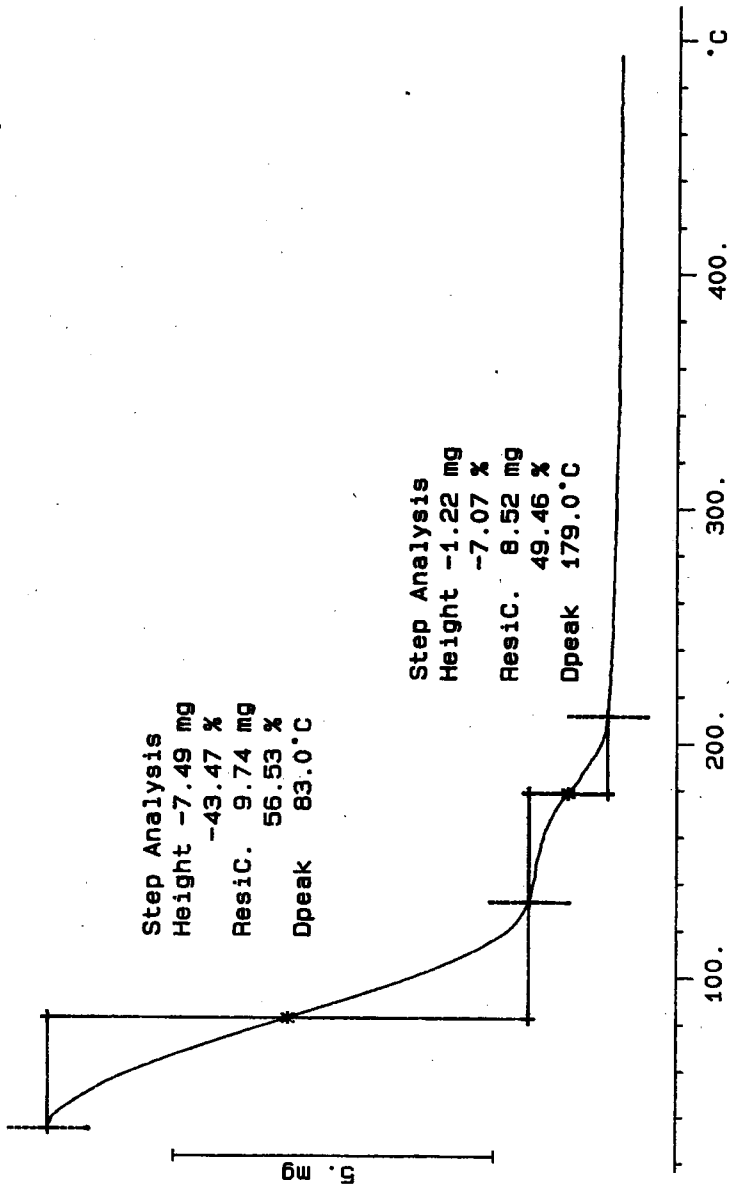
Rate: 10.0 °C/min

File: 00078.001 TG METTLER 29-Aug-96

Ident: 0.0 222-S Laboratory

Step Analysis
 Height -7.49 mg
 -43.47 %
 Resid. 9.74 mg
 56.53 %
 Dpeak 83.0 °C

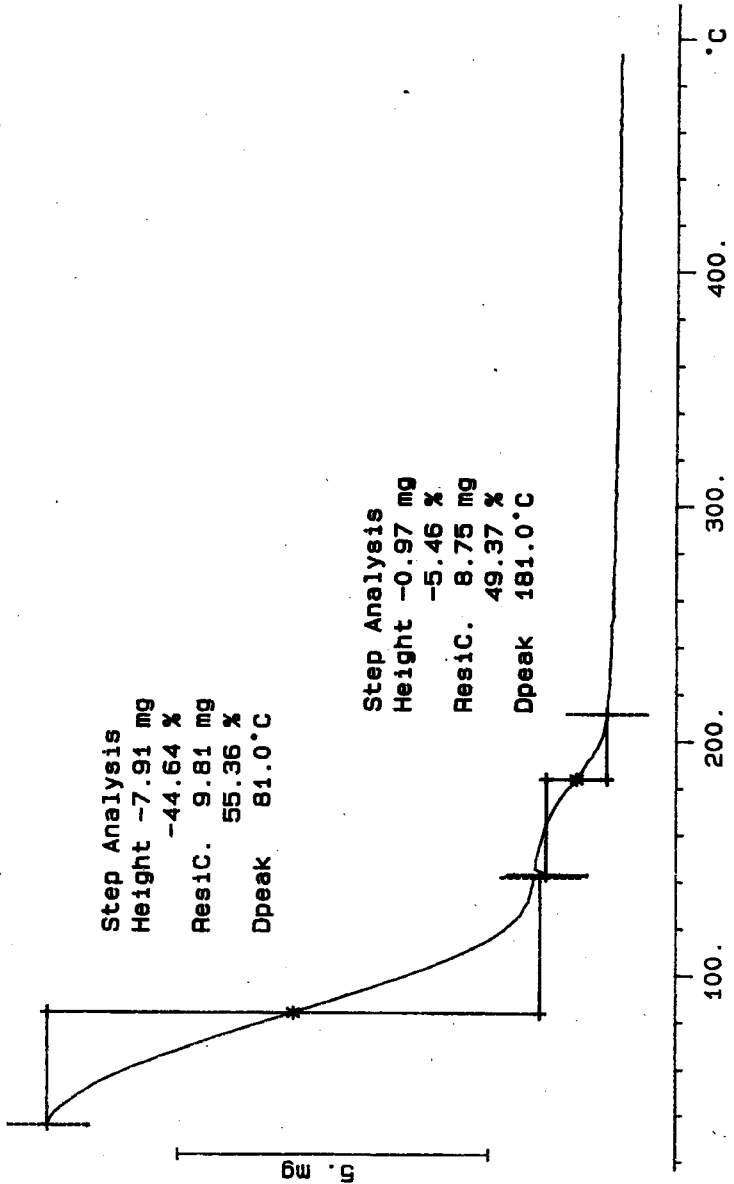
Step Analysis
 Height -1.22 mg
 -7.07 %
 Resid. 8.52 mg
 49.46 %
 Dpeak 179.0 °C



