

This document was too large to scan as a whole document, therefore it required breaking into smaller sections.

DOCUMENT NUMBER: SD-LM-DP-156

SECTION 2 OF 3

TITLE: 45-Day Safety Screening Results
for Tank 241-S-107 Push mode cores
105, 110, & 111

DATE: 12-12-95

ORIGINATOR: Young AE

CO: _____

RECIPIENT: _____

CO: _____

REFERENCES: _____

LABCORE Data Entry Template for Worklist#

2566

Analyst:

HNP

Instrument: DSC0

Book # 12N141A

Method: LA-514-113 Rev/Mod

00

Worklist Comment: Please run S-107 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-013	SOLID			N/A	Joules/g
95000138	S-107	2 SAMPLE	S95T002526	0	DSC-013	SOLID	N/A			Joules/g
95000138	S-107	3 DUP	S95T002526	0	DSC-013	SOLID			N/A	Joules/g
95000138	S-107	4 SAMPLE	S95T002527	0	DSC-013	SOLID	N/A			Joules/g
95000138	S-107	5 DUP	S95T002527	0	DSC-013	SOLID			N/A	Joules/g

Final page for worklist #

2566

Anthony Purm 10-15-95
Analyst Signature Date

Analyst Signature Date

Anthony Purm 10-15-95

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

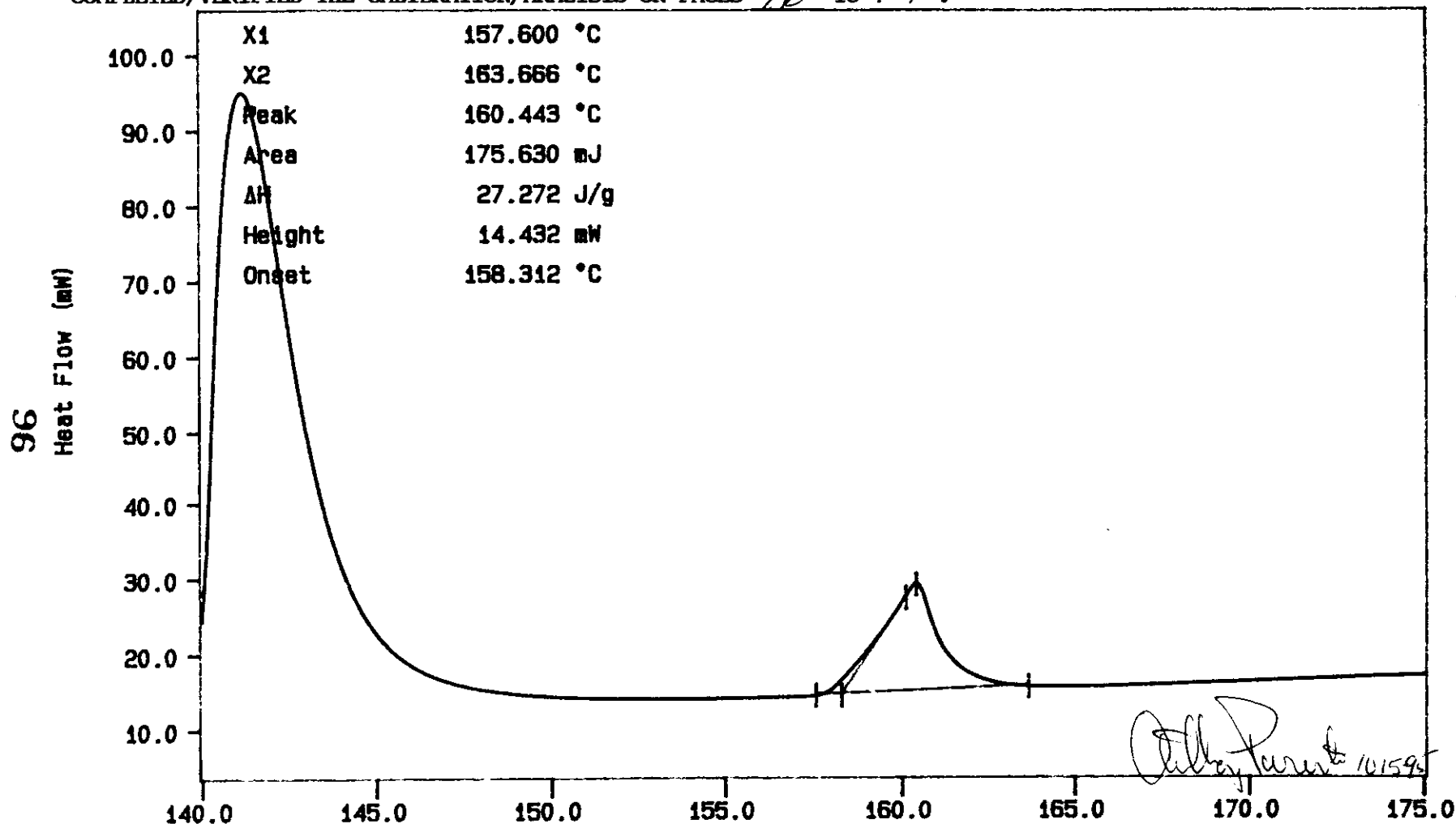
File info: IND101503 Sun Oct 15 18:51:45 1995

Sample Weight: 6.440 mg

Indium at 10C/min

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 96 TO 101.

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N2 exotherm down

TEMP: 140.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 175.0 °C

AD PURINTIN
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Oct 15 18:53:19 1995

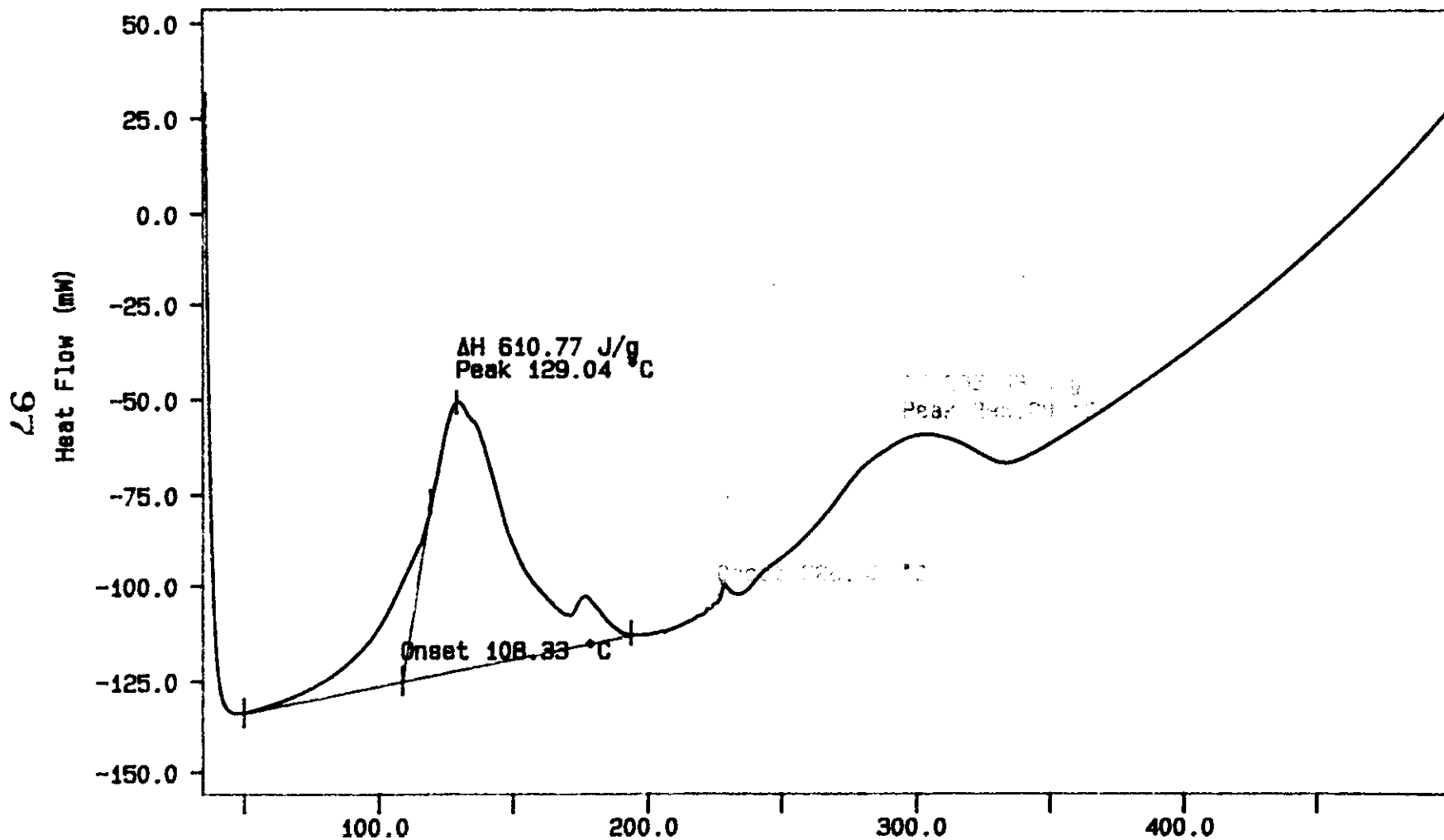
Curve 1: DSC

File info: SAM101504 Sun Oct 15 19:51:19 1995

Sample Weight: 29.500 mg

S95T002526 SAM AT 10C/MIN

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WHC-SD-WM-DP-156, REV 0

exotherm down, N2 purge gas

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

AD PURINTIN
PERKIN-ELMER
7 Series Thermal Analysis System
Sun Oct 15 20:41:51 1995

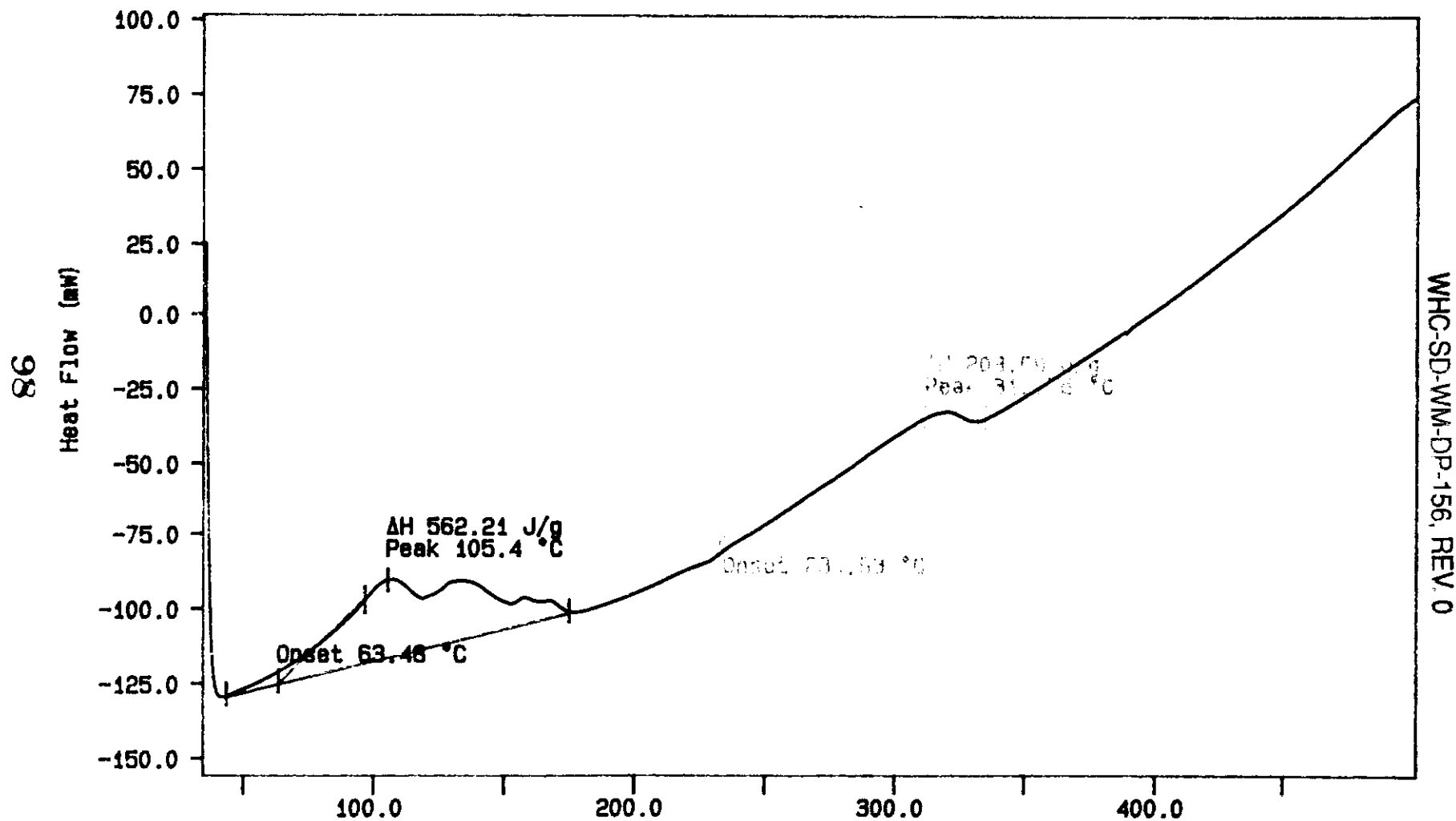
Curve 1: DSC

File info: SAM101506 Sun Oct 15 22:32:51 1995

Sample Weight: 16.880 mg

S95T002526 DUP 10C/MIN

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exotherm down, N2 purge gas

TEMP: 25.0 °C TIME: 0.0 min RATE: 10.0 °C/min

Temperature (°C)

