

DISTRIBUTION SHEET

To Distribution	From Characterization Plans and Reports	Page 1 of 2		
		Date:	05/05/95	
Project Title/Work Order WHC-SD-WM-DP-110, Rev. 0, "45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78"		EDT NO.:	EDT-612152	
		ECN NO.:	N/A	
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		ECN NO.: N/A	
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ENGINEERING DATA TRANSMITTAL

Page 1 of 1
1. EDT No 612152

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Push Mode, Cores 75 and 78

Release Date: 5/10/95

**This document was reviewed following the
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May 10, 1995

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WHC-SD-WM-DP-110, REV. 0

ANALYTICAL SERVICES

**45-DAY SAFETY SCREEN RESULTS FOR TANK 241-U-202,
PUSH MODE, CORES 75 AND 78**

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MAY 5, 1995

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TABLE OF CONTENTS

Narrative	1
Sample Data Summary	5
Undigested Sample Analyses - Direct	11
Differential Scanning Calorimetry(DSC)	
DSC Worklist # 1019	12
DSC Worklist # 1020	19
DSC Worklist # 1021	23
DSC Worklist # 1022	27
DSC Worklist # 1024	31
DSC Worklist # 1025	36
DSC Worklist # 1028	40
DSC Worklist # 1029	46
DSC Worklist # 1030	50
Thermogravimetric Analyses (TGA)	
TGA Worklist # 1034	57
TGA Worklist # 1035	63
TGA Worklist # 1036	67
TGA Worklist # 1047	74
TGA Worklist # 1048	82
TGA Worklist # 1050	86
TGA Worklist # 1051	93
TGA Worklist # 1052	97
TGA Worklist # 1053	103

This Document consists of pages 1 through 106.

WHC-SD-WM-DP-110, REV. 0

NARRATIVE

Summary

Three two-segment core samples from tank U-202 were received at the 222-S Laboratories. Two core samples were analyzed and one core sample, first core from riser 6 (Sample 95-055 and Sample 95-056), was archived for future needs. These samples underwent safety screening analysis Differential Scanning Calorimetry (DSC), Thermogravimetric Analysis (TGA) and Alpha Total in accordance with reference (1) below. The test results indicate that no safety screening notification limits were exceeded.

Sample Receipt and Extrusion

Core 75, Segment 1, Sample 95-050 (Riser 2)

Sample 95-050 was collected from riser 2 of tank U-202 on 3/22/95, and received at the 222-S laboratory on 3/23/95. Extrusion took place on 4/3/95, with the total amount of solid material recovered being 119 grams and drainable liquid recovered being 155 grams. There was no liquid in the liner. The drainable liquid was yellow and the solid sample was light yellow with some black specks and large crystals. The first 3 inches of the solid sample retained the shape of the sampler. The final 2 inches "melted" on the extrusion tray. The solid material was damp and creamy. All archiving requirements per the TCP were performed on the unfiltered liquid and solid subsamples, while all analysis of the drainable liquid was run after settling the solids. Sub-samples were provided to the laboratory for analysis, and results appear in the summary table as sample numbers S95T000582, S95T000584 and S95T000585.

Core 75, Segment 2, Sample 95-051 (Riser 2)

Sample 95-051 was collected from riser 2 of tank U-202 on 3/22/95, and received at the 222-S laboratory on 3/23/95. Extrusion took place on 4/3/95, with the total amount of solid material recovered being 122 grams and drainable liquid recovered being 137 grams. There was nine grams of fluid in the liner. The drainable liquid was yellow and the solid sample was light yellow. The solid material was extruded near the last six inches of extrusion of which the final three inches of the solid material was a light yellow sludge material. All other solid material was crystalline. The solid sample was divided into crystalline half segment and sludge half segment. All archiving requirements per the TCP were performed on the unfiltered liquid and solid subsamples, while all analysis of the drainable liquid was run after settling the solids. The liner liquid was not analyzed due to insufficient amount of sample. Sub-samples were provided to the laboratory for analysis, and results appear in the summary table as sample numbers S95T000588, S95T000590, S95T000591, S95T000598, and S95T000599.

Core 78, Segment 1, Sample 95-057 (Riser 6)

Sample 95-057 was collected from riser 6 of tank U-202 on 3/29/95, and received at the 222-S laboratory on 3/30/95. Extrusion took place on 4/4/95, with the total amount of solid material recovered being 312 grams, drainable liquid recovered being 42 grams, and no liner fluid was found. The drainable liquid was yellow and the solid sample was light yellow. The first six inches of extrusion was light yellow soft sludge, followed by a 3 inch gap which contained drainable liquid, and the last six inches was yellow sludge. The sludge contained black specks on the surface, but no crystals were observed. The solid sample was divided into a upper half segment and a lower half segment. All archiving requirements per the TCP were performed on the unfiltered liquid and solid subsamples, while all analysis of the drainable liquid was run after settling the solids. Sub-samples were provided to the laboratory for analysis, and results appear in the summary table as sample numbers S95T000621, S95T000630, S95T000632, S95T000633, and S95T000634.

Core 78, Segment 2, Sample 95-058 (Riser 6)

Sample 95-058 was collected from riser 6 of tank U-202 on 3/29/95, and received at the 222-S laboratory on 3/30/95. Extrusion took place on 4/4/95, with the total amount of solid material recovered being 184 grams, drainable liquid recovered being 19 grams, and no liner fluid was found. The drainable liquid was yellow and the solid sample was light yellow. The last eight inches of extrusion was solid of which the first four inches were light yellow crystals and the last four inches were light yellow sludge. The solid sample was divided into a upper half segment and a lower half segment. All archiving requirements per the TCP were performed on the unfiltered liquid and solid subsamples, while all analysis of the drainable liquid was run after settling the solid. Sub-samples were provided to the laboratory for analysis, and results appear in the summary table as sample numbers S95T000636, S95T000643, S95T000644, S95T000646, and S95T000650.

Core 78, Field Blank

Field Blank was collected for tank U-202 and U-201 on 3/30/95, and received at the 222-S laboratory on 3/30/95. Extrusion took place on 4/4/95, with the total amount of liquid recovered being 286 grams. The Field Blank was provided to the laboratory for analysis and results appear in the summary table as sample number S95T000654.

Analytical Results

TGA (Moisture)

The weight percent water by Thermogravimetric Analysis was performed using procedure LA-560-112, Rev. A-2 with a nitrogen purge. All results were above the notification limit (notification is made if the sample is analyzed at less than 17 percent water), therefore no notifications were made. All samples met the precision and accuracy criteria stated in reference (1) with an exception of samples S95T000590, S95T000630, and S95T000643. TGA precision between the sample and duplicate for samples S95T000590, S95T000630, and S95T000643

WHC-SD-WM-DP-110, REV. 0

exceeded the acceptance criteria, with Relative Percent Deviation (RPD) values of 12.0, 24.2, and 13.6, respectively. The sample result for S95T000590 was 43.64% water, the duplicate 38.71%. A third analysis was run with a result of 36.88%. This result does not appear on the table, but is included in the raw data. The sample result for S95T000630 was 24.11% water, the duplicate 18.90%. A third analysis was run with a result of 19.27%. This result does not appear on the table, but is included in the raw data.

The sample result for S95T000643 was 36.24% water, the duplicate 41.52%. A third analysis was run with a result of 34.81%. This result does not appear on the table, but is included in the raw data.

DSC

Differential thermal analyses were performed using procedure LA-514-113, Rev. B-1 and a Mettler Model 20 and LA-514-114, Rev. B-0 and a Perkin Elmer DSC-7 Differential Scanning Calorimetry under a nitrogen purge. All results were below the safety screen notification limit of 481 joules/g (dry), therefore no notifications were made. All samples met the precision and accuracy criteria stated in reference (1). No exotherms were observed in any of the samples.

Alpha Total

The Alpha Total analyses were performed using procedure LA-508-101, Rev. D-2. All alpha total results were below the notification limit. All samples (S95T000585, S95T000591, S95T000599, S95T000633, S95T000634, S95T000646, and S95T000650) exceeded the precision criteria. These samples demonstrated lower than normal spike recovery with values ranging from 50.8 to 89.6 percent recovery. Because sample alpha activities were approximately 3 orders of magnitude less than the action limit for total alpha, a rerun was not requested. The results appear in the summary table. The Tank Characterization Plan (TCP) accuracy criteria for the control standard was met in each case.

Reference: (1) WHC-SD-WM-TP-309, REV. 0, "Tank 241-U-202 Tank Characterization Plan," dated March 2, 1995, Westinghouse Hanford Company, Richland, WA 99352

WHC-SD-WM-DP-110, REV. 0

SAMPLE DATA SUMMARY

45 Day Safety Screen Results for 241-U-202
U-202

CORE NUMBER: 75
SEGMENT #: 1

SEGMENT PORTION: n/a

Sample#	R A#	Analyte	Unit	Action Limits Lower Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951000585	F	Alpha of Digested Solid	uCi/g	-1.000 1.000	78.04	<6.35e-04	1.19e-03	1.07e-3	1.13e-03	10.6	64.40	1.00e-03	80.6

W Whole Segment: W Whole Segment

Sample#	R A#	Analyte	Unit	Action Limits Lower Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951000584		% Water by TGA using Mettler	%	1.000 1.000	98.51	n/a	25.49	26.24	25.86	2.90	n/a	n/a	n/a
S951000584		DSC Exotherm Dry Calculated	Joules/g Dry	-1.000 1.000	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S951000584		DSC Exotherm using Mettler	Joules/g	-1.000 1.000	94.55	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a

Drainable Liquid: Drainable Liquid

Sample#	R A#	Analyte	Unit	Action Limits Lower Upper	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S951000582		% Water by TGA using Mettler	%	None None	99.17	n/a	72.60	73.24	72.92	0.88	n/a	n/a	n/a
S951000582		DSC Exotherm Dry Calculated	Joules/g Dry	None None	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S951000582		DSC Exotherm using Mettler	Joules/g	None None	91.74	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a

=> Limit Violated
=> Selected Limit

WHC-SD-WM-DP-110, REV. 0

45 Day Safety Screen Results for 241-U-202
U-202

CORE NUMBER: 75
SEGMENT #: 2

SEGMENT PORTION: N/a

Sample#	R A#	Analyte	Unit	Action Limits	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000588		% Water by IGA using Mettler	%	Lower: None Upper: None	99.17	n/a	73.29	72.23	72.76	1.46	n/a	n/a	n/a
S95T000588		DSC Exotherm Dry Calculated	Joules/g Dry	None	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000588		DSC Exotherm using Mettler	Joules/g	None	91.74	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a

U Upper Half of Segment: U Upper Half of Segment

Sample#	R A#	Analyte	Unit	Action Limits	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000598		% Water by IGA using Mettler	%	Lower: 10.000 Upper: 110.000	99.86	n/a	22.87	22.90	22.88	0.13	n/a	n/a	n/a
S95T000598		DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000598		DSC Exotherm using Mettler	Joules/g	-1.000	95.61	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000599	F	Alpha of Digested Solid	uCi/g	-1.000	78.04	<6.35e-04	< 7.40e-4	<1.22e-3	n/a	n/a	53.80	2.00e-03	500.0

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%
S95T000590		% Water by IGA using Mettler	%	Lower: 10.000 Upper: 110.000	98.51	n/a	43.64	38.71	41.17	12.0	n/a	n/a	n/a
S95T000590		DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000590		DSC Exotherm using Mettler	Joules/g	-1.000	94.55	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000591		Alpha of Digested Solid	uCi/g	-1.000	82.43	<1.18e-03	< 1.18e-3	<1.20e-3	n/a	n/a	79.70	3.00e-03	129.6

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-110, REV. 0

45 Day Safety Screen Results for 241-U-202
U-202

CORE NUMBER: 78
SEGMENT #: 1

SEGMENT PORTION: n/a

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000621		% Water by TGA using Mettler	%	None	None	99.24	n/a	73.42	73.6	73.51	0.27	n/a	n/a	n/a
S95T000621		DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	0.00e+00	n/a	0.000	n/a	n/a	n/a	n/a
S95T000621		DSC Exotherm using Mettler	Joules/g	None	None	102.3	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000630		% Water by TGA using Mettler	%	16.900	110.000	99.81	n/a	24.11	18.90	21.50	24.2	n/a	n/a	n/a
S95T000630		DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	241.000	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000630		DSC Exotherm using Mettler	Joules/g	-1.000	241.000	111.4	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000632		% Water by TGA using Mettler	%	16.900	110.000	99.43	n/a	24.45	22.24	23.34	9.47	n/a	n/a	n/a
S95T000632		DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	241.000	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000632		DSC Exotherm using Mettler	Joules/g	-1.000	241.000	107.0	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000633	F	Alpha of Digested Solid	uCi/g	-1.000	21.000	78.04	<6.90e-04	1.52e-03	<1.10e-3	n/a	n/a	53.20	2.00e-03	77.2
S95T000634	F	Alpha of Digested Solid	uCi/g	-1.000	41.000	78.04	<6.90e-04	1.25e-03	<1.37e-3	n/a	n/a	50.80	2.00e-03	88.6

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-110, REV. 0

45 Day Safety Screen Results for 241-U-202
U-202

CORE NUMBER: 78
SEGMENT #: 2

SEGMENT PORTION: n/a

Sample#	R A#	Analyte	Unit	Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S95T000636		% Water by TGA on Perkin Elmer	%	None	None	97.30	n/a	72.27	72.23	72.25	0.06	n/a	n/a	n/a
S95T000636		DSC Exotherm on Perkin Elmer	Joules/g	None	None	101.9	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000636		DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000643		% Water by TGA using Mettler	%	10.000	110.000	99.63	n/a	36.24	41.5	38.87	13.6	n/a	n/a	n/a
S95T000643		DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	43.100	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000643		DSC Exotherm using Mettler	Joules/g	-1.000	43.100	106.5	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000644		% Water by TGA using Mettler	%	10.000	110.000	98.67	n/a	24.43	23.96	24.20	1.94	n/a	n/a	n/a
S95T000644		DSC Exotherm Dry Calculated	Joules/g Dry	-1.000	43.100	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000644		DSC Exotherm using Mettler	Joules/g	-1.000	43.100	110.4	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a
S95T000646		Alpha of Digested Solid	uci/g	-1.000	41.100	82.43	<1.18e-03	< 1.18e-3	<1.16e-3	n/a	n/a	n/a	3.00e-03	500.0
S95T000650	F	Alpha of Digested Solid	uci/g	-1.000	41.100	84.46	<2.49e-03	< 5.32e-3	<4.71e-3	n/a	n/a	n/a	6.00e-03	375.3

=> Limit violated
=> Selected Limit

WHC-SD-WM-DP-110, REV. 0

45 Day Safety Screen Results for 241-U-202
U-202

CORE NUMBER: 78
SEGMENT #: FB

SEGMENT PORTION: n/a

Sample#	R A#	Analyte	Unit	. Action Limits		Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count	Err%
S95T000654		% Water by TGA on Perkin Elmer	%	Lower	Upper	97.30	n/a	99.66	99.52	99.59	0.14	n/a	n/a	n/a	n/a
S95T000654		DSC Exotherm on Perkin Elmer	Joules/g	None	None	101.9	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a
S95T000654		DSC Exotherm Dry Calculated	Joules/g Dry	None	None	n/a	n/a	0.00e+00	0	0.000	n/a	n/a	n/a	n/a	n/a

⇒ Limit violated
⇒ Selected Limit

WHC-SD-WM-DP-110, REV. 0

WHC-SD-WM-DP-110, REV. 0

UNDIGESTED ANALYSES RESULTS - DIRECT

LABCORE Data Entry Template for Worklist# 1019

Analyst: SMF Instrument: DSC01 Book # 12N14-17

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

Worklist Comment: Please run U-202 DSC 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>26.9</u>	<u>N/A</u>	Joules/g
95000039	U-202	2 SAMPLE	S95T000584	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000039	U-202	3 DUP	S95T000584	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000039	U-202	4 SAMPLE	S95T000590	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000039	U-202	5 DUP	S95T000590	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 1019

Susie M. Dalton 4/25/95
Analyst Signature Date

L. Jones 4-25-95
Analyst Signature Date

Verified by Blandina Valenzuela 4/25/95

Data Entry Comments:

S95T000584 - light, thick, yellow liquid w/ clear, thin upper phase. Produced Sandothene

S95T000590 - light, thin yellow liquid w/ large, clear crystals (2 1/4")

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.

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SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 13 TO 18.

DSC STD 12N14-A

6.340 mg

Rate: 10.0 °C/min

File: 00016.001 DSC METTLER 23-Apr-95

Ident: 0.0 222-S Laboratory

exo >

10. mW

Integration

Delta H 170 mJ

26.9 J/g

Peak 158.7 °C

-12.0 mW

120.

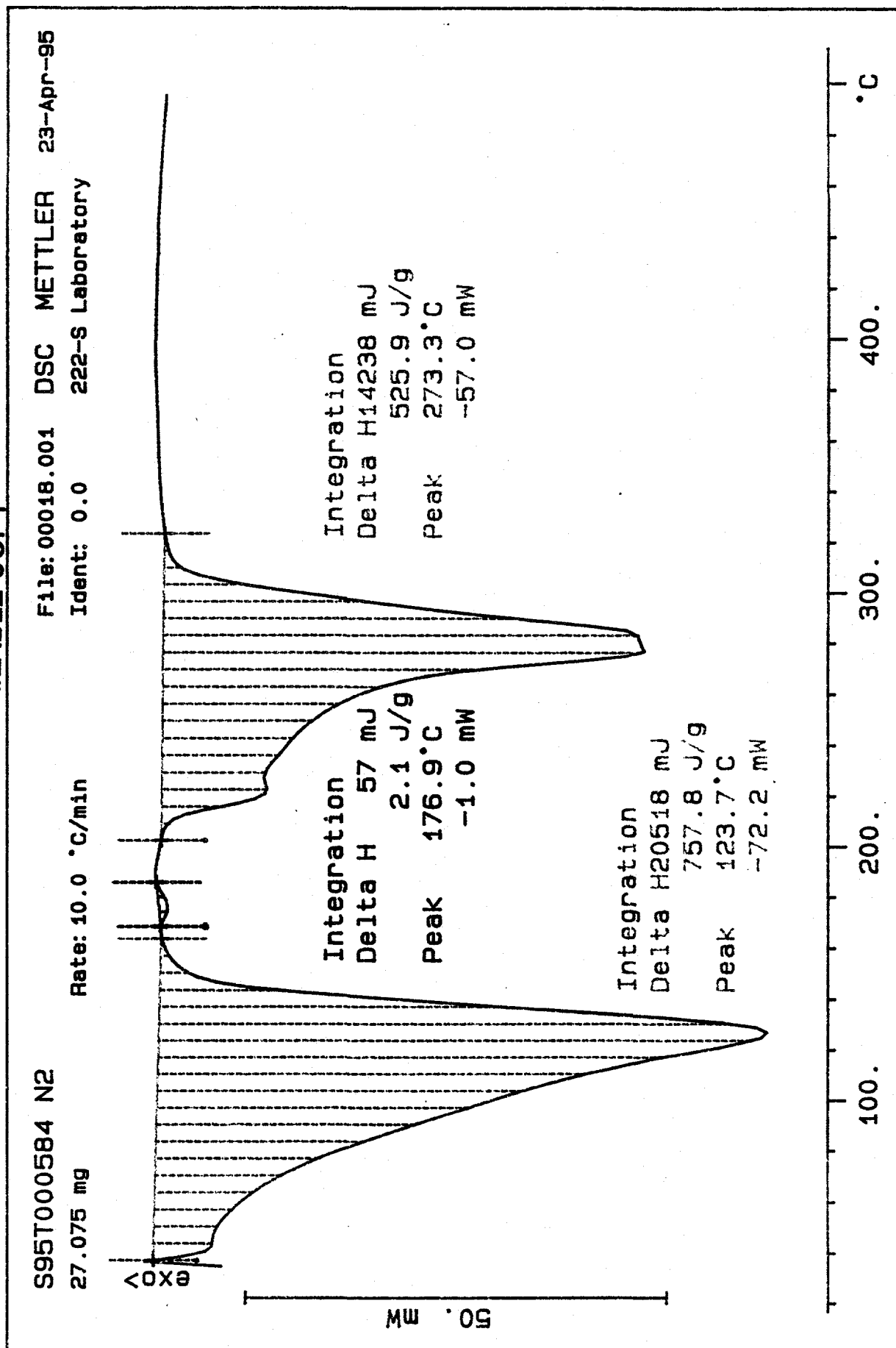
140.

160.

180. °C

See M. J. (180) °C

BEST AVAILABLE COPY



BEST AVAILABLE COPY

S95T000584 (DUP) N2

19.175 mg

Rate: 10.0 °C/min

File: 00020.001 DSC METTLER 24-Apr-95

Ident: 0.0 222-S Laboratory

exo

20. mW

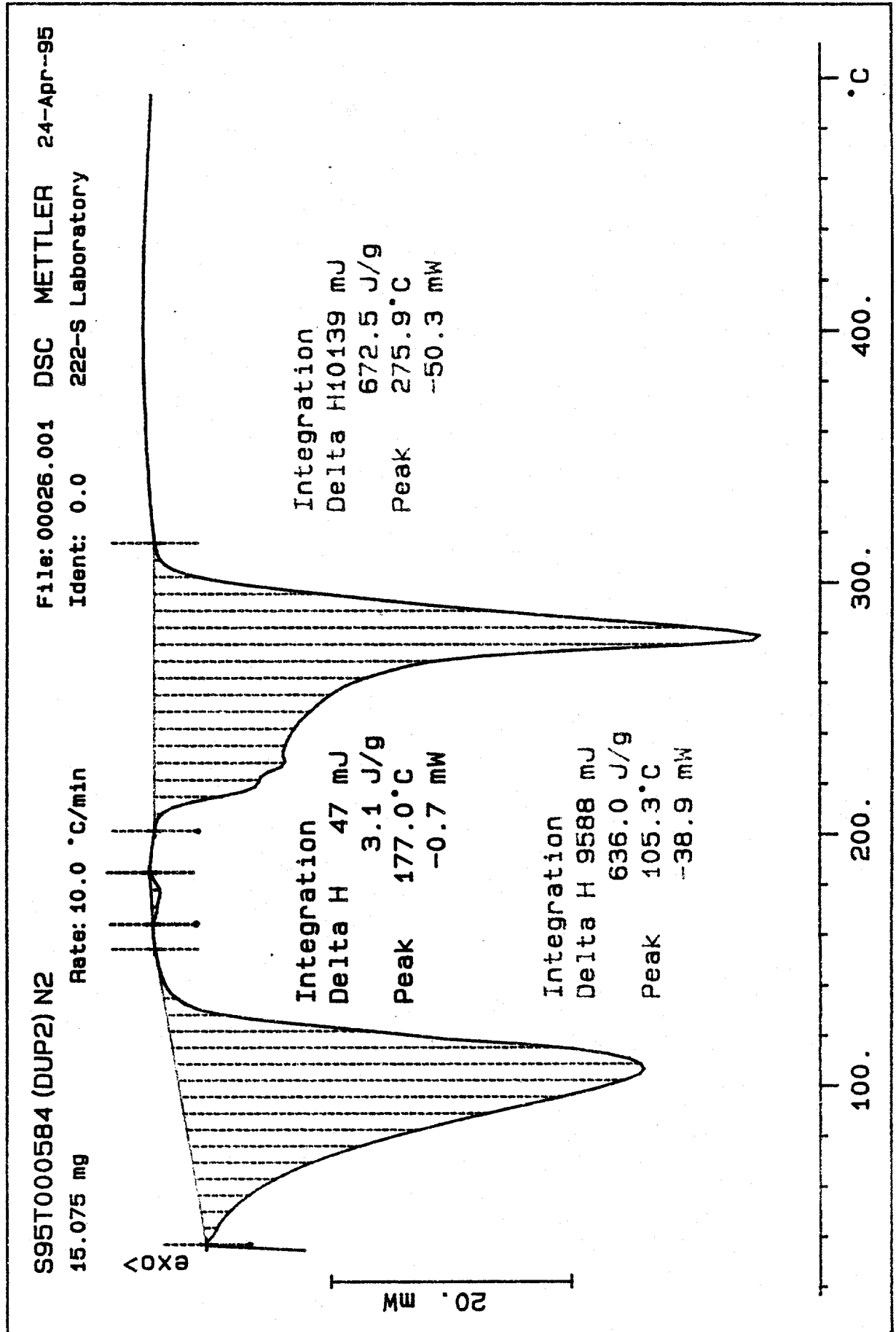
Integration
Delta H 49 mJ
2.6 J/g
Peak 179.1°C
-0.8 mW

Integration
Delta H11669 mJ
608.5 J/g
Peak 105.2°C
-43.8 mW

Integration
Delta H12214 mJ
637.0 J/g
Peak 275.7°C
-54.6 mW

100. 200. 300. 400. °C

BEST AVAILABLE COPY

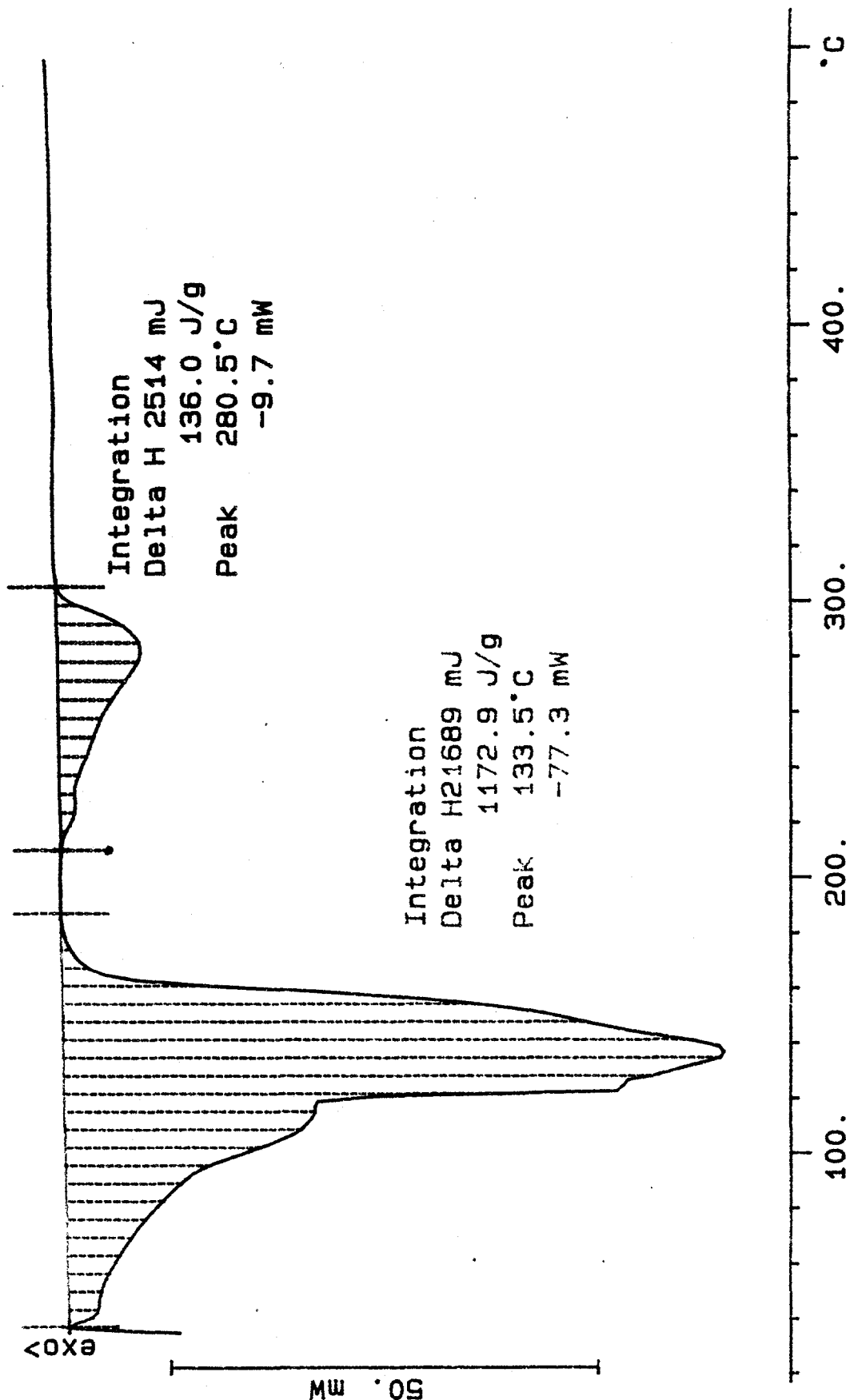


BEST AVAILABLE COPY

S95T000590 N2
18.492 mg

File: 00022.001 DSC METTLER 24-Apr-95
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



BEST AVAILABLE COPY

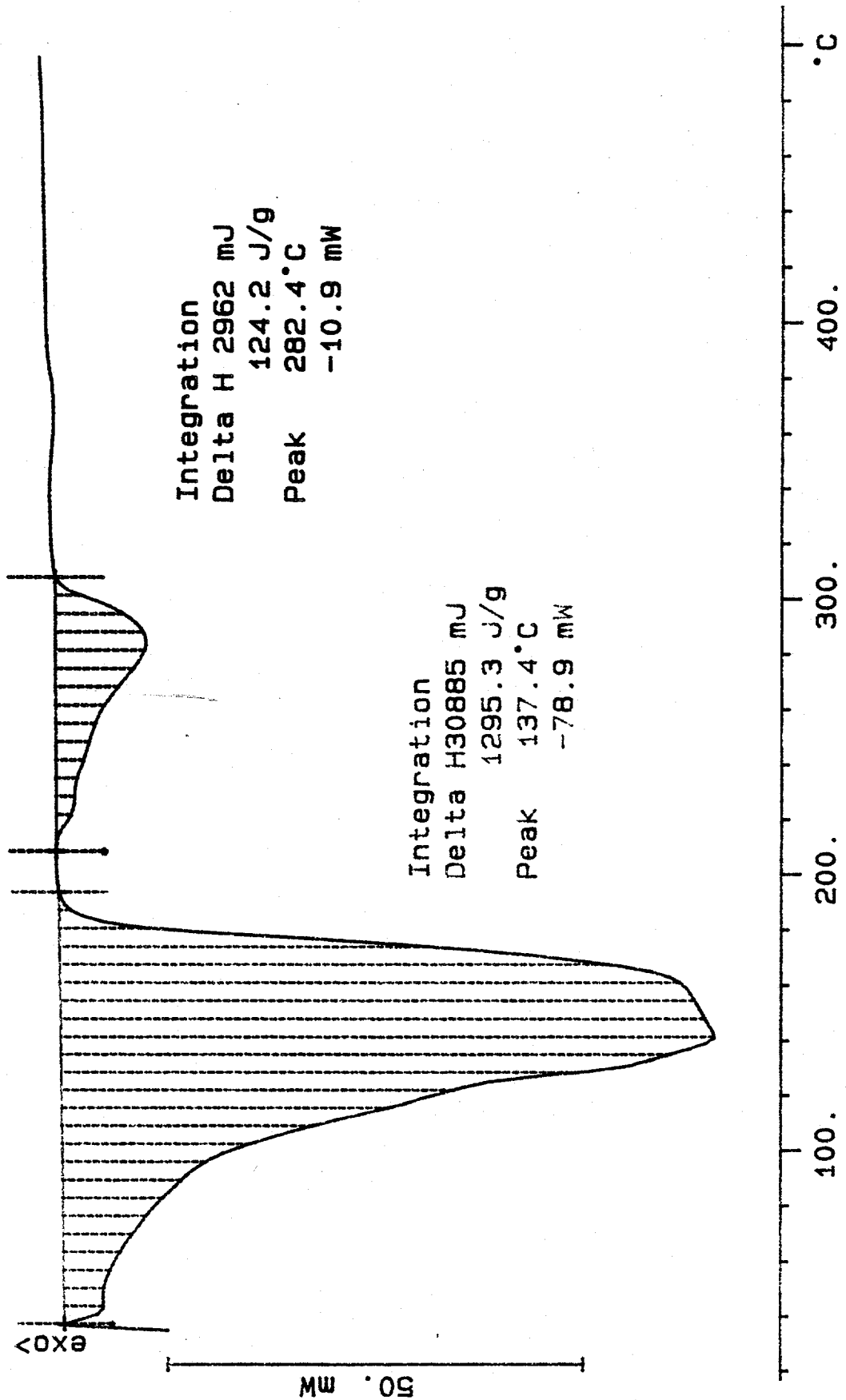
S95T000590 (DUP) N2

23.844 mg

File: 00024.001 DSC METTLER 24-Apr-95

Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



LABCORE Data Entry Template for Worklist# 1020

Analyst: RDM Instrument: DSC01 Book # 12N14A

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

Worklist Comment: Please run U-202 DSC 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>27.2</u>	<u>N/A</u>	Joules/g
95000039	U-202	2 SAMPLE	S95T000598	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000039	U-202	3 DUP	S95T000598	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 1020

RDM 5/1/95
Analyst Signature Date

[Signature] 5/1/95
Analyst Signature Date

Verified by Blandina Valenzuela 5/1/95

Data Entry Comments: S95T000598 produced three endotherms one at 110.5°C
with a delta H of 1118.5 J/g, second at 176.9°C with a delta H of 100.5 J/g,
and the third at 273.4°C with a delta H of 44.6 J/g

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.

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SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 20 TO 22.