S96T004420 SAMPLE
17.727 mg
Rate: 10.0 °C/min
File: 00080.001 TG METTLER 30-Aug-96
Ident: 0.0 222-S Laboratory

Step Analysis
Height -7.91 mg
-44.64 %
Resic. 9.81 mg
55.36 %
Dpeak 81.0 °C

Step Analysis
Height -0.97 mg
-5.46 %
Resic. 8.75 mg
49.37 %
Dpeak 181.0 °C



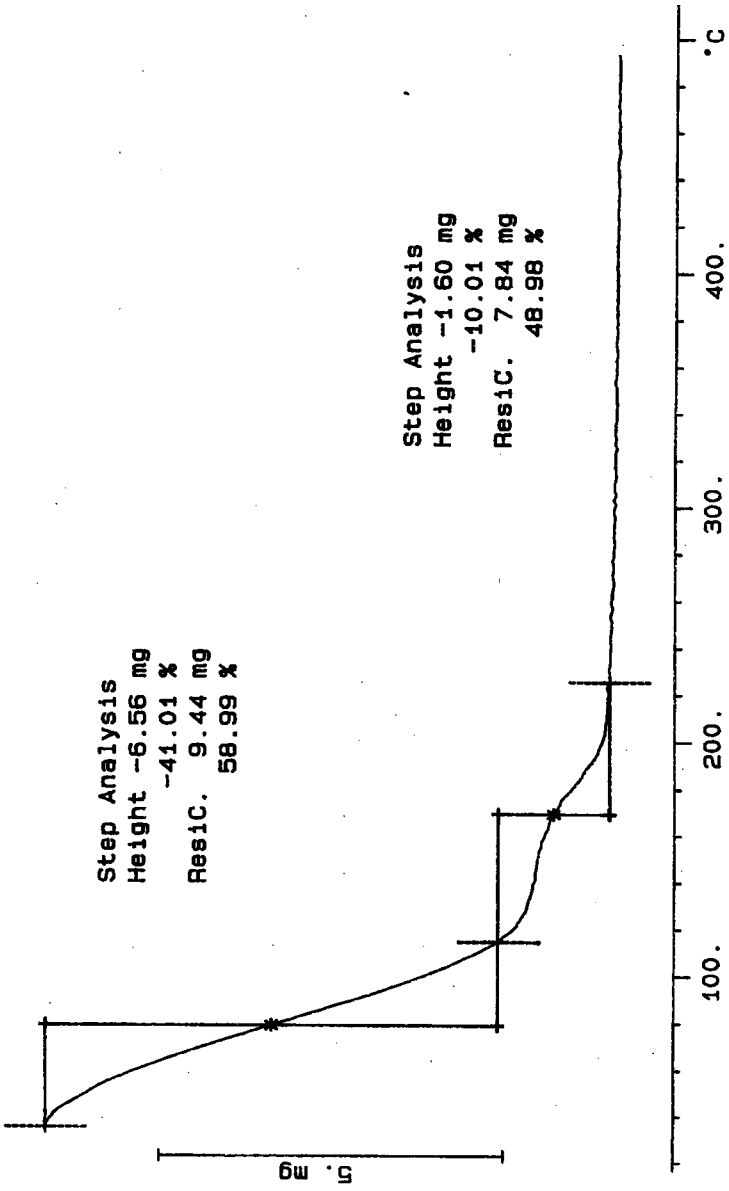
S96T004420 DUP
15.999 mg

File: 00082.001 TG METTLER 30-Aug-96
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Step Analysis
Height -6.56 mg
-41.01 %
Res1C. 9.44 mg
58.99 %

Step Analysis
Height -1.60 mg
-10.01 %
Res1C. 7.84 mg
48.98 %



LABCORE Data Entry Template for Worklist# 12341

Analyst: RWK Instrument: TGA0 3 Book # 82N8A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdv

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	STD				TGA-03	LIQUID	<u>59.2</u>	<u>58.67</u>	<u>N/A</u>	<u>%</u>
96000945	AN-105	2	SAMPLE	S96T004421	0		TGA-03	LIQUID	<u>N/A</u>	<u>49.93</u>		<u>%</u>
96000945	AN-105	3	DUP	S96T004421	0		TGA-03	LIQUID	<u>49.93</u>	<u>49.97</u>	<u>N/A</u>	<u>%</u>
96000945	AN-105	4	SAMPLE	S96T004433	0		TGA-03	LIQUID	<u>N/A</u>	<u>49.71</u>		<u>%</u>
96000945	AN-105	5	DUP	S96T004433	0		TGA-03	LIQUID	<u>49.71</u>	<u>49.80</u>	<u>N/A</u>	<u>%</u>

Final page for worklist # 12341

See attached for signatures
Analyst Signature _____ Date 9-3-96

Analyst Signature _____ Date _____

Verified/Validated by
Blandina Valenzuela
9-6-96

Data Entry Comments: S96T004421 results are the sum of two weight loss steps.

S96T004433 results are the sum of two weight loss steps.

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# 12341

Analyst: NR Instrument: TGA0 _____ Book # 8208-A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdy

GROUP	PROJECT	S TYPE	SAMPLE#	R	A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD				TGA-01	LIQUID	_____	_____	N/A	%
96000945	AN-105	2 SAMPLE	S96T004421	0		TGA-01	LIQUID	N/A	_____	_____	%
96000945	AN-105	3 DUP	S96T004421	0		TGA-01	LIQUID	_____	_____	N/A	%
96000945	AN-105	4 SAMPLE	S96T004433	0		TGA-01	LIQUID	N/A	_____	_____	%
96000945	AN-105	5 DUP	S96T004433	0		TGA-01	LIQUID	_____	_____	N/A	%

Final page for worklist # 12341

Rob King 4-1-96
Analyst Signature Date

Reichert 9/5/96
Analyst Signature Date

TGA-03 instrument
was used.