AD PURINTIN

PERKIN-ELMER

7 Series Thermal Analysis System

Sun Oct 15 22:35:02 1995

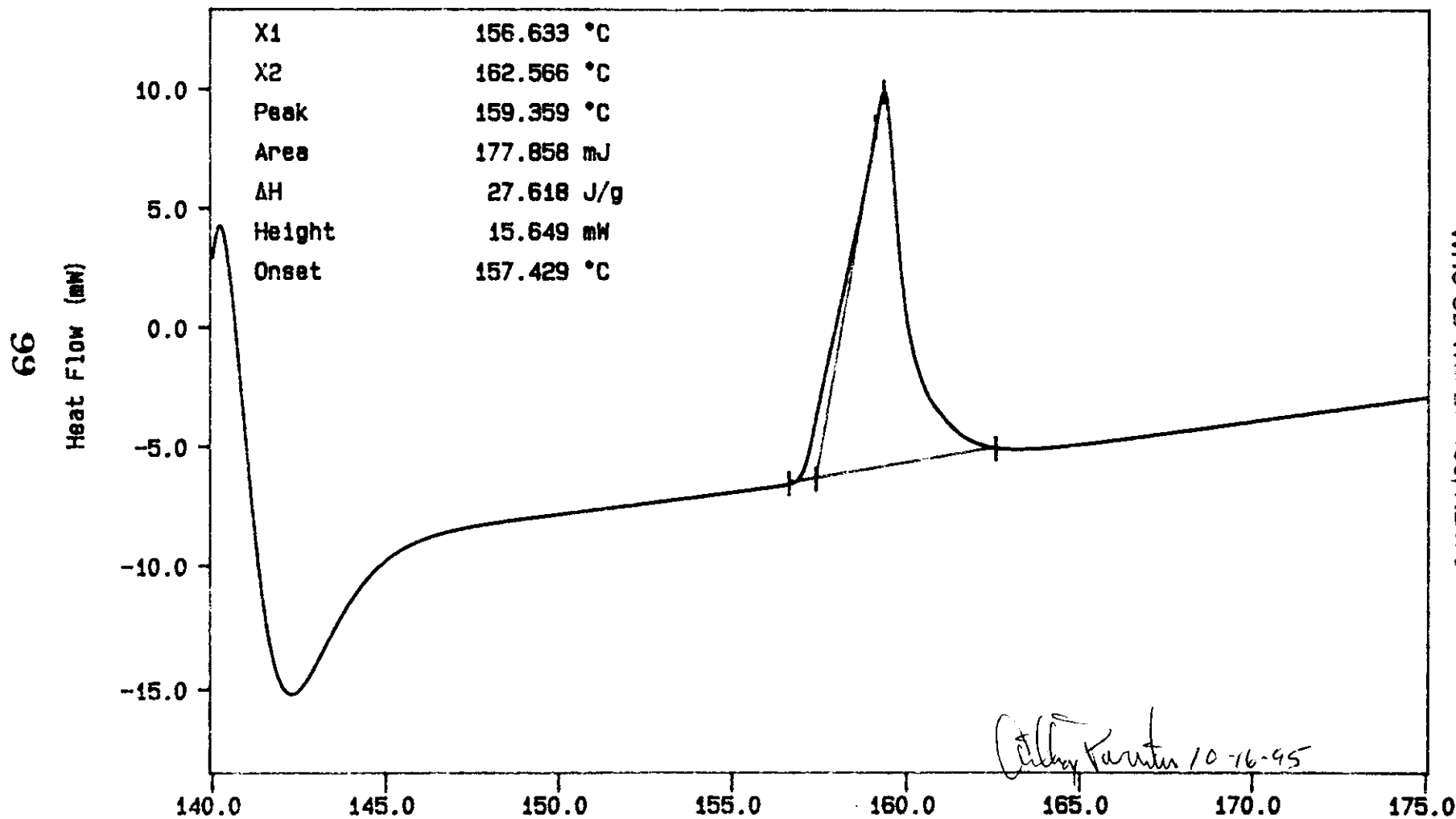
Curve 1: DSC

File info: 101601 Mon Oct 16 15:51:20 1995

Sample Weight: 6.440 mg

Indium at 10C/min

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N2 exotherm down

TEMP: 140.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 175.0 °C

Temperature (°C)

AD PURINTIN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Oct 16 16:11:33 1995

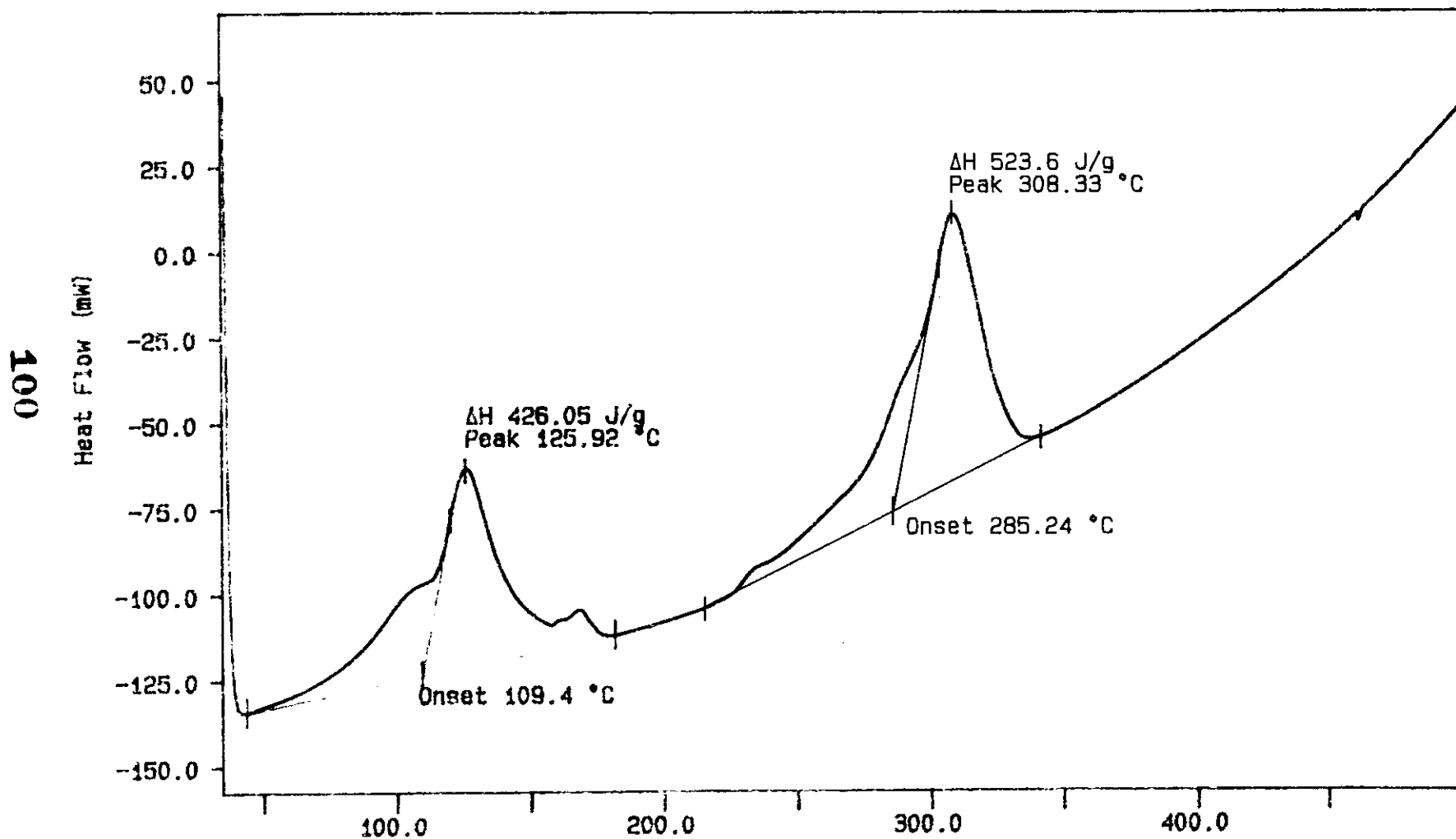
Curve 1: DSC

File info: SAM101602 Mon Oct 16 17:33:06 1995

Sample Weight: 31.100 mg

S95T002527 SAM 10C/MIN

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WHC-SD-WM-DP-156, REV. 0

exotherm down, N2 purge gas
TEMP: 30.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 500.0 °C

Temperature (°C)

AD PURINTIN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Oct 17 08:54:17 1995

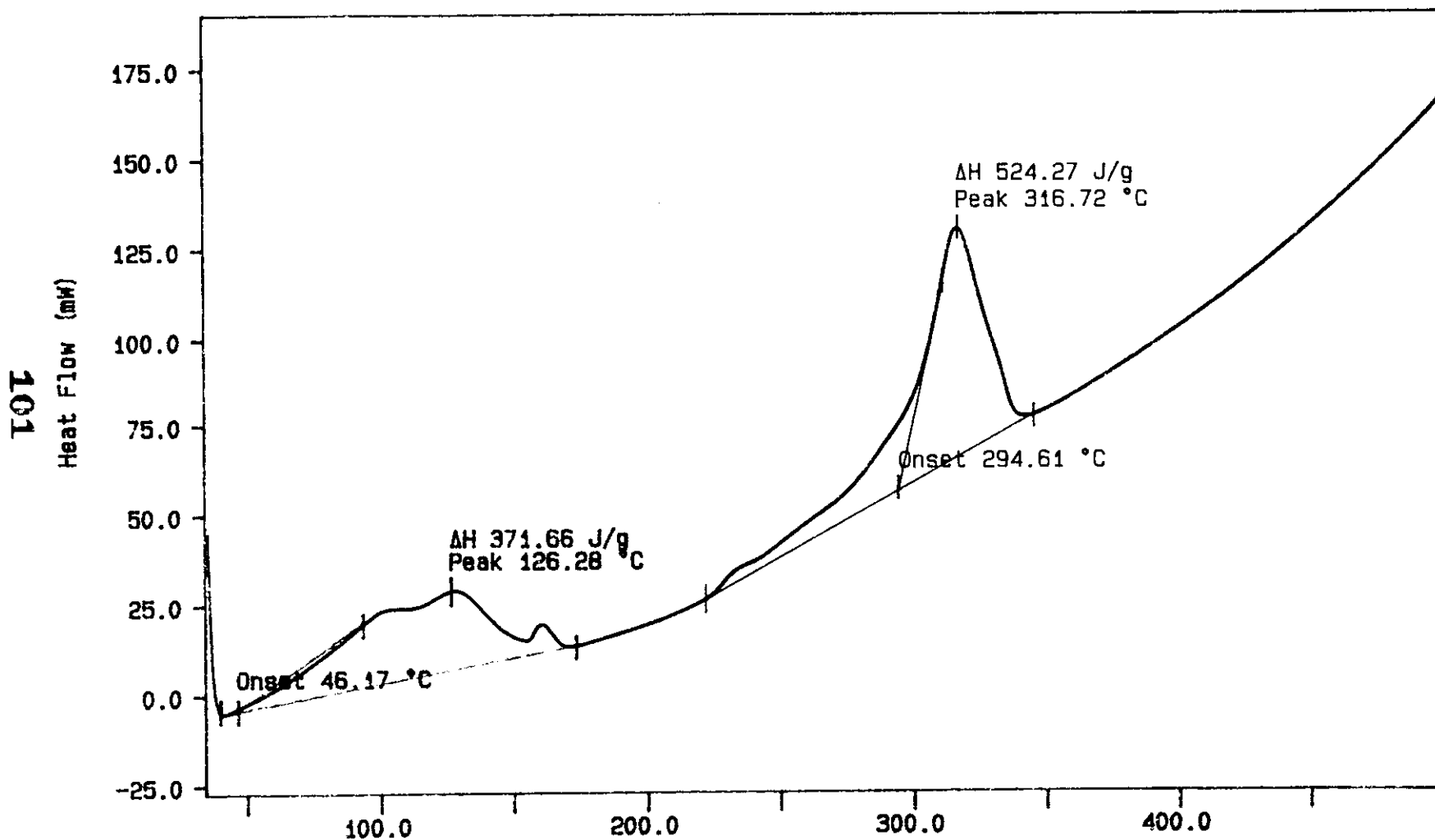
Curve 1: DSC

File info: SAM101603 Mon Oct 16 19:28:29 1995

Sample Weight: 23.520 mg

S95T002527 DUP 10C/MIN

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WHC-SD-WM-DP-156, REV.0

exotherm down, N2 purge gas

TEMP1: 50.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C)