DSC STD 12N14-A

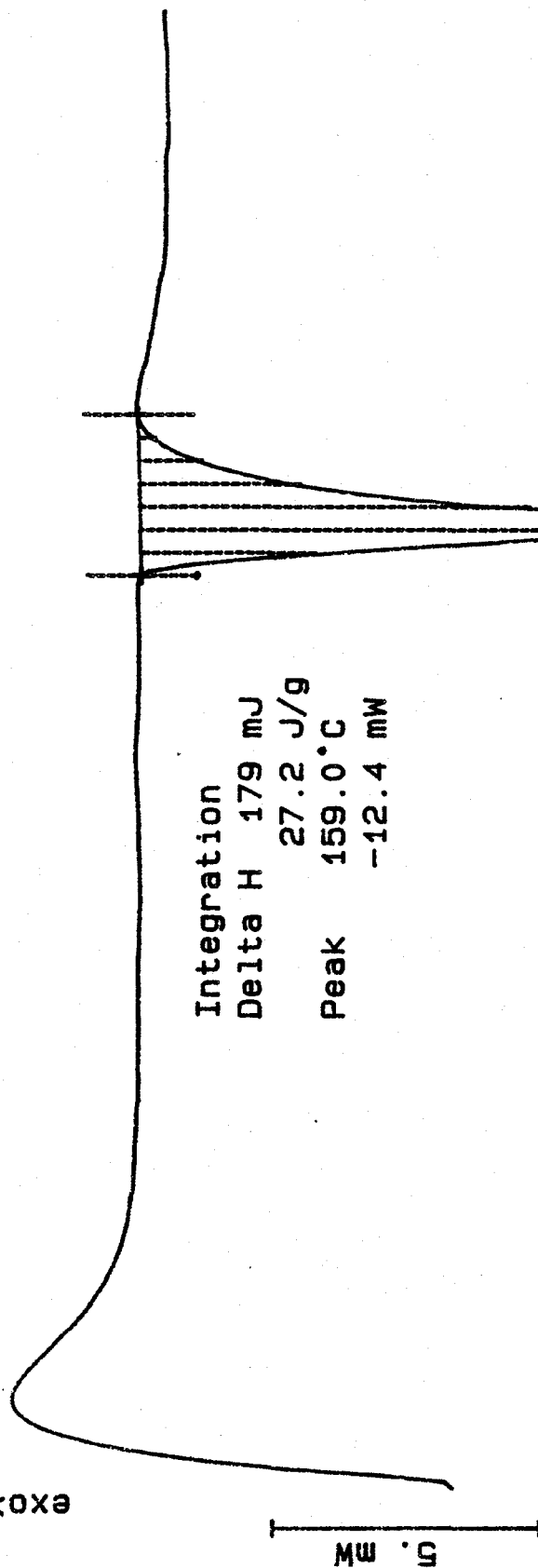
File: 00017.001 DSC METTLER 30-Apr-95

6.590 mg

Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

Exo

Barbina Valenzuela
5/1/95 for 180 °C
RD Meyer's

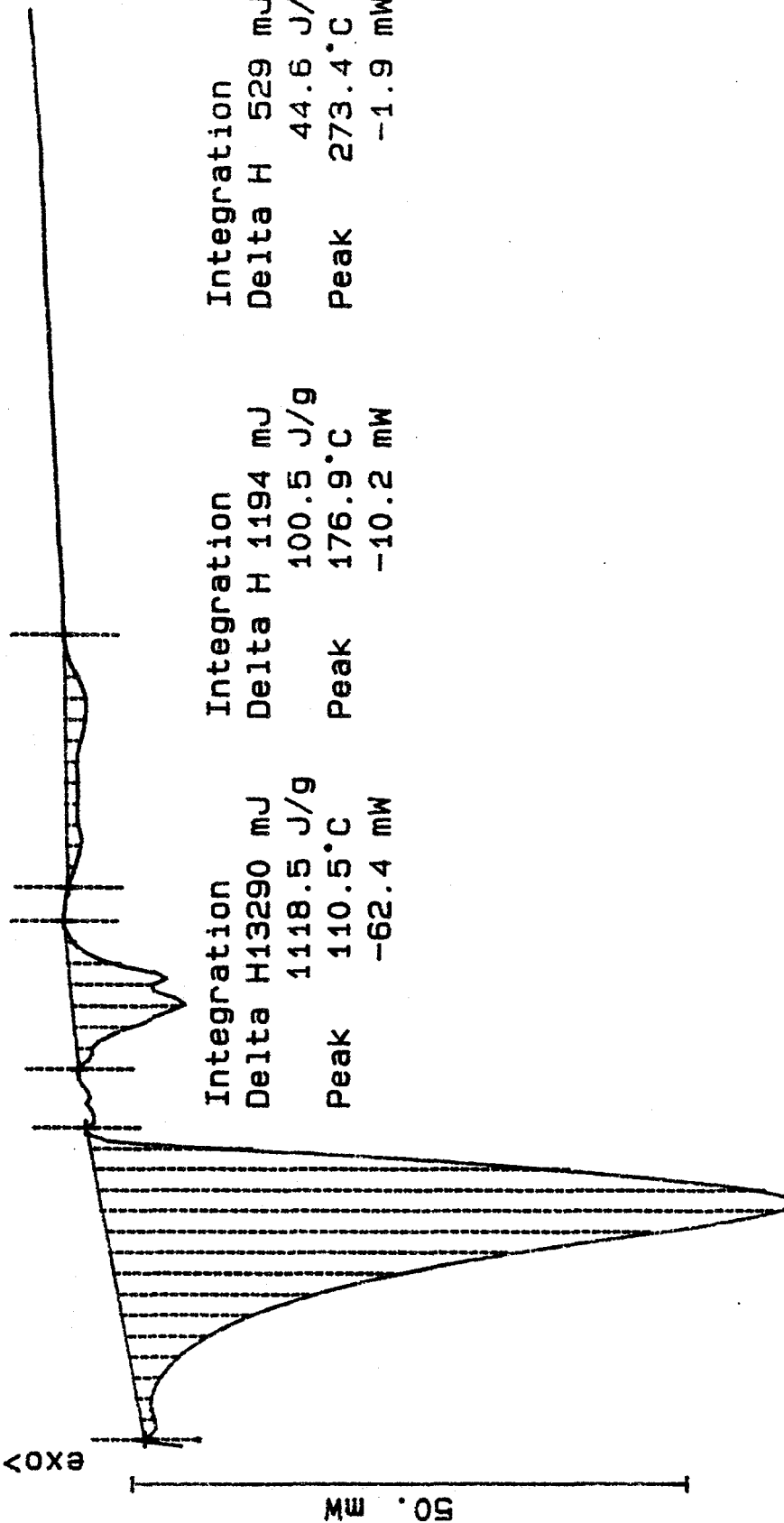
BEST AVAILABLE COPY

S95T000598 N2
11.882 mg

File: 00018.001 DSC METTLER 30-Apr-95
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

exo >



Integration
Delta H 113290 mJ
1118.5 J/g
Peak 110.5°C
-62.4 mW

Integration
Delta H 1194 mJ
100.5 J/g
Peak 176.9°C
-10.2 mW

Integration
Delta H 529 mJ
44.6 J/g
Peak 273.4°C
-1.9 mW

100.

200.

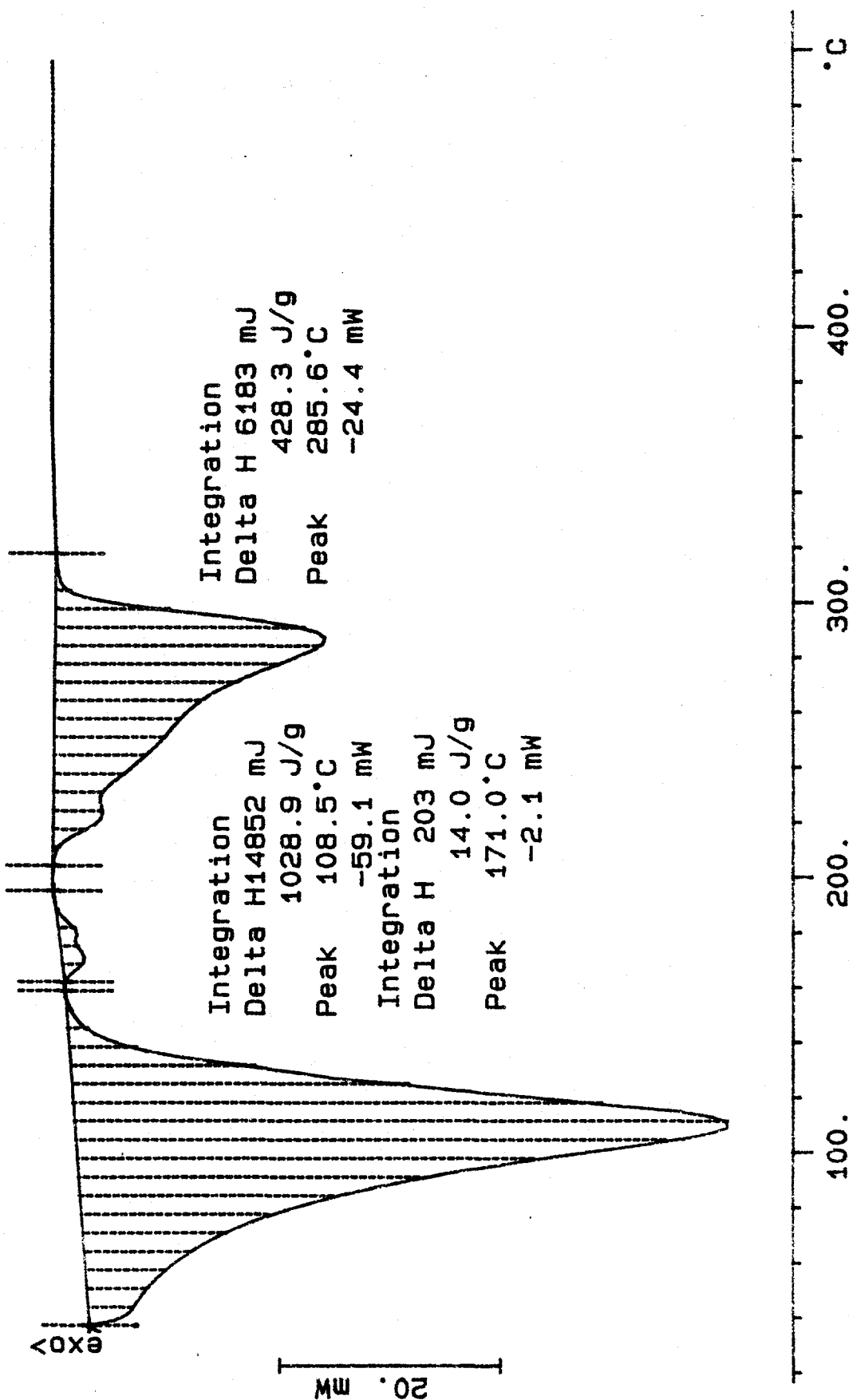
300.

400.

°C

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S95T000598 (DUP) N2
 14.435 mg
 Rate: 10.0 °C/min
 File: 00019.001 DSC METTLER 30-Apr-95
 Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist# 1021

Analyst: ADP Instrument: DSC01 Book # 12N14-A

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

Worklist Comment: Please run U-202 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	31.7	N/A	Joules/g
95000052	U-202	4 SAMPLE	S95T000630	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000052	U-202	5 DUP	S95T000630	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 1021

Anthony Purnator 5-2-95
Analyst Signature Date

R. S. Jones 5-3-95
Analyst Signature Date

Verified by Blandina Valenzuela 5-3-95

Data Entry Comments:

Sample produced two endothermic regions one at 111.1°C with a delta H of 616.4 J/g and second at 276.4°C with a delta H of 638.5 J/g. The second endotherm is believed to be Aluminum Hydroxide.

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.

DSC STD12N14-A

6.340 mg

Rate: 10.0 °C/min

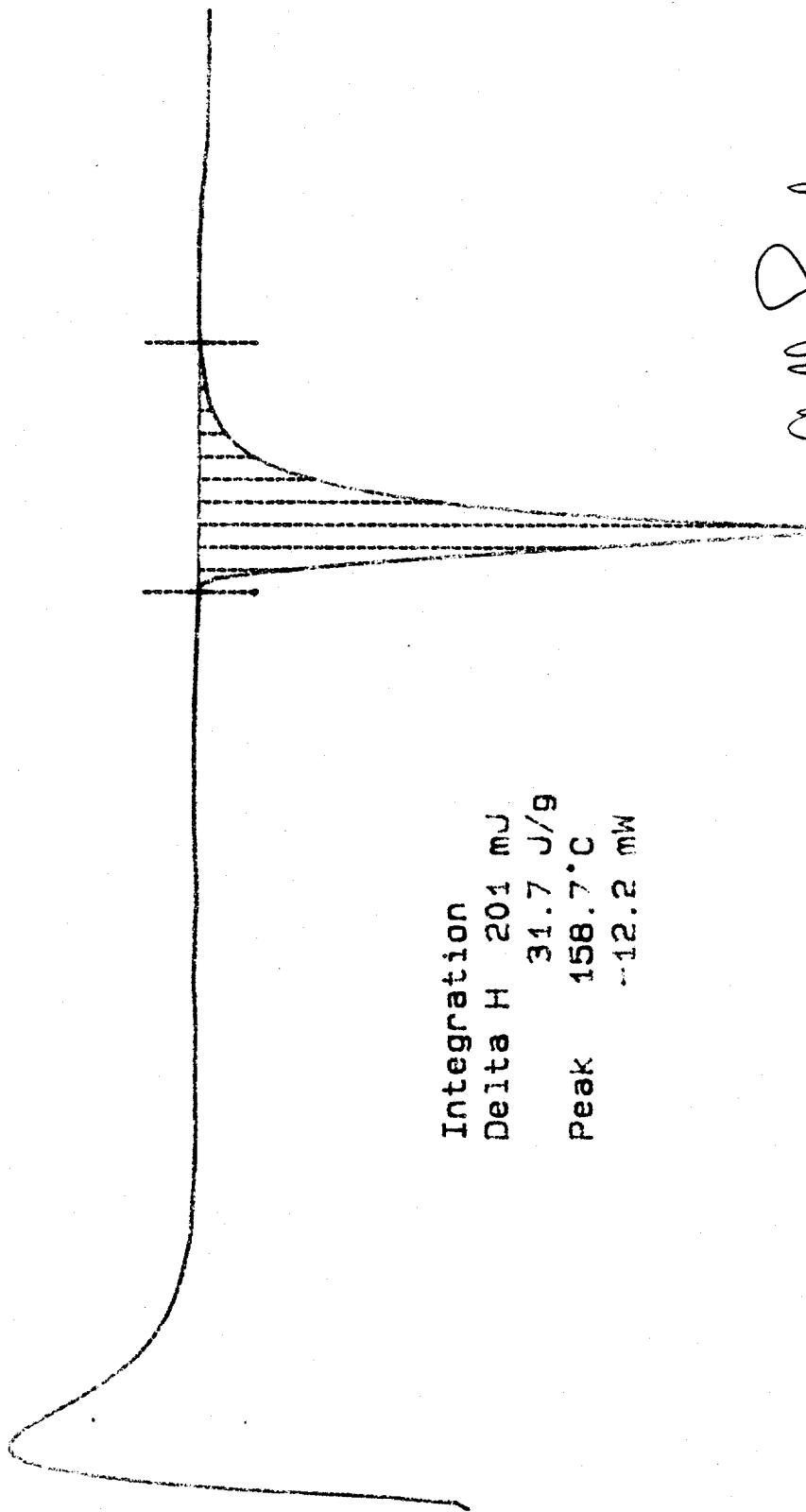
File: 00040.001 DSC METTLER 02-May-95

Ident: 0.0 222-S Laboratory

exo >

10. mW

Integration
Delta H 201 mJ
31.7 J/g
Peak 158.7 °C
-12.2 mW



Anthony Farnsworth 5-2-95

120.

140.

160.

180. °C

BEST AVAILABLE COPY

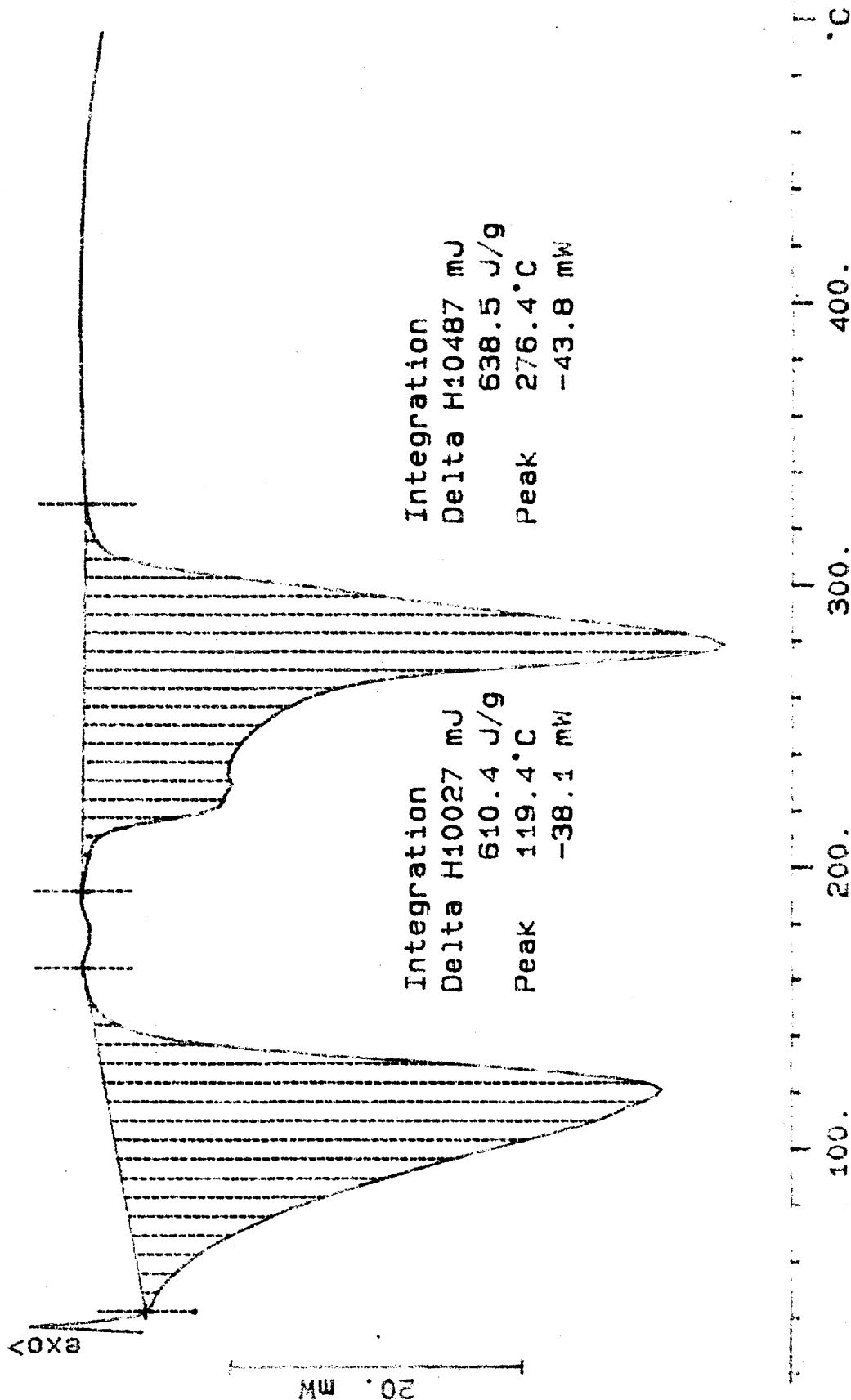
DSC S95T000630 SAM

16.425 mg

Rate: 10.0 °C/min

File: 00041.001 DSC METTLER 02-May-95

Ident: 0.0 222-S Laboratory



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DSC S95T000630 DUP

19.724 mg

Rate: 10.0 °C/min

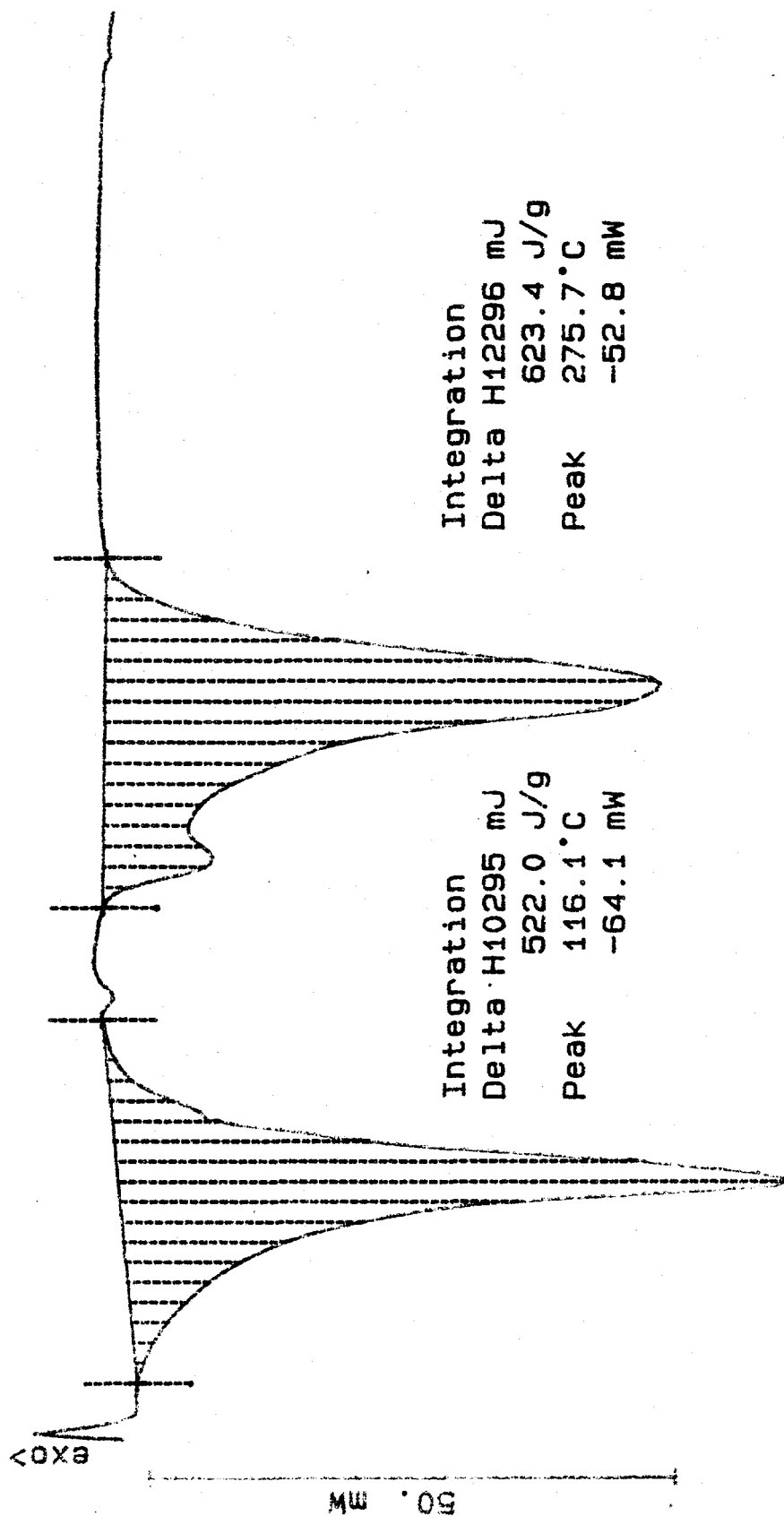
File: 00042.001

DSC METTLER

02-May-95

Ident: 0.0 222-S Laboratory

<exo>



LABCORE Data Entry Template for Worklist# 1022

Analyst: SMF Instrument: DSC01 Book # 12N14-A

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

Worklist Comment: Please run U-202 DSC 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>30.4</u>	<u>N/A</u>	Joules/g
95000052	U-202	2 SAMPLE	S95T000632	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000052	U-202	3 DUP	S95T000632	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 1022

Lusie M. Dutton 5-1-95
Analyst Signature Date

Joe Hernandez 5/2/95
Analyst Signature Date

Verified by Blandina Valenzuela

S95T000632 produced three endotherms one at 117.6°C with a delta H of 472.3 J/g; second at 178.9°C with a delta H of 2.8 J/g and third at 271.3°C with a delta H of 635.1 J/g.

Data Entry Comments:

S95T000632 - light yellow thick material w/ thin layer of "water"

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.

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 28 TO 30.

DSC STD 12N14-A

File: 00020.001 DSC METTLER 30-Apr-95

6.590 mg

Rate: 10.0 °C/min

Ident: 0.0 222-S Laboratory

exo >

10. mW

Integration
Delta H 200 mJ
30.4 J/g
Peak 158.6°C
-14.2 mW

120.

140.

160.

180. °C

Lucia M. Feltner 5-1-95

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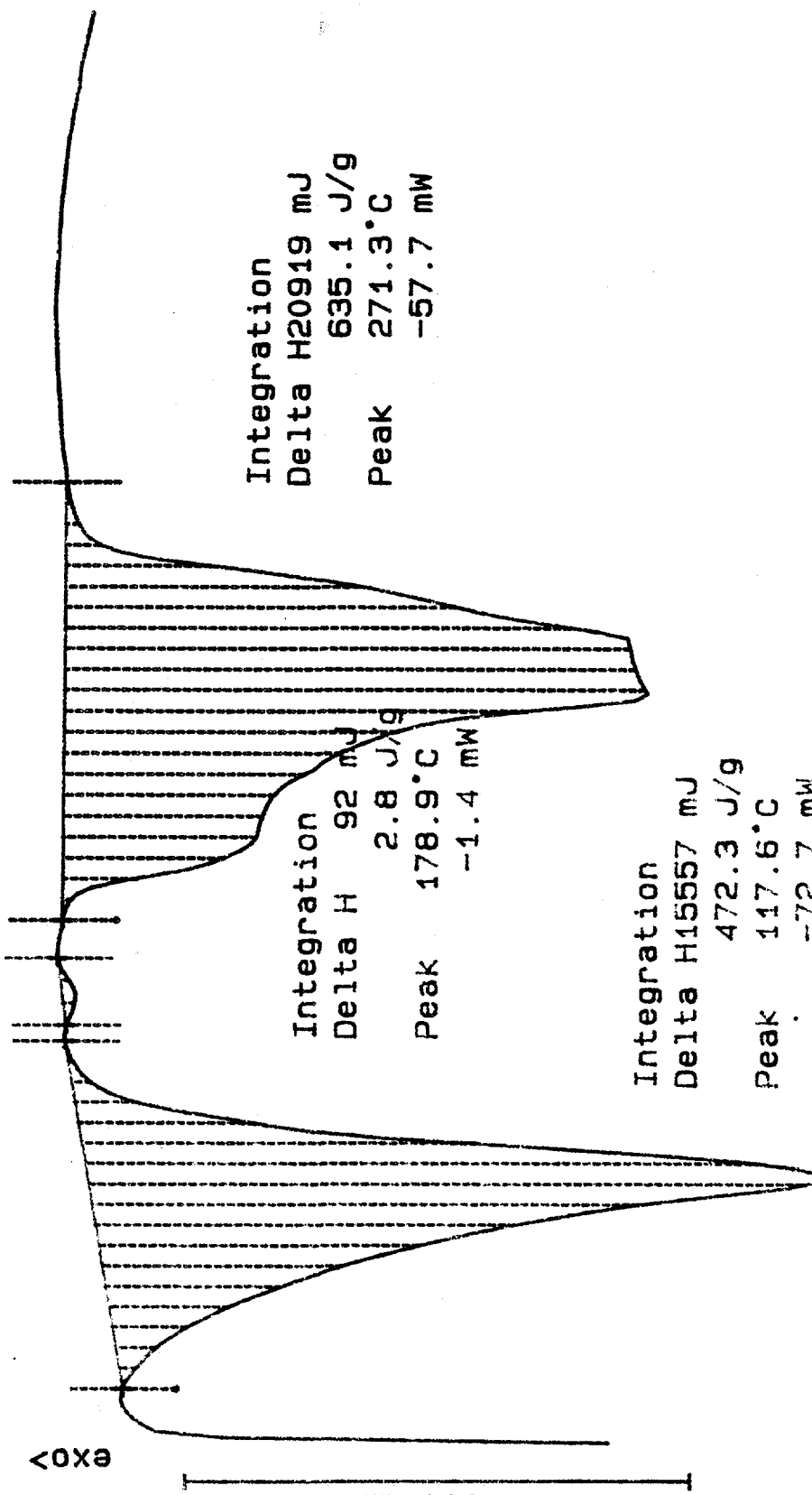
S95T000632 N2
32.939 mg

Rate: 10.0 °C/min

File: 00027.001 DSC METTLER 01-May-95
Ident: 0.0 222-S Laboratory

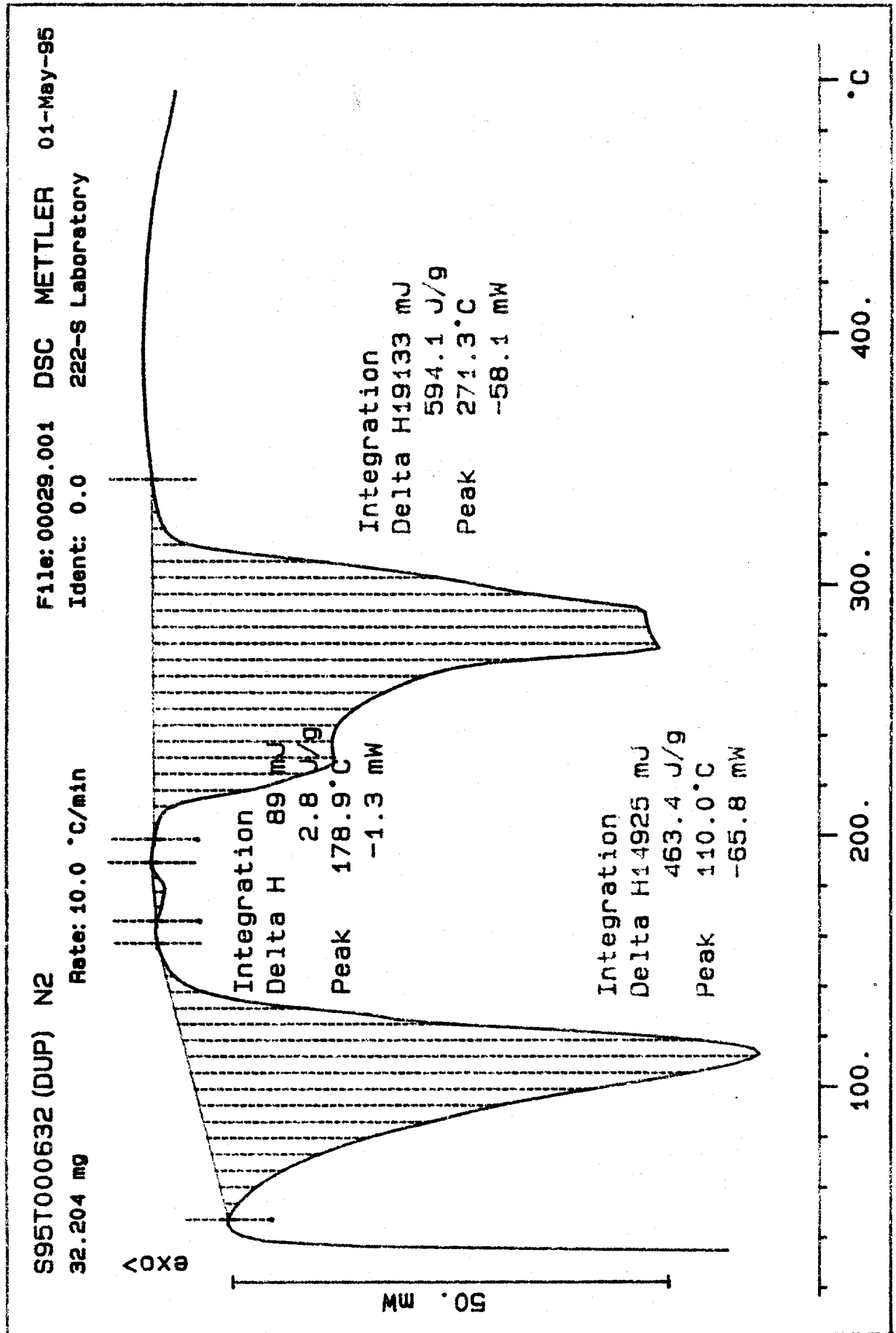
exo >

50. mW



100. 200. 300. 400. °C

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LABCORE Data Entry Template for Worklist# 1024

Analyst: SMF Instrument: DSC01 Book # 12N14-A

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

Worklist Comment: Please run U-202 DSC 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>30.3</u>	<u>N/A</u>	Joules/g
95000052	U-202	4 SAMPLE	S95T000643	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000052	U-202	5 DUP	S95T000643	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 1024

See attached for signatures 5-1-95

Analyst Signature [Signature] Date 5-1-95

Analyst Signature _____ Date _____

Verified by Blandina Valenzuela 5-2-95

Data Entry Comments: S95T000643 produced two endotherms one at 115.3°C with a
delta H of 503.5 J/g and the second at 265.6°C with a delta H of 129.6 J/g
The sample was a light yellow material w/ large crystals (>50% crystals)

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# 1024

Analyst: SM Instrument: DSC01 Book # 12N14-A

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

Worklist Comment: Please run U-202 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID			N/A	Joules/g
95000054	U-202	2 SAMPLE	S95T000610	0	DSC-01	SOLID	N/A			Joules/g
95000054	U-202	3 DUP	S95T000610	0	DSC-01	SOLID			N/A	Joules/g
95000052	U-202	4 SAMPLE	S95T000643	0	DSC-01	SOLID	N/A			Joules/g
95000052	U-202	5 DUP	S95T000643	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist # 1024

Susie M. Julton 5-1-95
Analyst Signature Date

Analyst Signature Date

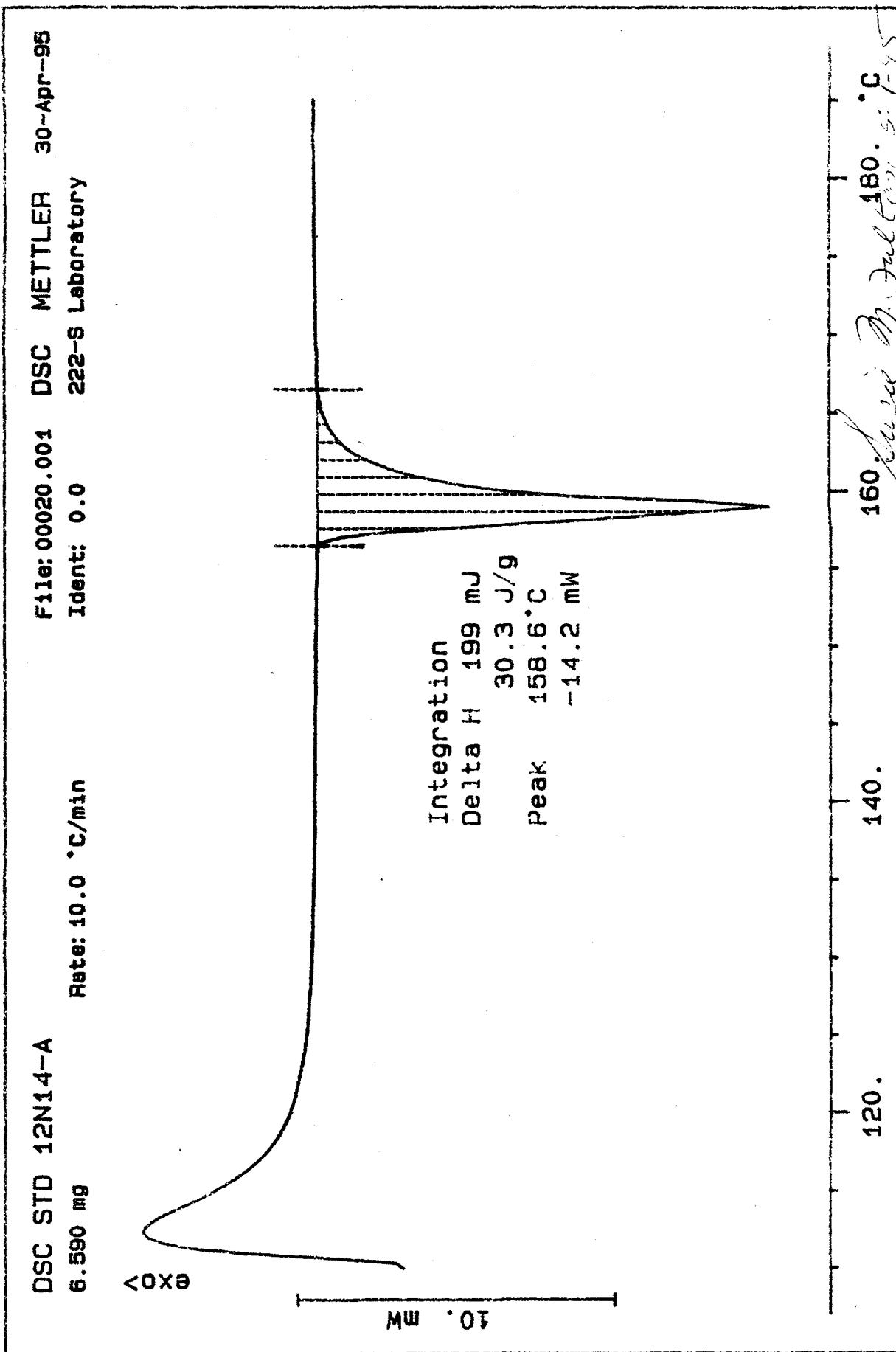
Data Entry Comments:

S95T000610 - Archived

S95T000643 - light yellow material w/ large crystals
(>50% crystals)

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 33 TO 35.
BEST AVAILABLE COPY