9-3-96

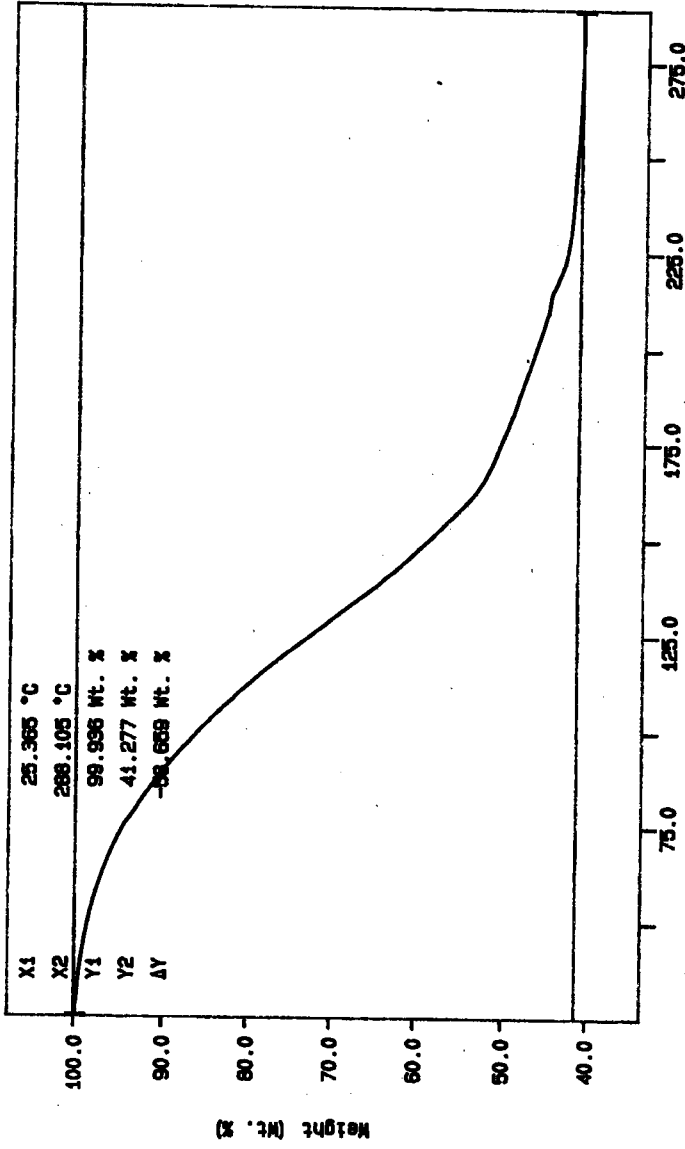
Blandina
Valenzuela

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.

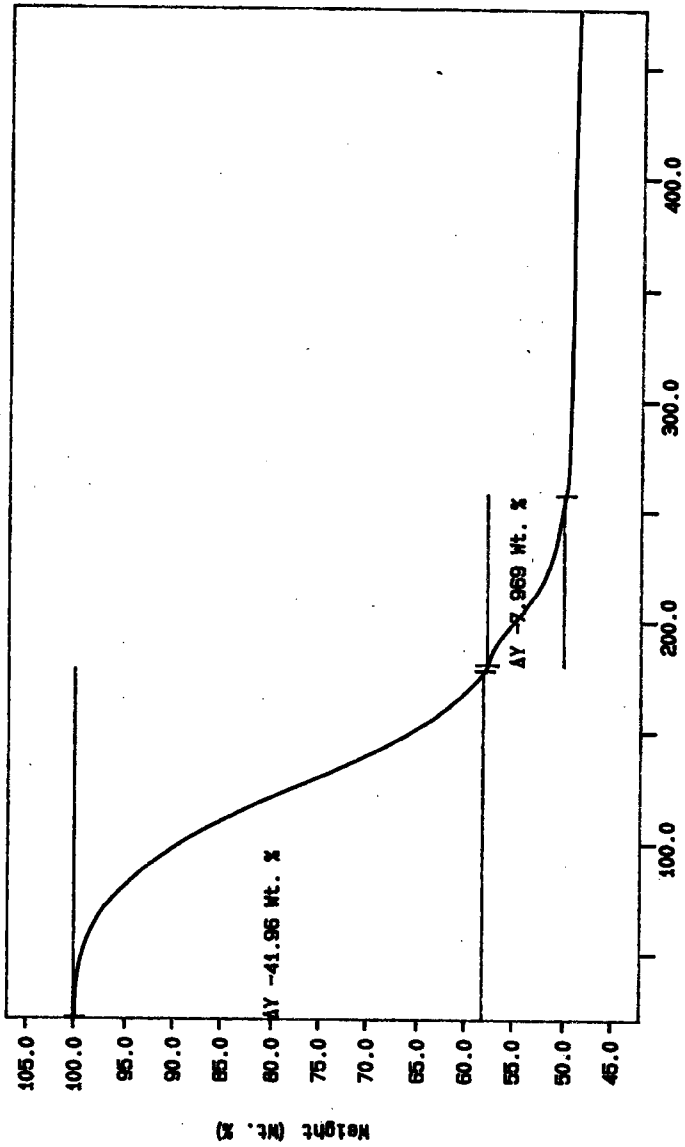
Curve 1: TGA
File Info: TER090108 Sun Sep 1 10:52:55 1996
Sample Weight: 21.394 mg
TGA STD 82N6-A

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 463 TO 467.