AD PURINTIN
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Oct 16 19:31:31 1995

LABCORE Data Entry Template for Worklist#

2568

Analyst:

ADP

Instrument: DSC0

1

Book # 12 N14A

Method: LA-514-113 Rev/Mod

CO

Worklist Comment: Please run S-107 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>29.4</u>	<u>N/A</u>	Joules/g
95000138	S-107	2 SAMPLE	S95T002528	0		DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000138	S-107	3 DUP	S95T002528	0		DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000138	S-107	4 SAMPLE	S95T002529	0		DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000138	S-107	5 DUP	S95T002529	0		DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist #

2568


Analyst Signature

10-16-95
Date


Analyst Signature

10/17/95
Date

Verified by Blandina Valenzuela
10-18-95

S95T002528 produced three endotherms; one at 132.8°C with a delta H of 701.2 J/g, second at 213.2°C with a delta H of 2.2 J/g, third at 432.8°C with a delta H of 32.4 J/g.

Data Entry Comments:

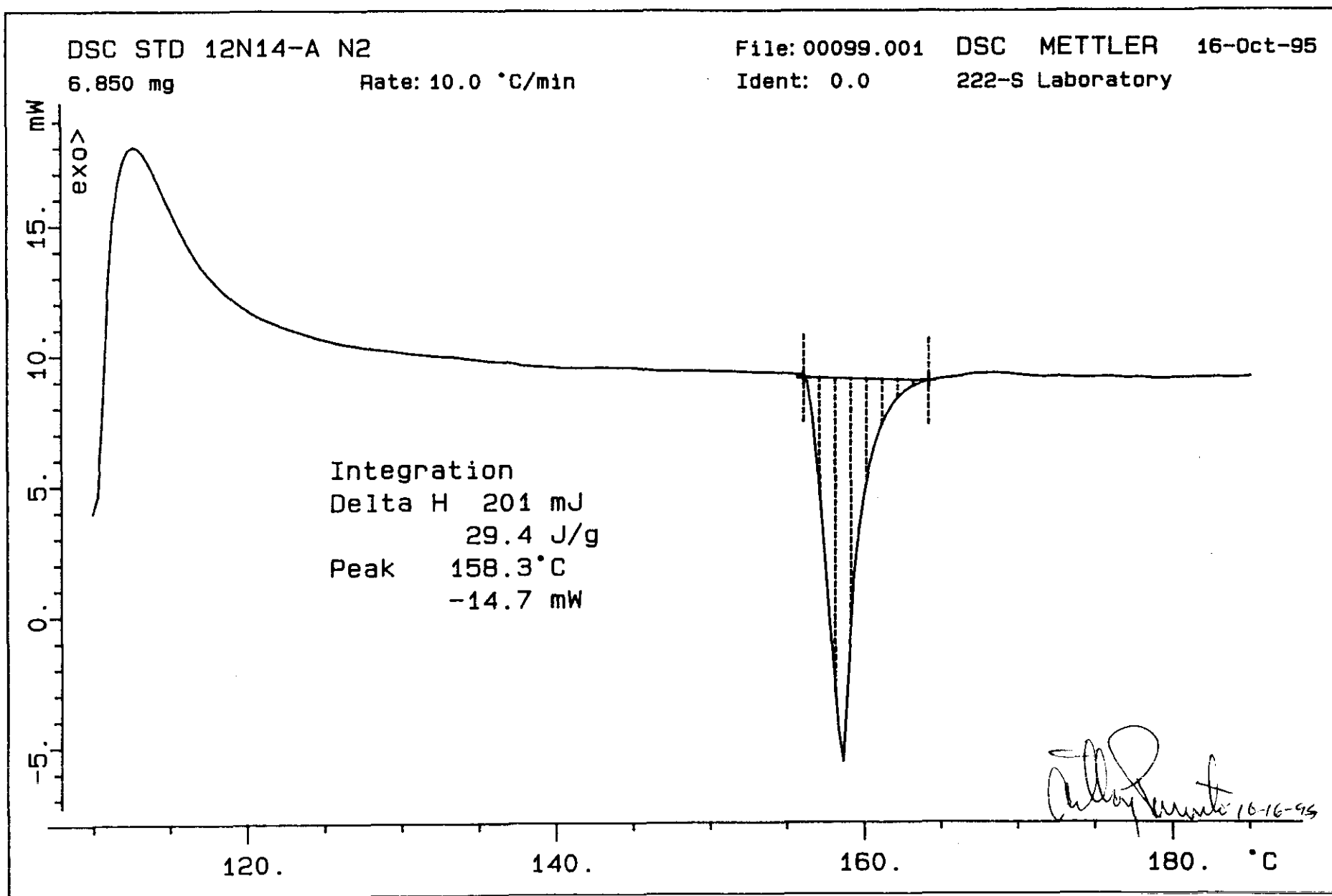
S95T002529 produced three endotherms; one at 128.6°C with a delta H of 828.1 J/g, second at 219.3°C with a delta H of 5.5 J/g, and third at 455.0°C with a delta H of 33.4 J/g.

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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 103 TO 107.