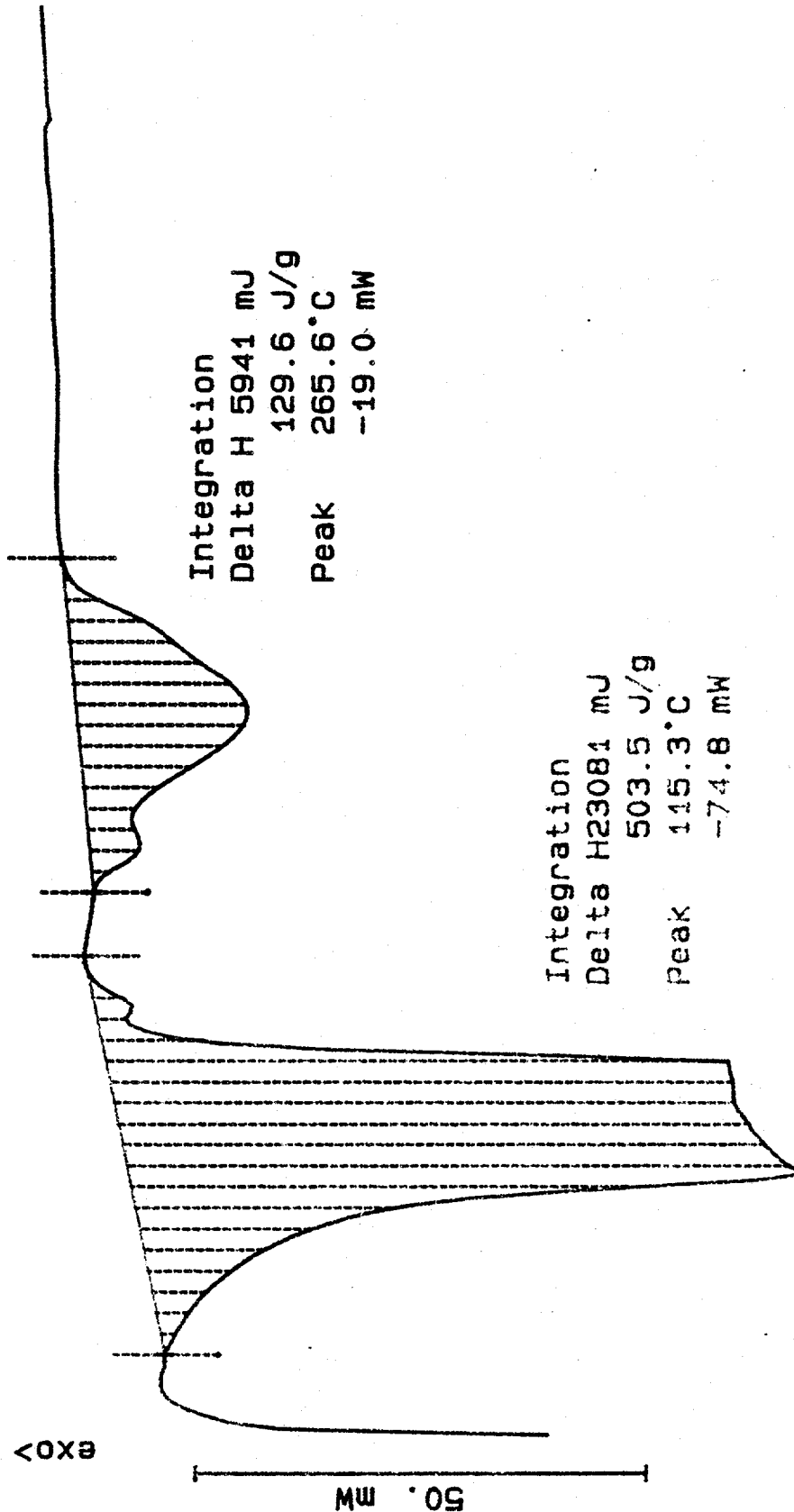
BEST AVAILABLE COPY

S95T000643 N2
45.843 mg

File: 00022.001 DSC METTLER 30-Apr-95
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min

<OX>

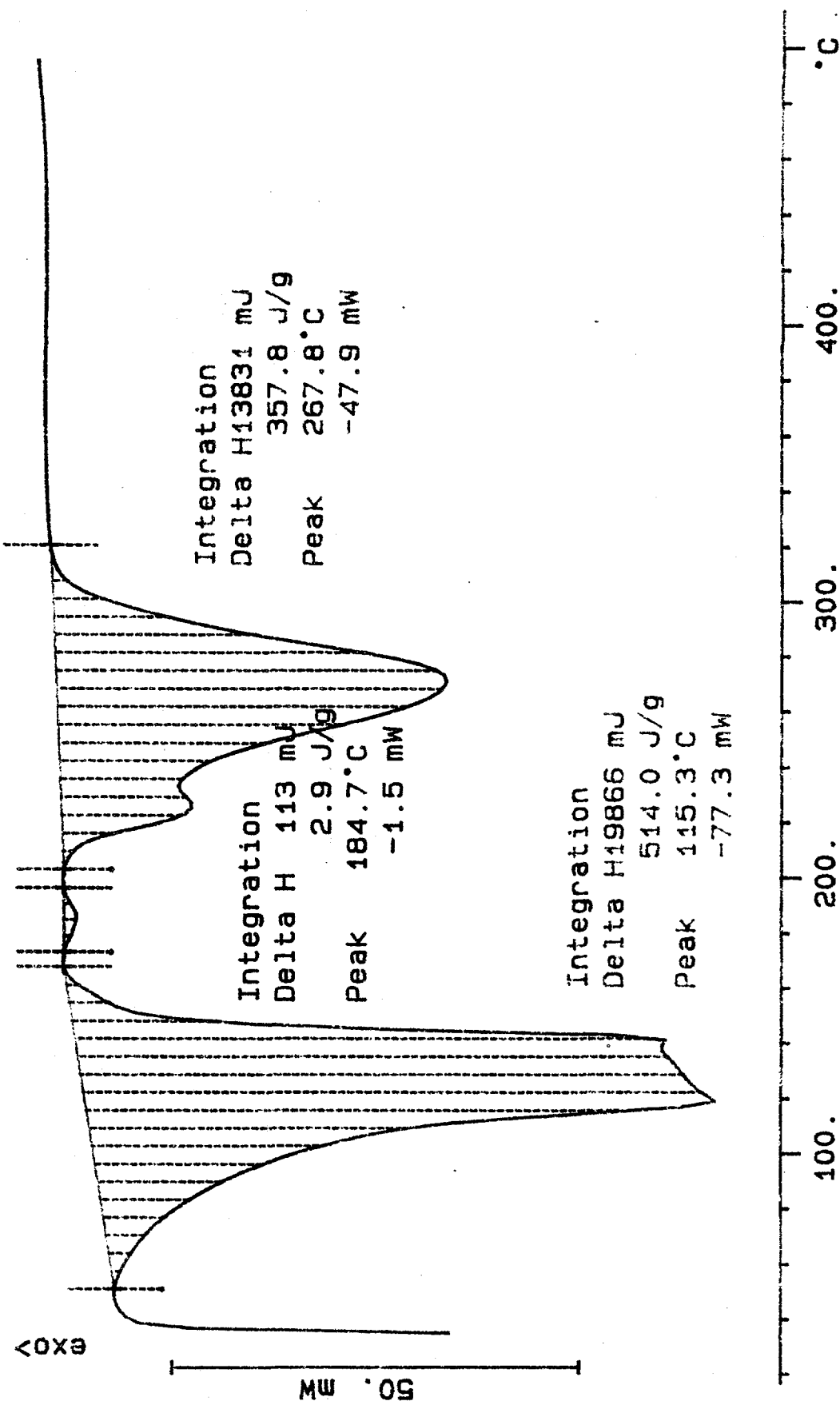


50. mW

100. 200. 300. 400. °C

BEST AVAILABLE COPY

S95T000643 (DUP) N2
 38.652 mg
 Rate: 10.0 °C/min
 File: 00024.001 DSC METTLER 30-Apr-95
 Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist# 1025

Analyst: DWS Instrument: DSC01 Book # 12014-A

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

Worklist Comment: Please run U-202 DSC 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>31.4</u>	<u>N/A</u>	Joules/g
95000052	U-202	2 SAMPLE	S95T000644	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000052	U-202	3 DUP	S95T000644	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 1025

David W. Smith 4-25-95
Analyst Signature Date

Li Jones 4-25-95
Analyst Signature Date

Verified by Blandina Valenzuela 4/25/95

Data Entry Comments: S95T000644 produced two endothermic regions

one at 115.3°C with a delta H of 664.0 J/g, and the second, which is
postulated to be Aluminum hydroxide, was at 267.3°C with a delta H of
496.0 J/g.

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 37 TO 39. BEST AVAILABLE COPY

DSC STD 12N14-A File: 00028.001 DSC METTLER 24-Apr-95
6.340 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

exo >

10. mW

Integration
Delta H 199 mJ
31.4 J/g
Peak 158.6°C
-14.0 mW

120. 140. 160. 180. °C

David W. Smith
4-25-95

BEST AVAILABLE COPY

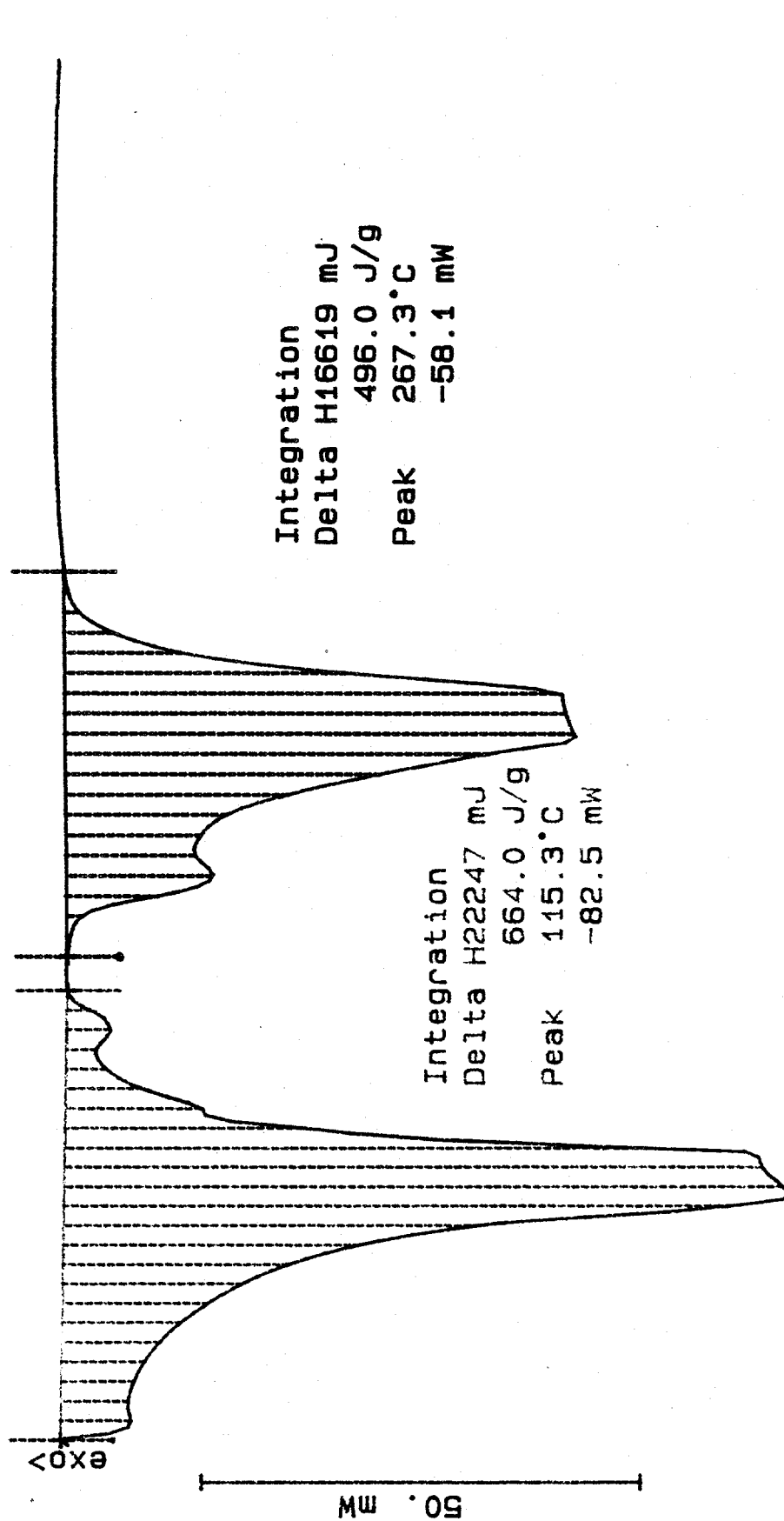
S95T000644 N2

33.503 mg

File: 00030.001 DSC METTLER 24-Apr-95

Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



Integration
Delta H16619 mJ
496.0 J/g
Peak 267.3°C
-58.1 mW

Integration
Delta H22247 mJ
664.0 J/g
Peak 115.3°C
-82.5 mW

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S95T000644 (DUP) N2

34.333 mg

Rate: 10.0 °C/min

File: 00032.001

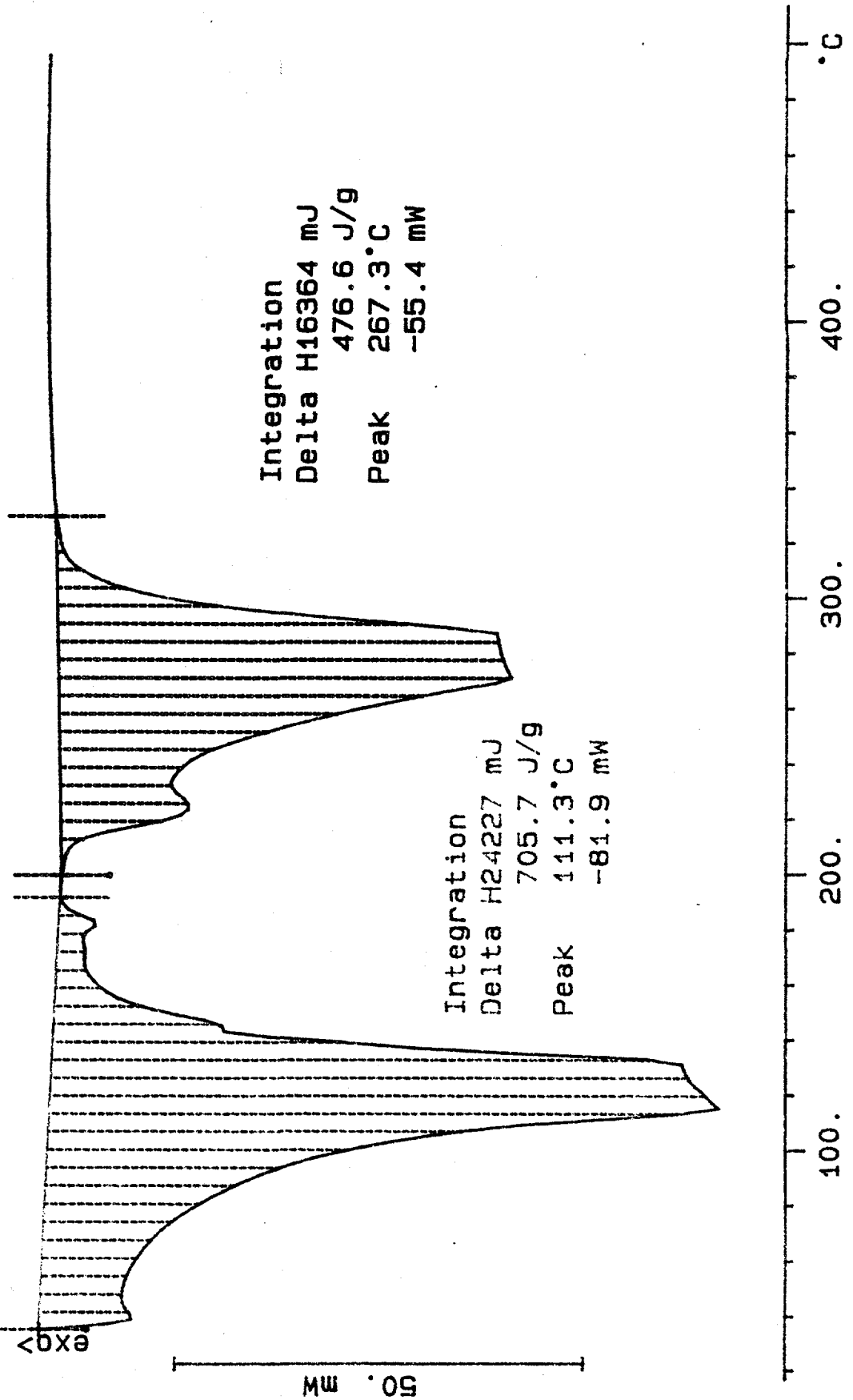
Ident: 0.0

DSC

METTLER

24-Apr-95

222-S Laboratory



LABCORE Data Entry Template for Worklist# 1028

Analyst: DWS Instrument: DSC01 Book # V2W14-17

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

Worklist Comment: Please run U-202 DSC 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>26.1</u>	<u>N/A</u>	Joules/g
95000039	U-202	2 SAMPLE	S95T000582	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000039	U-202	3 DUP	S95T000582	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000039	U-202	4 SAMPLE	S95T000588	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000039	U-202	5 DUP	S95T000588	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 1028

[Signature] 5-4-95
Analyst Signature Date

[Signature] 5-4-95
Analyst Signature Date

Verified by Blandina Valenzuela 5/5/95

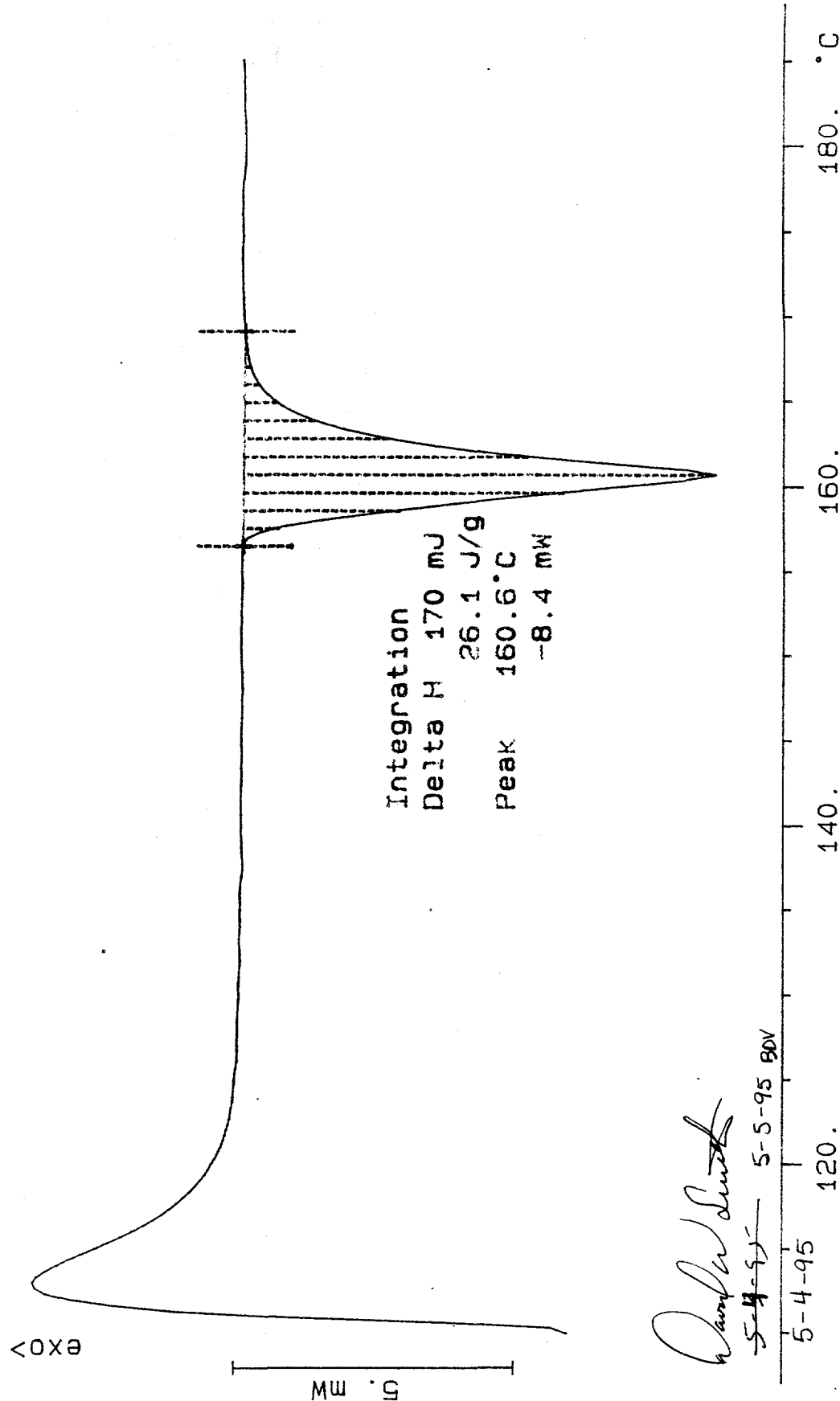
Data Entry Comments:

S95T000582 produced two endothermic peaks one at 115.4°C with a
delta H of 1349.0 J/g, and second at 224.3°C with a delta H of 21.5 J/g.
S95T000588 produced two endothermic regions one at 109.3°C with a delta H of
1473.6 J/g, and second at 227.1°C with a delta H of 21.3 J/g. The instrument was changing the dates
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.
Over day shift, the chemist corrected the dates on the thermograms.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 41 TO 45.

4/1/95

DSC STD 12N14-A
6.525 mg
Rate: 10.0 °C/min
File: 00061.001
DSC METTLER
Ident: 0.0
222-S Laboratory
03-May-95

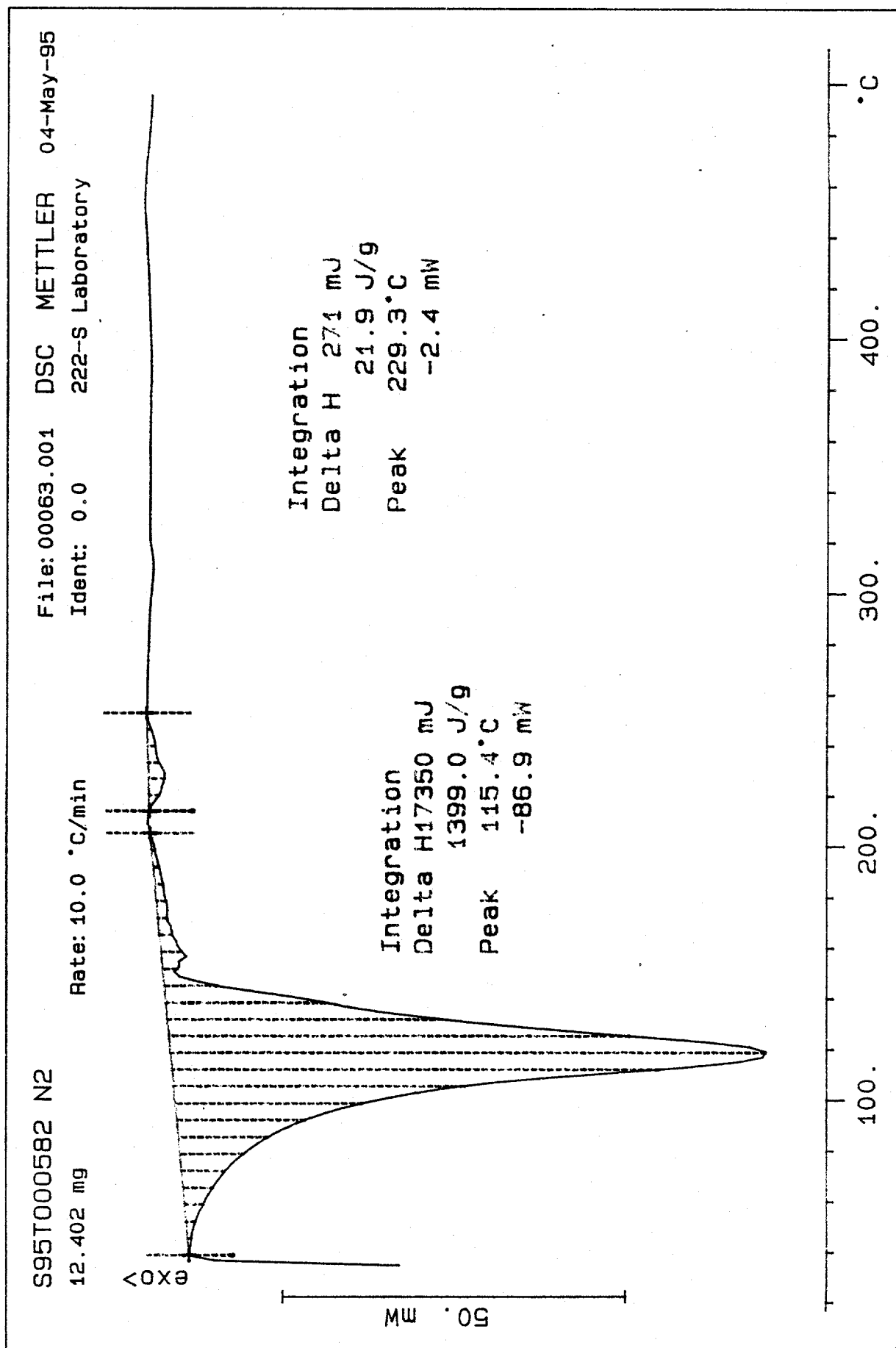


Charles Smith

5-4-95 5-5-95 BDV

5-4-95

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4/11/95
1004

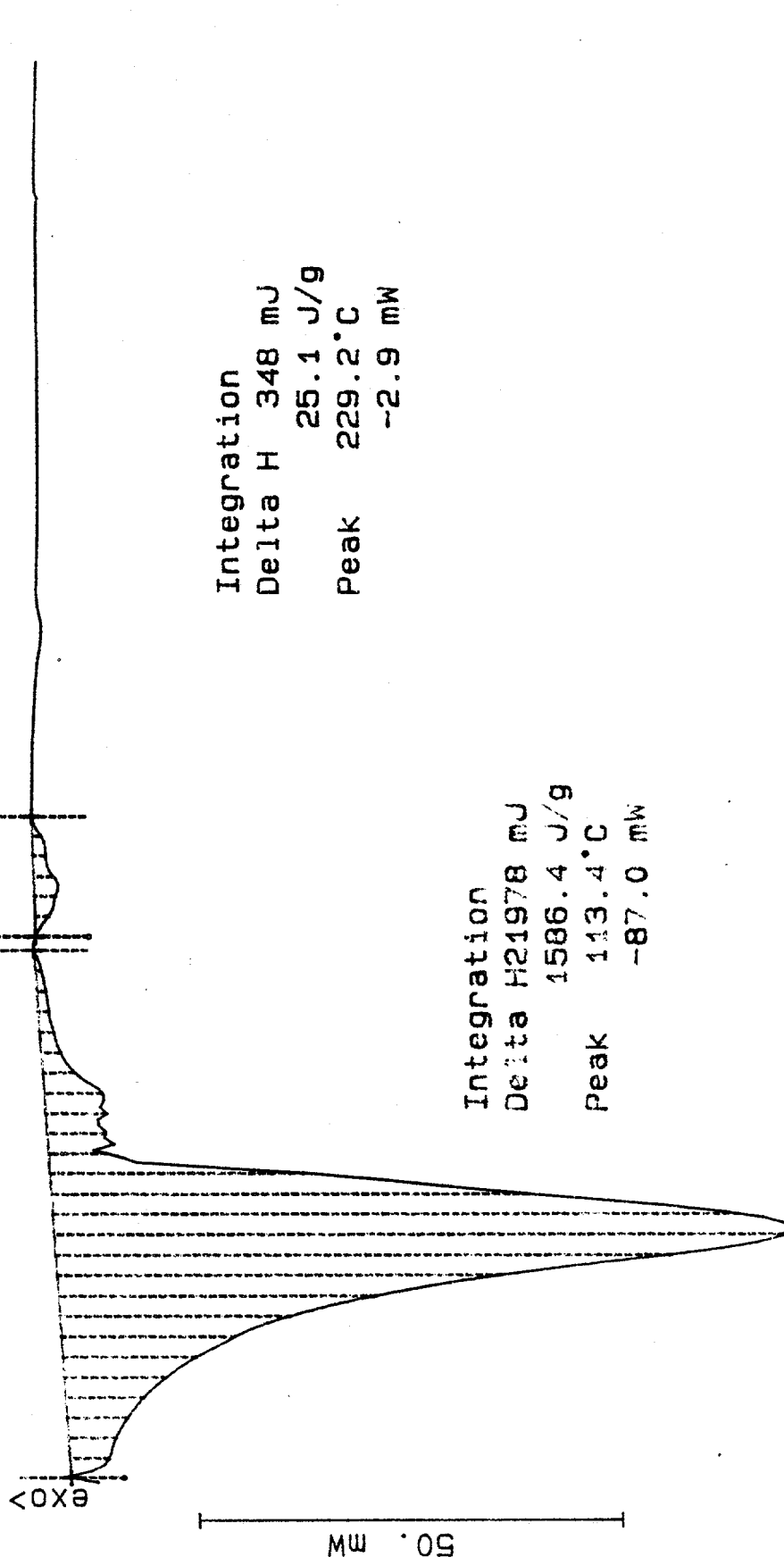
S95T000582 (DUP) N2

13.854 mg

Rate: 10.0 °C/min

File: 00065.001 DSC METTLER 05-May-95

Ident: 0.0 222-S Laboratory



Integration
Delta H 21978 mJ
Peak 113.4°C
-87.0 mW

Integration
Delta H 348 mJ
Peak 229.2°C
-2.9 mW

100. 200. 300. 400. °C

BEST AVAILABLE COPY

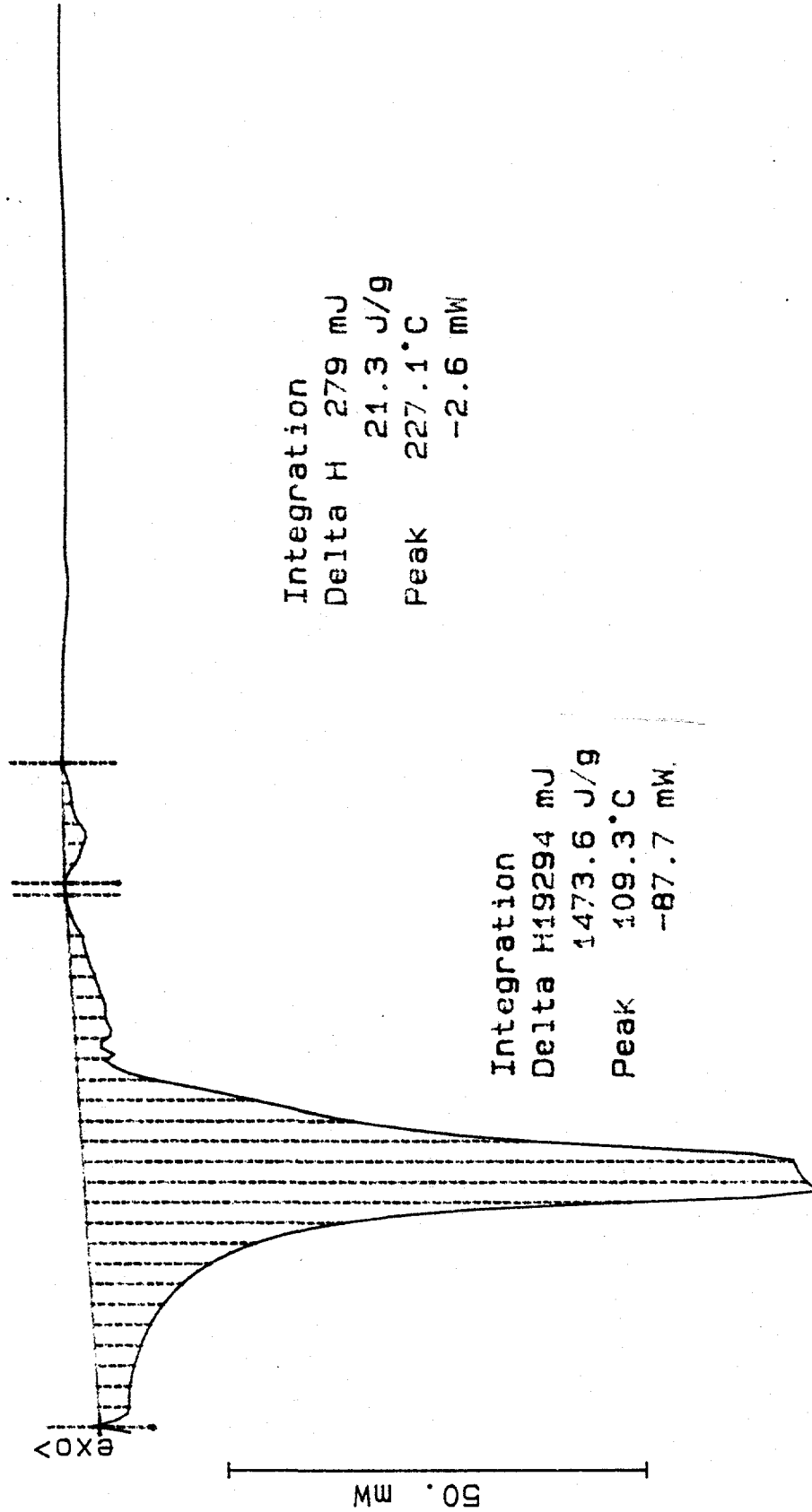
S95T000588 N2

13.093 mg

File: 00067.001 DSC METTLER 05-May-95

Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



Integration
Delta H19294 mJ
1473.6 J/g
Peak 109.3°C
-87.7 mW

Integration
Delta H 279 mJ
21.3 J/g
Peak 227.1°C
-2.6 mW

100. 200. 300. 400. °C

BEST AVAILABLE COPY

5/14/95

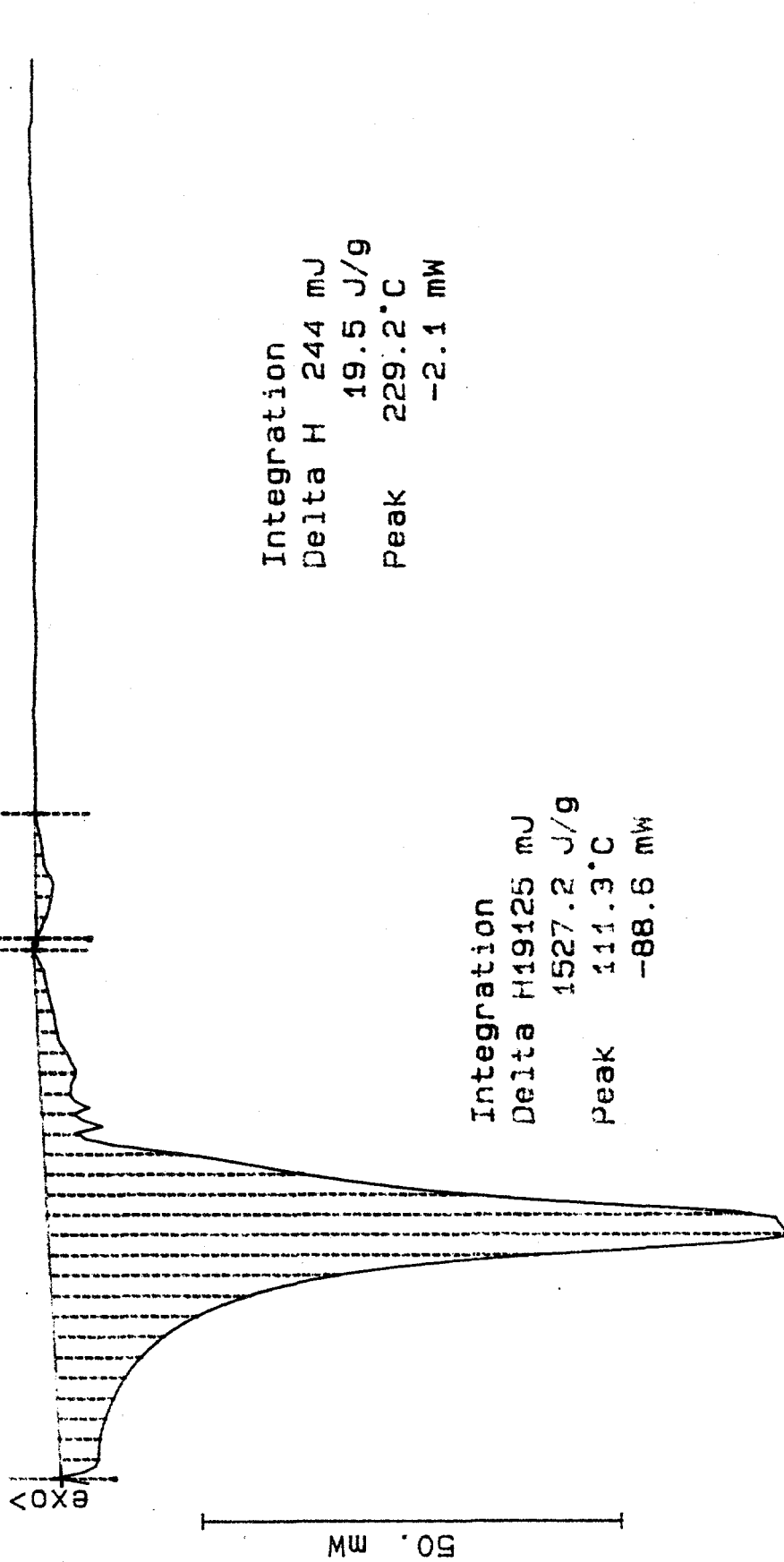
S95T000588 (DUP) N2

12.523 mg

Rate: 10.0 °C/min

File: 00069.001 DSC METTLER 08-May-95

Ident: 0.0 222-S Laboratory



Integration
Delta H19125 mJ
Peak 1527.2 J/g
111.3°C
-88.6 mW

Integration
Delta H 244 mJ
Peak 19.5 J/g
229.2°C
-2.1 mW

100. 200. 300. 400. °C

LABCORE Data Entry Template for Worklist# 1029

Analyst: SNF Instrument: DSC01 Book # 12N14-A

Method: LA-514-113 Rev/Mod A-2

Worklist Comment: Please run U-202 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	LIQUID	28.45	29.1	N/A	Joules/g
95000052	U-202	4 SAMPLE	S95T000621	0	DSC-01	LIQUID	N/A	Ø		Joules/g
95000052	U-202	5 DUP	S95T000621	0	DSC-01	LIQUID	Ø	Ø	N/A	Joules/g

Final page for worklist # 1029

Susie M. Jul for
Analyst Signature Date 5-3-95

Blandina Valenzuela
Analyst Signature Date 5/4/95

Verified by Blandina Valenzuela 5/5/95

Data Entry Comments:

S95T000621 produced three endotherms at 174.3°C with a
delta H of 1342.3 J/g, second at 229.3°C with a delta H of 12.1 J/g and
third at 413.3°C with a delta H of 9.6 J/g

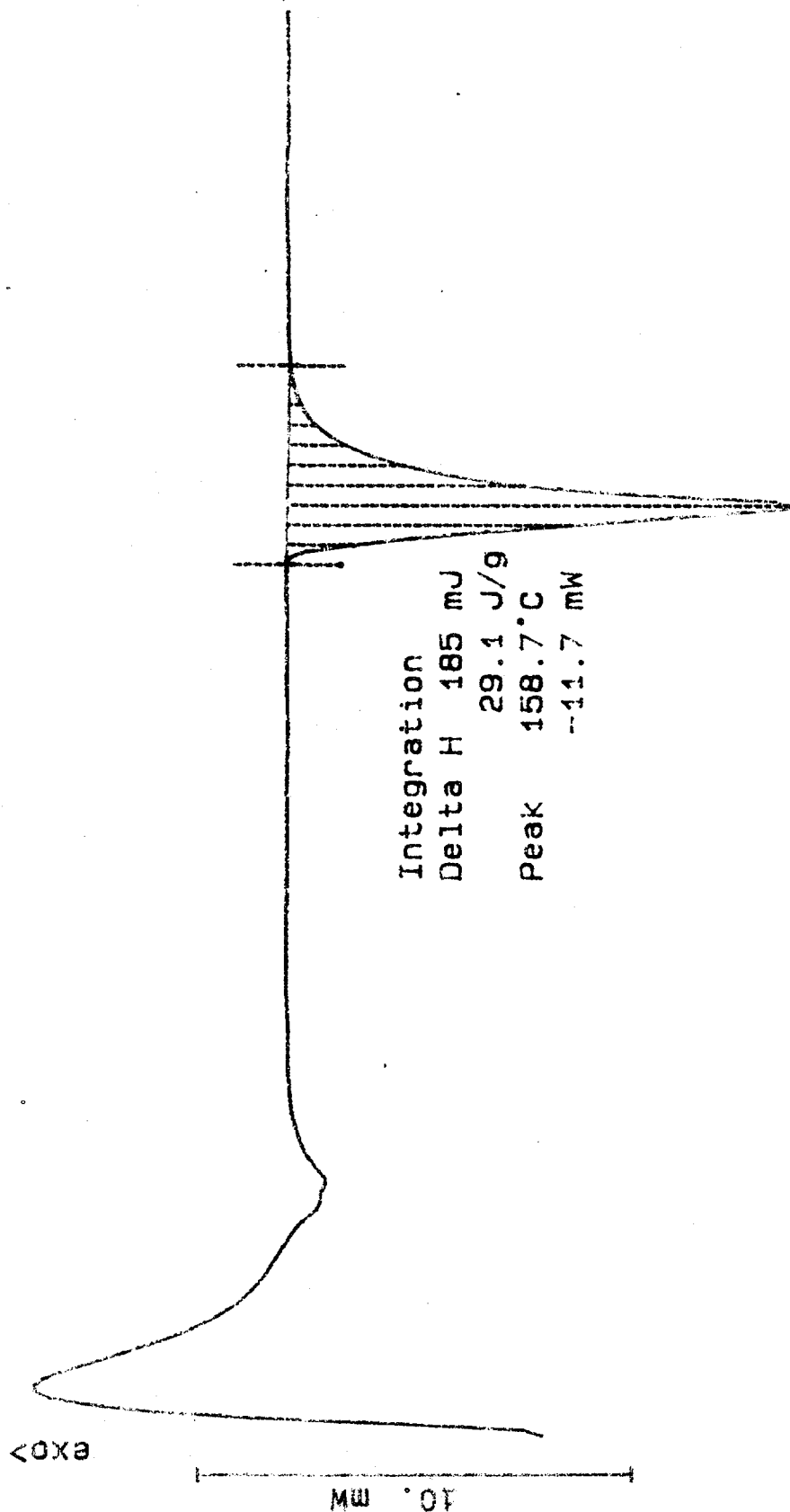
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.