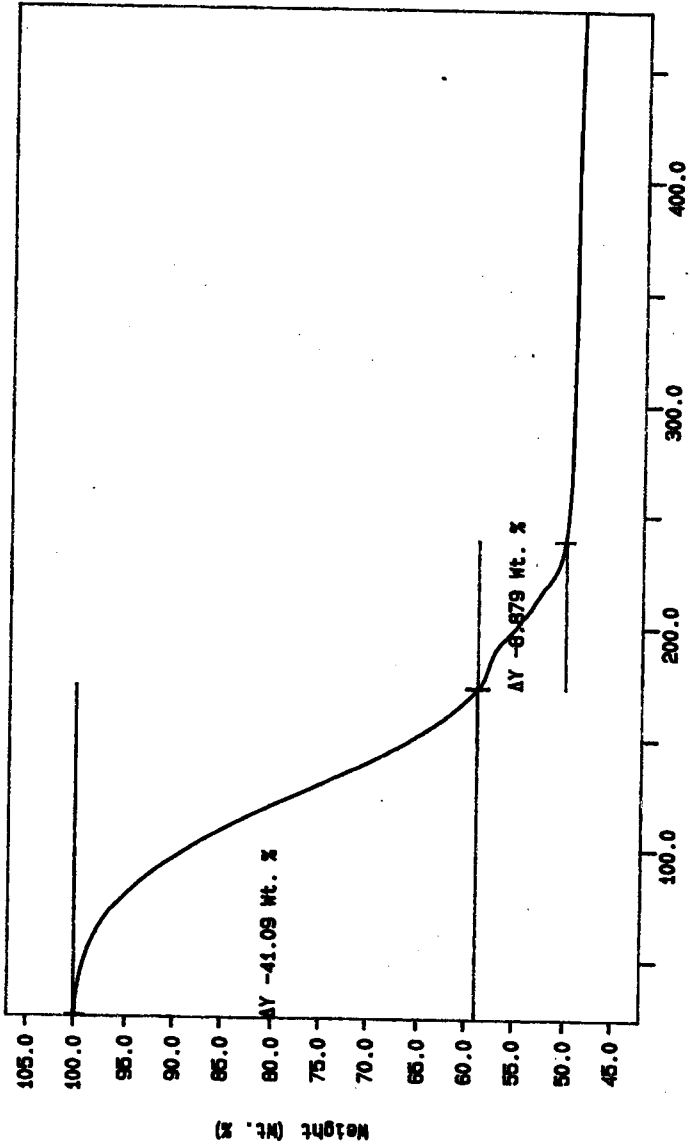
N2 10C/MIN
 THERM 300.8 g THERM 0.0 min RATE: 10.0 C/min
 EA-LANDEL Rob King 9/1/96
 PERKIN-ELMER
 7 Series Thermal Analysis System

Curve 1: TGA
File Info: SAW040106 Sun Sep 1 19: 24: 47 1996
Sample Weight: 16.181 mg
S96T004421



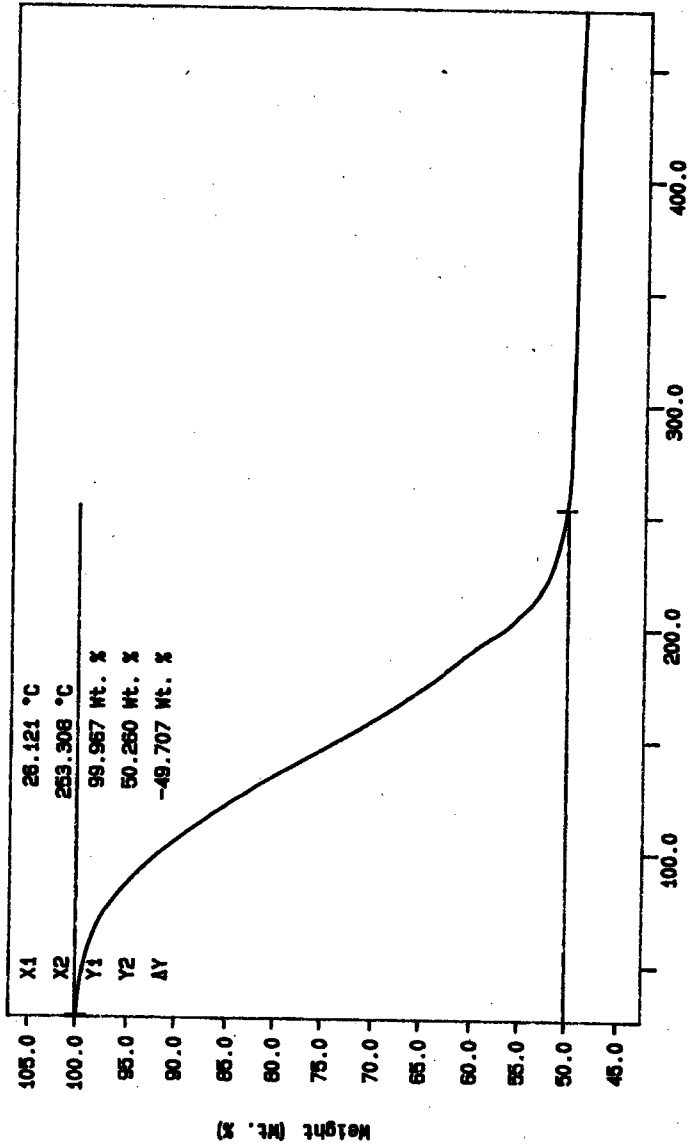
100./MIN N2
TIME 05:08
HEAT 05:08
SAMPLE RATE: 10.0 C/MIN
RM KING
PERKIN-ELMER
7 Series Thermal Analysis System

Curve 1: TGA
File info: qeev1 Sun Sep 1 21:00:27 1986
Sample Weight: 15.577 mg
S96T004421 DLP



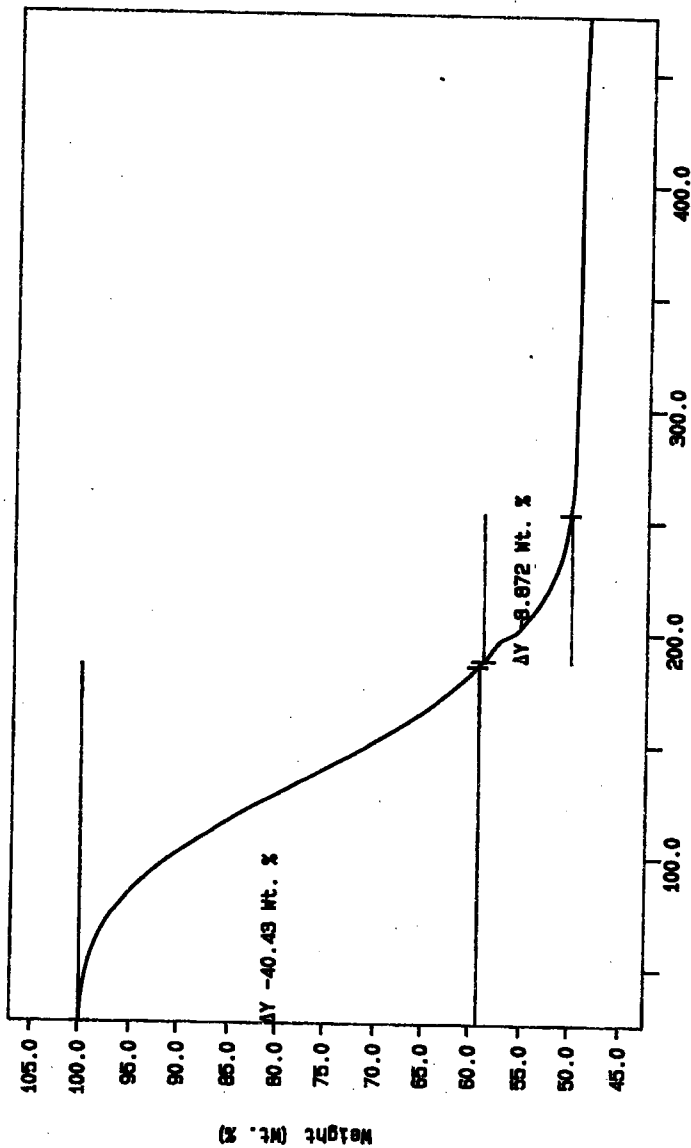
100/MIN N2
HEAT RATE 50.0
TRIMS: 0.0 min MATR: 50.0 g/min
RM KING PERKIN-ELMER
7 Series Thermal Analysis System