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103



WHC-SD-WM-DP-156, REV 0

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S95T002528 SAM N2

30.590 mg

Rate: 10.0 °C/min

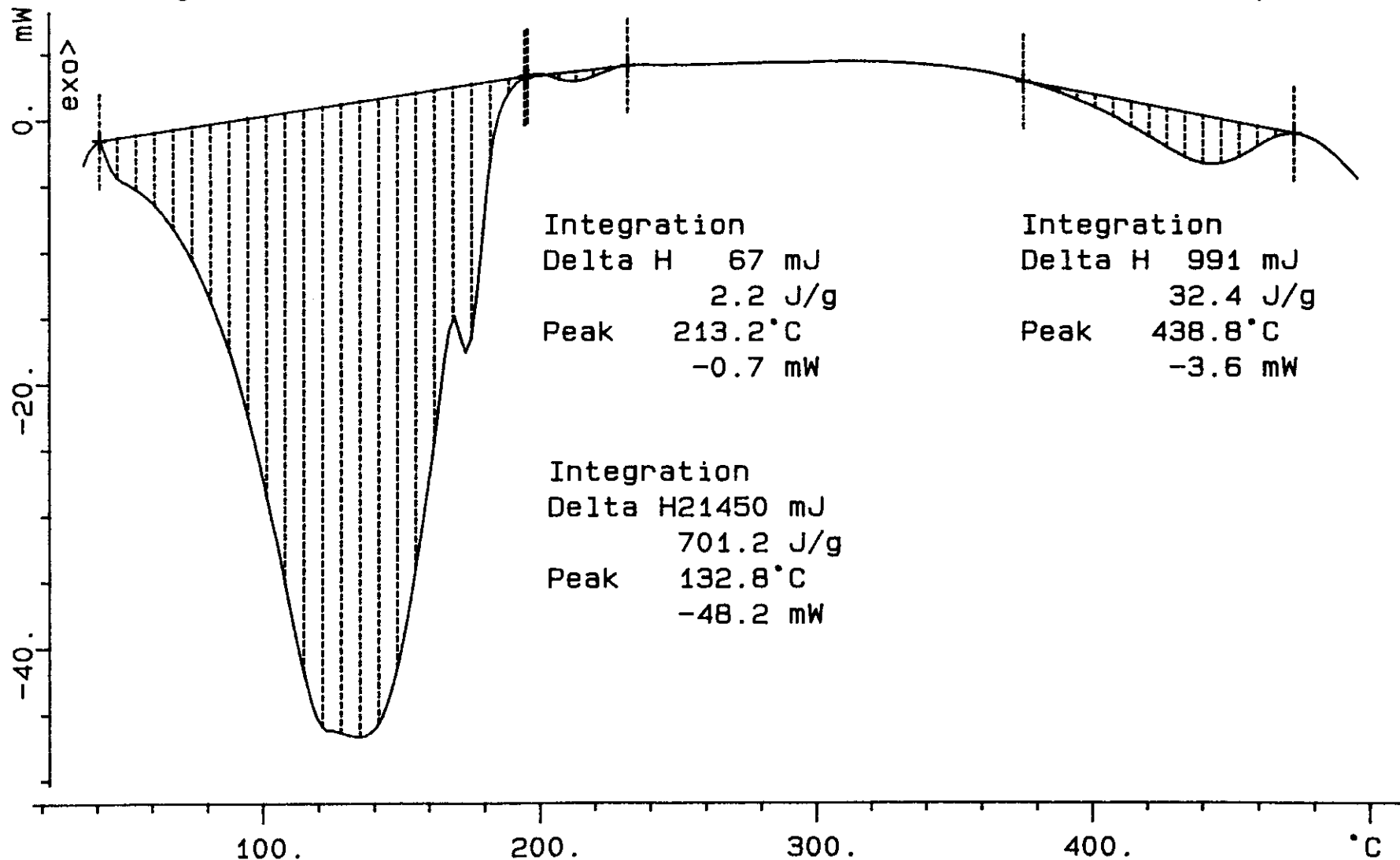
File: 00101.001

DSC METTLER

16-Oct-95

Ident: 0.0

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105

S95T002528 DUP N2

18.854 mg

Rate: 10.0 °C/min

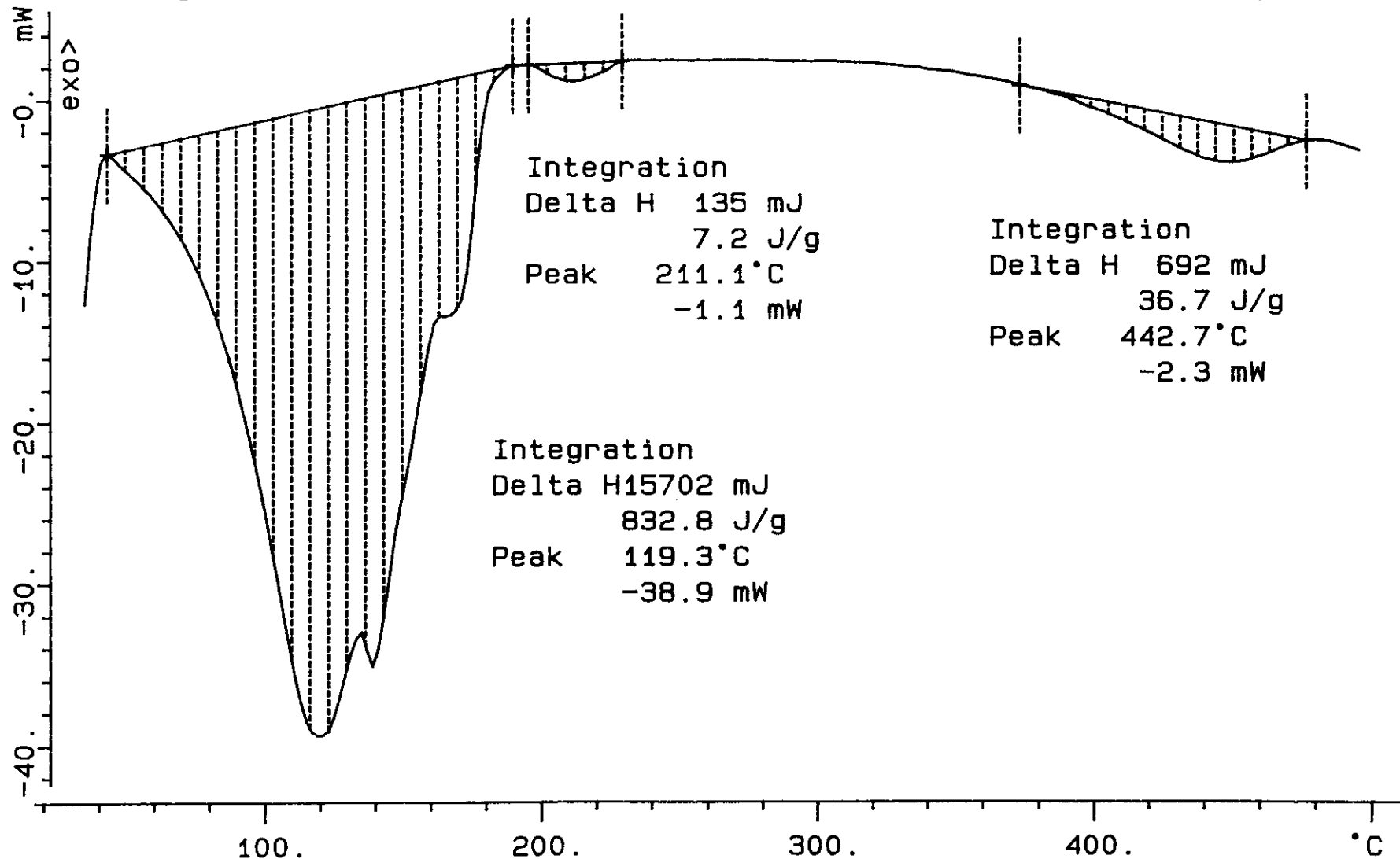
File: 00058.001

DSC METTLER

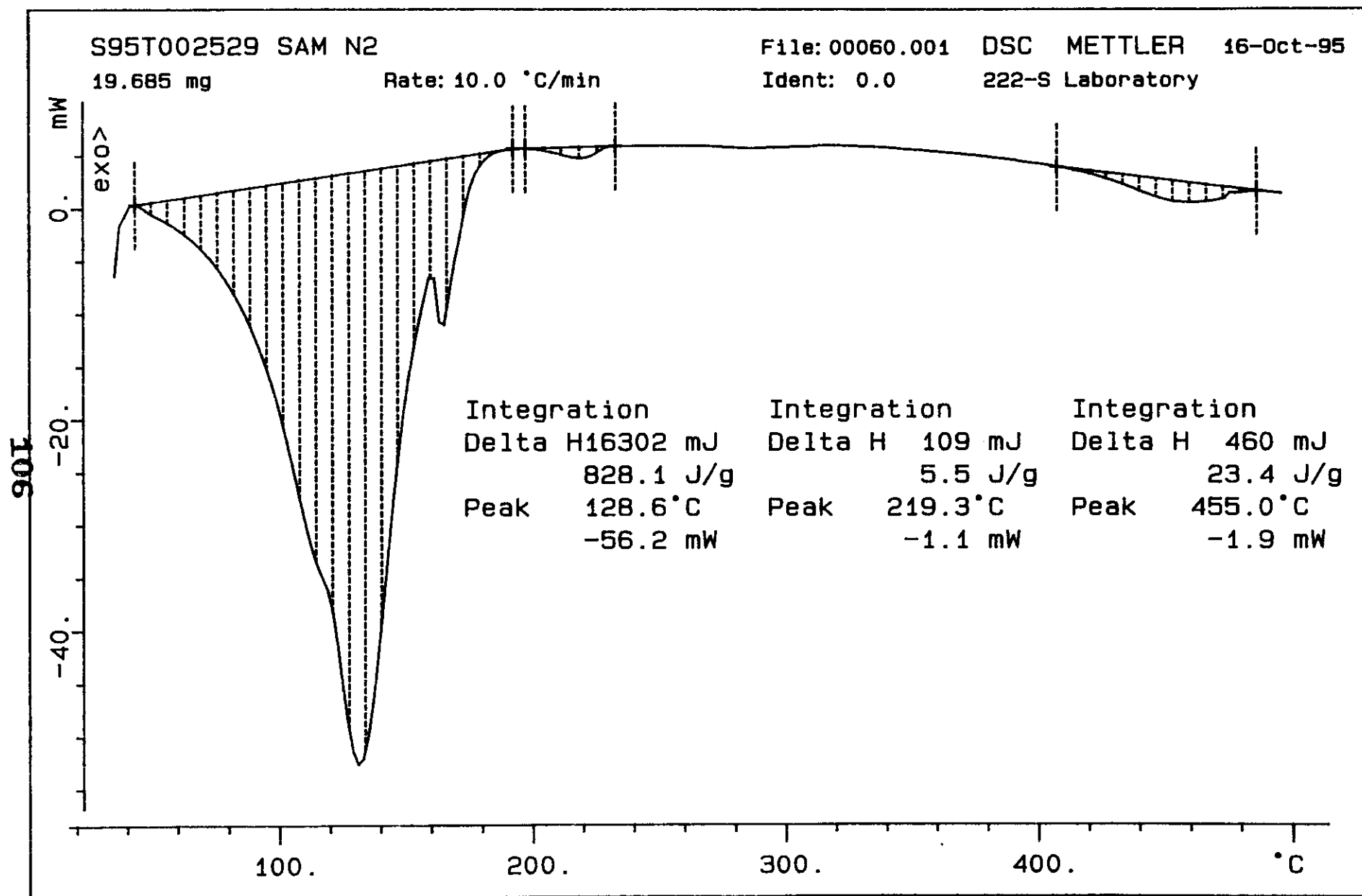
16-Oct-95

Ident: 0.0

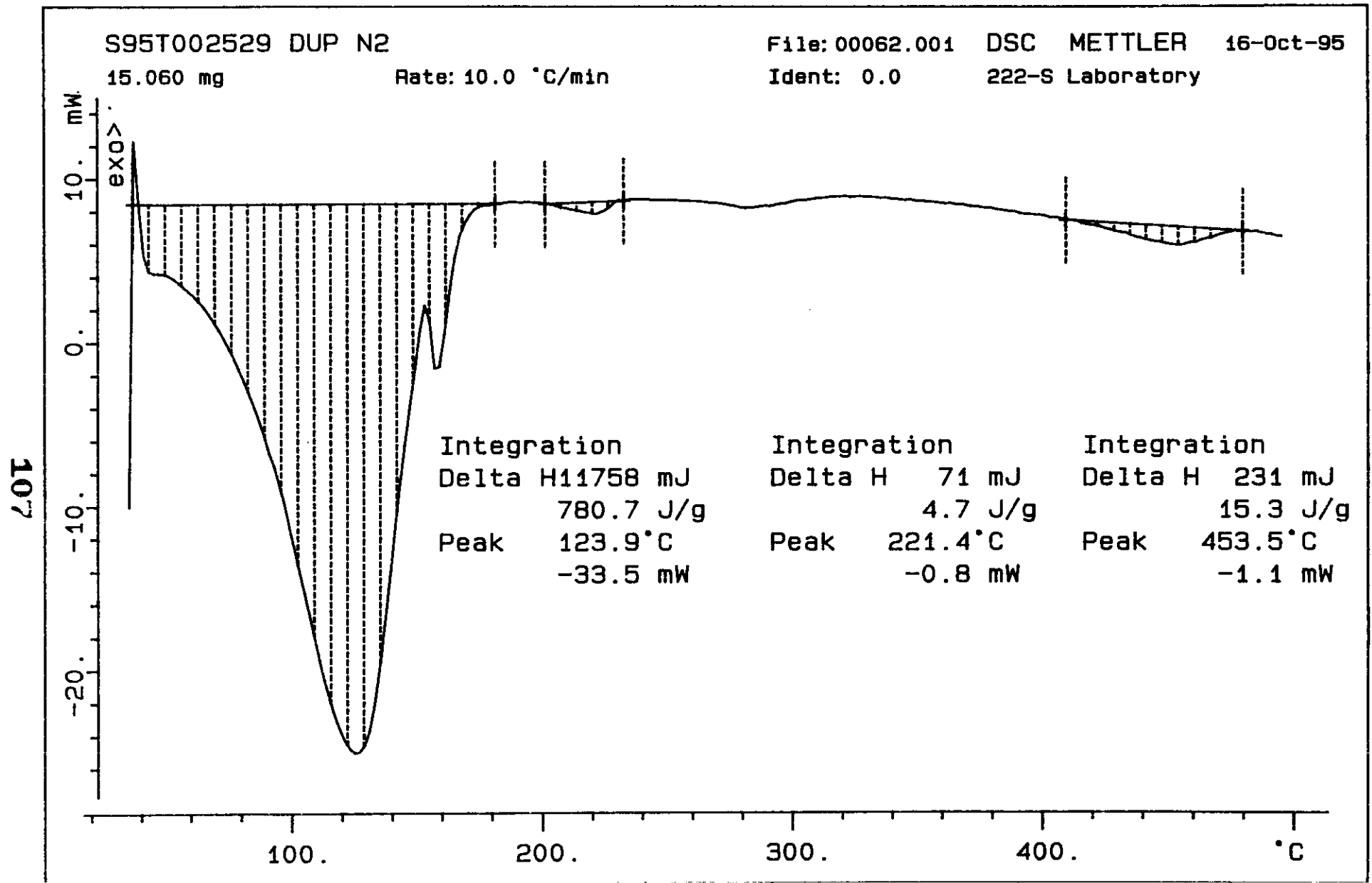
222-S Laboratory



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BEST AVAILABLE COPY



LABCORE Data Entry Template for Worklist#

2591

Analyst: DGD Instrument: DSC0 1 Book # 12N14A

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

Worklist Comment: Please run S-107 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	29.9	N/A	Joules/g
95000138	S-107	2 SAMPLE	S95T002530	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000138	S-107	3 DUP	S95T002530	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g
95000138	S-107	4 SAMPLE	S95T002531	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000138	S-107	5 DUP	S95T002531	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2591

David C. Durham 10-14-95
Analyst Signature Date

Tom D. M. G. 10/17/95
Analyst Signature Date

Verified by Blandina Valenzuela
10-18-95

S95T002530 produced two endotherms, one at 133.6°C with a delta H of 964.5 J/g and second at 439.4°C with a delta H of 44.1 J/g

Data Entry Comments: S95T002531 produced three endotherms; one at 127.5°C with a delta H of 709.9 J/g, second at 213.2°C with a delta H of 3.4 J/g, third at 436.9°C with a delta H of 29.1 J/g

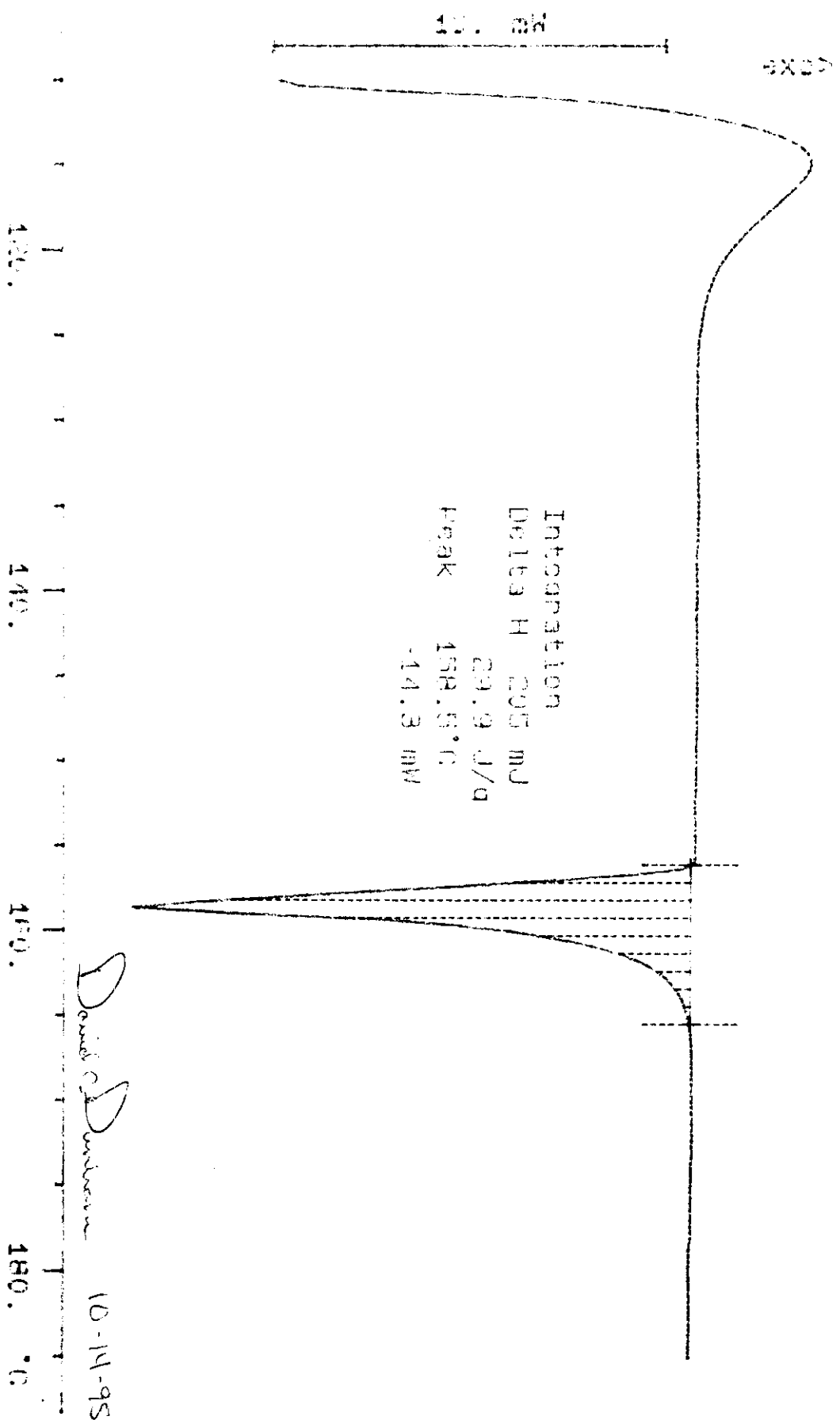
Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 102 TO 113.