5/5/95 BOW

03
~~02-May-95~~

File: 00044.001 DSC METTLER
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



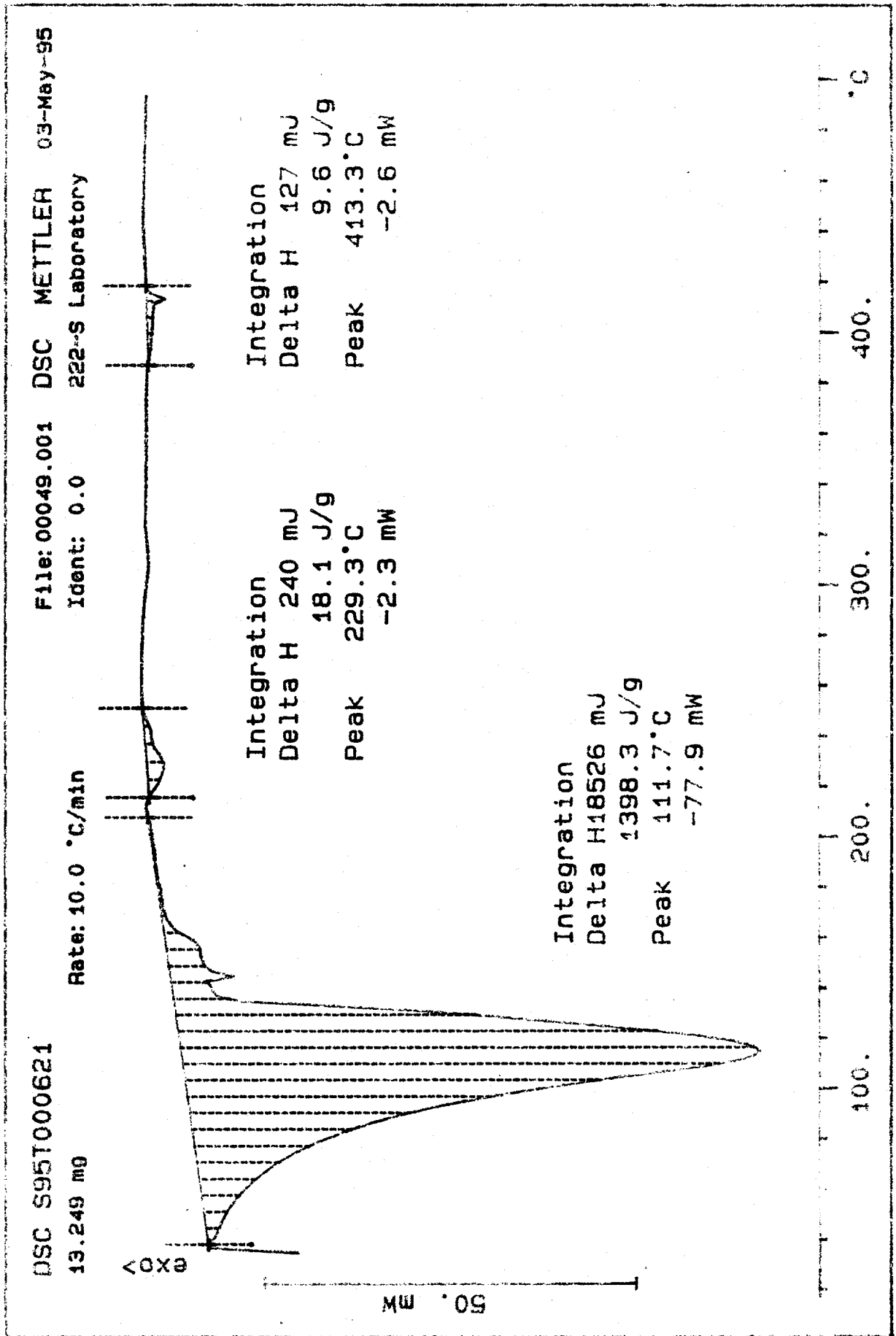
20

40

5

✓ *Lucie* M. Dec 169. 5-3-95-

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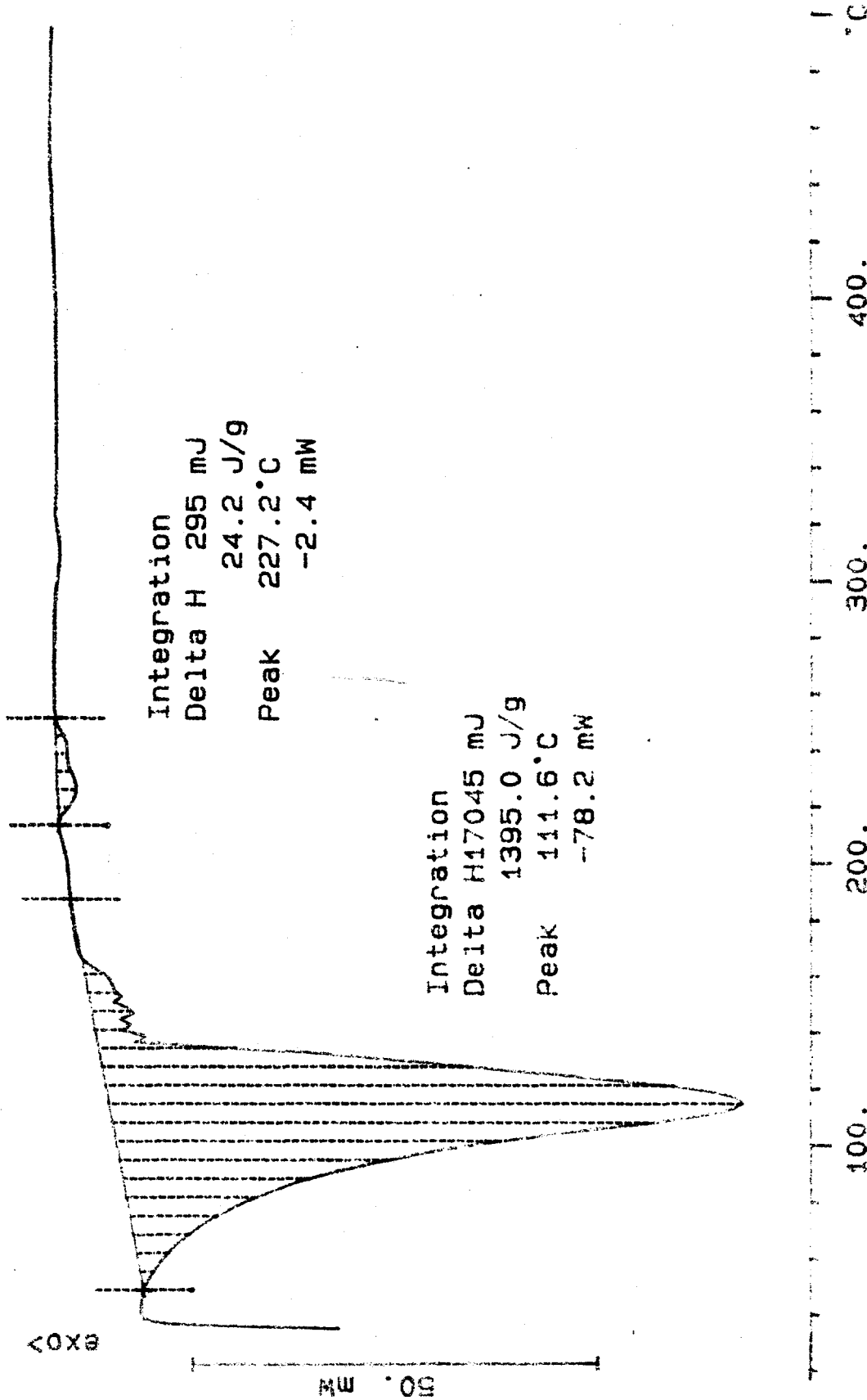
S95T000621 (DUP) N2

12.219 mg

Rate: 10.0 °C/min

File: 00051.001 DSC METTLER 03-May-95

Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist# 1030

Analyst: SMF Instrument: DSC01 03 Book # 12N14-A

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

5/5/95
BDV

Worklist Comment: Please run U-202 DSC 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>28.98</u>	<u>N/A</u>	Joules/g
95000052	U-202	2 SAMPLE	S95T000636	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000052	U-202	3 DUP	S95T000636	0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000052	U-202	4 SAMPLE	S95T000654	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000052	U-202	5 DUP	S95T000654	0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 1030

See attached for signatures
Analyst Signature _____ Date _____

[Signature] 5/4/95
Analyst Signature _____ Date _____

Verified by Blandina Valenzuela 5/5/95

Data Entry Comments:

5/4/95 BDV
S10T000636 produced two endotherms on a 105.4°C scan. The first at 153.2°C and second at 227.4°C with a delta H of 35.71 J/g. S10T000654 produced one endotherm at 98.98°C with a delta H of 2258.4 J/g.

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# 1030

Analyst: SMF Instrument: DSC01 Book # 12 N14-A

Method: LA-514-113 Rev/Mod BD

Worklist Comment: Please run U-202 DSC under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD	<u>5/5/95</u>		DSC-01	LIQUID			N/A	Joules/g
95000052	U-202	2 SAMPLE	<u>S95T000636</u>	0	DSC-01	LIQUID	N/A			Joules/g
95000052	U-202	3 DUP	<u>S95T000636</u>	0	DSC-01	LIQUID			N/A	Joules/g
95000052	U-202	4 SAMPLE	S95T000654	0	DSC-01	LIQUID	N/A			Joules/g
95000052	U-202	5 DUP	S95T000654	0	DSC-01	LIQUID			N/A	Joules/g

Final page for worklist # 1030

Susie M. Fulton 5.3.95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

S95T000636 - Bright yellow liquid

S95T000654 Clear colorless liquid

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: IND050301 Wed May 3 08:39:26 1995

Sample Weight: 6.687 mg

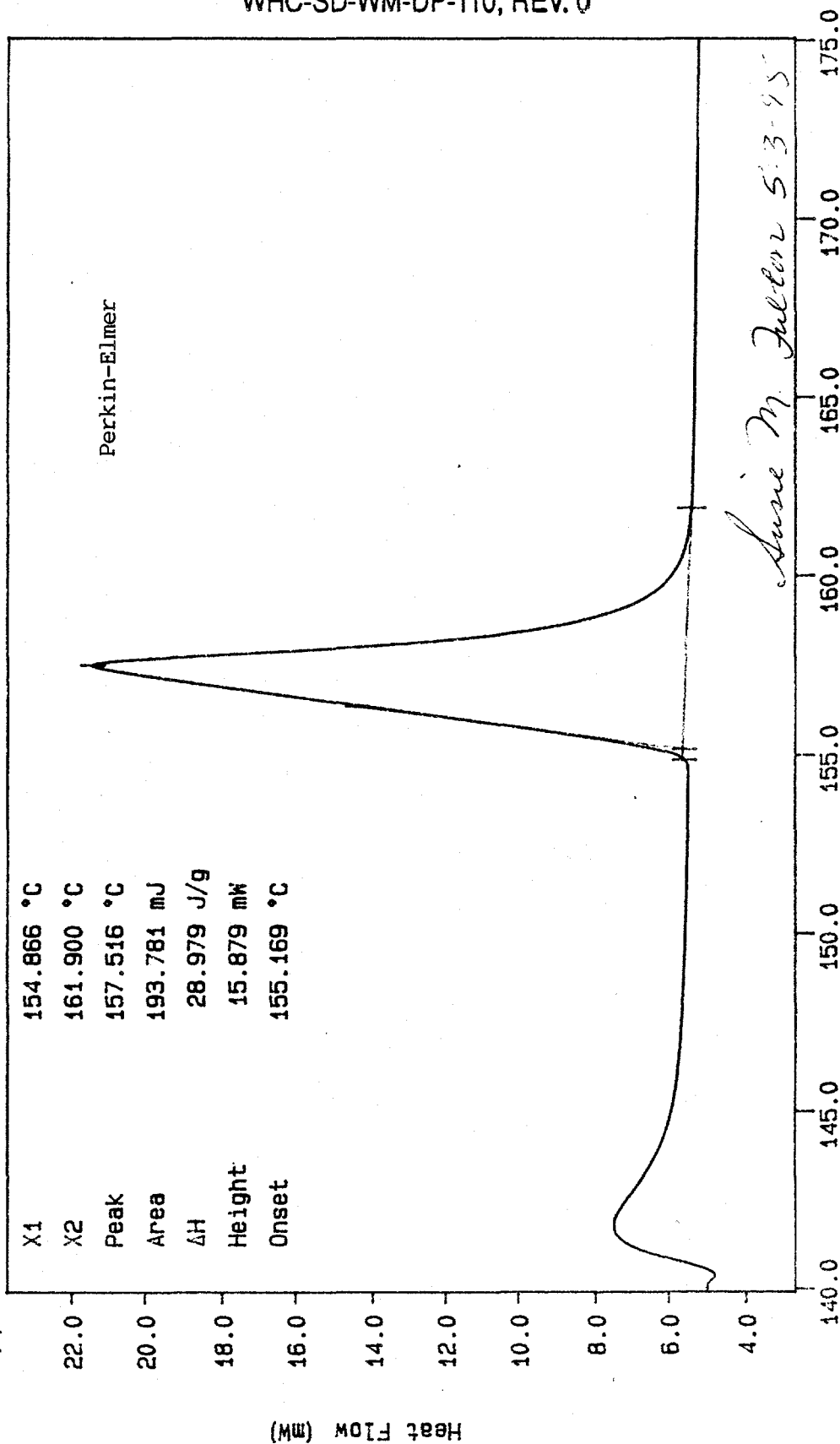
Indium at 10C/1000 mg

12N14-A COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 52 TO 56.

5/5/95 BSV

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WHC-SD-WM-DP-110, REV. 0



N2 exotherm down

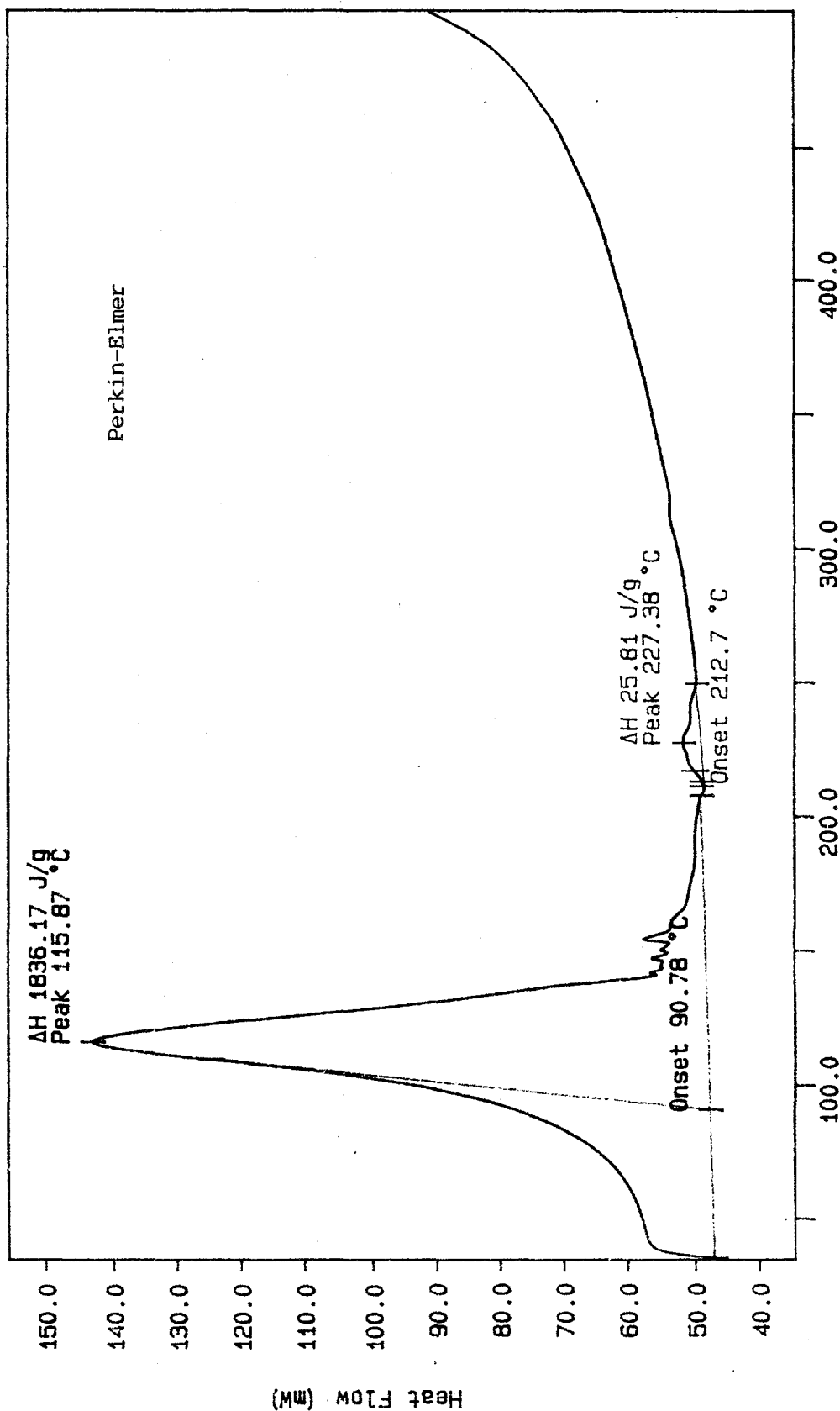
TEMP1: 140.8 °C TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

SM FULTON
Westinghouse Hanford Co.
222-S Lab
Wed May 3 08:46:31 1995

Curve 1: DSC
 File info: SAM050303 Wed May 3 12:38:46 1995
 Sample Weight: 12.670 mg
 S95T000636, 10C/min

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SM Fulton
 Westinghouse Hanford Co.
 222-S Lab
 Wed May 3 13:25:51 1995

exotherm down, nitrogen purge gas
 TEMP1: 35.0 °C
 TEMP2: 500.0 °C
 TIME1: 0.0 min
 RATE1: 10.0 °C/min

Curve 1: DSC

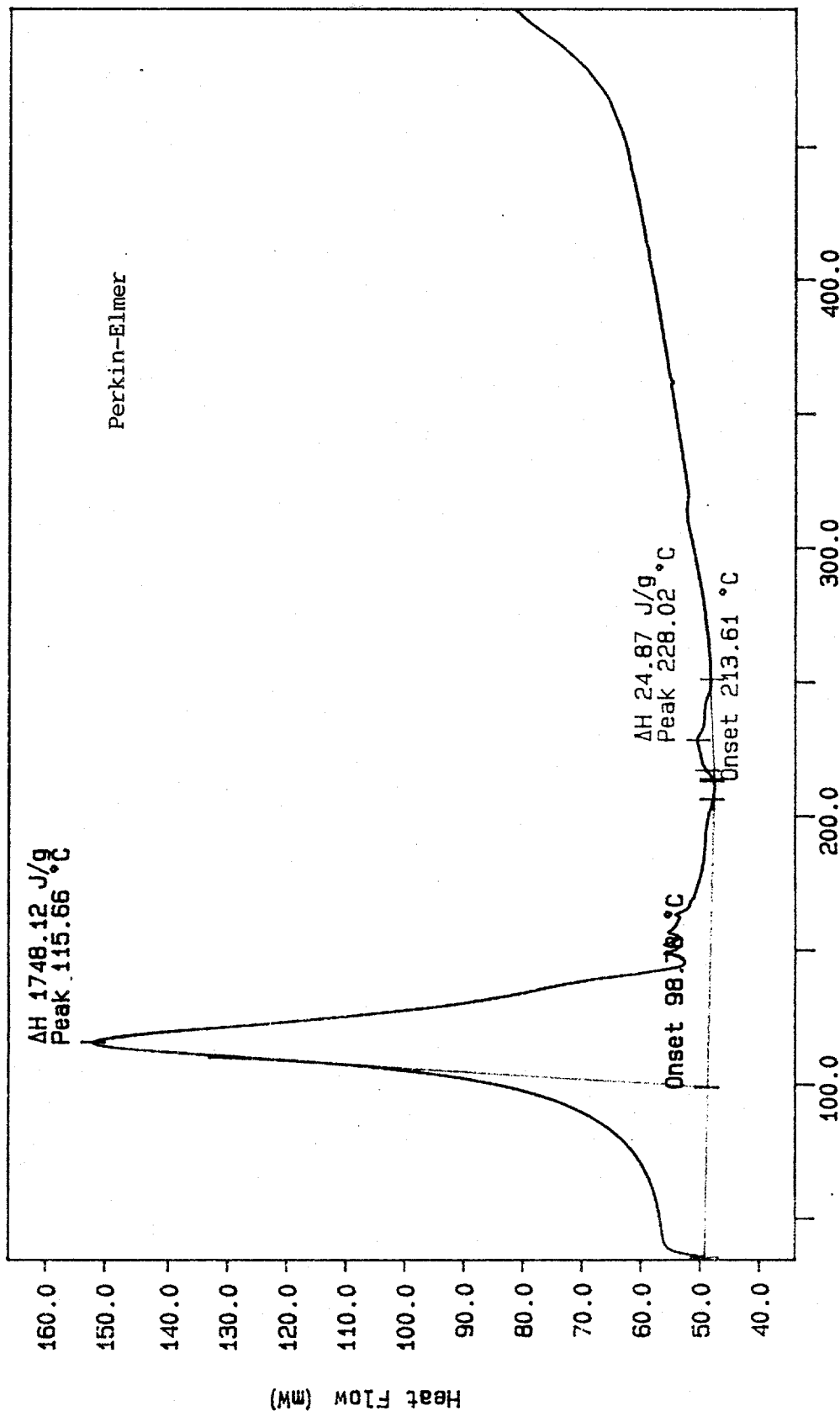
File info: SAM050304 Wed May 3 14:17:41 1995

Sample Weight: 12.040 mg

S95T000636 (DUP). 10C/min

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WHC-SD-WM-DP-110, REV. 0



exotherm down, nitrogen purge gas

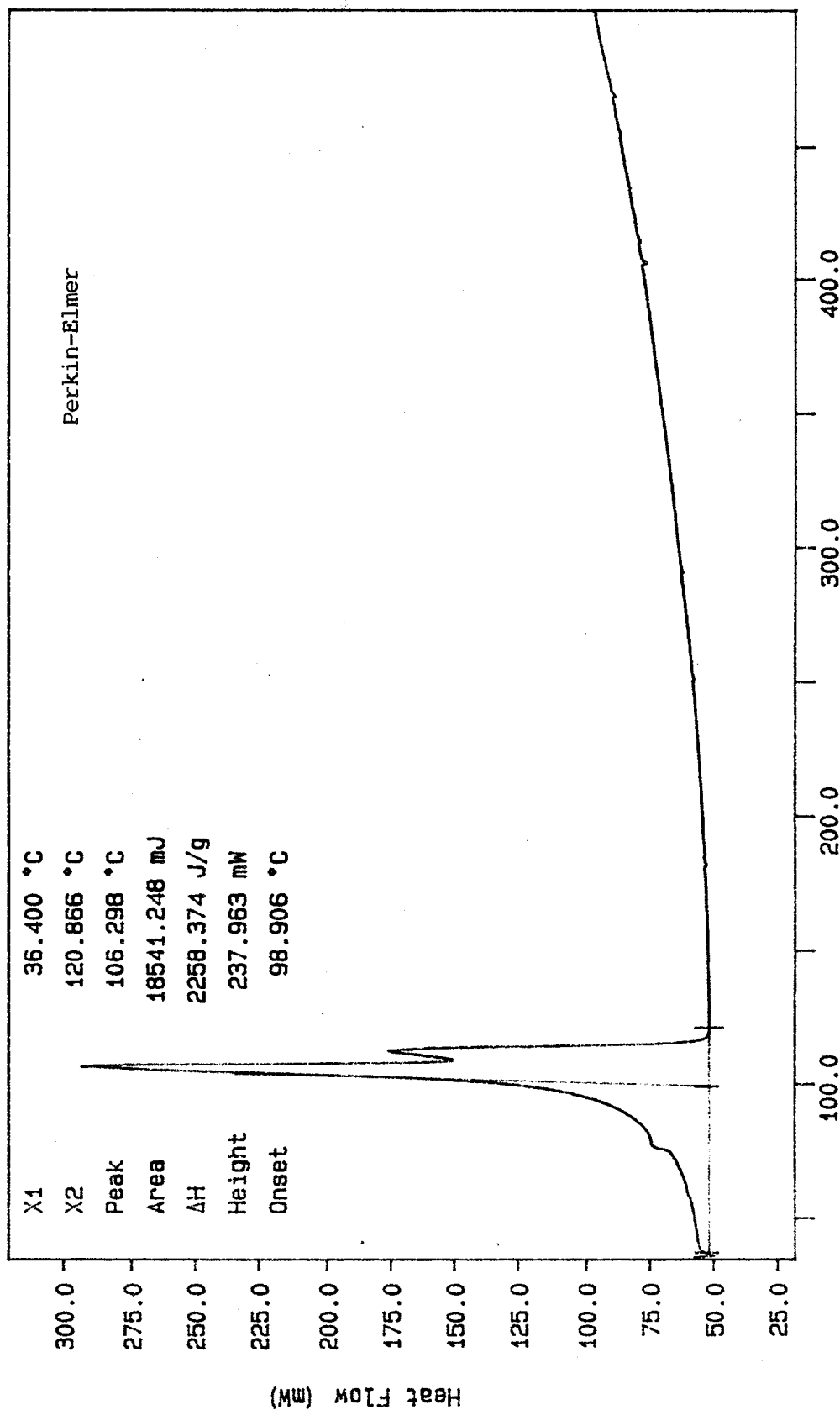
TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Wed May 3 14:25:55 1995

Curve 1: DSC
 File info: SAM050301 Wed May 3 09: 48: 59 1995
 Sample Weight: 8.210 mg
 S95T000654, 10C/min

BEST AVAILABLE COPY



exotherm down, nitrogen purge gas
 TEMP: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min
 SM Fulton
 Westinghouse Hanford Co.
 222-S Lab
 Wed May 3 09: 51: 15 1995

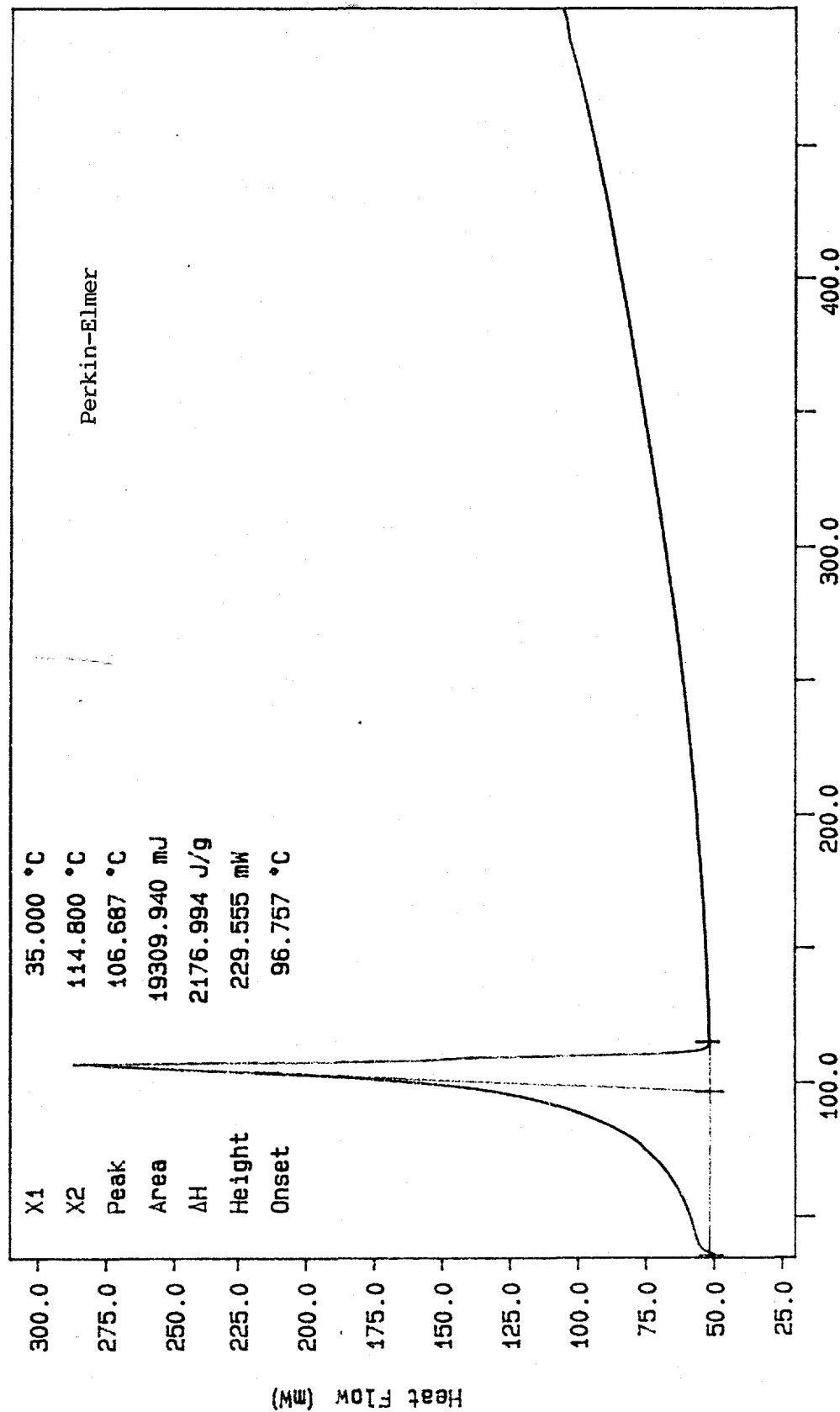
Curve 1: DSC

File info: SAM050302 Wed May 3 11:33:18 1995

Sample Weight: 8.870 mg

S95T000654 (DUP), 10/min

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exotherm down, nitrogen purge gas

TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min

Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Wed May 3 11:40:57 1995

WHC-SD-WM-DP-110, REV. 0

LABCORE Data Entry Template for Worklist# 1034

Analyst: pus Instrument: TGA01 Book # 4248-17

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.19</u>	<u>58.70</u>	<u>N/A</u>	%
95000039	U-202	2 SAMPLE	S95T000582	0	TGA-01	LIQUID	<u>N/A</u>	<u>72.60</u>		%
95000039	U-202	3 DUP	S95T000582	0	TGA-01	LIQUID	<u>72.60</u>	<u>73.24</u>	<u>N/A</u>	%
95000039	U-202	4 SAMPLE	S95T000588	0	TGA-01	LIQUID	<u>N/A</u>	<u>73.29</u>		%
95000039	U-202	5 DUP	S95T000588	0	TGA-01	LIQUID	<u>73.29</u>	<u>72.23</u>	<u>N/A</u>	%

Final page for worklist # 1034

[Signature] 5-4-95
Analyst Signature Date

[Signature] 5-4-95
Analyst Signature Date

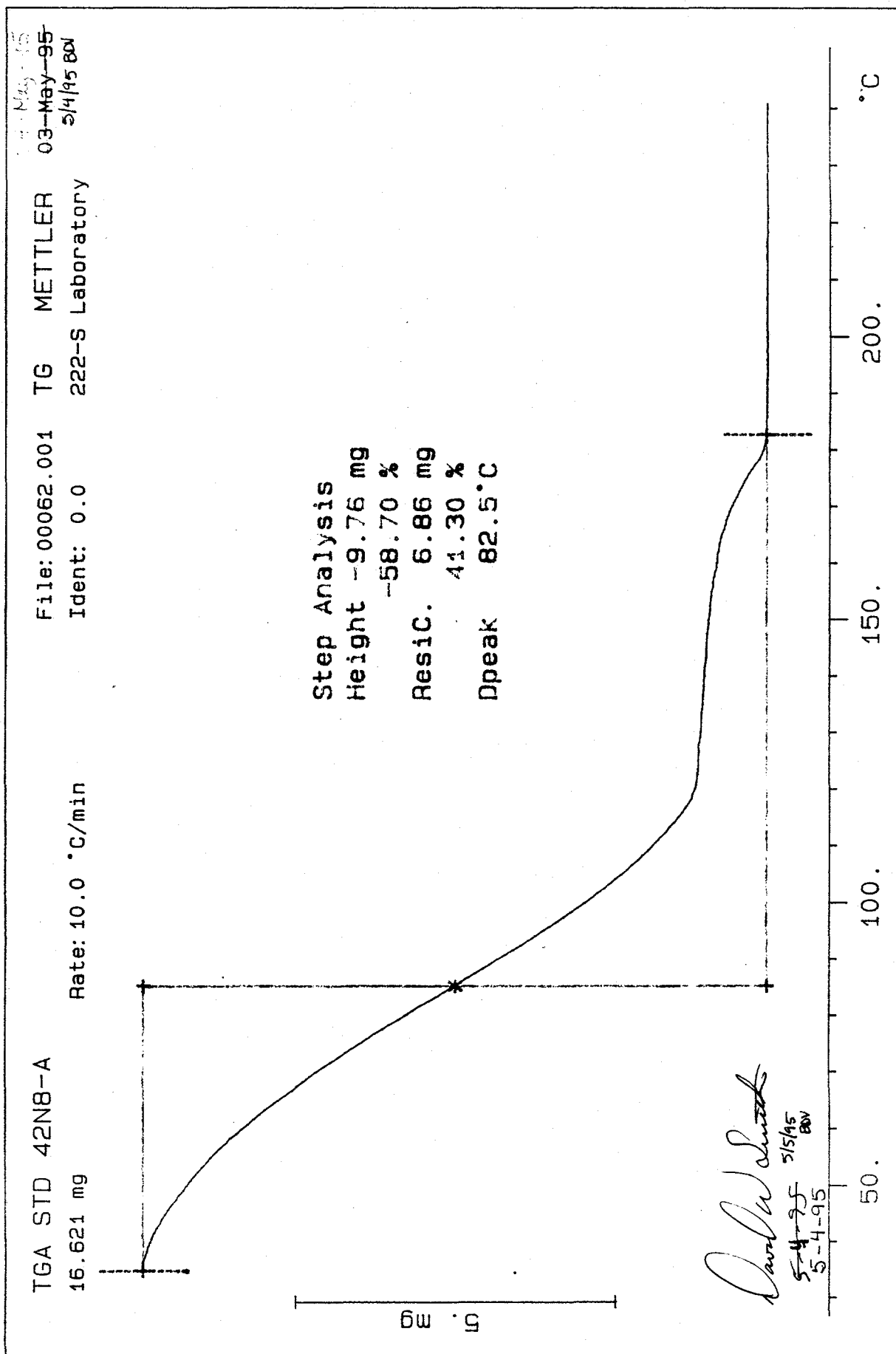
Verified by Blandina Valenzuela 5/5/95

Data Entry Comments:

The instrument was changing the dates and day shift, the chemist corrected the dates on the thermograms.