Curve 1: TGA
File Infc: SAM040108 Sun Sep 1 22:11:44 1996
Sample Weight: 16.253 mg
S96T004439



10C/MIN N2
TEMP# 08:8 8 T2M15 0.0 MIN RATE: 10.0 C/MIN
RM KINS
PERKIN-ELMER
7 Series Thermal Analysis System

Curve 1: TGA
File Info: SAM040201 Sun Sep 1 23: 23: 16 1996
Sample Weight: 18.384 mg
S96T004433 DUP



10C/MIN N2
 TAPPE 88.8 8 TAPMS 0.0 MIN RATESS 10.0 C/MIN
 RW KING
 PERKIN-ELMER
 7 Series Thermal Analysis System

LABCORE Data Entry Template for Worklist# 12342

Analyst: RB Instrument: TGA0 1 Book # 82N8-A

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

Worklist Comment: Please run AN-105 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.19</u>	<u>N/A</u>	%
96000945	AN-105	2 SAMPLE	S96T004434	0	TGA-01	LIQUID	<u>N/A</u>	<u>51.07</u>		%
96000945	AN-105	3 DUP	S96T004434	0	TGA-01	LIQUID	<u>51.07</u>	<u>51.41</u>	<u>N/A</u>	%

Final page for worklist # 12342

RaeAnn Sheen 8-31-96
Analyst Signature Date

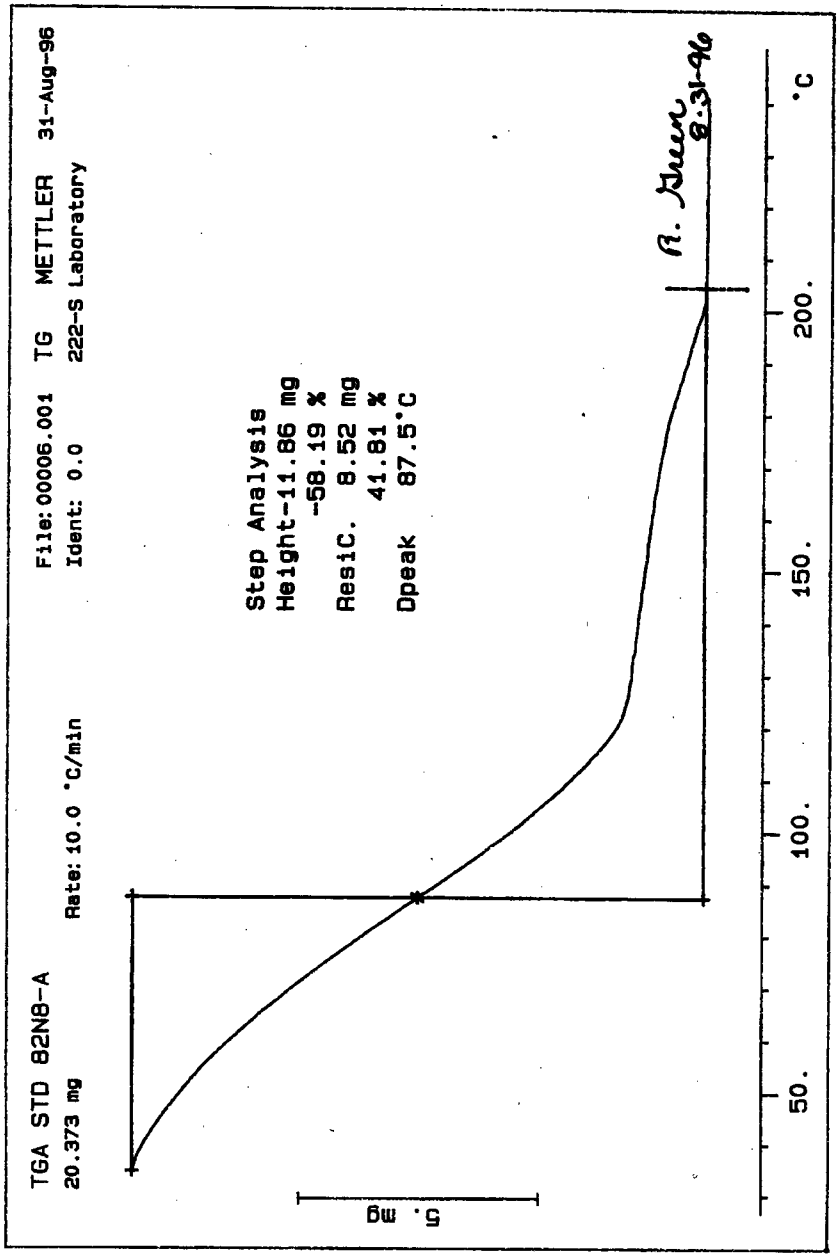
Rey Jight 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela
9-6-96

Data Entry Comments: S96T004434 results are the sum of two weight loss steps.

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 467 TO 471.