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DSC STD 12N14A File: 00024.001 DSC METTLER 14-Oct-95
0.970 mg Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory

Integration
Delta H 205 mJ
29.9 J/g
Peak 158.5 °C
-14.3 mW



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305TC0000330 CAM NE

Rate: 10.0 °C/min

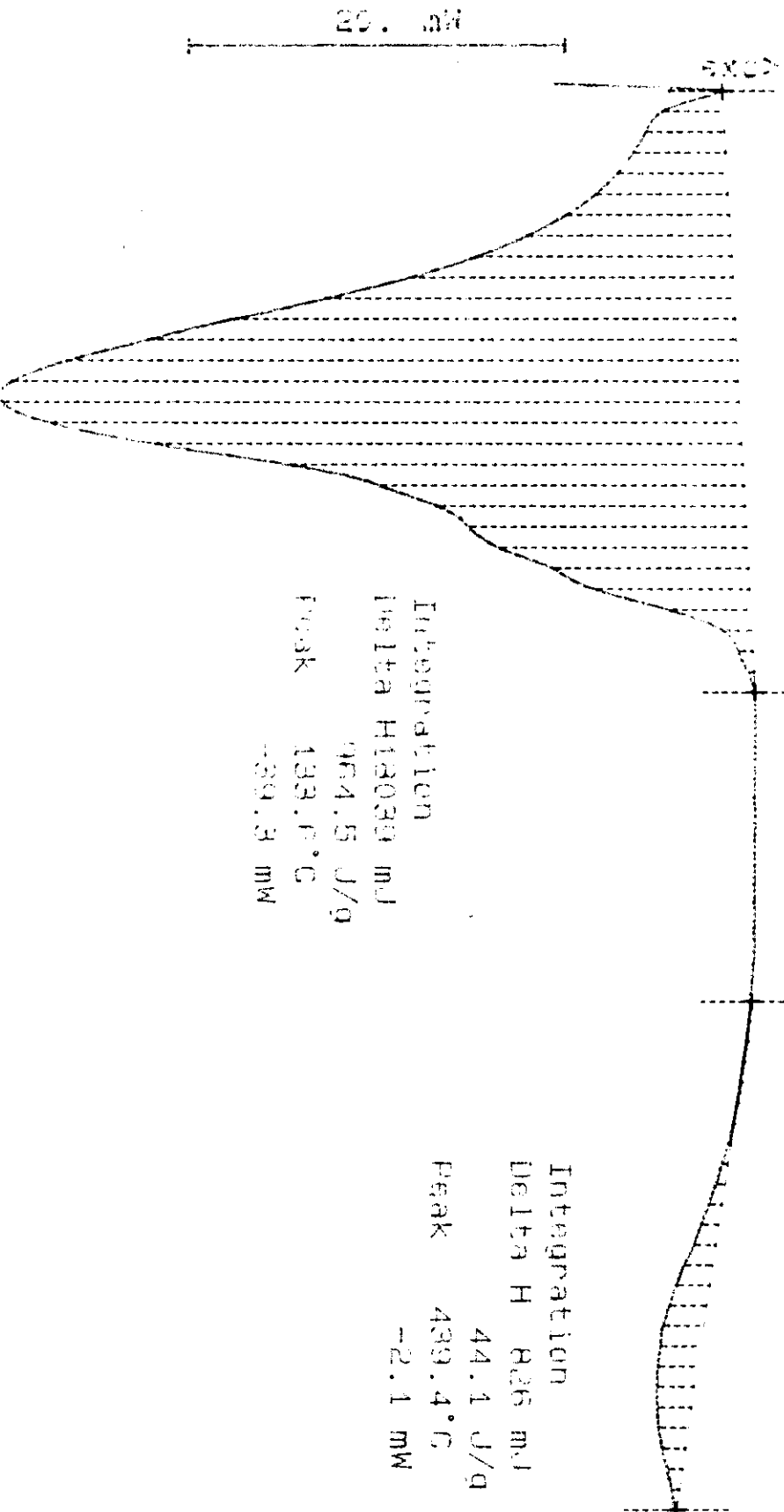
File: 00026.001

DSC METTLER

14-Oct-95

Ident: 0.0

222-S Laboratory



WHC-SD-WM-DF-156, REV. 0

44-38861-55



III

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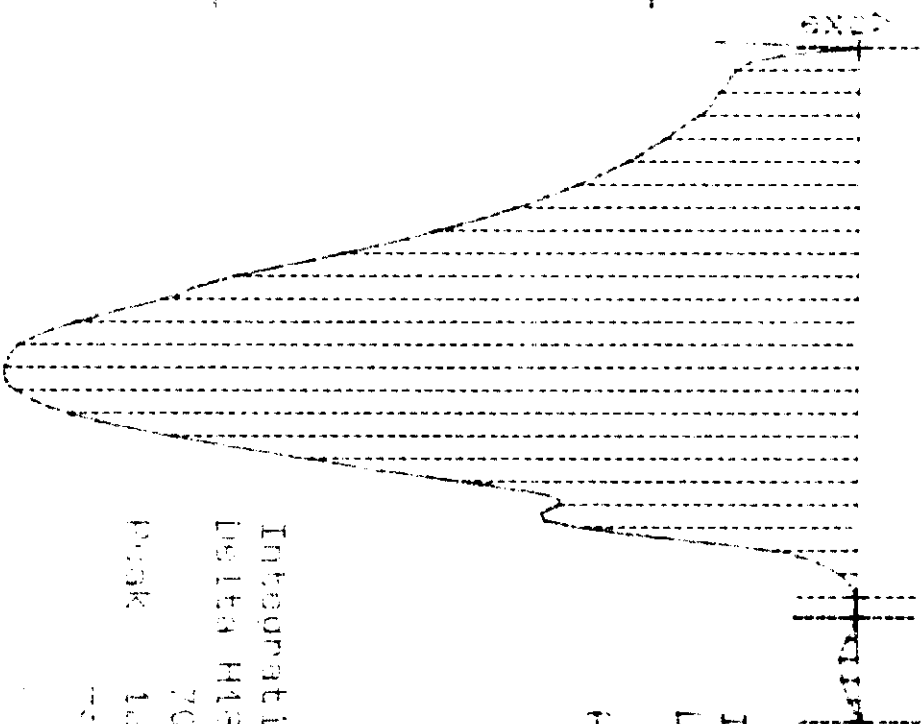
300T00000134 SAM No

Rate: 10.0 °C/min

File: 000030.001 DSC METTLEH 14-Oct-95
Ident: 0.0 222-3 Laboratory

112

20.0 mW



Integration
Delta H 14167 mJ
709.9 J/g
Peak 427.5°C
-394.2 mW

Integration
Delta H 87 mJ
3.4 J/g
Peak 243.2°C
-0.8 mW

Integration
Delta H 744 mJ
29.1 J/g
Peak 436.9°C
-2.6 mW

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300T00000001 DSC HE

45.000 mg

Rate: 10.0 °C/min

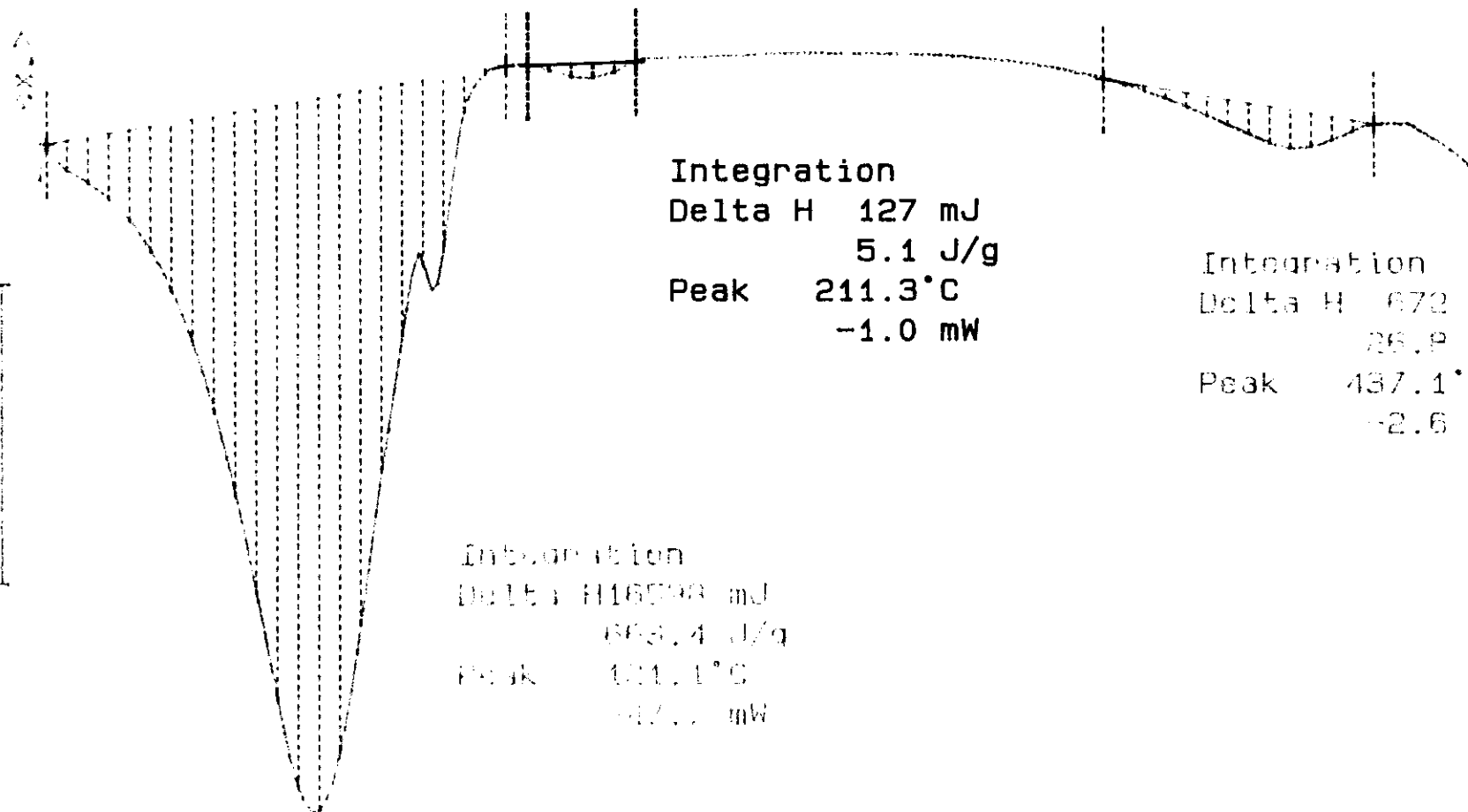
File: 00002.001

DSC METTLER

14-Oct-95

Ident: 0.0

228-P Laboratory



113

WHC-SD-WM-DE-156 REV 0

LABCORE Data Entry Template for Worklist#

2755

Analyst: ADP

Instrument: DSC0 1

Book # 12N1414

Method: LA-514-113 Rev/Mod CO

Worklist Comment: Please run S-107 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>2845</u>	<u>30.0</u>	<u>N/A</u>	Joules/g
95000141	S-107	2 SAMPLE	S95T002605	0	DSC-01	SOLID	<u>N/A</u>	<u>✓</u>		Joules/g
95000141	S-107	3 DUP	S95T002605	0	DSC-01	SOLID	<u>✓</u>	<u>✓</u>	<u>N/A</u>	Joules/g
95000141	S-107	4 SAMPLE	S95T002606	0	DSC-01	SOLID	<u>N/A</u>	<u>✓</u>		Joules/g
95000141	S-107	5 DUP	S95T002606	0	DSC-01	SOLID	<u>✓</u>	<u>✓</u>	<u>N/A</u>	Joules/g

Final page for worklist #

2755

Anthony Piment 10-17-95
Analyst Signature Date

Tom D. McNeil 10/20/95
Analyst Signature Date

Verified by Blandina Valenzuela
10/23/95

S95T002605 produced an endotherm at 127.6°C with a delta H of
866.2 J/g.