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SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 58 TO 62.



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S95T000582 N2

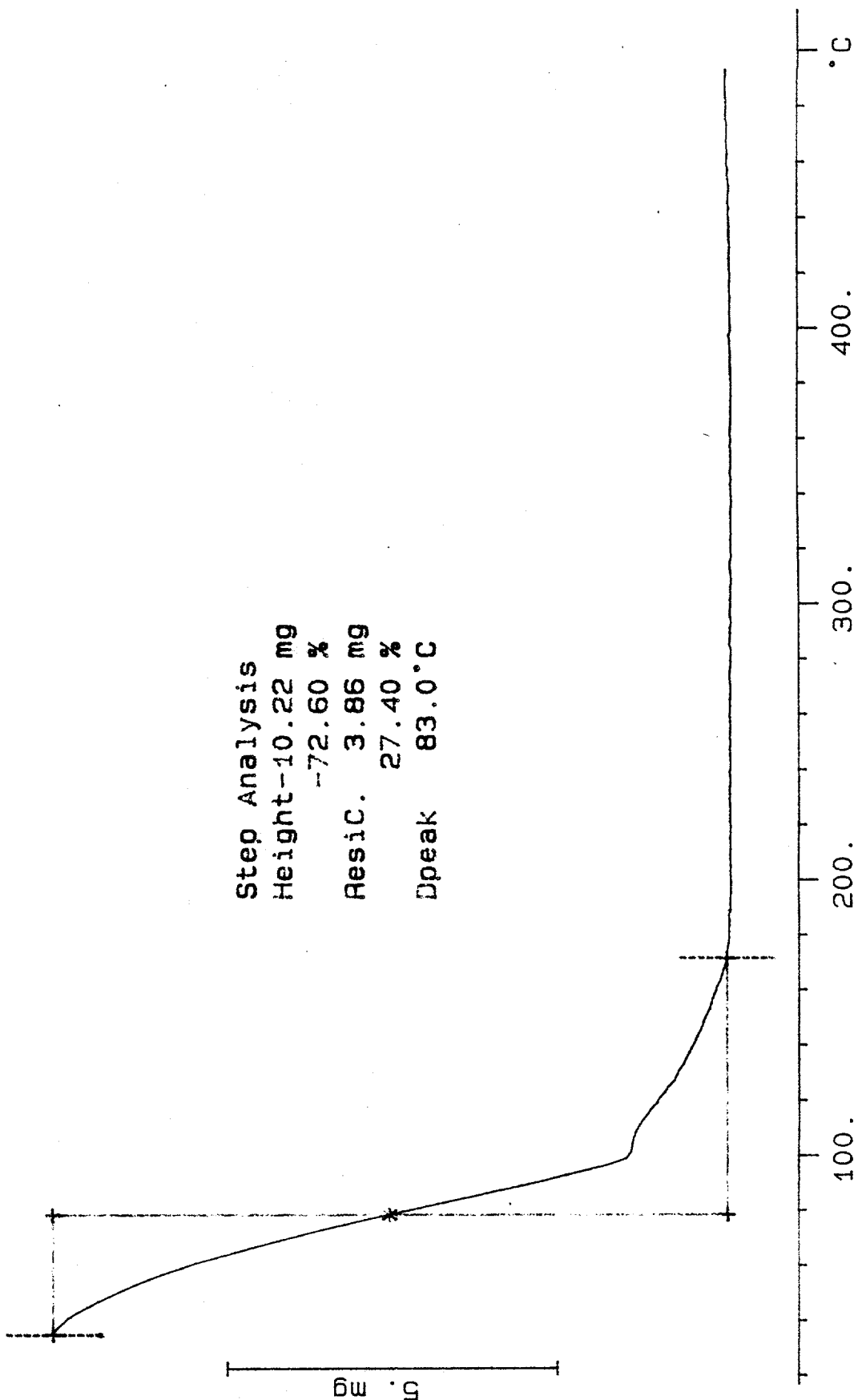
14.076 mg

Rate: 10.0 °C/min

File: 00064.001 TG METTLER 04-May-95

Ident: 0.0 222-S Laboratory

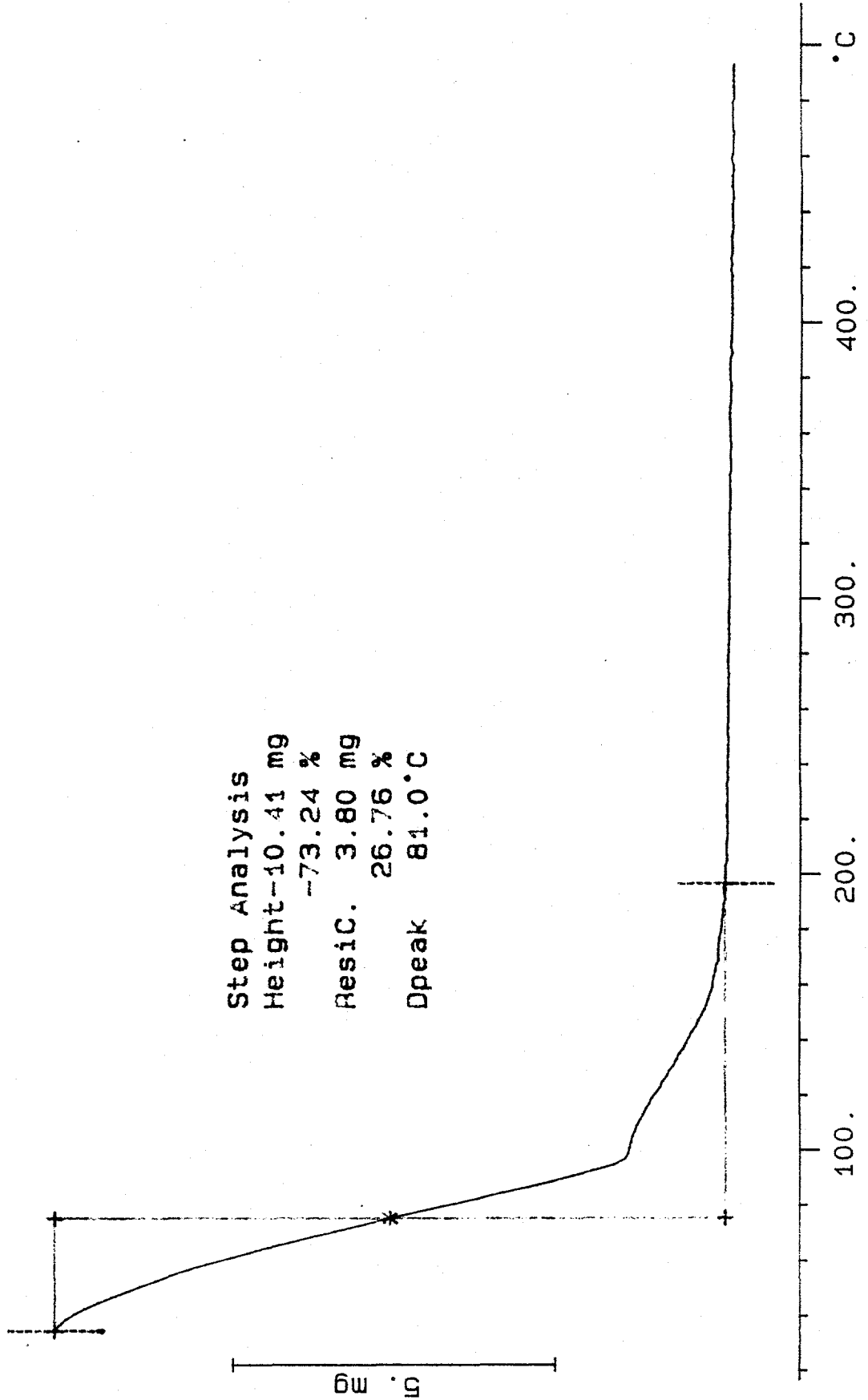
Step Analysis
 Height-10.22 mg
 -72.60 %
 Resid. 3.86 mg
 27.40 %
 Dpeak 83.0 °C



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S95T000582 (DUP) N2
 14.208 mg
 Rate: 10.0 °C/min
 File: 00066.001 TG METTLER
 Ident: 0.0 222-S Laboratory
 04-May-95
 05-May-95
 5/4/95 Bv

Step Analysis
 Height-10.41 mg
 -73.24 %
 ResidC. 3.80 mg
 26.76 %
 Dpeak 81.0°C



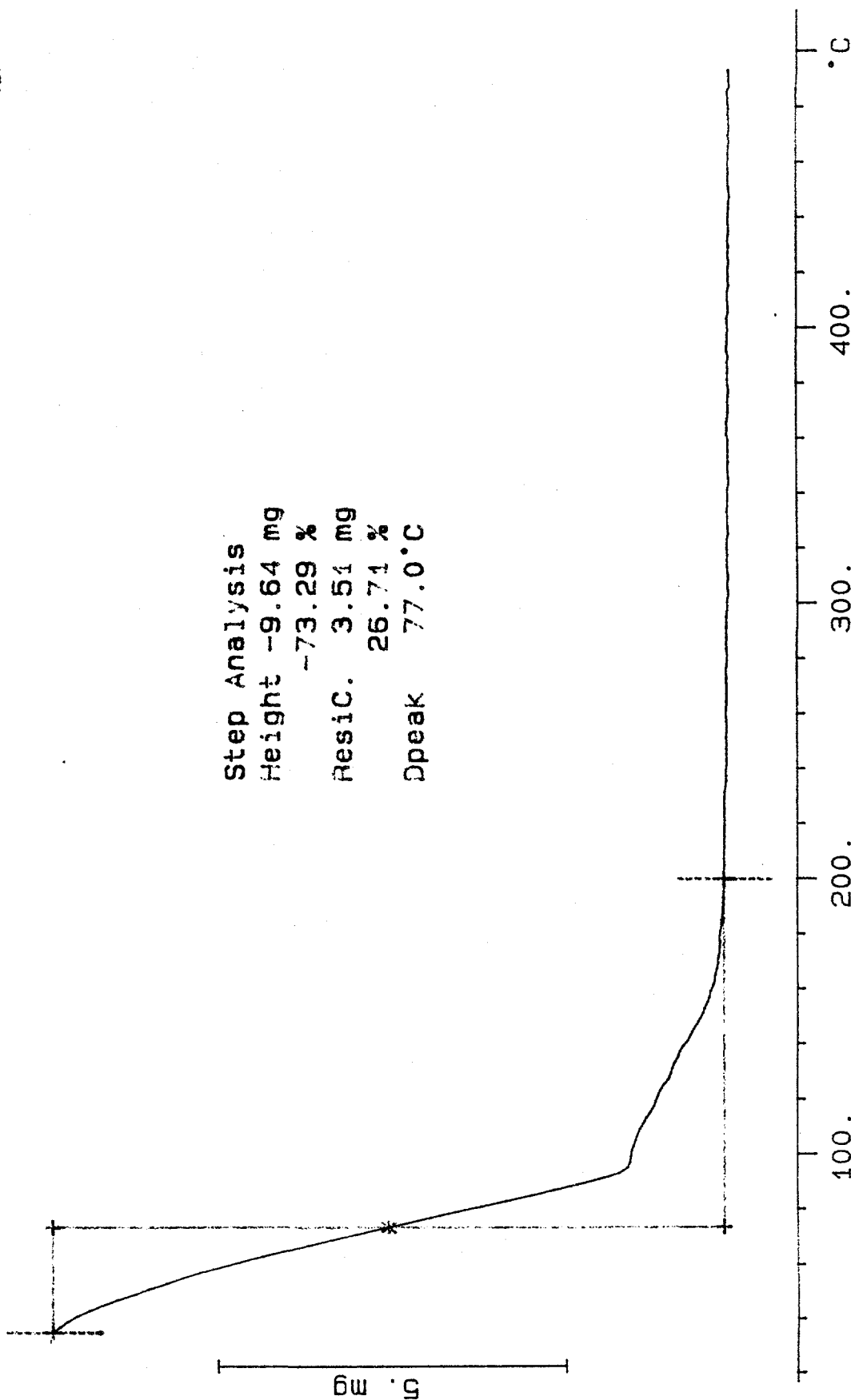
BEST AVAILABLE COPY

S95T000588 N2
13.149 mg

Rate: 10.0 °C/min

File: 00068.001 TG METTLER 05-May-95
Ident: 0.0 222-S Laboratory 5/4/95 Box

Step Analysis
Height -9.64 mg
-73.29 %
Resid. 3.51 mg
26.71 %
Dpeak 77.0°C



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S95T000588 (DUP) N2

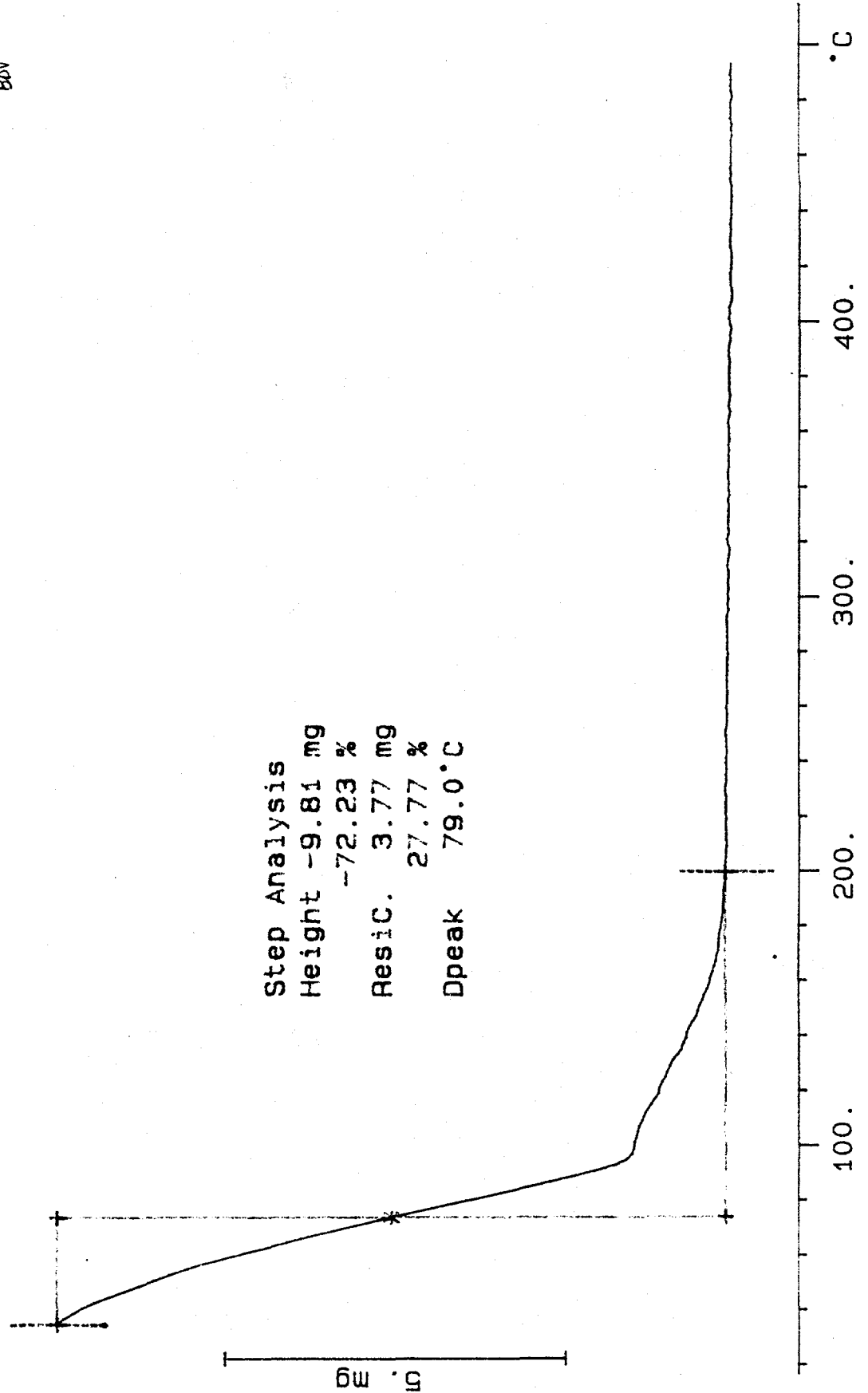
13.577 mg

Rate: 10.0 °C/min

File: 00070.001 TG METTLER 05-May-95

Ident: 0.0 222-S Laboratory 5/1/95 80V

Step Analysis
 Height -9.81 mg
 -72.23 %
 ResiC. 3.77 mg
 27.77 %
 Dpeak 79.0 °C



LABCORE Data Entry Template for Worklist# 1035

Analyst: SMF Instrument: TGA01 Book # 42N8-A

Method: LA-560-112 Rev/Mod DA A-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.19</u> <u>58.7</u>	<u>58.74</u>	<u>N/A</u>	%
95000052	U-202	4 SAMPLE	S95T000621	0	TGA-01	LIQUID	<u>N/A</u>	<u>73.42</u>		%
95000052	U-202	5 DUP	S95T000621	0	TGA-01	LIQUID	<u>73.42</u>	<u>73.64</u>	<u>N/A</u>	%

Final page for worklist # 1035

Susie M. Dultor 5-3-95
Analyst Signature Date
Blandina Valenzuela 5-4-95
Verified by 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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 64 TO 66.

BEST AVAILABLE COPY

TGA STD 42N8-A

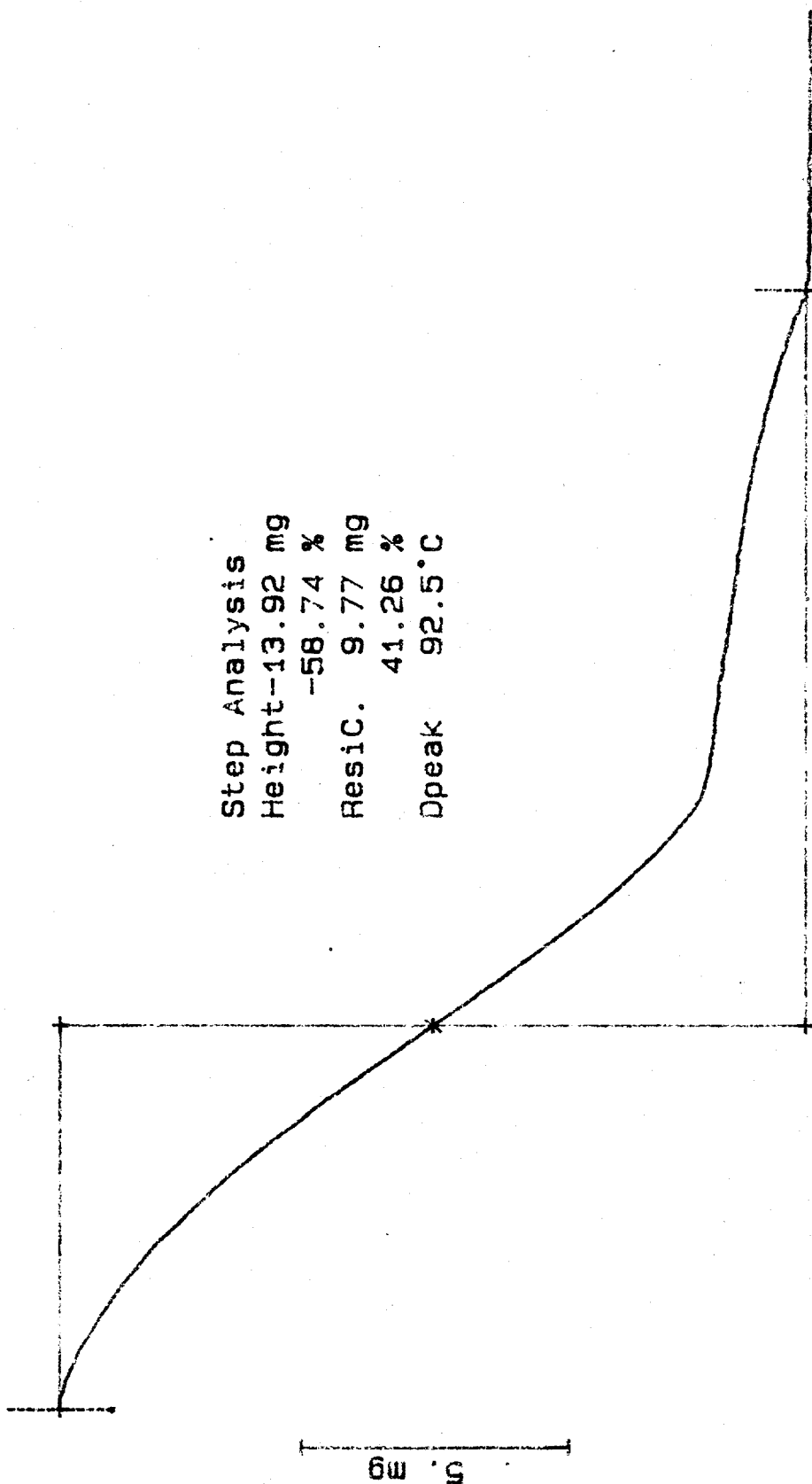
23.688 mg

File: 00045.001

TG METTLER 02-May-95

Rate: 10.0 °C/min

Ident: 0.0 222-S Laboratory



50. 100. 150. 200. °C

Lucie M. Miller 5/3/95

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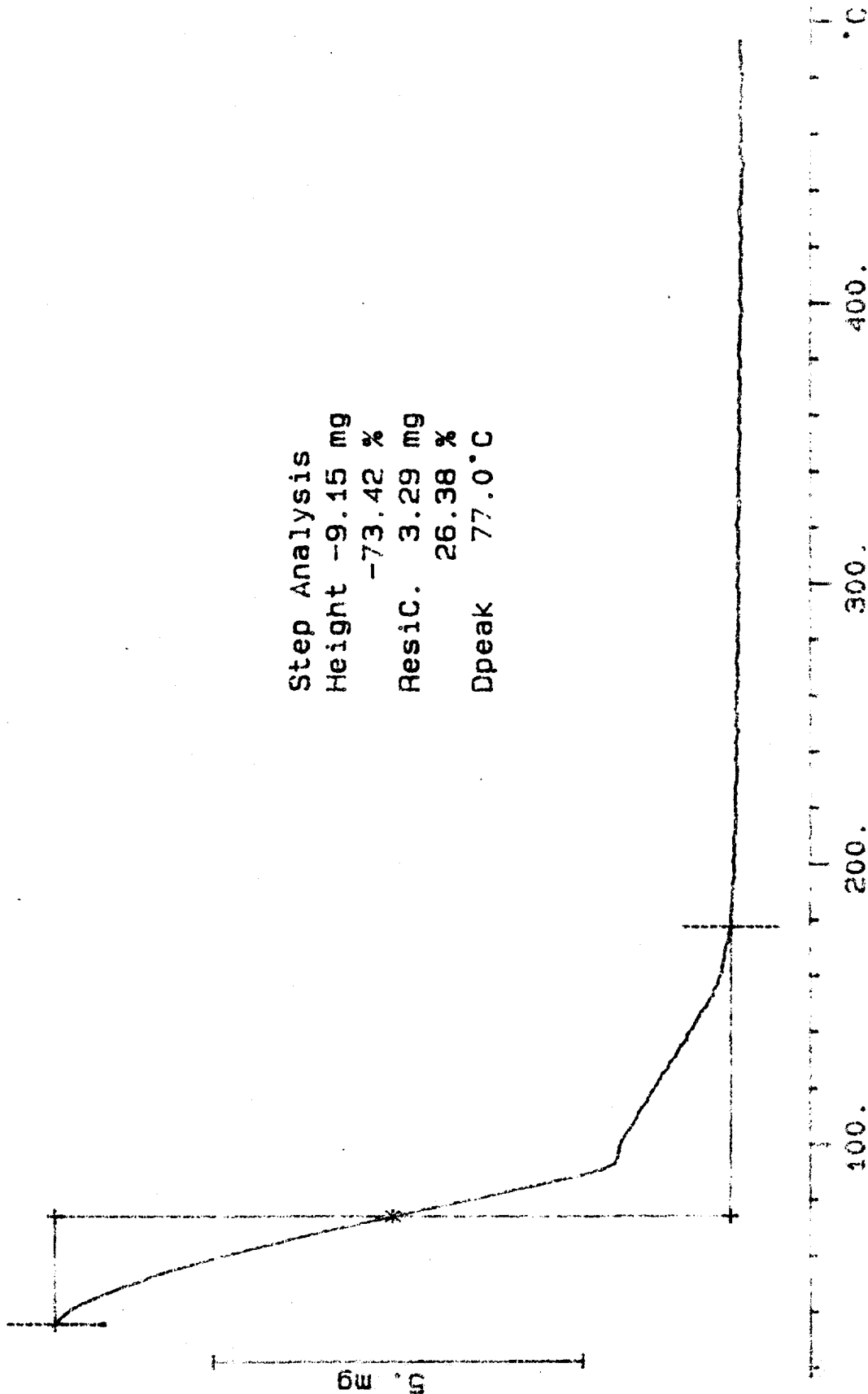
S95T000621 N2

12.456 mg

Rate: 10.0 °C/min

File: 00050.001 TG METTLER 03-May-95

Ident: 0.0 222-S Laboratory



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S95T0000621 (DUP) N2

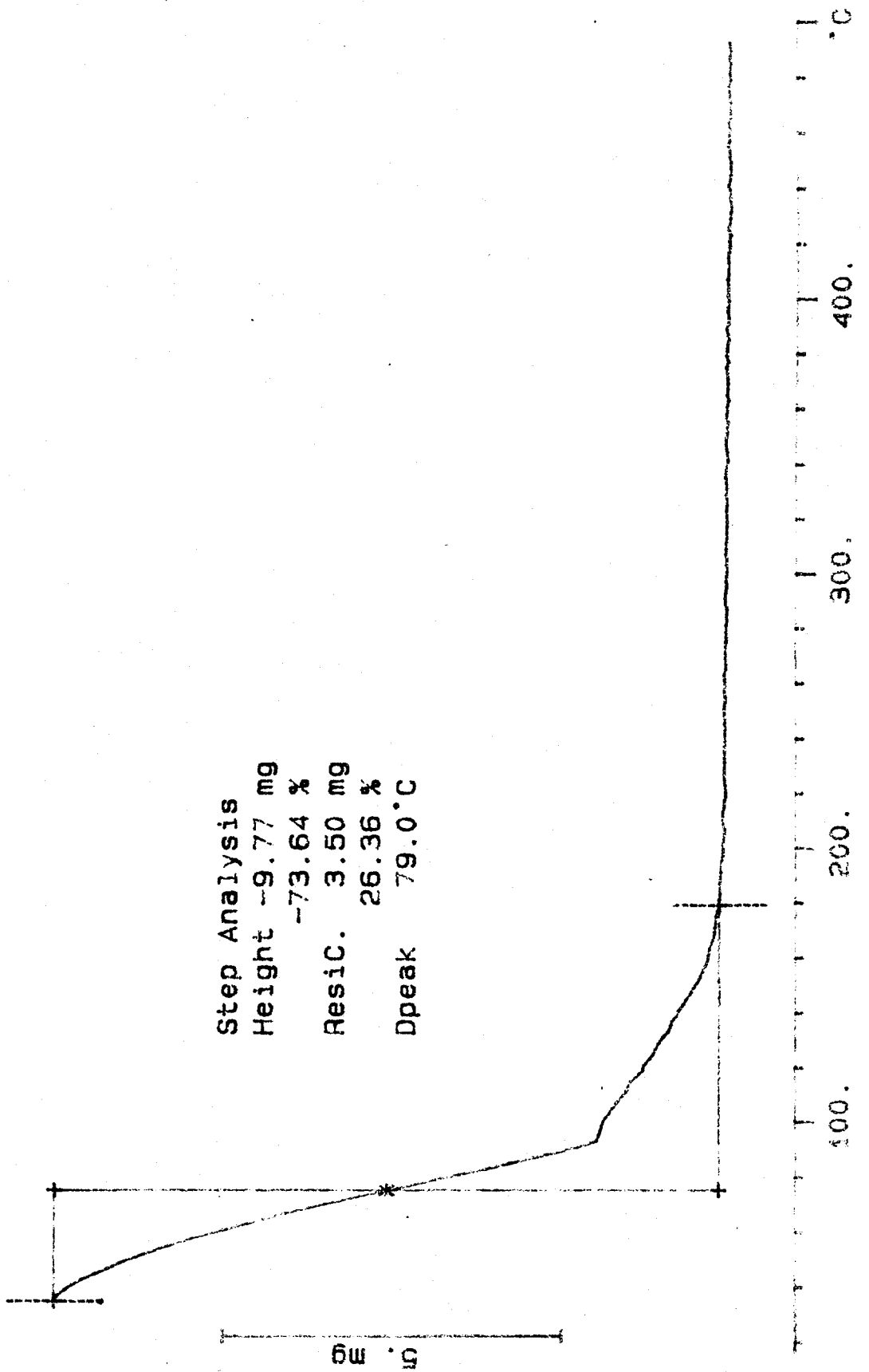
13.270 mg

Rate: 10.0 °C/min

File: 00052.001 TG METTLER 03-May-95

Ident: 0.0 222-S Laboratory

Step Analysis
Height -9.77 mg
-73.64 %
Resid. 3.50 mg
26.36 %
Dpeak 79.0 °C



LABCORE Data Entry Template for Worklist# 1036

Analyst: SNF Instrument: TGA01 03 Book # 11317 A

Method: LA-514-114 Rev/Mod E-6

5/5/95
BDV

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-03	LIQUID	59.19	57.59	N/A	%
95000052	U-202	2 SAMPLE	S95T000636	0	TGA-03	LIQUID	N/A	72.27		%
95000052	U-202	3 DUP	S95T000636	0	TGA-03	LIQUID	72.27	72.23	N/A	%
95000052	U-202	4 SAMPLE	S95T000654	0	TGA-03	LIQUID	N/A	99.66		%
95000052	U-202	5 DUP	S95T000654	0	TGA-03	LIQUID	99.66	99.52	N/A	%

Final page for worklist # 1036

See attached for signatures
Analyst Signature _____ Date _____

[Signature] 5/4/95
Analyst Signature _____ Date _____

Verified by Blandina Valenzuela 5/5/95

Data Entry Comments:

S10T000636 - Blandina Valenzuela
S95T000654 - Clear colorless liquid

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# 1036

Analyst: SMF Instrument: TGA01 Book # 42N'S-A

Method: ~~LA-560-112 Rev/Mod~~ LA-514-114/BD
SMF 5/5/95 BDV

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID			N/A	%
95000052	U-202	2 SAMPLE	⁶³⁶ S95T000637 0		TGA-01	LIQUID	N/A			%
95000052	U-202	3 DUP	⁶³⁶ S95T000637 0		TGA-01	LIQUID			N/A	%
95000052	U-202	4 SAMPLE	S95T000654 0		TGA-01	LIQUID	N/A			%
95000052	U-202	5 DUP	S95T000654 0		TGA-01	LIQUID			N/A	%

Final page for worklist # 1036

Susie M. Dutton 5-3-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

S95T000 636 - Bright yellow liquid

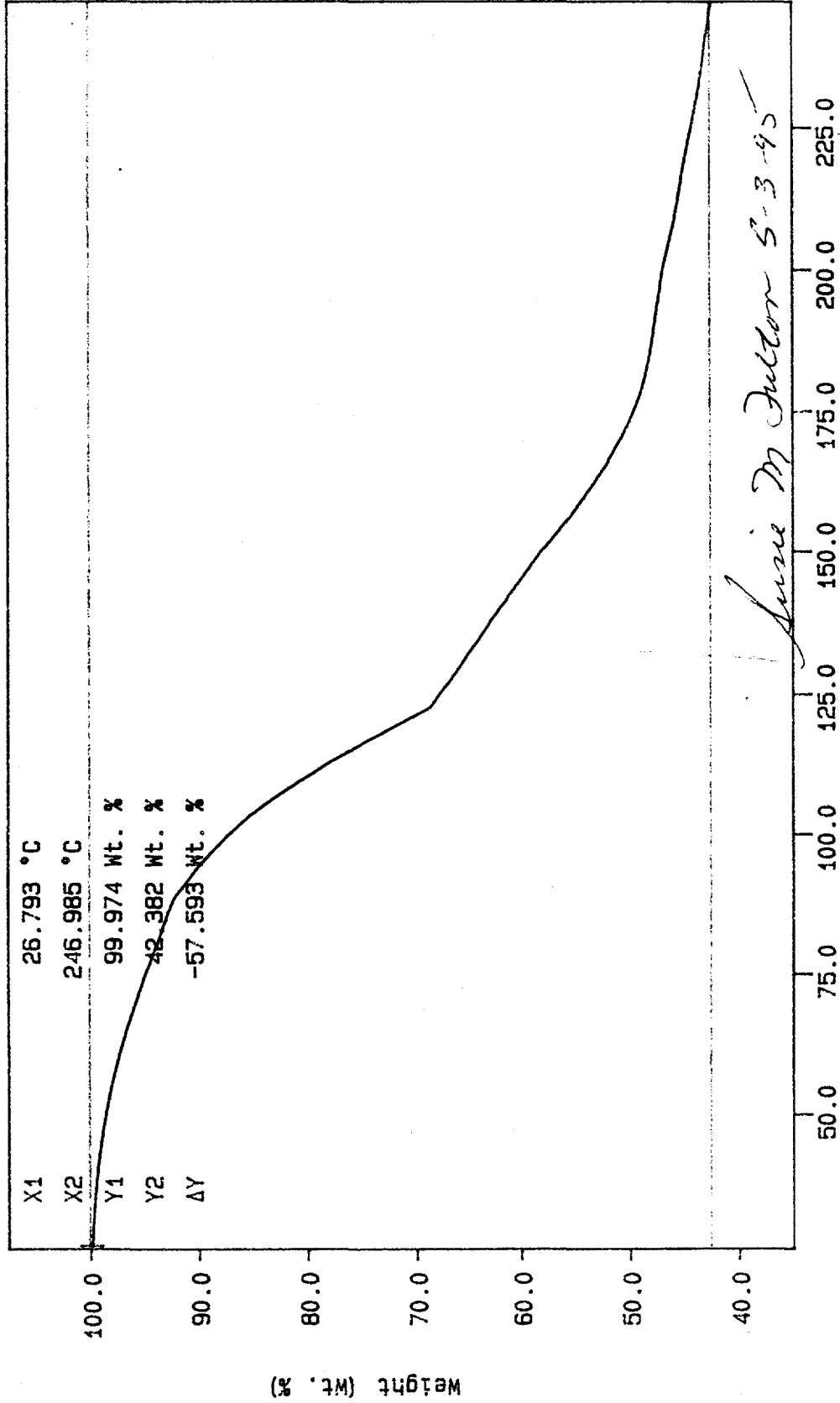
S95T000 654 - Clear colorless liquid

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.