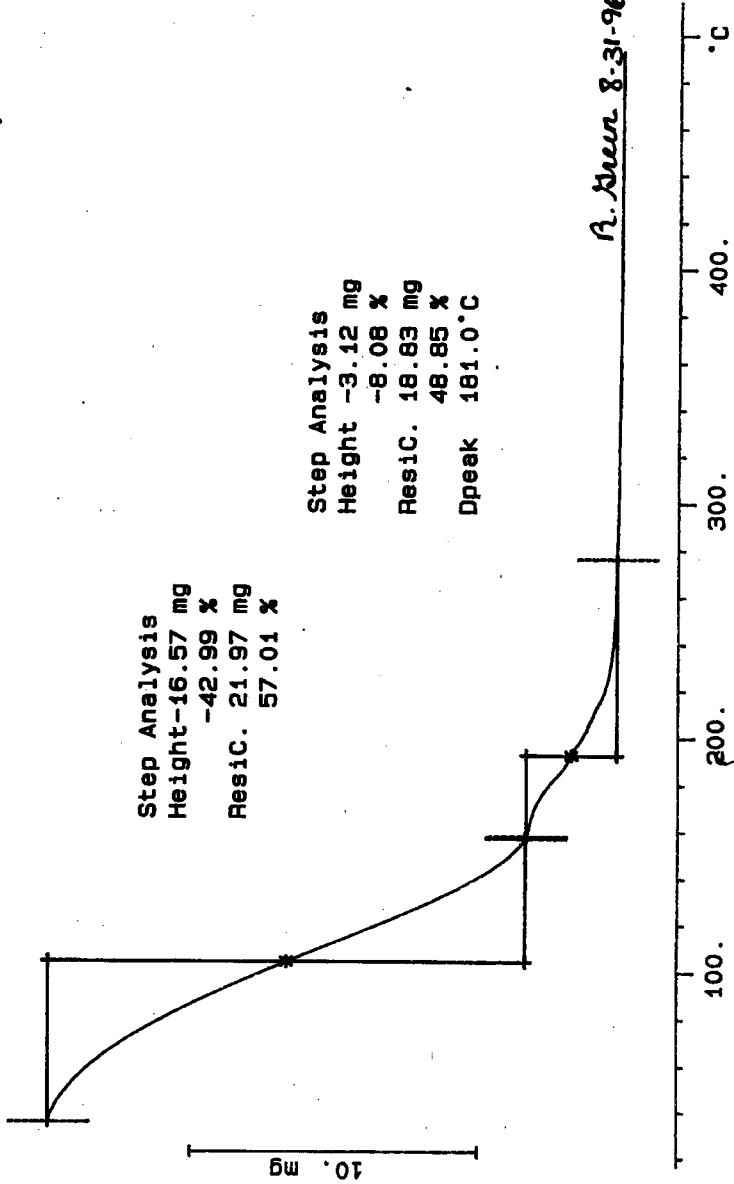


S96T004434 SAM N2
38.539 mg

Rate: 10.0 °C/min

File: 00002.001 TG METTLER 31-Aug-96

Ident: 0.0 222-S Laboratory



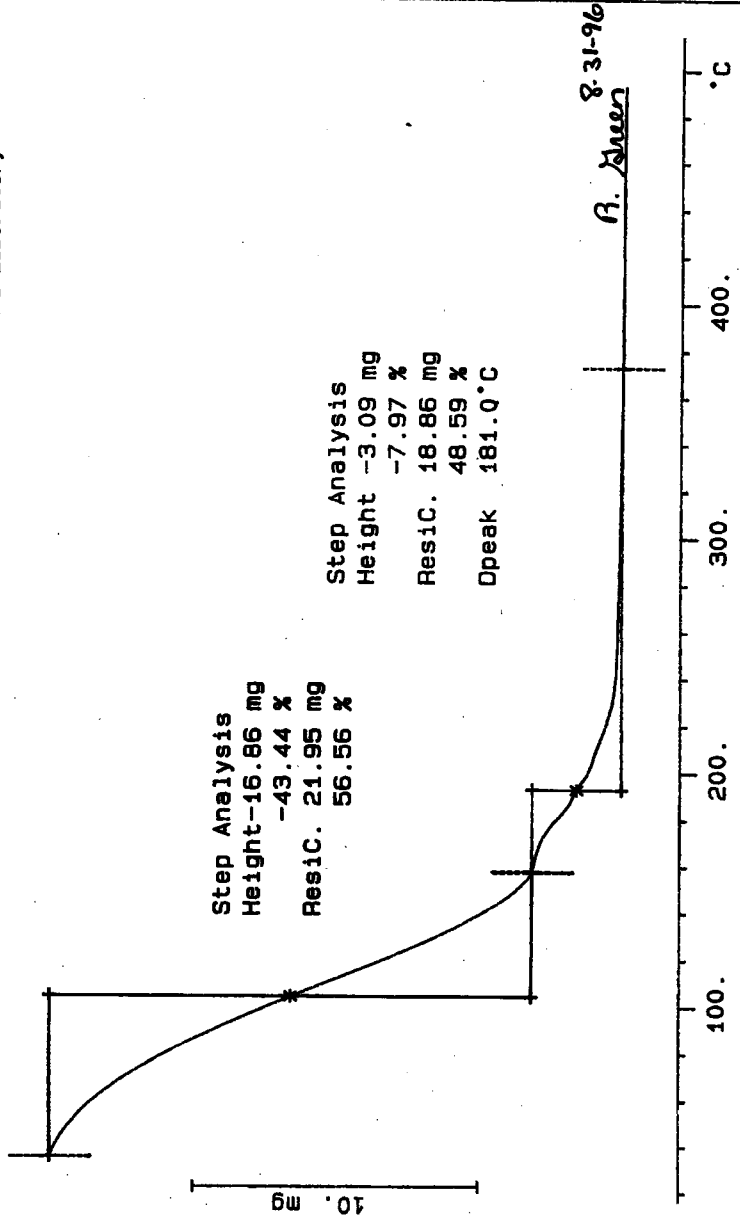
Step Analysis
 Height-16.57 mg
 -42.99 %
 Resid. 21.97 mg
 57.01 %

Step Analysis
 Height -3.12 mg
 -8.08 %
 Resid. 18.83 mg
 48.85 %
 Dpeak 181.0 °C

A. Deer 8.31.96

10. mg

S96T004434 DUP N2
38.814 mg
Rate: 10.0 °C/min
File: 00004.001 TG METTLER 31-Aug-96
Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist# 12607