Data Entry Comments: S95T002606 produced an endotherm at 125.6°C with a
delta H of 843.8 J/g and a second at 229.3°C with a delta H of 5.8 J/g

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

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DSC STD 12N14-A N2

6.850 mg

Rate: 10.0 °C/min

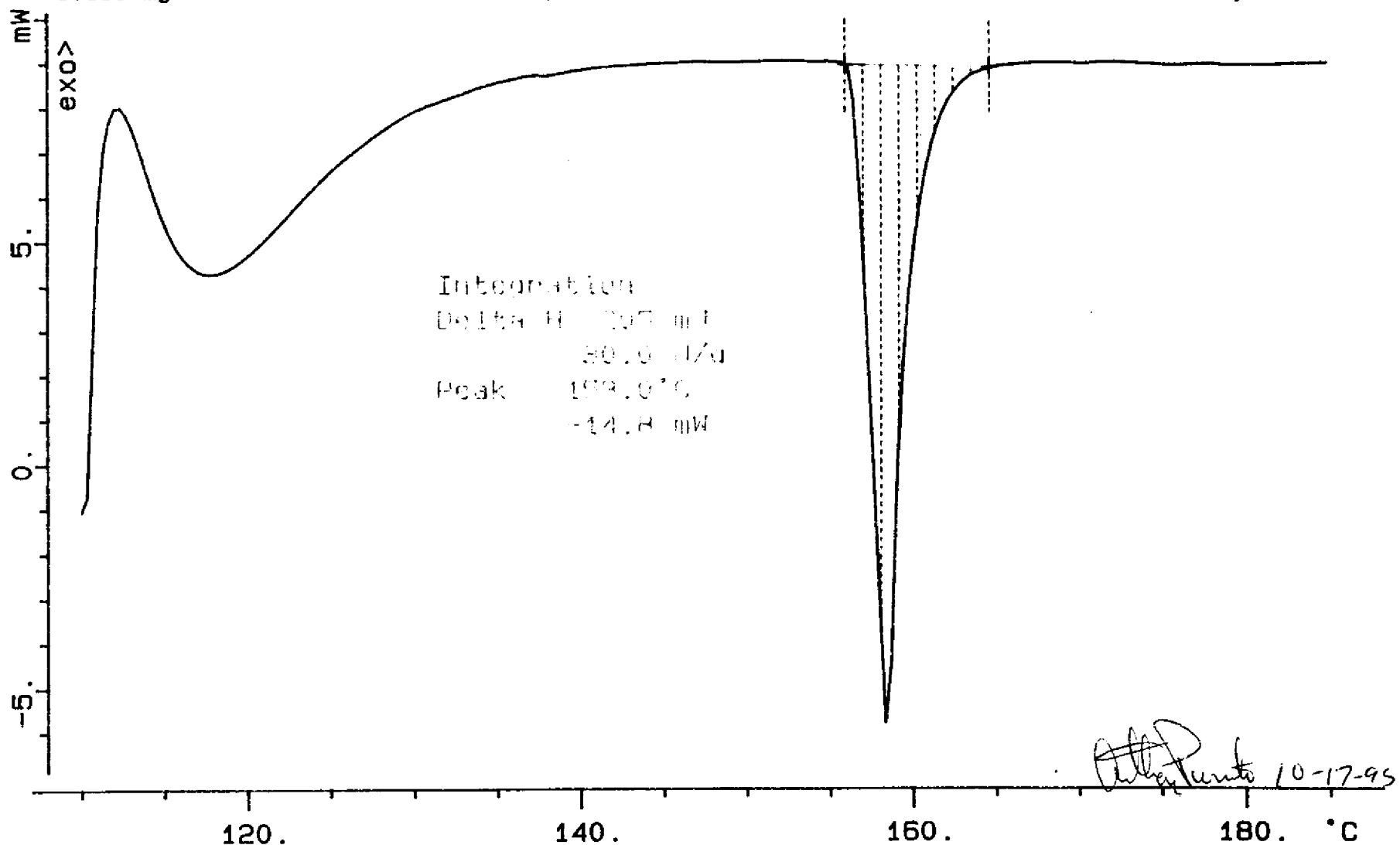
File: 00076.001

DSC METTLER

17-Oct-95

Ident: 0.0

222-S Laboratory



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S95T002605 SAM N2

26.835 mg

Rate: 10.0 °C/min

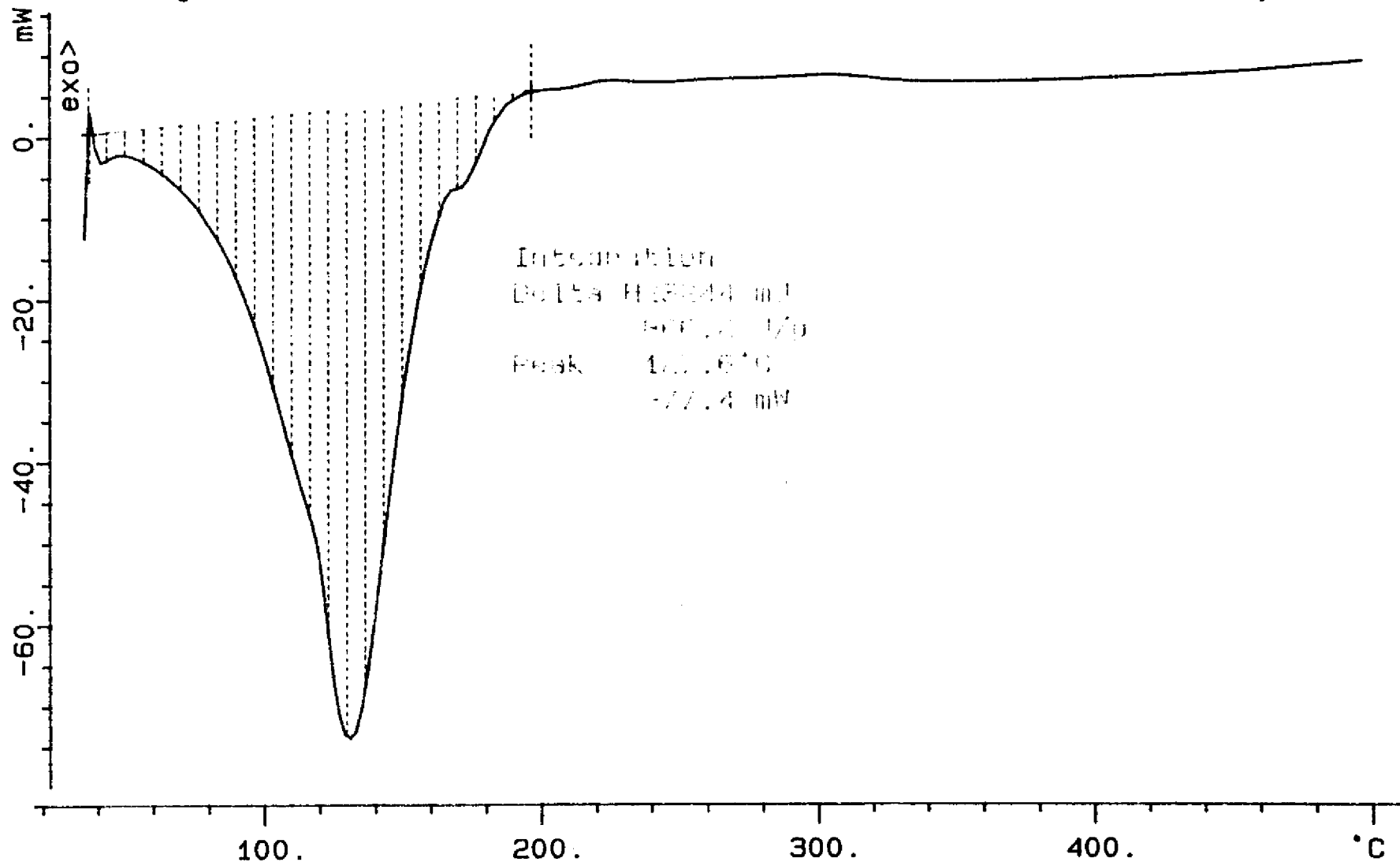
File: 00079.001

DSC METTLER

17-Oct-95

Ident: 0.0

222-S Laboratory



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S95T002605 DUP N2

25.166 mg

Rate: 10.0 °C/min

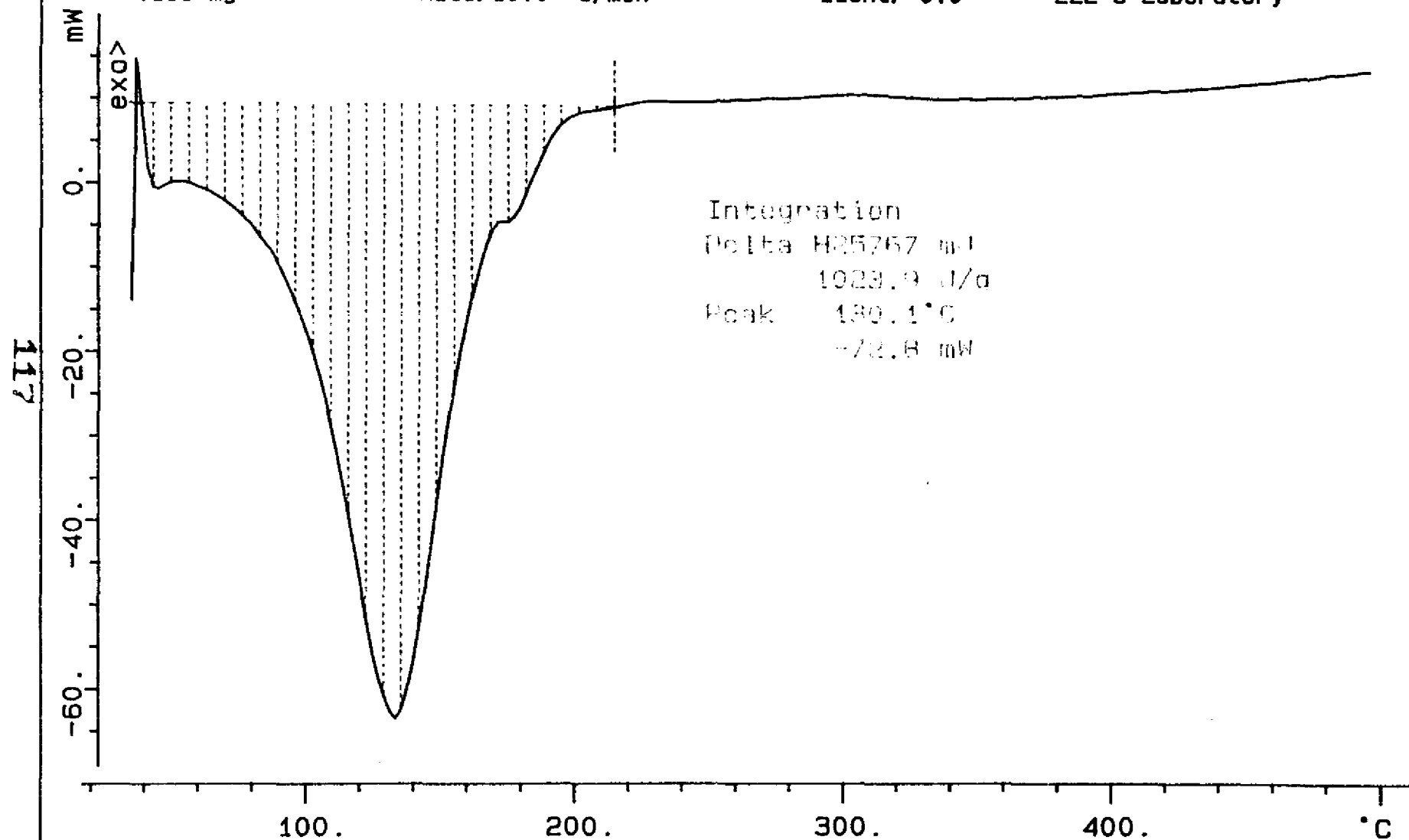
File: 00081.001

DSC METTLER

17-Oct-95

Ident: 0.0

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S95T002606 SAM N2

27.000 mg

Rate: 10.0 °C/min

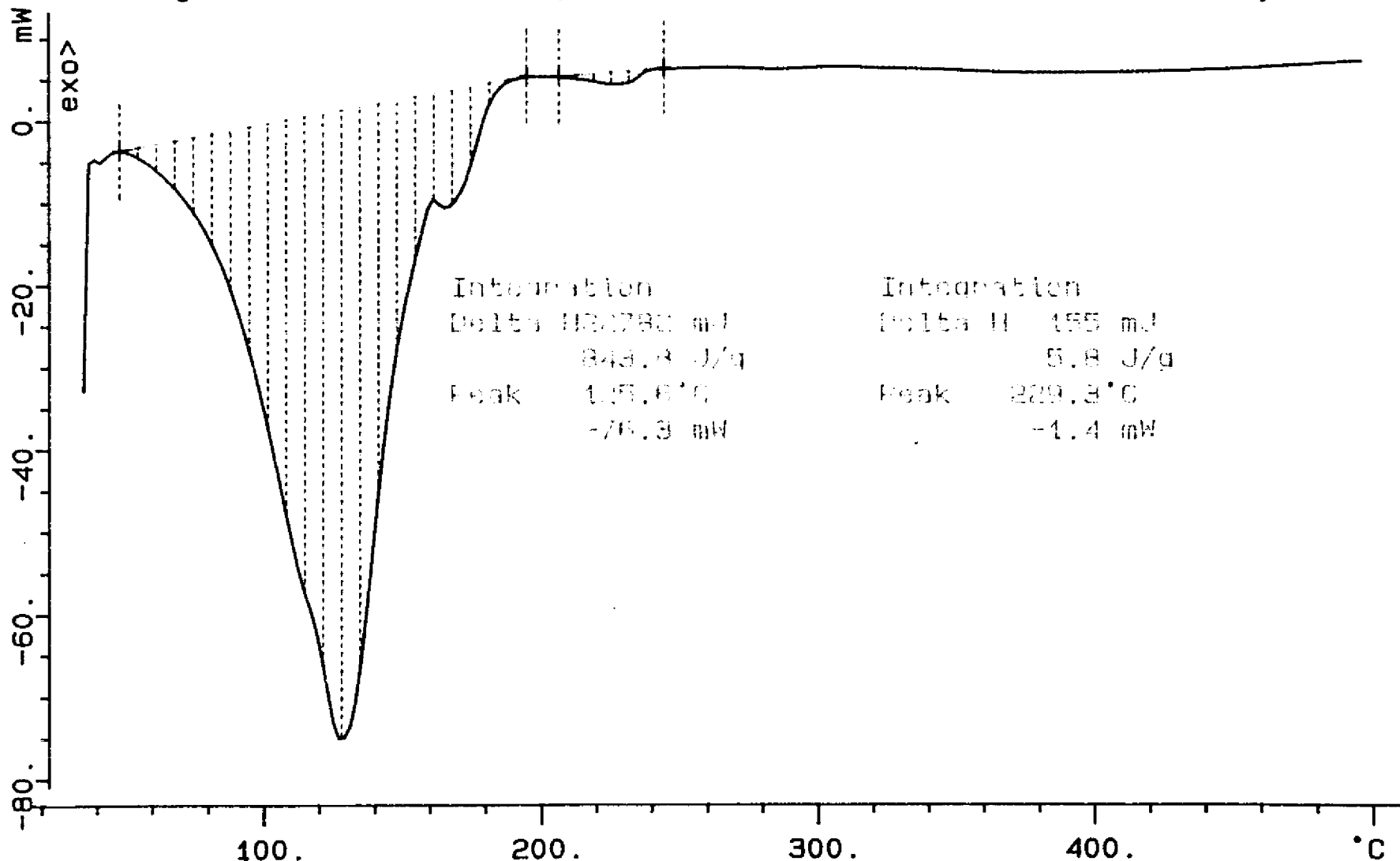
File: 00083.001

DSC METTLER

17-Oct-95

Ident: 0.0

222-S Laboratory

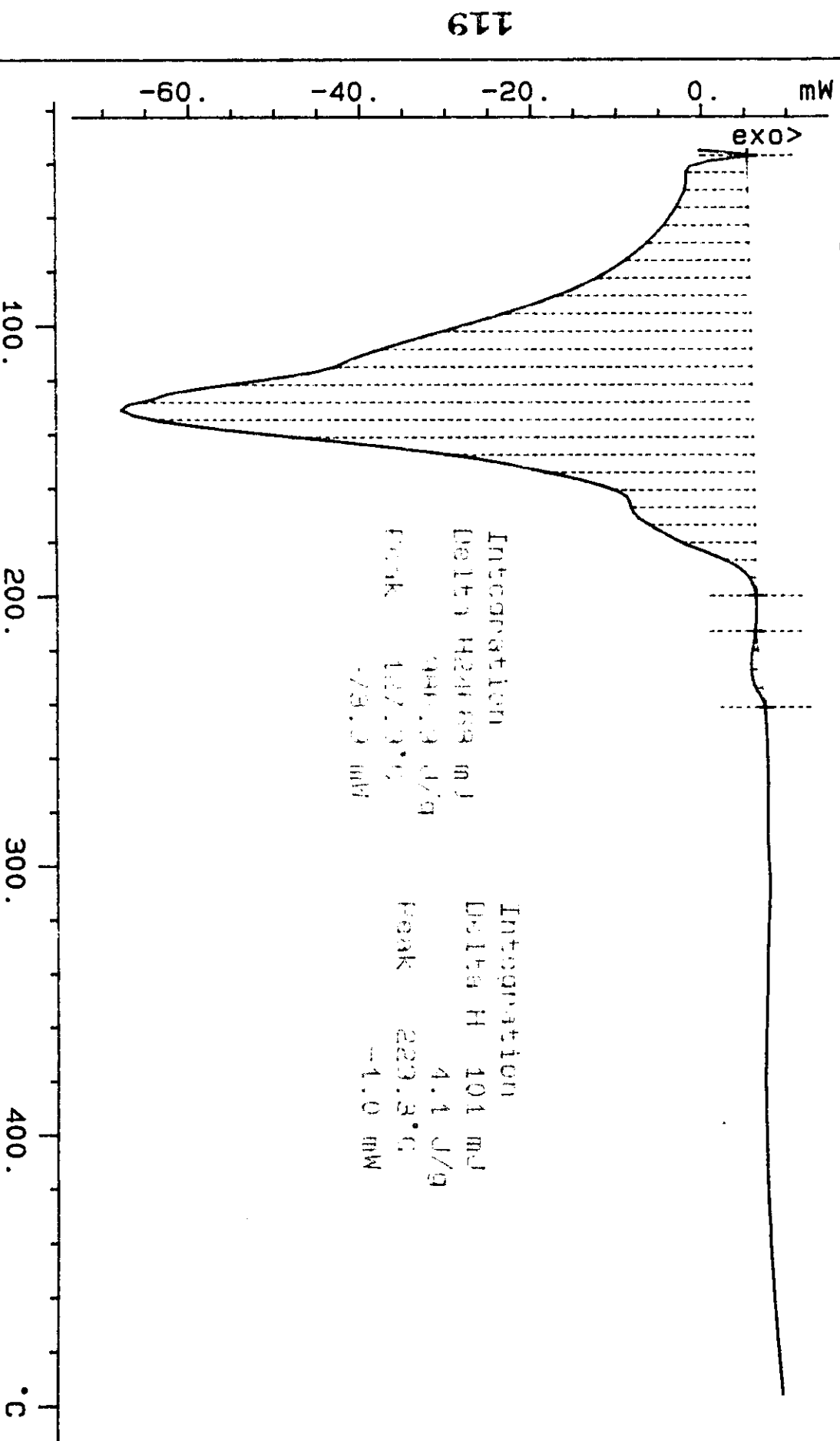


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S95T002606 DUP N2
24.995 mg

Rate: 10.0 °C/min

File: 00085.001 DSC METTLER 17-Oct-95
Ident: 0.0 222-S Laboratory



LABCORE Data Entry Template for Worklist#

2756

Analyst: ADP Instrument: DSC0 4 Book # 12N14-A

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

Worklist Comment: Please run S-107 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>29.7</u>	<u>N/A</u>	Joules/g
95000141	S-107	2 SAMPLE	S95T002607	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000141	S-107	3 DUP	S95T002607	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000141	S-107	4 SAMPLE	S95T002608	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000141	S-107	5 DUP	S95T002608	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist #

2756

Aditya Puri 10-18-95
Analyst Signature Date

Tom DMEZ 10/20/95
Analyst Signature Date

Verified by Blandina Valenzuela
10-23-95

S95T002607 produced an endotherm at 126.0°C with a delta H of 975.6 J/g ¹⁰⁻¹⁷⁻⁹⁵

Data Entry Comments: S95T002608 produced an endotherm at 132.5°C with a delta H of 524.5 J/g and another one at 302.6°C with a delta H of 421.4 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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 121 TO 125.