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Curve 1: TGA
 File info: TER050301 Wed May 3 08:58:12 1995
 Sample Weight: 18.839 mg
 42N8A Terliq

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
 COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 69 TO 73.



Lucie M Fulton 5-3-95

N2
 TEMP: 35.0 °C
 TEMPE: 250.0 °C
 TIME: 0.0 min RATE: 10.0 °C/min
 SM Fulton
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed May 3 09:03:07 1995

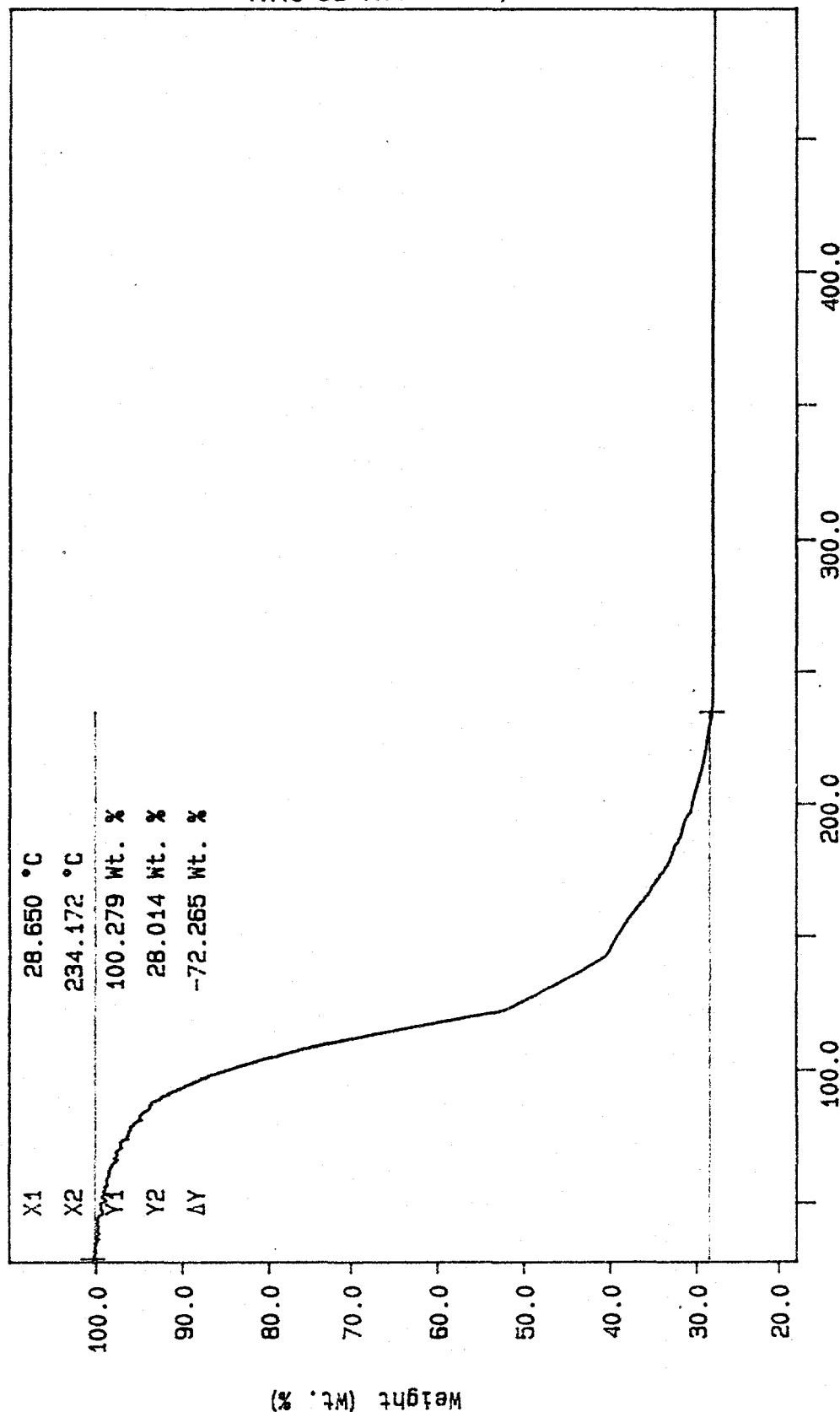
Curve 1: TGA

File info: SAM050303 Wed May 3 12:47:52 1995

Sample Weight: 13.753 mg

S95T000636, 10C/min

BEST AVAILABLE COPY



N2

TEMP1: 35.0 °C
TEMP2: 800.0 °C

TIME1:

0.0 min RATE1:

10.0 C/min

Temperature (°C)

SM Fulton

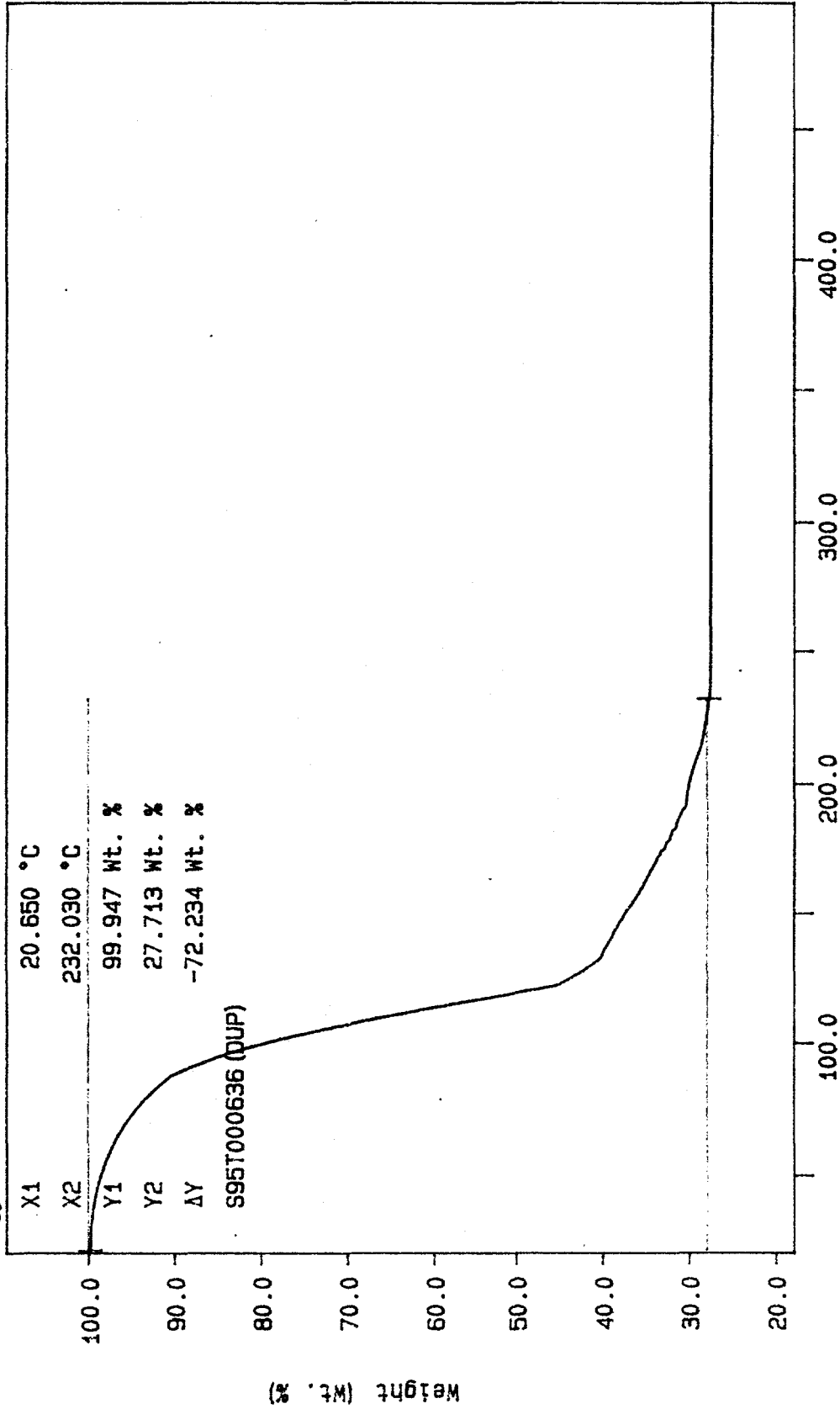
PERKIN-ELMER

7 Series Thermal Analysis System

Wed May 3 13:19:43 1995

BEST AVAILABLE COPY

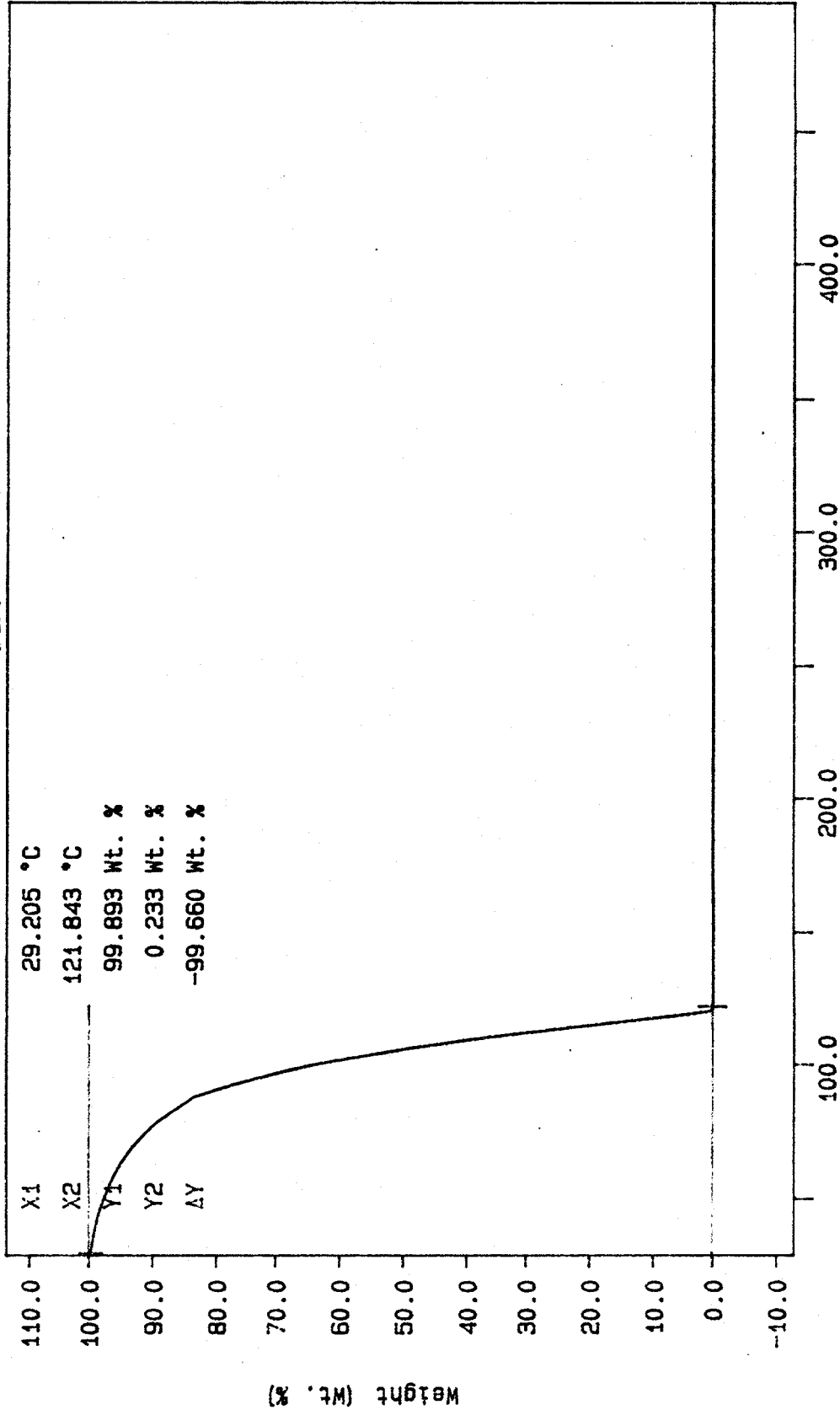
Curve 1: TGA
 File info: SAM050304 Wed May 3 14:20:06 1995
 Sample Weight: 13.408 mg
 S95T000636, 10C/min
 (DUP) 5/5/95



N2
 TEMP1: 35.0 C
 TEMP2: 500.0 C
 TIME1: 0.0 min
 RATE1: 10.0 C/min
 SM Fulton
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed May 3 14:32:05 1995

Curve 1: TGA
 File info: SAM050301 Wed May 3 15: 25: 06 1995
 Sample Weight: 9.448 mg
 S95T000654, 10C/min

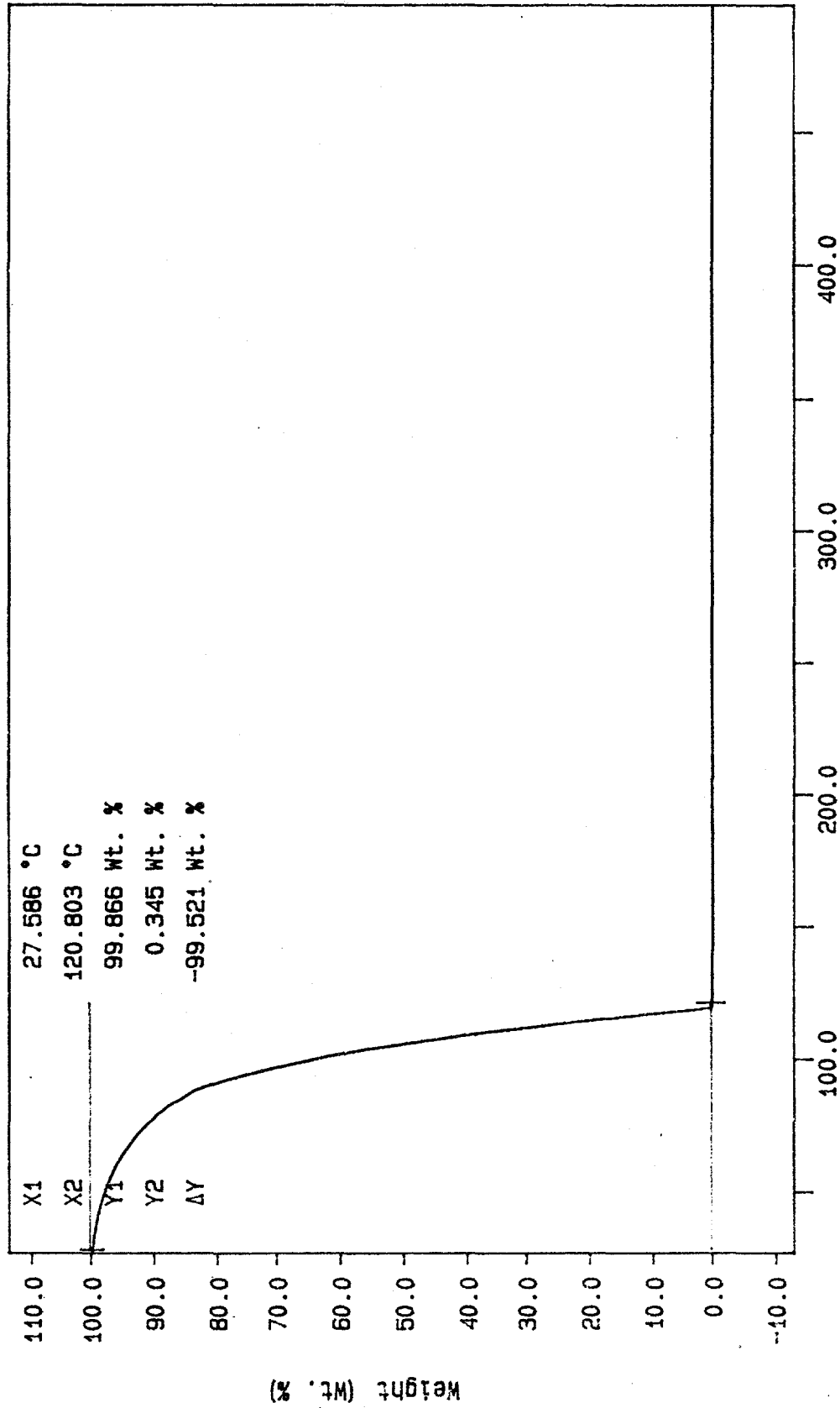
BEST AVAILABLE COPY



N2
 TEMPE: 35.0 C
 TEMPE: 500.0 C
 TIME: 0.0 min
 RATE: 10.0 C/min
 SM Fulton
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed May 3 15: 38: 13 1995

Curve 1: TGA
 File info: SAM050302 Wed May 3 11:42:25 1995
 Sample Weight: 8.704 mg
 S95T000654 (DUP), 10C/min
 (DUP)

BEST AVAILABLE COPY



N2
 TEMP: 38.0 °C
 TEMP: 800.0 °C
 TIME: 0.0 min
 RATE: 10.0 °C/min
 SM Fulton
 PERKIN-ELMER
 7 Series Thermal Analysis System
 Wed May 3 11:47:00 1995

LABCORE Data Entry Template for Worklist# 1047

Analyst: SMF Instrument: TGA01 Book # 4248-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.31</u>	<u>N/A</u>	%
95000039	U-202	2 SAMPLE	S95T000584	0	TGA-01	SOLID	<u>N/A</u>	<u>25.49</u>		%
95000039	U-202	3 DUP	S95T000584	0	TGA-01	SOLID	<u>25.49</u>	<u>26.24</u>	<u>N/A</u>	%
95000039	U-202	4 SAMPLE	S95T000590	0	TGA-01	SOLID	<u>N/A</u>	<u>43.64</u>		%
95000039	U-202	5 DUP	S95T000590	0	TGA-01	SOLID	<u>43.64</u>	<u>38.71</u>	<u>N/A</u>	%
95000039	U-202	6 DUP2	S95T000590	0	TGA-01	SOLID	<u>43.64</u>	<u>36.88</u>	<u>N/A</u>	%

Final page for worklist # 1047

See attached for signatures
Analyst Signature _____ Date _____

Data entered + verified
Blandina Valenzuela 4/25/95
Analyst Signature _____ Date _____

Data Entry Comments:

584
S95T000584 - light yellow thick liquid with clear thin upper
phase. S95T000590 - light yellow liquid with large (1/4") clear crystals
S95T000584 produced a second weight loss step of 17.93% at 281.0°C
S95T000590 produced a second weight loss step of 52.22% at 341.0°C
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# 1047

Analyst: SMF Instrument: TGA01 Book # 42 N/A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
95000039	U-202	2 SAMPLE	S95T000584	0	TGA-01	SOLID	N/A			%
95000039	U-202	3 DUP	S95T000584	0	TGA-01	SOLID			N/A	%
95000039	U-202	4 SAMPLE	S95T000590	0	TGA-01	SOLID	N/A			%
95000039	U-202	5 DUP	S95T000590	0	TGA-01	SOLID			N/A	%

Final page for worklist # 1047

Smfulton 4-24-95
Analyst Signature Date

Analyst Signature Date

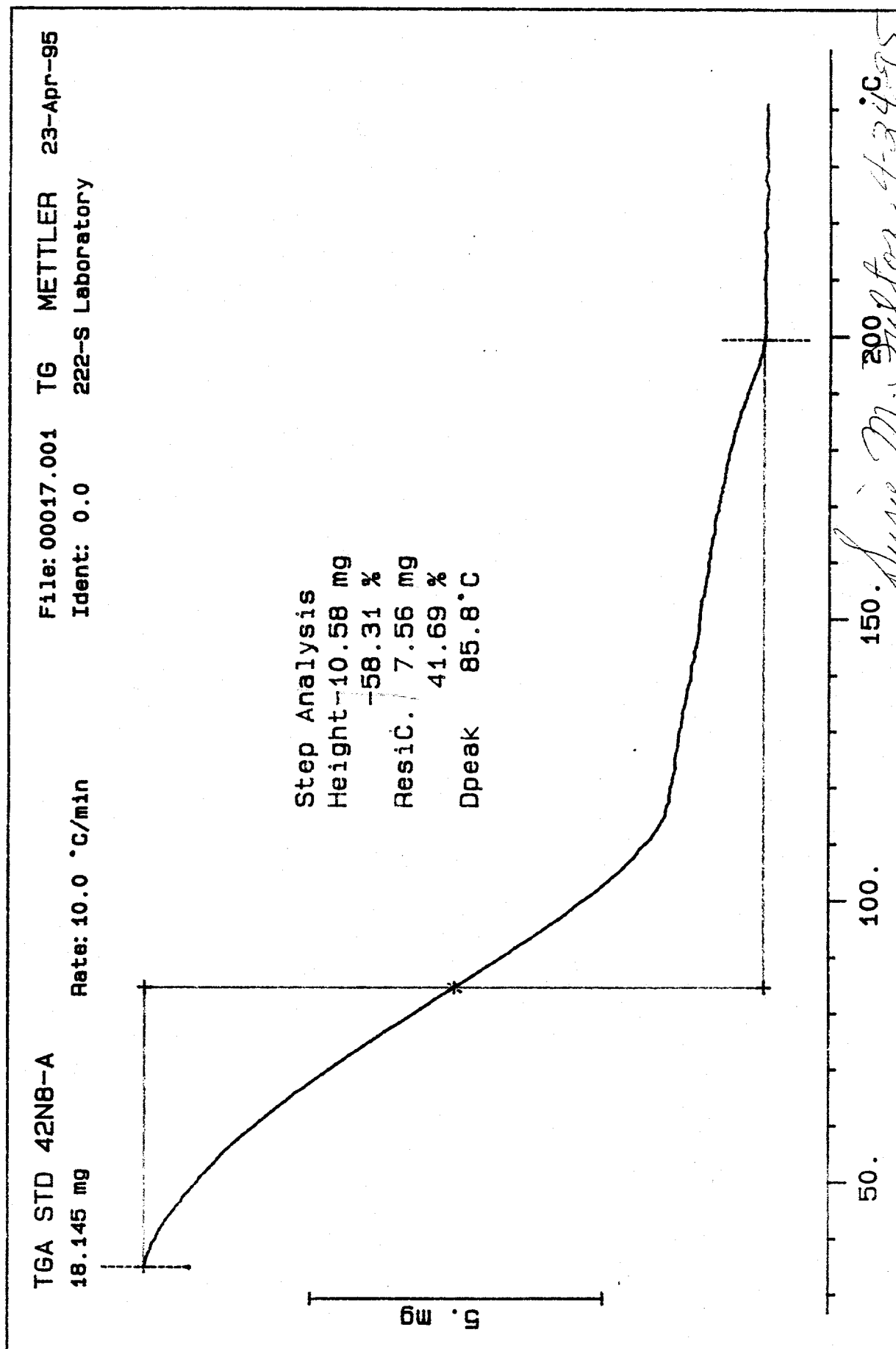
Data Entry Comments:

S95T000548 - light yellow thick liquid
w clear ⁴⁰⁰⁴⁵ thin upper phase.

S95T000590 - light yellow liquid at large ("4") clear
crystals

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 76 TO 81.
 BEST AVAILABLE COPY