Analyst: SMF Instrument: TGA0 1 Book # 82108A

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

Worklist Comment: Rerun. Please run AN-105 TGAs under N2. Doesn't need DSC.bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.2</u>	<u>58.07</u>	<u>N/A</u>	%
96000832	AN-105	2 SAMPLE	S96T003748	1	TGA-01	LIQUID	<u>N/A</u>	<u>50.51</u>		%
96000832	AN-105	3 DUP	S96T003748	1	TGA-01	LIQUID	<u>50.51</u>	<u>50.66</u>	<u>N/A</u>	%

Final page for worklist # 12607

Susie M. Fulton 9-4-96
Analyst Signature Date

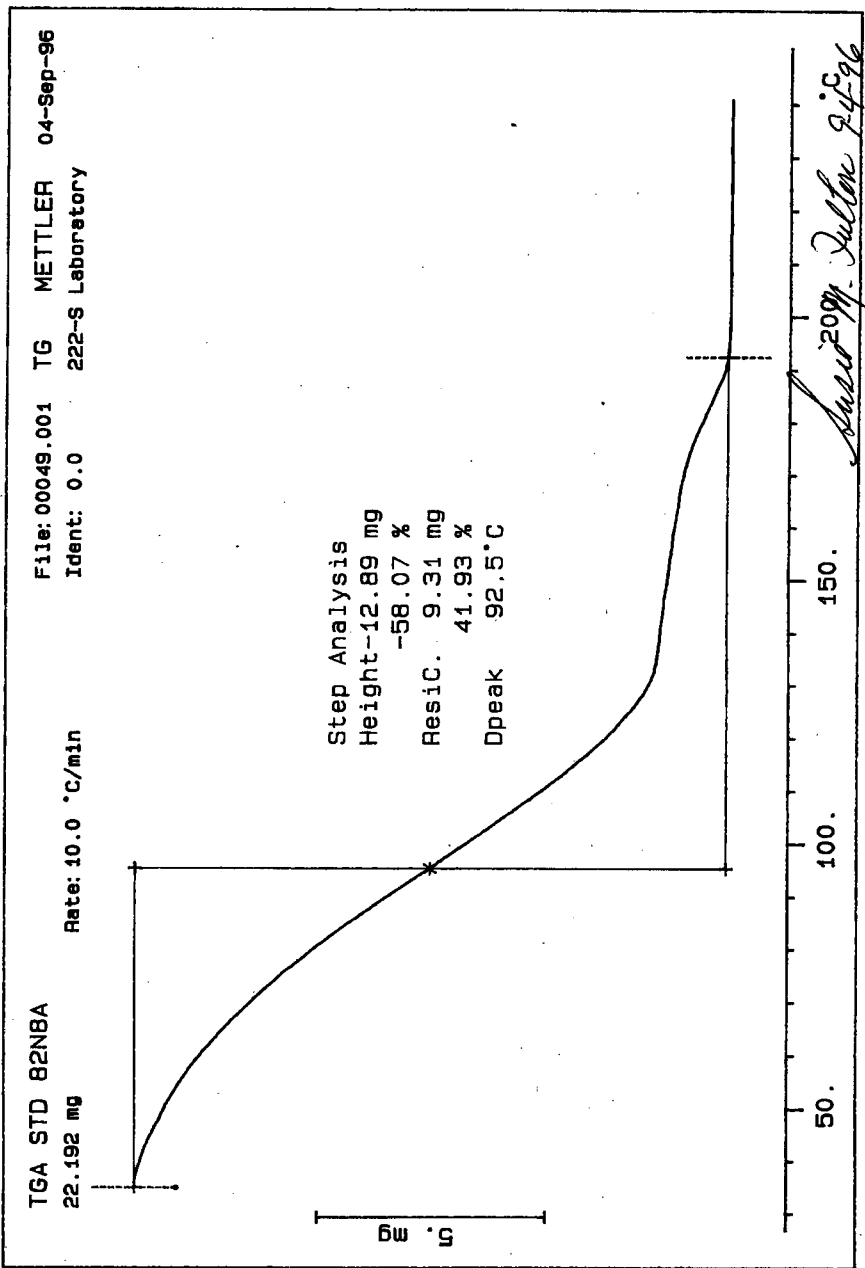
Kevin H 9/5/96
Analyst Signature Date

Verified/Validated by
Blandina
Valenzuela

Data Entry Comments: Sample results are the sum of two weight loss
steps.

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 472 TO 475.



S96T003748 N2

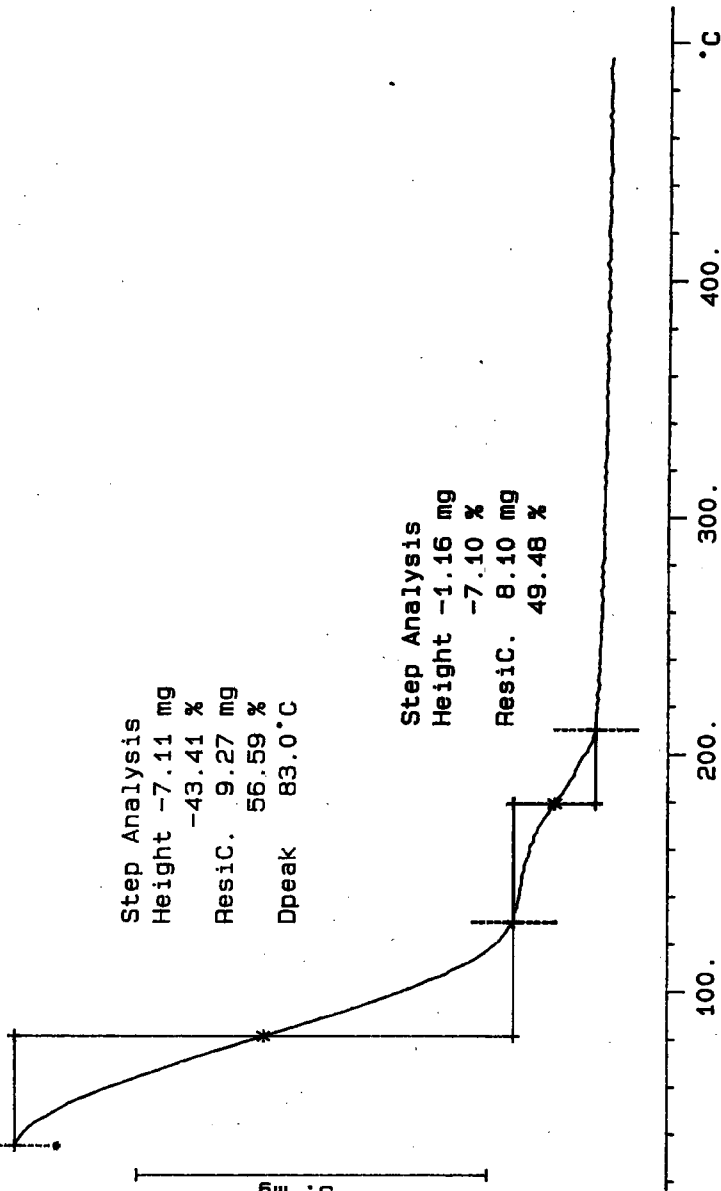
16.379 mg

File: 00051.001 TG METTLER 04-Sep-96

Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

Step Analysis
 Height -7.11 mg
 -43.41 %
 Resid. 9.27 mg
 56.59 %
 Dpeak 83.0 °C

Step Analysis
 Height -1.16 mg
 -7.10 %
 Resid. 8.10 mg
 49.48 %



S96T003748 DUP N2

8.569 mg

Rate: 10.0 °C/min

File: 00053.001

Ident: 0.0

TG METTLER

04-Sep-96

222-S Laboratory

Step Analysis

Height -3.82 mg

-44.61 %

Resic. 4.75 mg

55.39 %

Dpeak 75.0 °C

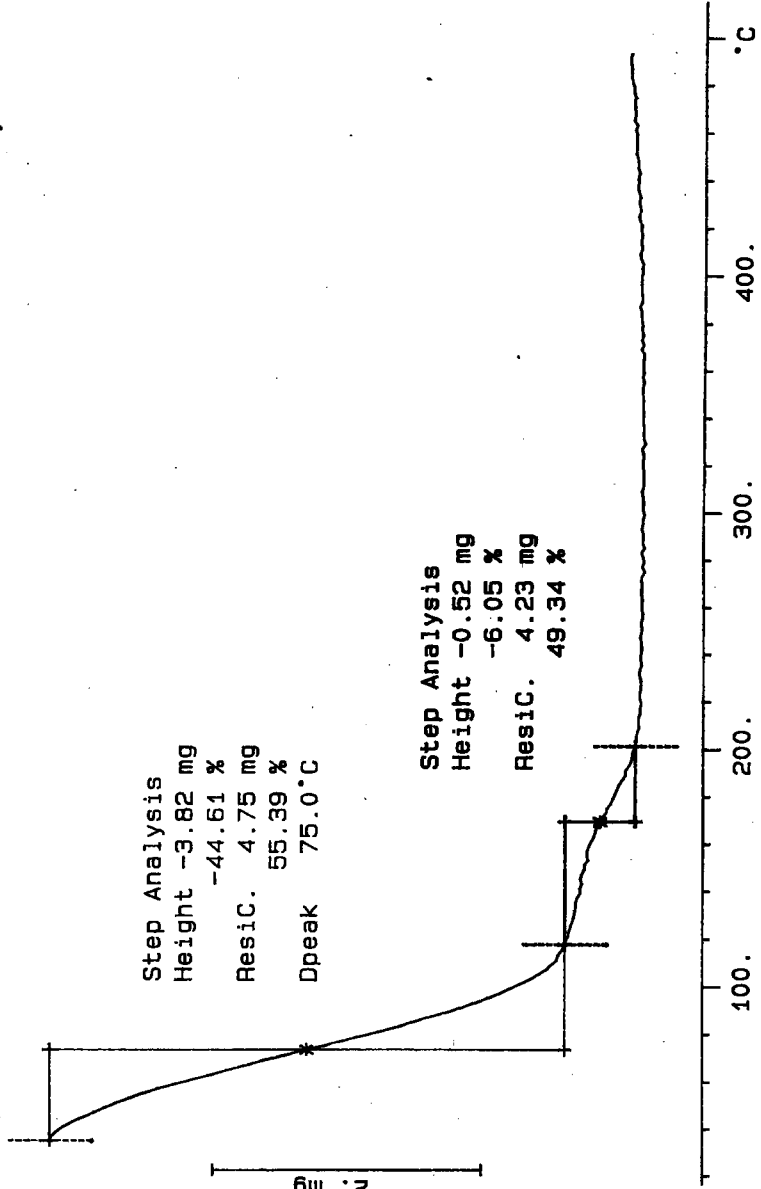
Step Analysis

Height -0.52 mg

-6.05 %

Resic. 4.23 mg

49.34 %



4.75
2.0 mg

DISTRIBUTION SHEET

To Distribution	From Production Planning & Control	Page 1 of 1
		Date: 09/18/96

Project Title/Work Order
**WHC-SD-WM-DP-199, Rev. 0, "Tank 241-AN-105, Cores 152 and 153,
 Analytical Results for the 45 Day Report**

EDT NO.: EDT-617495

ECN NO.:

Name	MSIN	Text With all Attach	EDT/ECN ONLY	
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Pacific Northwest Laboratory

J. R. Gormsen	K7-28		X	
S. J. Harris	K7-22	X		
K. L. Silvers	P7-27		X	

U.S. Department of Energy, RL

C. A. Babel	S7-54	X		
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Westinghouse Hanford Company

J. N. Appel	G3-21		X	
M. W. Barnes	T6-03	X		
D. C. Hetzer	S6-31		X	
T. J. Kelley	S7-21		X	
N. W. Kirch	R2-11	X		
M. J. Kupfer	H5-49		X	
J. E. Meacham	S7-15	X		
K. L. Powell	T6-04		X	
J. B. Schaffer (SD COV SHT., DST. SHT, ROR)	R2-12		X*	
F. H. Steen	R2-12	X		
M. J. Sutey	T4-07		X	X*
T. T. Tran (LATA)	B1-44	X		
J. A. Voogd	H5-03		X	
L. R. Webb (SD COV SHT., DST. SHT, ROR)	T6-06		X *	
A. E. Young	R2-12	X		
Central Files	A3-88	2		
EDMC	H6-08	X		
LTIC	T6-03		X	

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* Needs only releasing paperwork, not a copy of the released document.