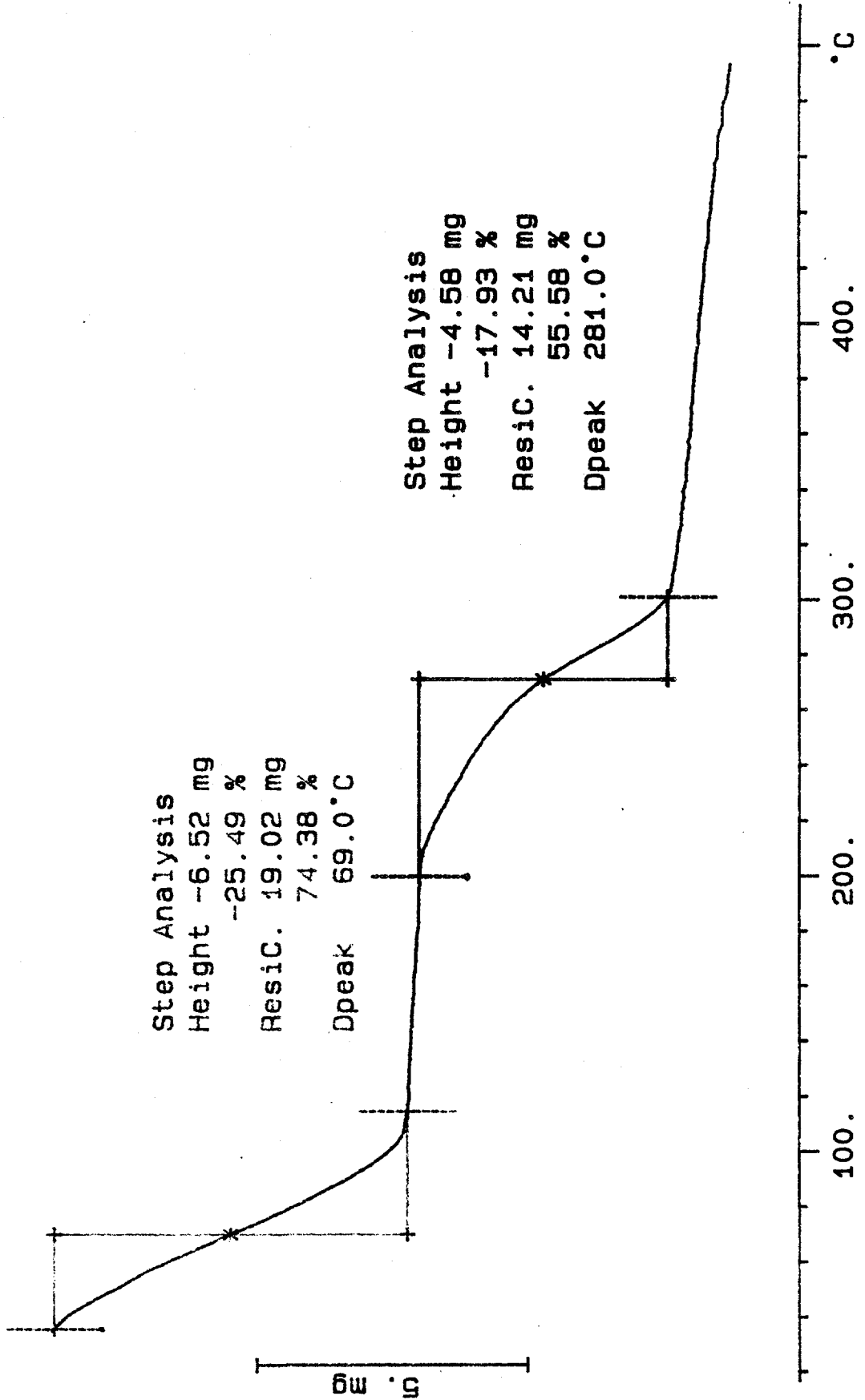


BEST AVAILABLE COPY

S95T000584 N2
25.575 mg

File: 00019.001 TG METTLER 23-Apr-95
Ident: 0.0 222-S Laboratory

Rate: 10.0 °C/min



BEST AVAILABLE COPY

S95T000584 (DUP) N2

32.671 mg

Rate: 10.0 °C/min

File: 00021.001 TG

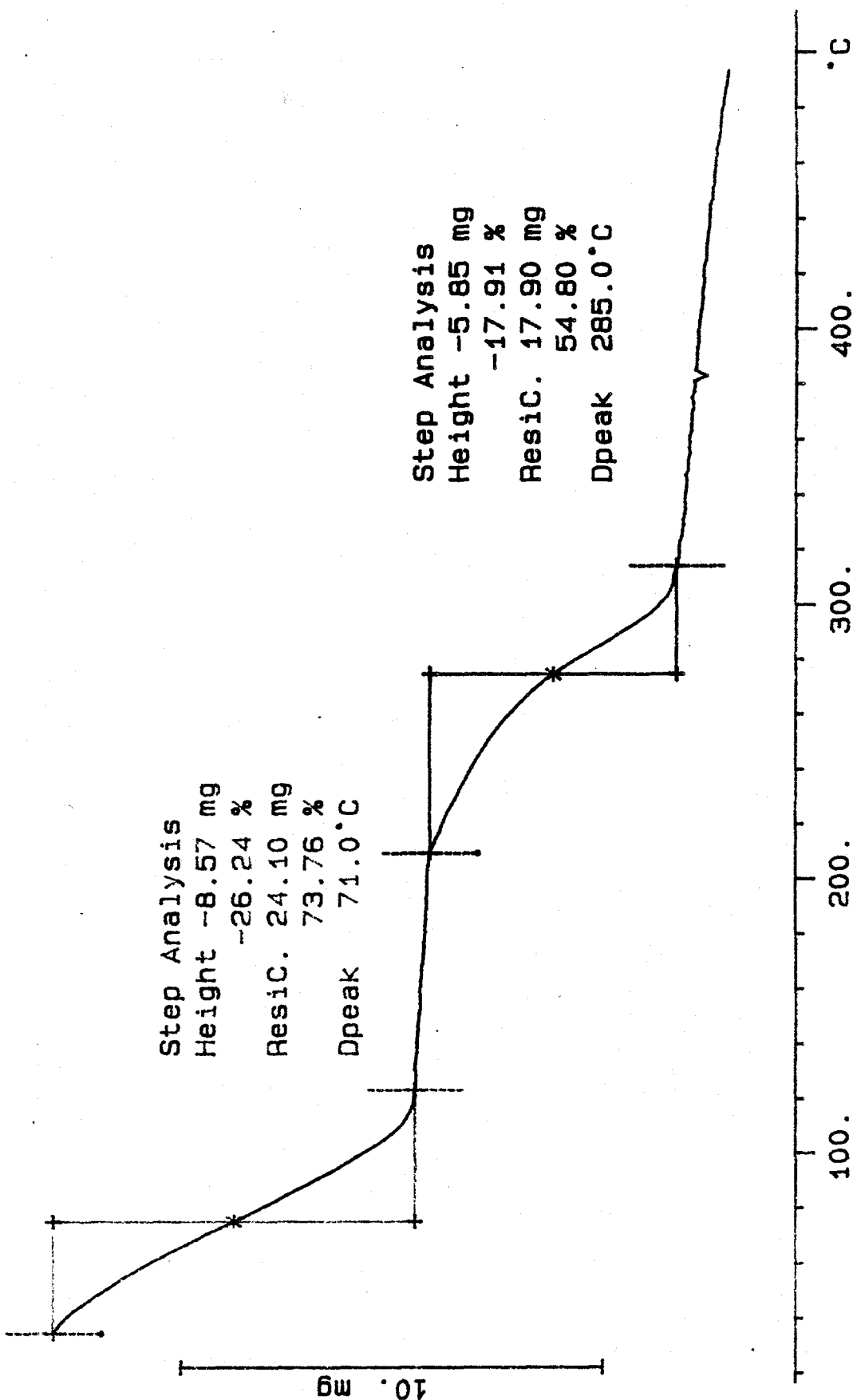
METTLER

24-Apr-95

Ident: 0.0 222-S Laboratory

Step Analysis
Height -8.57 mg
-26.24 %
ResiC. 24.10 mg
73.76 %
Dpeak 71.0 °C

Step Analysis
Height -5.85 mg
-17.91 %
ResiC. 17.90 mg
54.80 %
Dpeak 285.0 °C



TEST AVAILABLE COPY

S95T000590 N2

19.274 mg

Rate: 10.0 °C/min

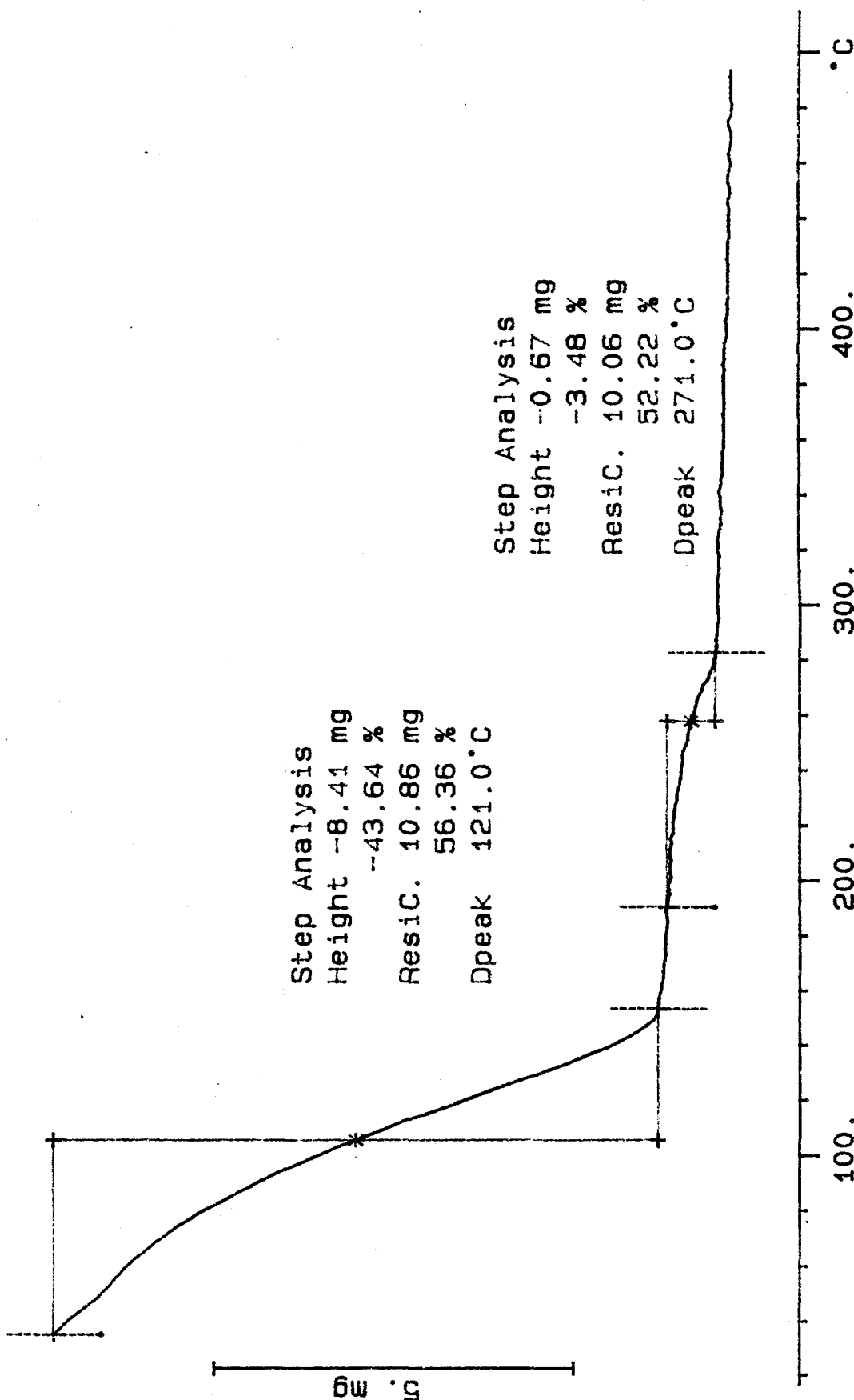
File: 00023.001

Ident: 0.0

TG

24-Apr-95

222-S Laboratory



NOT AVAILABLE COPY

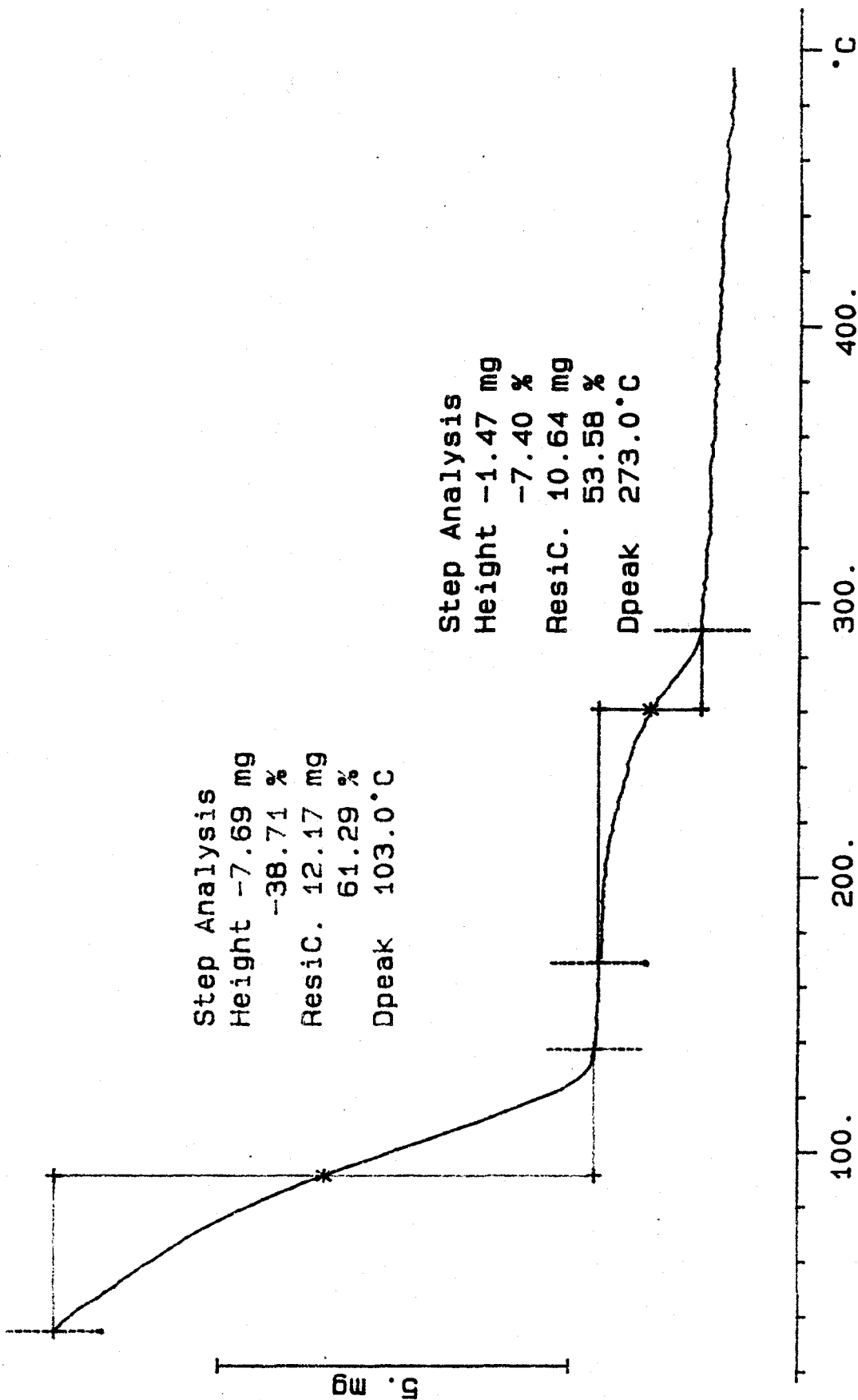
S95T000590 (DUP) N2

19.861 mg

Rate: 10.0 °C/min

File: 00025.001 TG METTLER 24-Apr-95

Ident: 0.0 222-S Laboratory



BEST AVAILABLE COPY

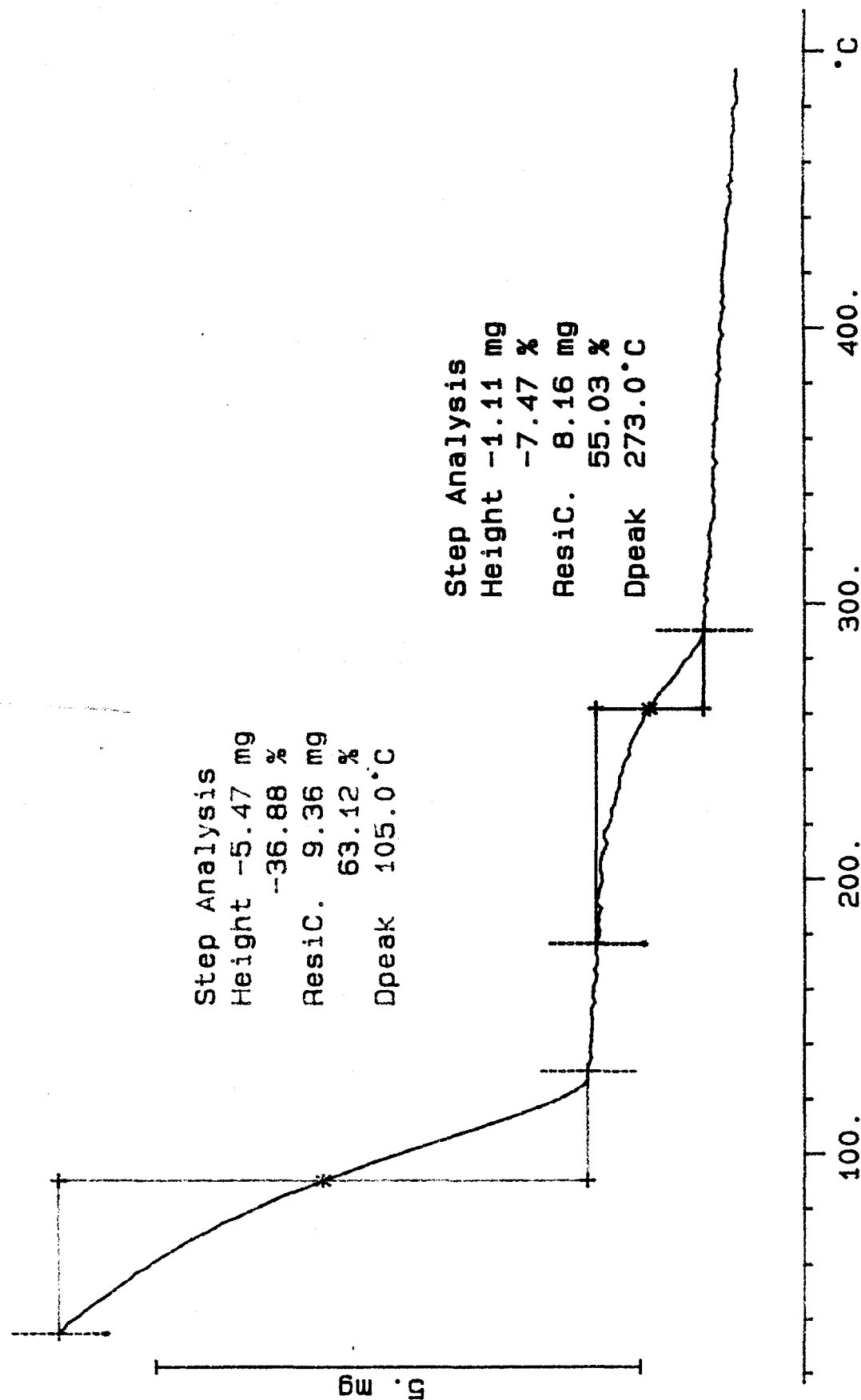
S95T000590 (DUP2) N2

14.826 mg

Rate: 10.0 °C/min

File: 00027.001 TG METTLER 24-Apr-95

Ident: 0.0 222-S Laboratory



Step Analysis

Height -5.47 mg

-36.88 %

Resid. 9.36 mg

63.12 %

Dpeak 105.0 °C

Step Analysis

Height -1.11 mg

-7.47 %

Resid. 8.16 mg

55.03 %

Dpeak 273.0 °C

LABCORE Data Entry Template for Worklist# 1048

Analyst: ASP Instrument: TGA01 Book # 42N8-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>59.11</u>	<u>N/A</u>	%
95000039	U-202	2 SAMPLE	S95T000598	0	TGA-01	SOLID	<u>N/A</u>	<u>22.87</u>		%
95000039	U-202	3 DUP	S95T000598	0	TGA-01	SOLID	<u>22.87</u>	<u>22.90</u>	<u>N/A</u>	%

Final page for worklist # 1048

Anthony Puroto 5-3-95
Analyst Signature Date

[Signature] 5-4-95
Analyst Signature Date

Verified by Blandina Valenzuela 5/4/95

Data Entry Comments:

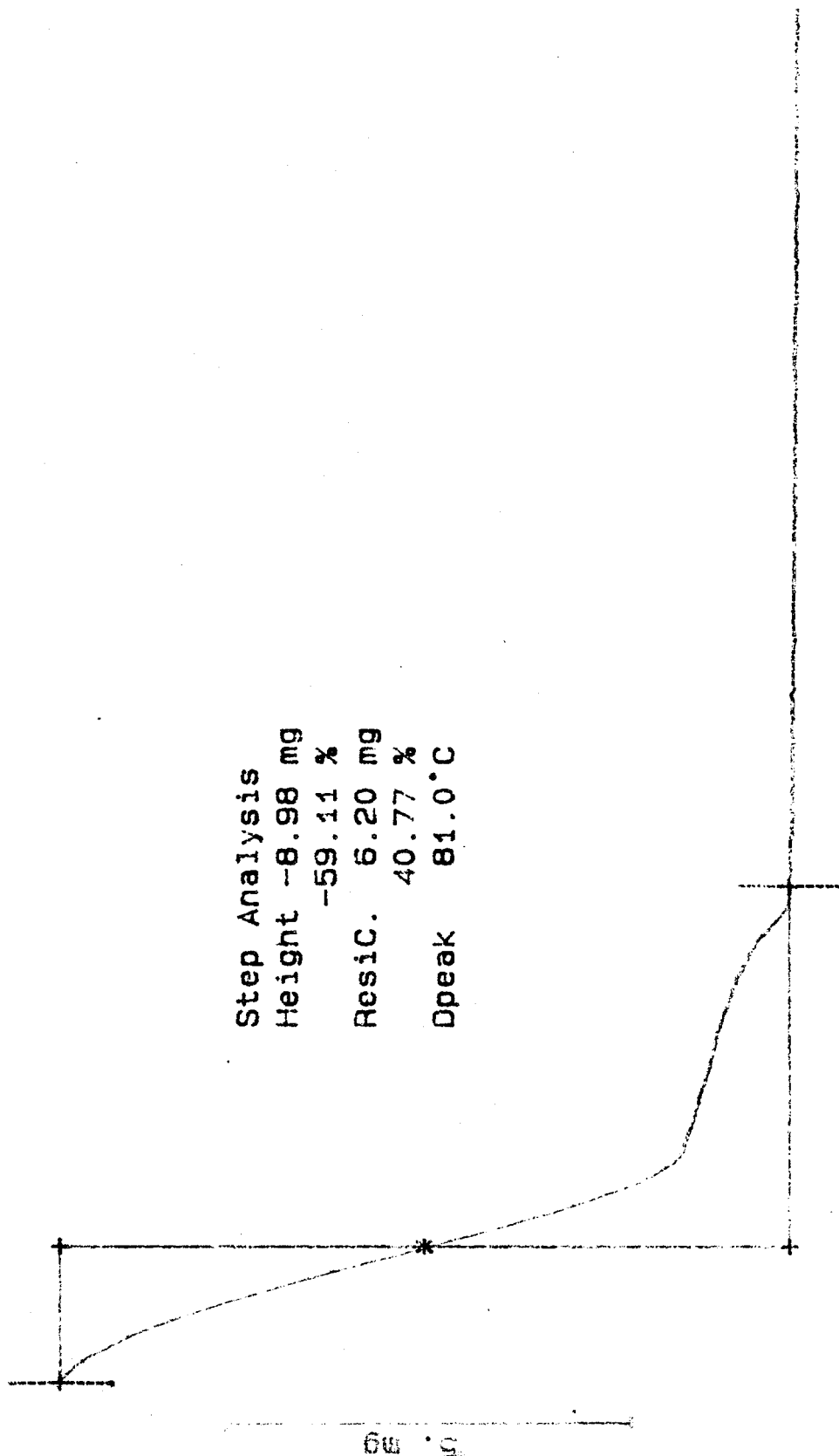
Sample produced a second weight loss step at
18.47% at 279°C

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 83 TO 85.

TGA STD 42NB-A
15.199 mg
Rate: 10.0 °C/min
File: 00053.001 TG METTLER 03-May-95
Ident: 0.0 222-S Laboratory

Step Analysis
Height -8.98 mg
-59.11 %
Resid. 6.20 mg
40.77 %
Dpeak 81.0 °C



400 (H) 100 (S) 20 (S) 95

BEST AVAILABLE COPY

File: 00056.002 TG MFTT100 03 May 90
 Inert: 0.0 222-C Laboratory

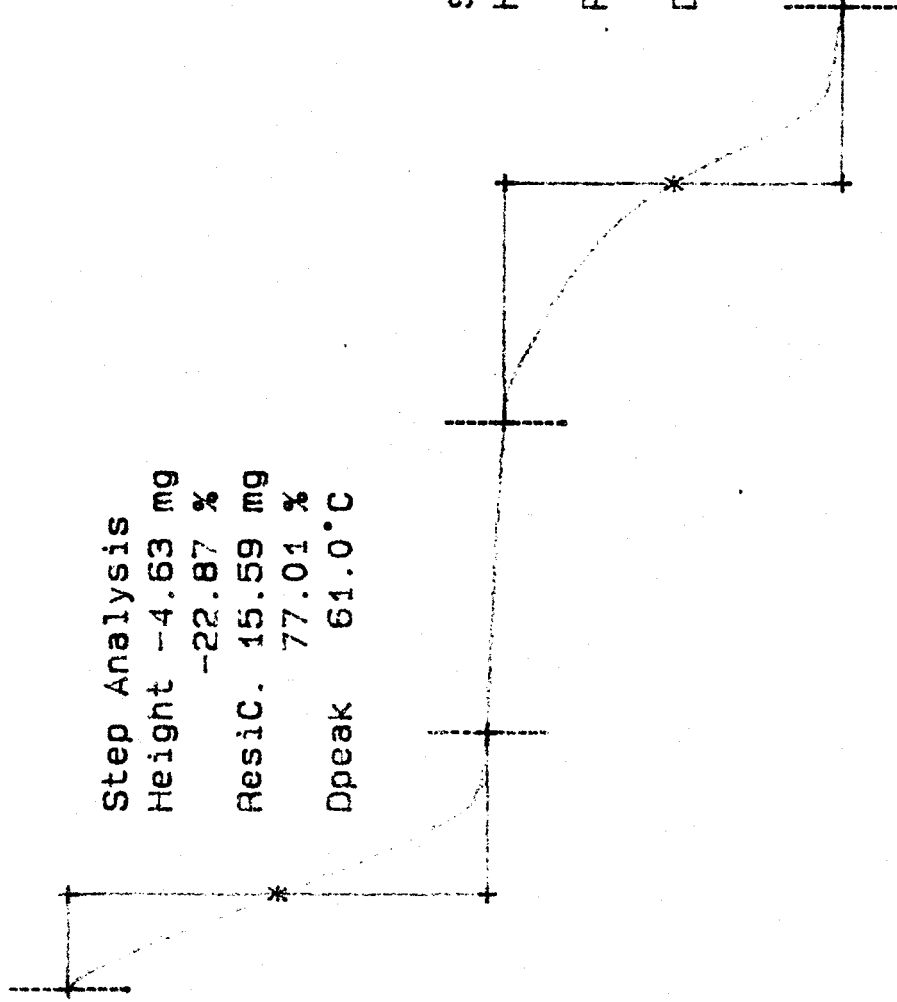
Rate: 10.0 °C/min

0307000550 10
 20.24 mg

Step Analysis

Height -4.63 mg
 -22.87 %
 Resid. 15.59 mg
 77.01 %
 Dpeak 61.0 °C

Step Analysis
 Height -3.74 mg
 -18.47 %
 Resid. 11.67 mg
 57.68 %
 Dpeak 279.0 °C



TEST AVAILABLE COPY

S95T000598 DUP N2

19.294 mg

Rate: 10.0 °C/min

File: 00057.001

TG METTLER

03-May-95

Ident: 0.0

222-S Laboratory

Step Analysis

Height -4.42 mg

-22.90 %

Resid. 14.85 mg

76.95 %

Dpeak 51.0°C

Step Analysis

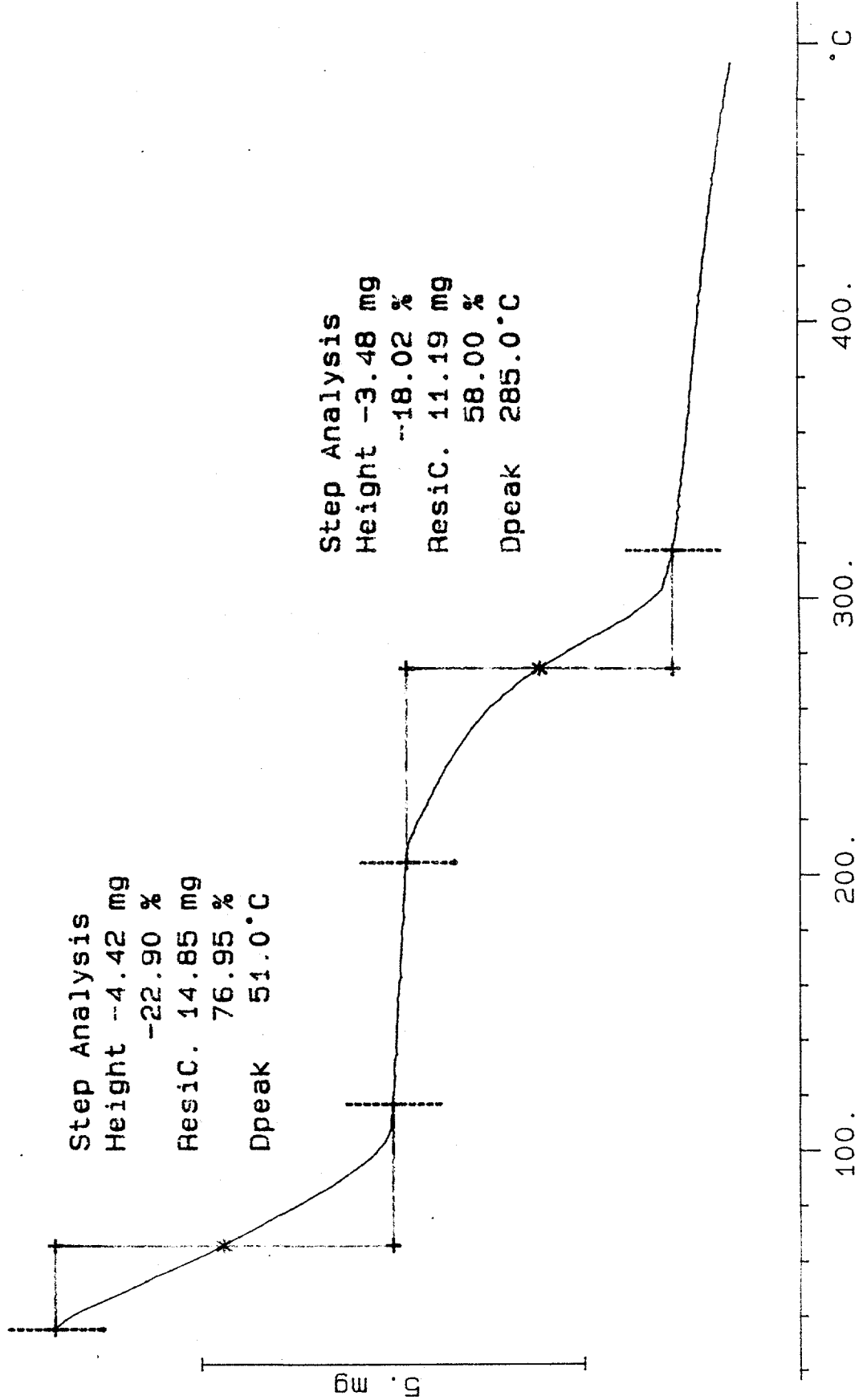
Height -3.48 mg

--18.02 %

Resid. 11.19 mg

58.00 %

Dpeak 285.0°C



LABCORE Data Entry Template for Worklist# 1050

Analyst: ADP Instrument: TGA01 Book # 42N8-A

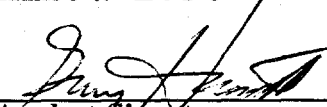
Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	59.19	59.08	N/A	%
95000052	U-202	2 SAMPLE	S95T000630	0	TGA-01	SOLID	N/A	24.11		%
95000052	U-202	3 DUP Std	S95T000630	0	TGA-01	SOLID	24.11 59.19	18.90 58.42	N/A	%
95000052	U-202	4 TRIPL	S95T000630	0	TGA-01	SOLID	24.11	19.27	N/A	%

Final page for worklist # 1050

See attached for Signatures
Analyst Signature _____ Date _____


Analyst Signature _____ Date 5/5/95 BDV

Verified by Blandina Valenzuela 5/5/95

Data Entry Comments:

5/5/95 BDV
S95T000630 produced an error message at 15.61% at 323 °C. The triple was run the next day and the chemist was able to look at the data. The data on the Standard and triple were incorrect the chemist corrected the data on the thermograms.

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# 1050

Analyst: ADP Instrument: TGA01 Book # 42N8-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>57.08</u>	<u>5/5/95</u>	<u>80V</u>
									N/A	%
95000052	U-202	4 SAMPLE	S95T000630	0	TGA-01	SOLID	<u>N/A</u>			%
95000052	U-202	5 DUP	S95T000630	0	TGA-01	SOLID			N/A	%

Final page for worklist # 1050

Anthony Purinton 5-3-95
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.

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 88 TO 92.

TGA STD 42N8-A

15.199 mg

Rate: 10.0 °C/min

File: 00053.001

TG

METTLER

03-May-95

Ident: 0.0

222-S Laboratory

Step Analysis

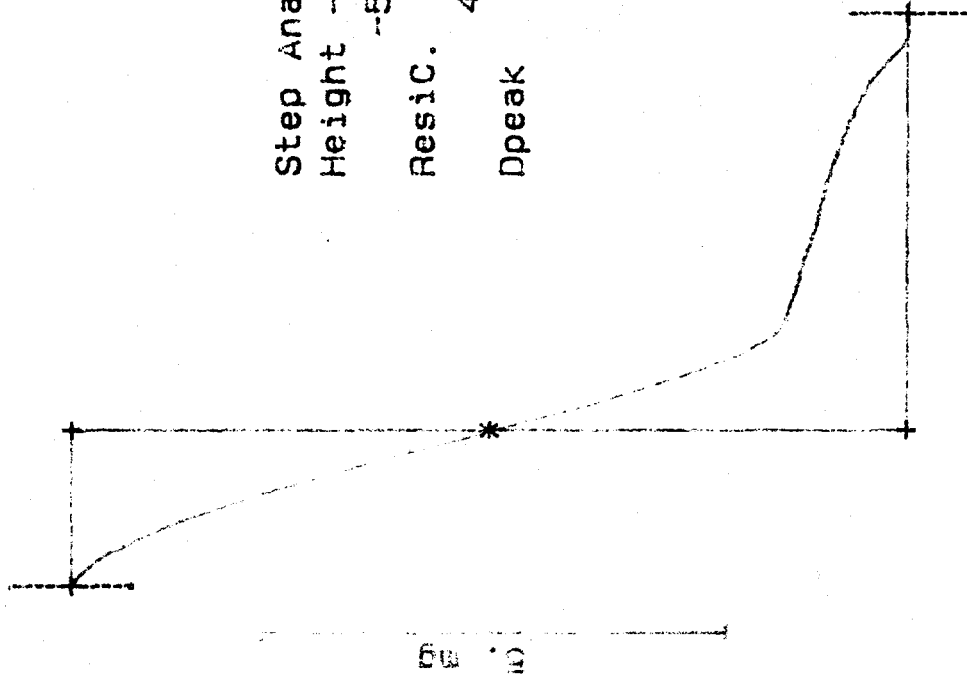
Height -8.98 mg

-59.08 %

Resid. 6.20 mg

40.80 %

Dpeak 81.0°C



100.

200.

300.

400.

W. R. P. [Signature]

BEST AVAILABLE COPY

5985000030 112

23.742 mg

Rate: 10.0 °C/min

File: 00054.001

TG

METTLER 03-May-95

Ident: 0.0 222-S Laboratory

Step Analysis

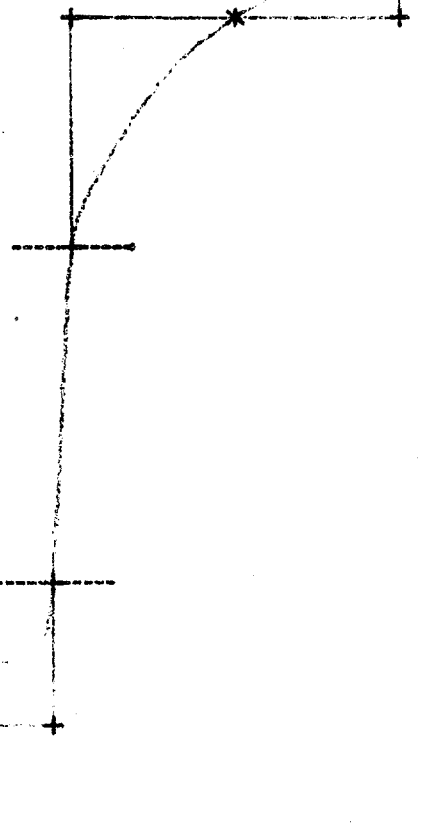
Height -5.73 mg

-24.11 %

Resid. 17.99 mg

75.76 %

Dpeak 65.0 °C



Step Analysis

Height -4.42 mg

-18.61 %

Resid. 13.30 mg

56.02 %

Dpeak 283.0 °C

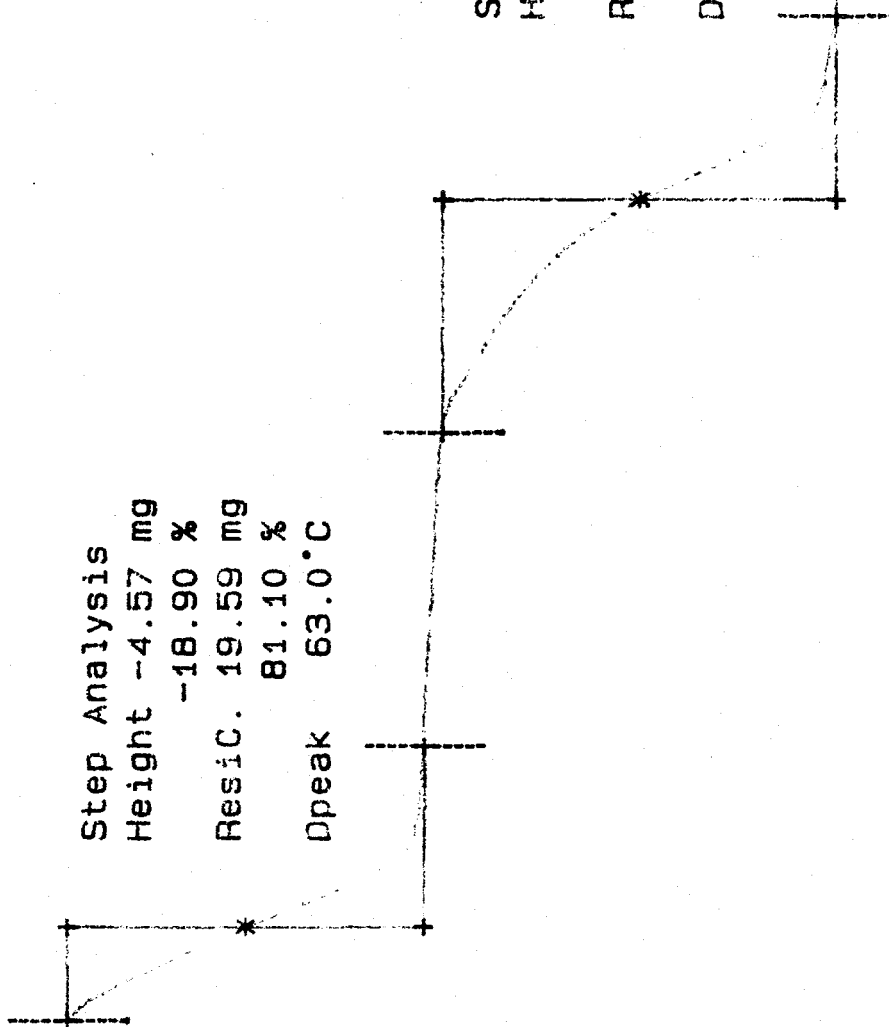
200. 300. 400.

BEST AVAILABLE COPY

200501130 3000 Hz File: 00055.001 TO: MOTTLEY 07-14-73
 24,100 20 Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

Step Analysis
 Height -4.57 mg
 -18.90 %
 Resid. 19.59 mg
 81.10 %
 Dpeak 63.0 °C

Step Analysis
 Height -5.04 mg
 -20.87 %
 Resid. 14.33 mg
 59.33 %
 Dpeak 283.0 °C



TEST AVAILABLE COPY

5/5/95
12/1

TGA STD 42N8-A

16.621 mg

Rate: 10.0 °C/min

File: 00062.001

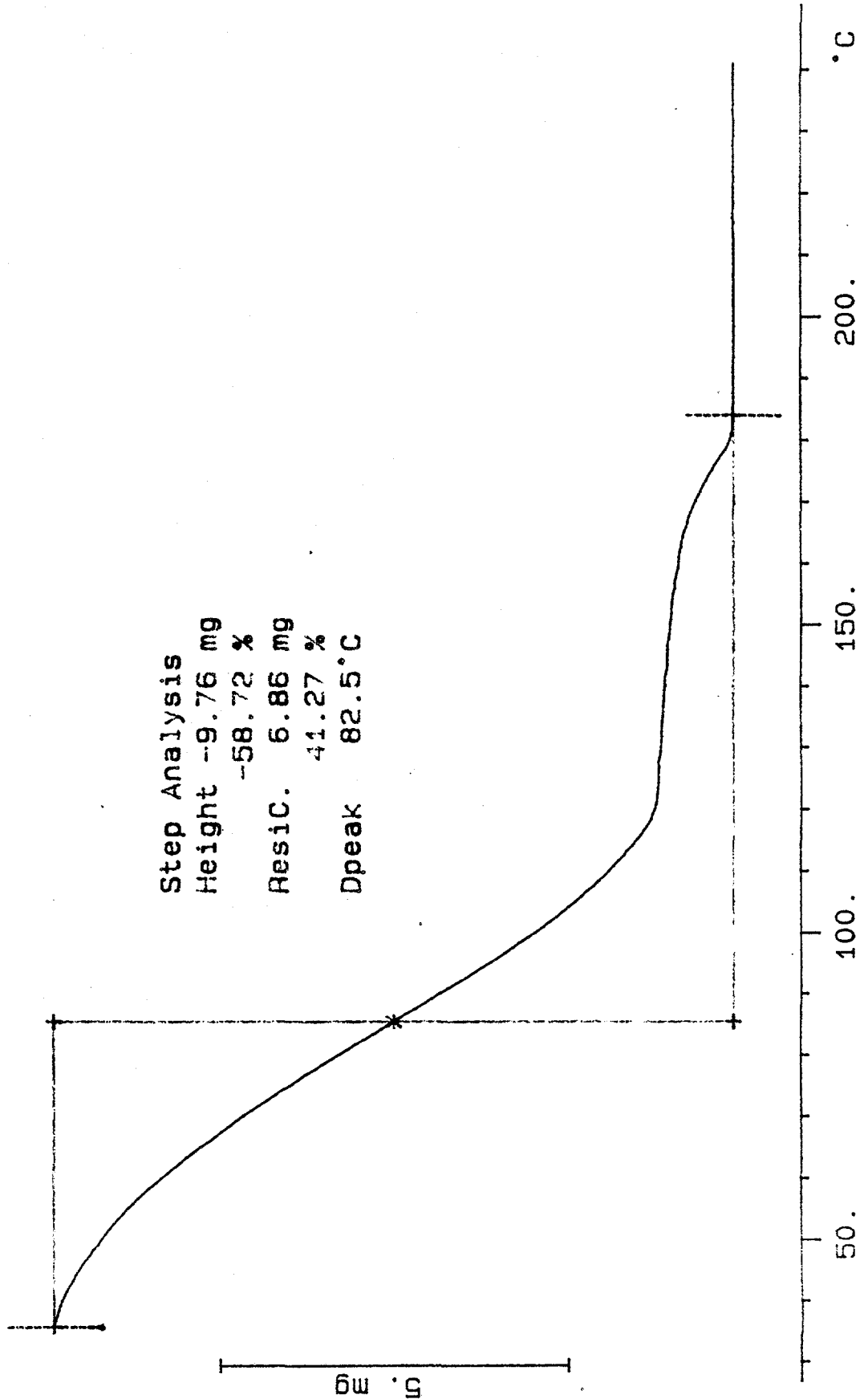
Ident: 0.0

TG METTLER

222-S Laboratory

03-May-95

Step Analysis
Height -9.76 mg
-58.72 %
ResidC. 6.86 mg
41.27 %
Dpeak 82.5 °C



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S95T000630 (TRIPL) N2

File: 00071.001 TG METTLER 05-May-95

35.831 mg

Rate: 10.0 °C/min

Ident: 0.0 222-S Laboratory

Step Analysis

Height -6.91 mg

-19.27 %

ResidC. 28.93 mg

80.73 %

Dpeak 69.0 °C

5. mg

Step Analysis

Height -6.92 mg

-19.32 %

ResidC. 21.70 mg

60.55 %

Dpeak 287.0 °C

100. 200. 300. 400. °C

LABCORE Data Entry Template for Worklist# 1051

Analyst: SMF Instrument: TGA01 Book # 42N8-A

Method: LA-560-112 Rev/Mod A - 2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.85</u>	<u>N/A</u>	%
95000052	U-202	2 SAMPLE	S95T000632	0	TGA-01	SOLID	<u>N/A</u>	<u>24.45</u>		%
95000052	U-202	3 DUP	S95T000632	0	TGA-01	SOLID	<u>24.45</u>	<u>22.24</u>	<u>N/A</u>	%

Final page for worklist # 1051

Blandina Valenzuela for SM. Fulton 5-2-95
Analyst Signature Date
5/2/95
Analyst Signature Date
Verified by Blandina Valenzuela 5-2-95

Data Entry Comments: S95T000632 - light yellow thick material w/ thin layer of
water. The sample also produced a second weight loss step of 18.78%
at 309.0°C

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.

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 94 TO 96.

TGA STD 42N8-A

14.470 mg

Rate: 10.0 °C/min

File: 00021.001

TG

METTLER

30-Apr-95

Ident: 0.0

222-S Laboratory

Step Analysis

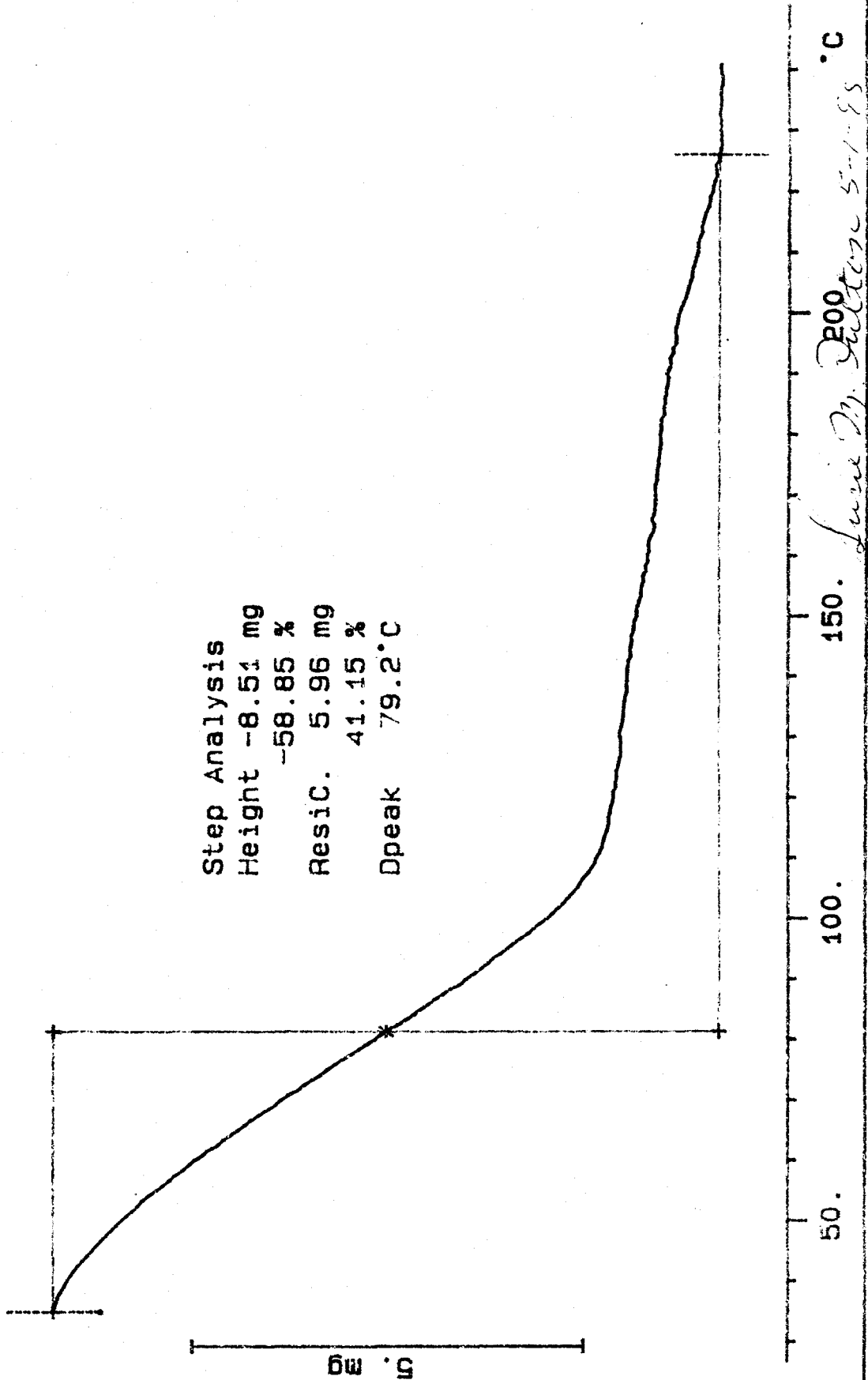
Height -8.51 mg

-58.85 %

Resid. 5.96 mg

41.15 %

Dpeak 79.2 °C



BEST AVAILABLE COPY

S95T000632 N2

35.347 mg

Rate: 10.0 °C/min

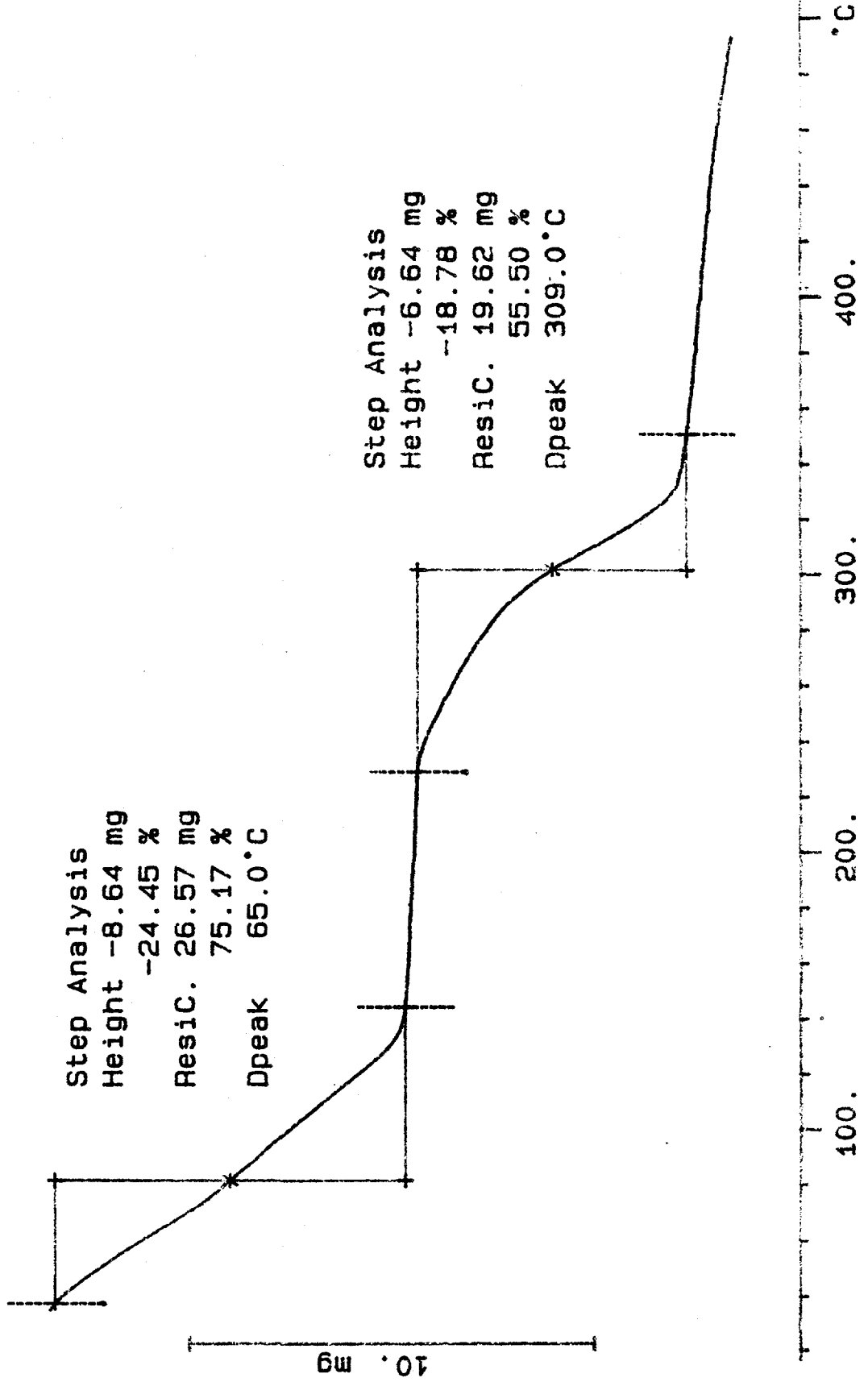
File: 00028.001

Ident: 0.0

TG METTLER

01-May-95

222-S Laboratory



Step Analysis

Height -8.64 mg

-24.45 %

Resid. 26.57 mg

75.17 %

Dpeak 65.0 °C

Step Analysis

Height -6.64 mg

-18.78 %

Resid. 19.62 mg

55.50 %

Dpeak 309.0 °C

BEST AVAILABLE COPY

S95T000632 (DUP) N2

22.493 mg

Rate: 10.0 °C/min

File: 00030.001

Ident: 0.0

TG

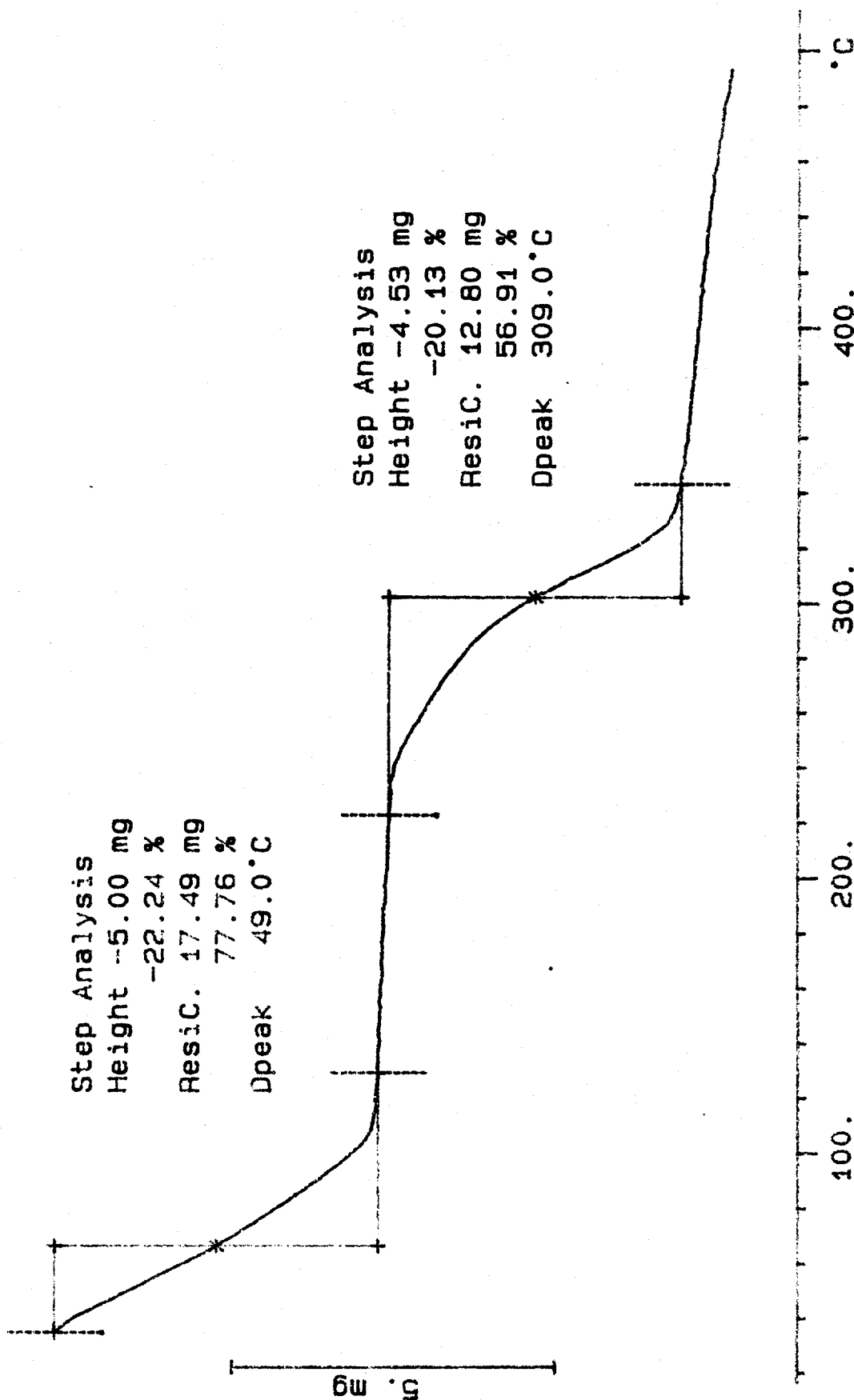
METTLER

01-May-95

222-S Laboratory

Step Analysis
Height -5.00 mg
-22.24 %
ResiC. 17.49 mg
77.76 %
Dpeak 49.0 °C

Step Analysis
Height -4.53 mg
-20.13 %
ResiC. 12.80 mg
56.91 %
Dpeak 309.0 °C



LABCORE Data Entry Template for Worklist# 1052

Analyst: SME Instrument: TGA01 Book # 42NE-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.97</u>	<u>N/A</u>	%
95000052	U-202	2 SAMPLE	S95T000643	0	TGA-01	SOLID	<u>N/A</u>	<u>36.24</u>		%
95000052	U-202	3 DUP	S95T000643	0	TGA-01	SOLID	<u>36.24</u>	<u>41.52</u>	<u>N/A</u>	%
95000052	U-202	4 TRIPL	S95T000643	0	TGA-01	SOLID	<u>36.24</u>	<u>34.81</u>	<u>N/A</u>	%

Final page for worklist # 1052

See attached for signatures 5-1-95
Analyst Signature [Signature] Date 5-1-95

Verified by
Blandina Valenzuela 5-1-95
Analyst Signature [Signature] Date 5-1-95

Data Entry Comments: S95T000643 produced a second weight loss step of 8.58%
at 303.0°C

LABCORE Data Entry Template for Worklist# 1052

Analyst: SIF Instrument: TGA01 Book # 42N8-A

Method: LA-560-112 Rev/Mod A-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID			N/A	%
95000054	U-202	2 SAMPLE	S95T000610	0	TGA-01	SOLID	N/A			%
95000054	U-202	3 DUP	S95T000610	0	TGA-01	SOLID			N/A	%
95000052	U-202	4 SAMPLE	S95T000643	0	TGA-01	SOLID	N/A			%
95000052	U-202	5 DUP	S95T000643	0	TGA-01	SOLID			N/A	%

Final page for worklist # 1052

Susie M. Fulton 5-1-95
Analyst Signature Date

Analyst Signature Date

Data Entry Comments:

S95T000610 - Archival

S95T000643 - light yellow material w/ large crystals
(> 50% crystals)

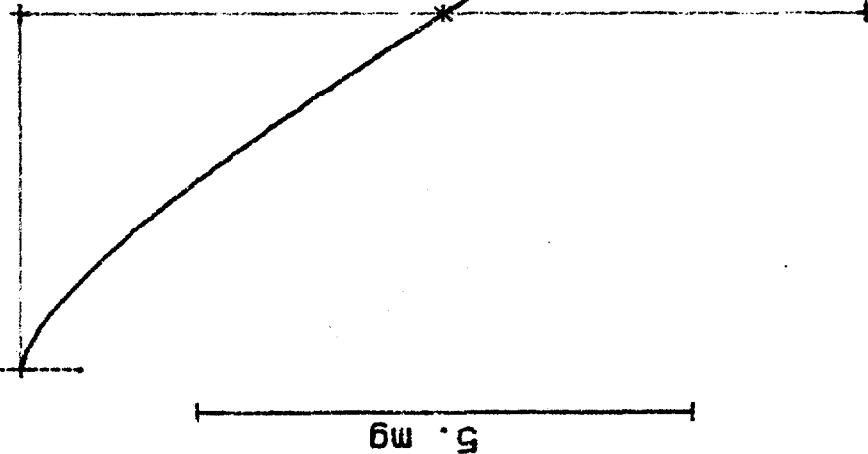
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

TEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 99 TO 102.

TGA STD 42N8-A
14.470 mg
File: 00021.001 TG METTLER 30-Apr-95
Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

Step Analysis
Height -8.53 mg
-58.97 %
Resid. 5.94 mg
41.03 %
Dpeak 79.2°C



150. 100. 50. 200. 59-95

BEST AVAILABLE COPY

S95T000643 N2

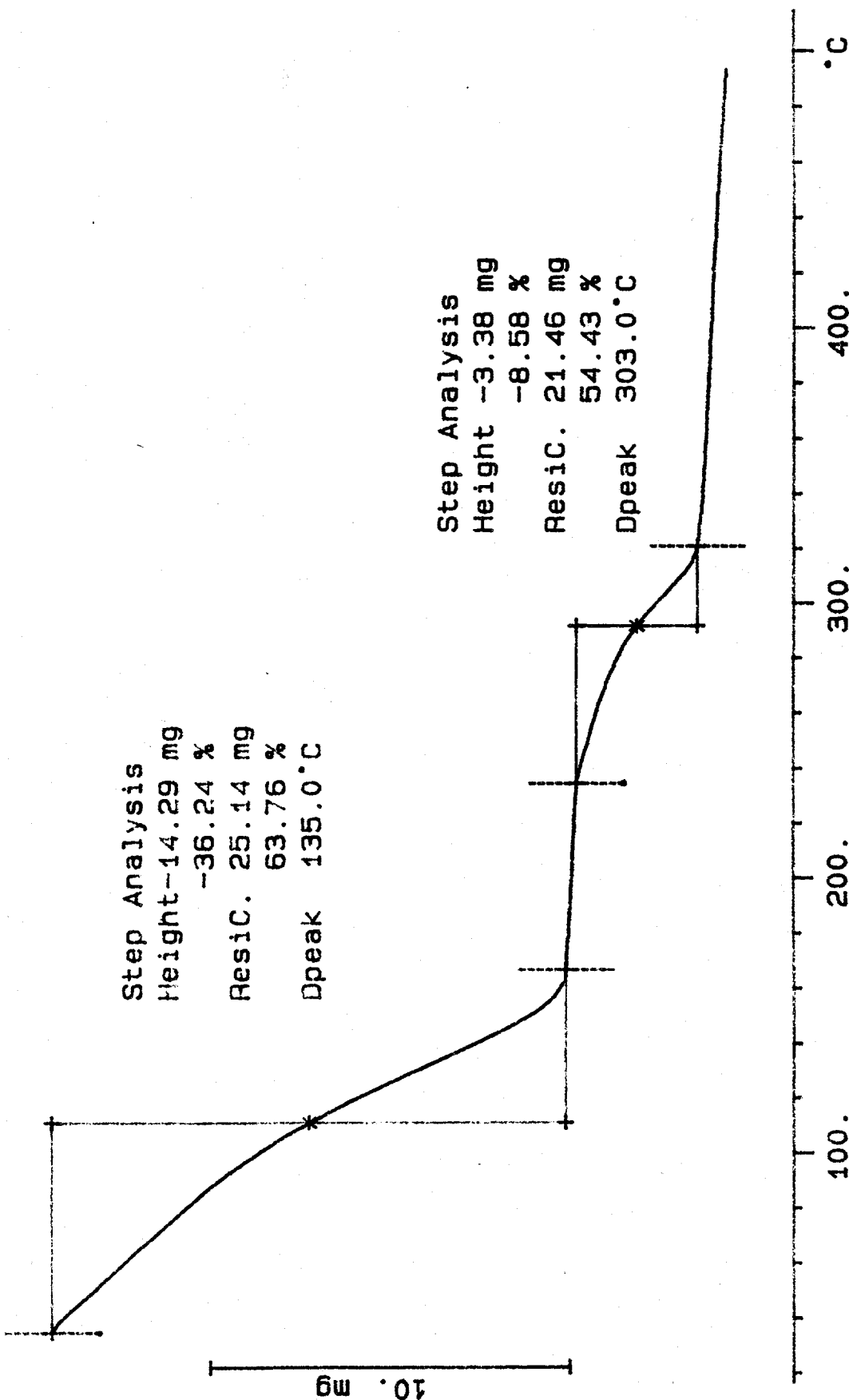
39.426 mg

File: 00023.001 TG METTLER 30-Apr-95

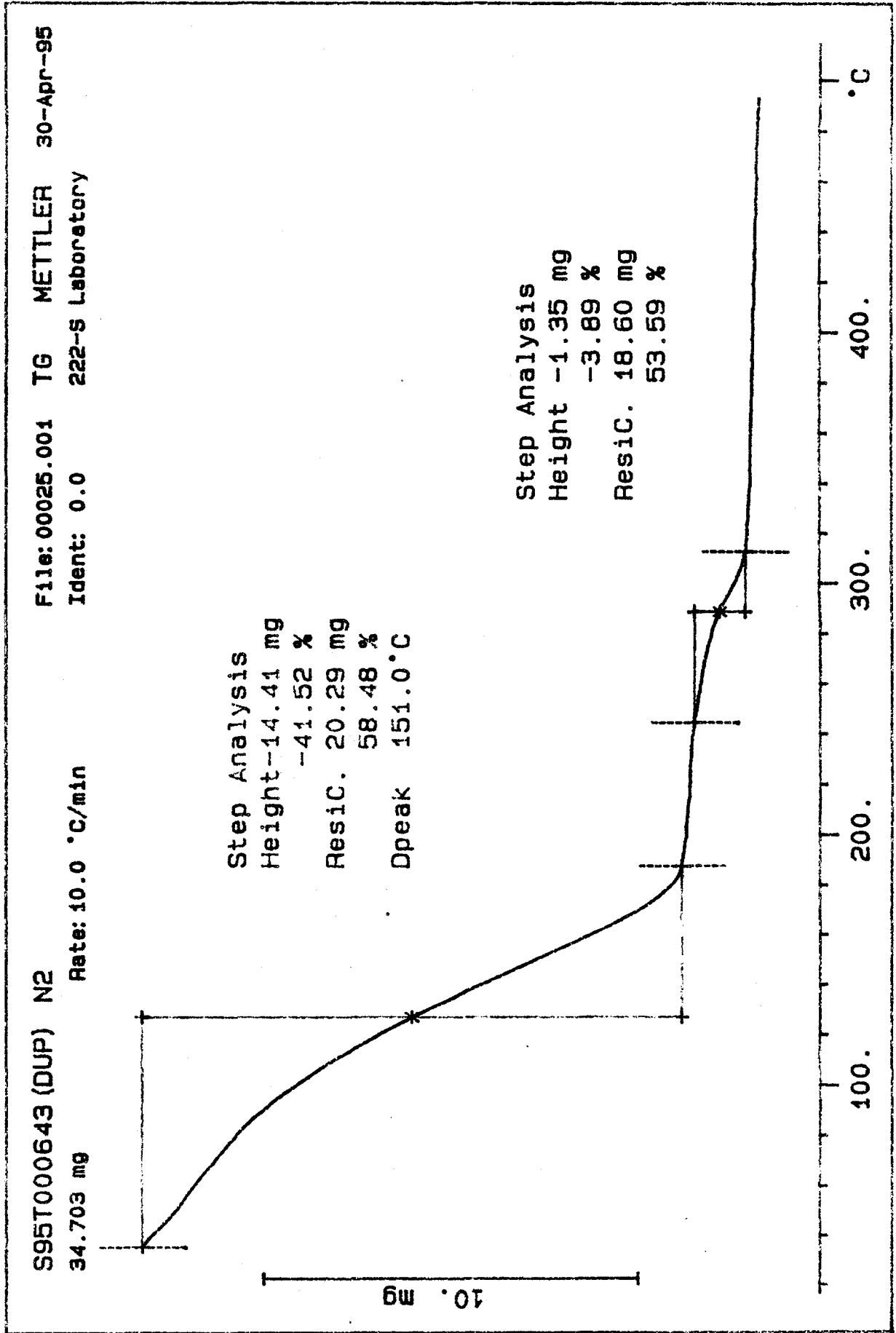
Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

Step Analysis
Height-14.29 mg
-36.24 %
Resid. 25.14 mg
63.76 %
Dpeak 135.0 °C

Step Analysis
Height -3.38 mg
-8.58 %
Resid. 21.46 mg
54.43 %
Dpeak 303.0 °C

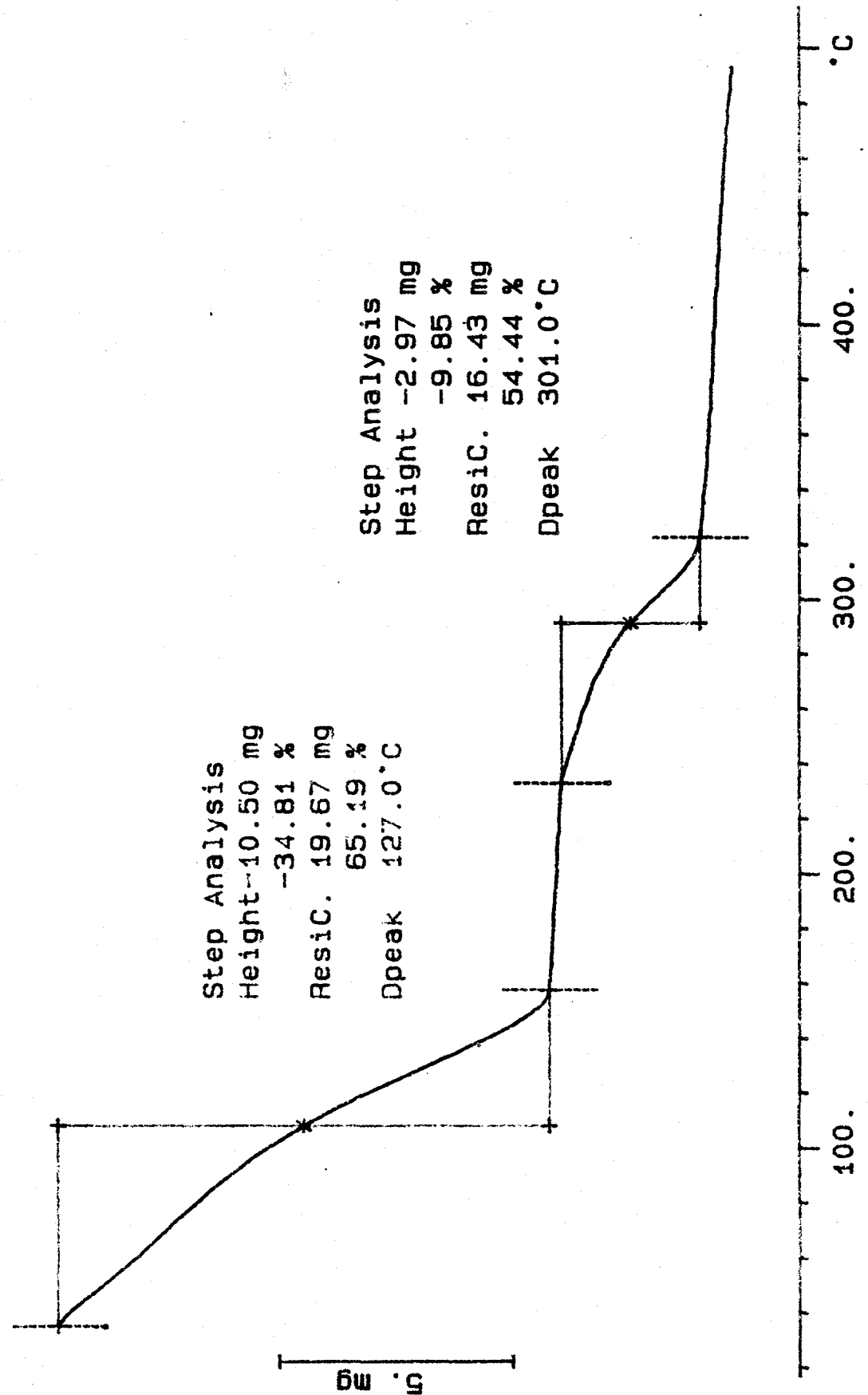


BEST AVAILABLE COPY



BEST AVAILABLE COPY

S95T000643 (TRIP) N2
 30.171 mg
 Rate: 10.0 °C/min
 File: 00026.001 TG METTLER 01-May-95
 Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist# 1053

Analyst: DVS Instrument: TGA01 Book # 42 N8-A

Method: LA-560-112 Rev/Mod B-2

Worklist Comment: Please run U-202 TGA under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	SOLID	<u>59.19</u>	<u>58.40</u>	<u>N/A</u>	%
95000052	U-202	2 SAMPLE	S95T000644	0	TGA-01	SOLID	<u>N/A</u>	<u>24.43</u>		%
95000052	U-202	3 DUP	S95T000644	0	TGA-01	SOLID	<u>24.43</u>	<u>23.96</u>	<u>N/A</u>	%

Final page for worklist # 1053

Randy Smith 4-25-95
Analyst Signature Date

R. Jones 4-25-95
Analyst Signature Date

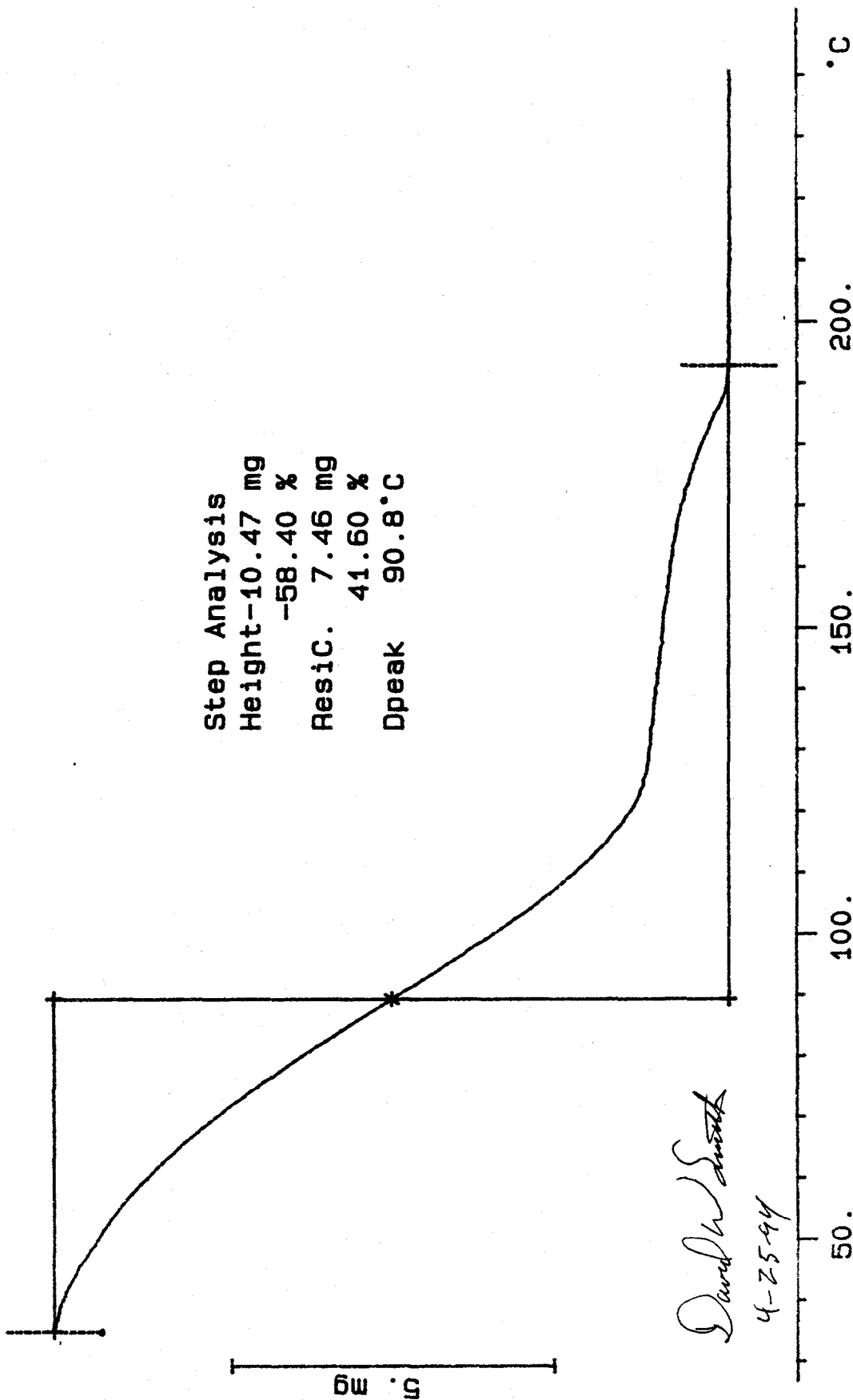
Verified by Blandina Valenzuela 4/25/95

Data Entry Comments: S95T000644 produced a second weight loss step of 17.61%
at 227°C

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 104 TO 106. BEST AVAILABLE COPY

TGA STD 42N8-A
17.926 mg
File: 00029.001 TG METTLER 24-Apr-95
Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

Step Analysis
Height-10.47 mg
-58.40 %
Resid. 7.46 mg
41.60 %
Dpeak 90.8 °C



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S95T000644 N2

39.619 mg

Rate: 10.0 °C/min

File: 00031.001

TG METTLER

24-Apr-95

Ident: 0.0 222-S Laboratory

Step Analysis

Height -9.68 mg

-24.43 %

Resid. 29.94 mg

75.57 %

Dpeak 83.0 °C

10. mg

Step Analysis

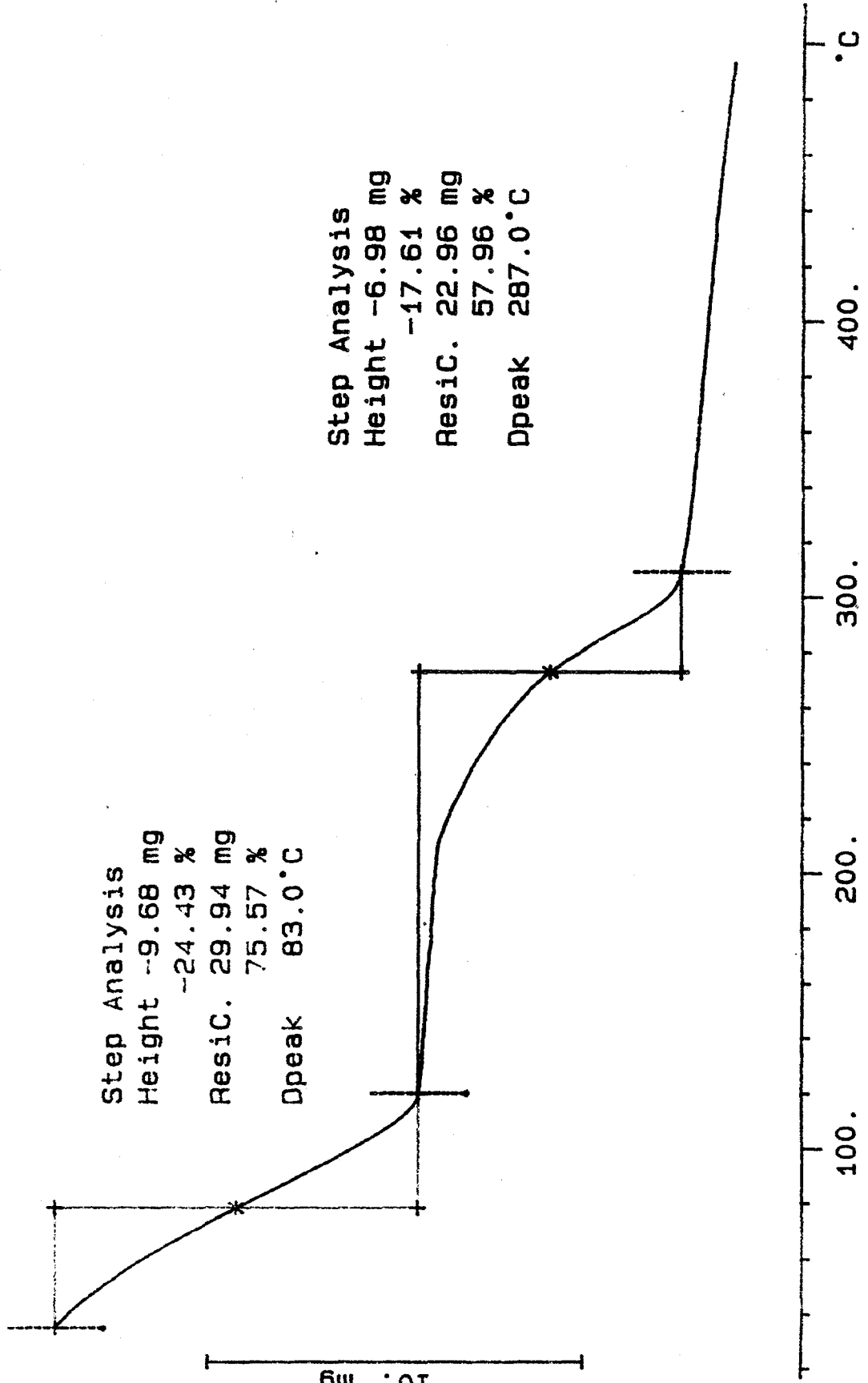
Height -6.98 mg

-17.61 %

Resid. 22.96 mg

57.96 %

Dpeak 287.0 °C



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S95T000644 (DUP) N2

35.531 mg

Rate: 10.0 °C/min

File: 00033.001

TG METTLER

24-Apr-95

Ident: 0.0 222-S Laboratory

Step Analysis

Height -8.51 mg

-23.96 %

Resid: 27.02 mg

76.04 %

Step Analysis

Height -6.43 mg

-18.11 %

Resid: 20.58 mg

57.93 %

Dpeak 287.0 °C