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DSC STD 12N14-A N2

6.850 mg

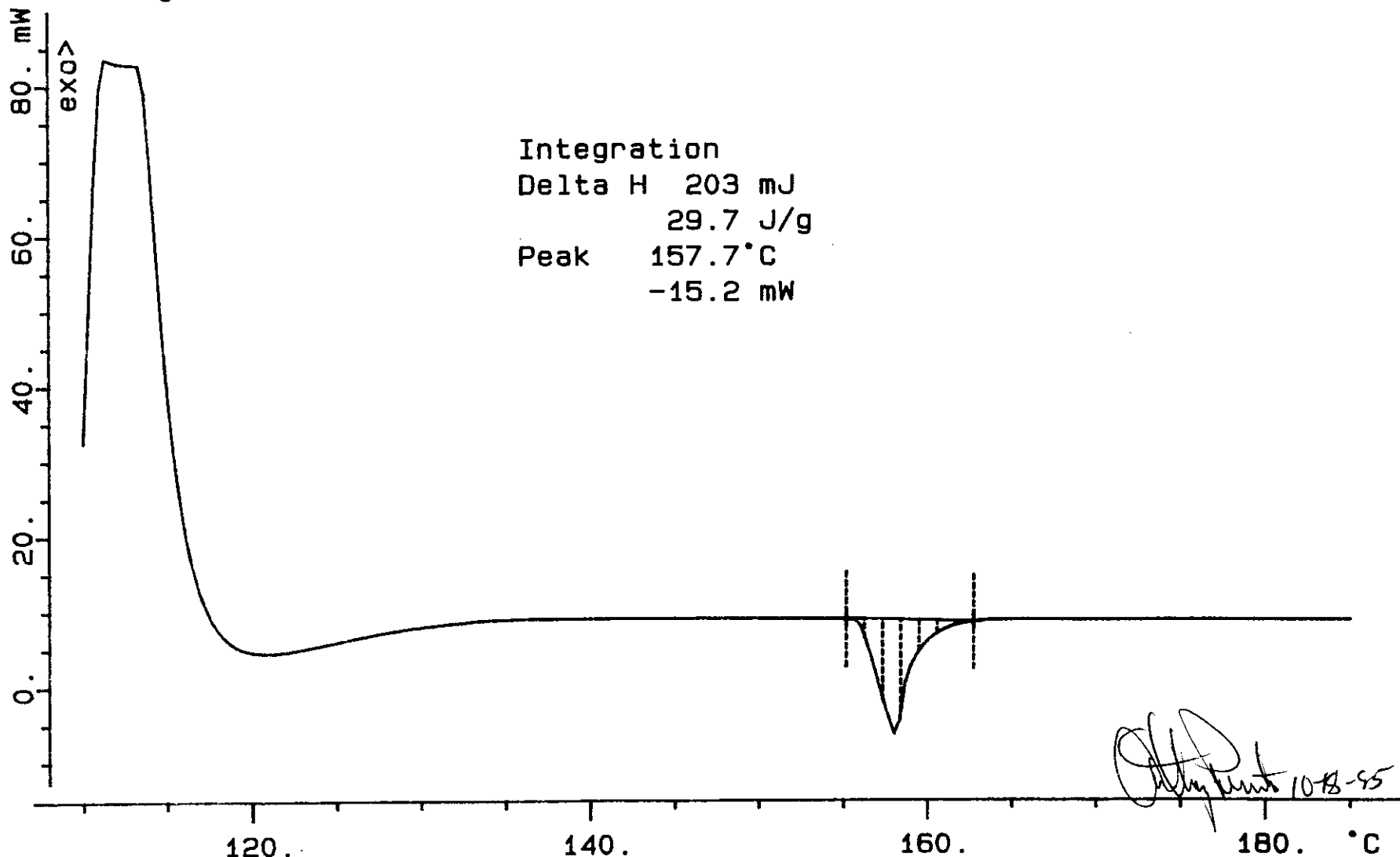
Rate: 10.0 °C/min

File: 00001.001

DSC METTLER 18-Oct-95

Ident: 0.0

222-S Laboratory



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S95T002607 SAM N2

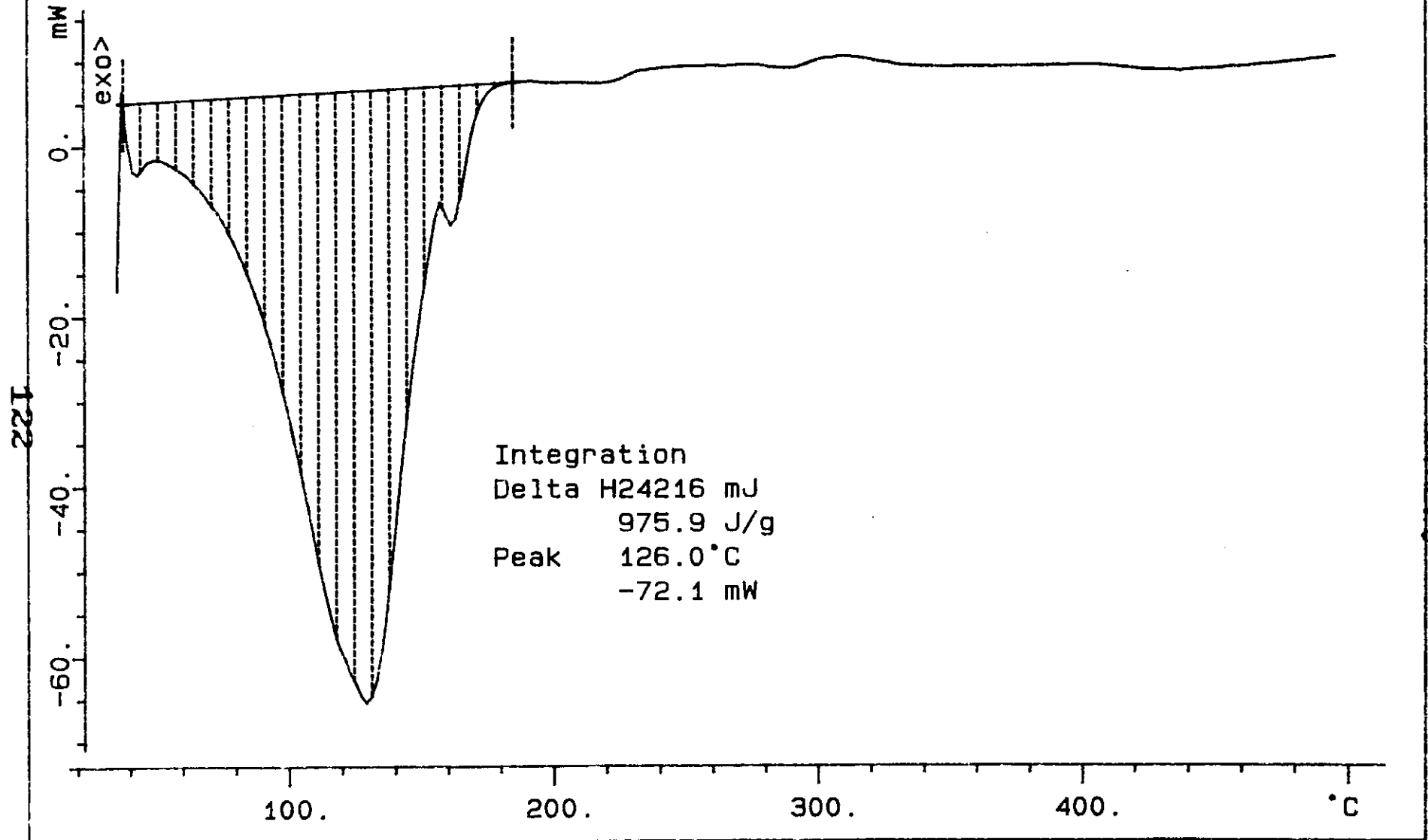
File: 00003.001 DSC METTLER 18-Oct-95

24.815 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

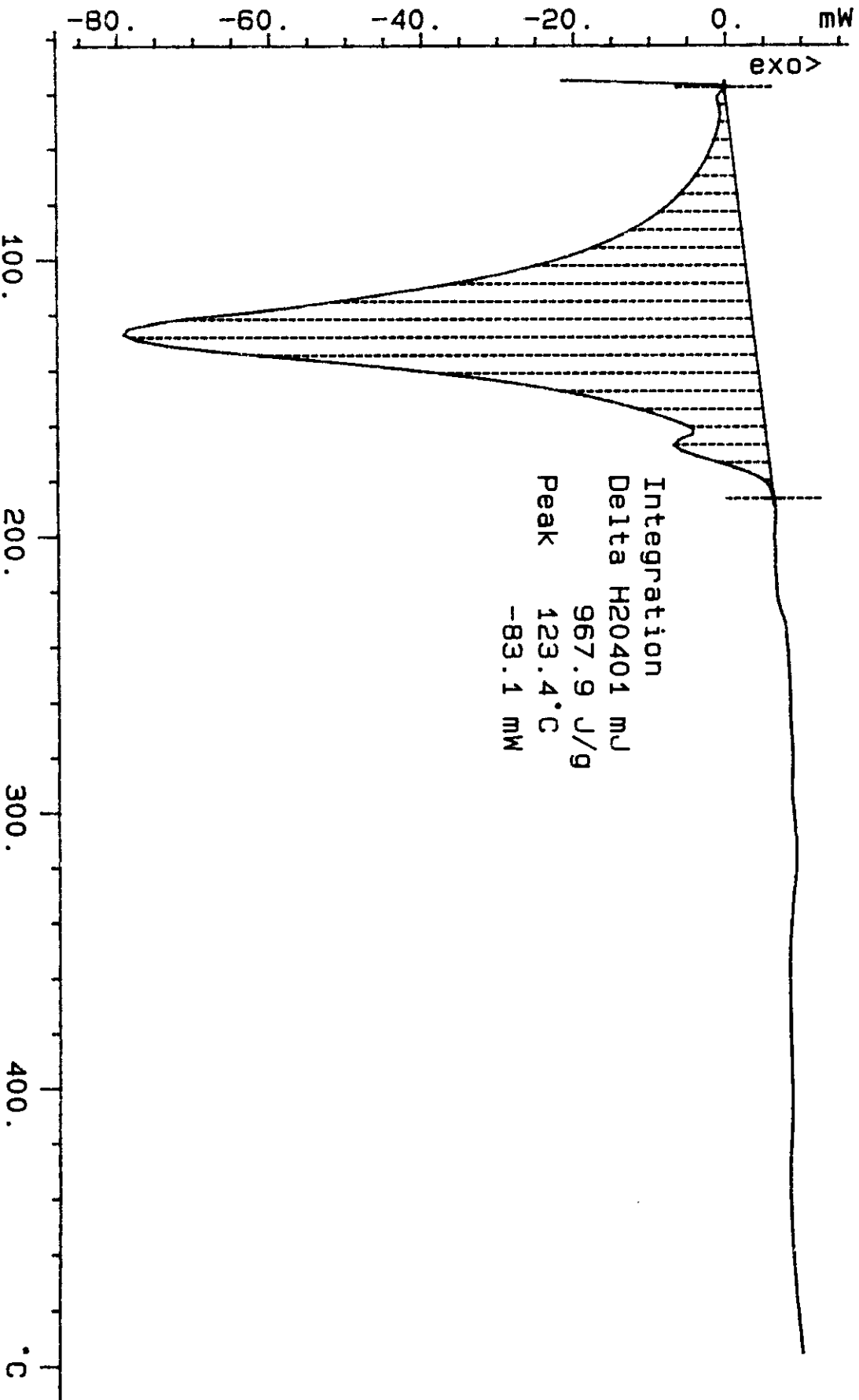


BEST AVAILABLE COPY

S95T002607 DUP N2
21.077 mg

Rate: 10.0 °C/min

File: 00005.001 DSC METTLER 18-Oct-95
Ident: 0.0 222-S Laboratory



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S95T002608 SAM N2

35.780 mg

Rate: 10.0 °C/min

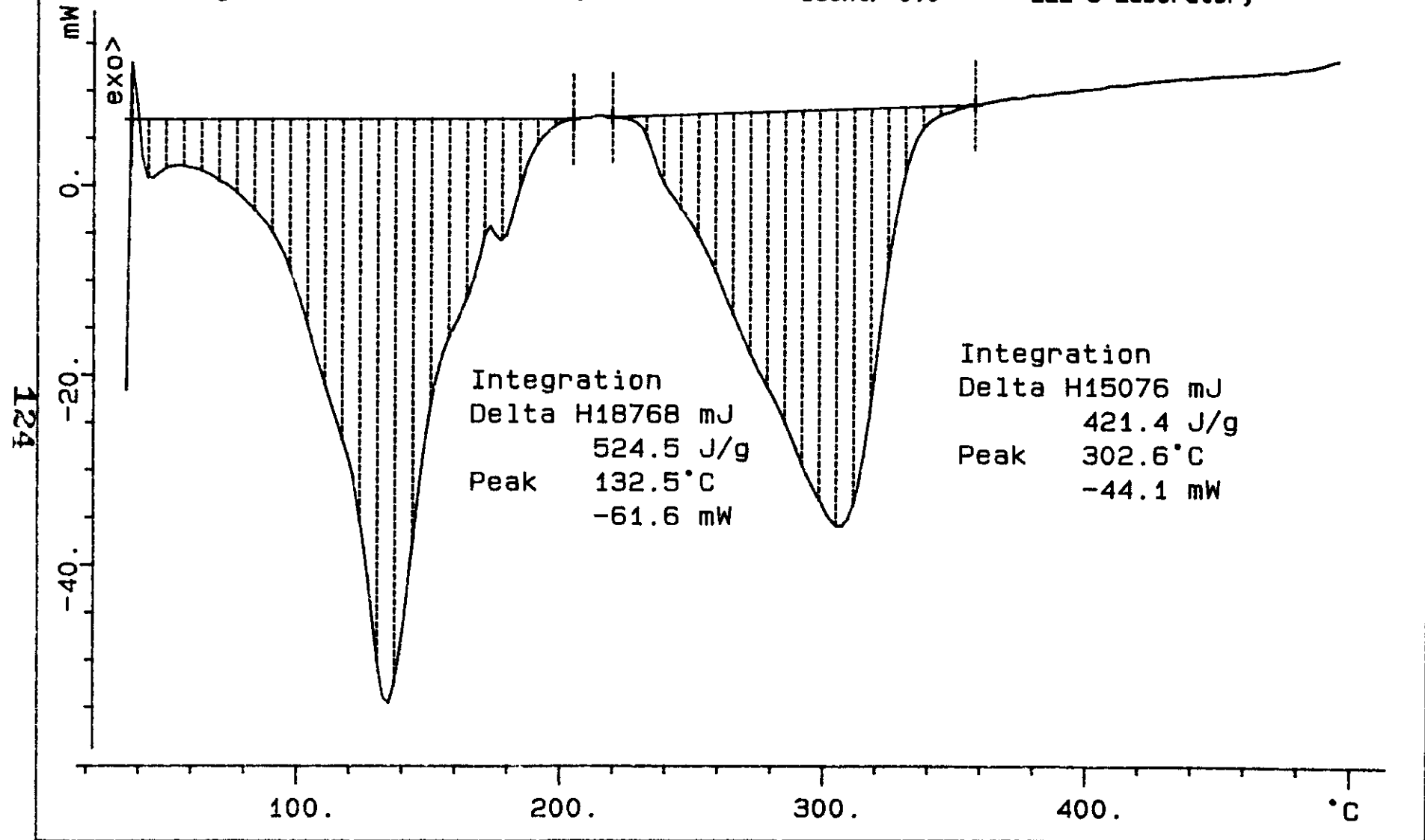
File: 00007.001

DSC METTLER

18-Oct-95

Ident: 0.0

222-S Laboratory



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S95T002608 DUP N2

18.300 mg

Rate: 10.0 °C/min

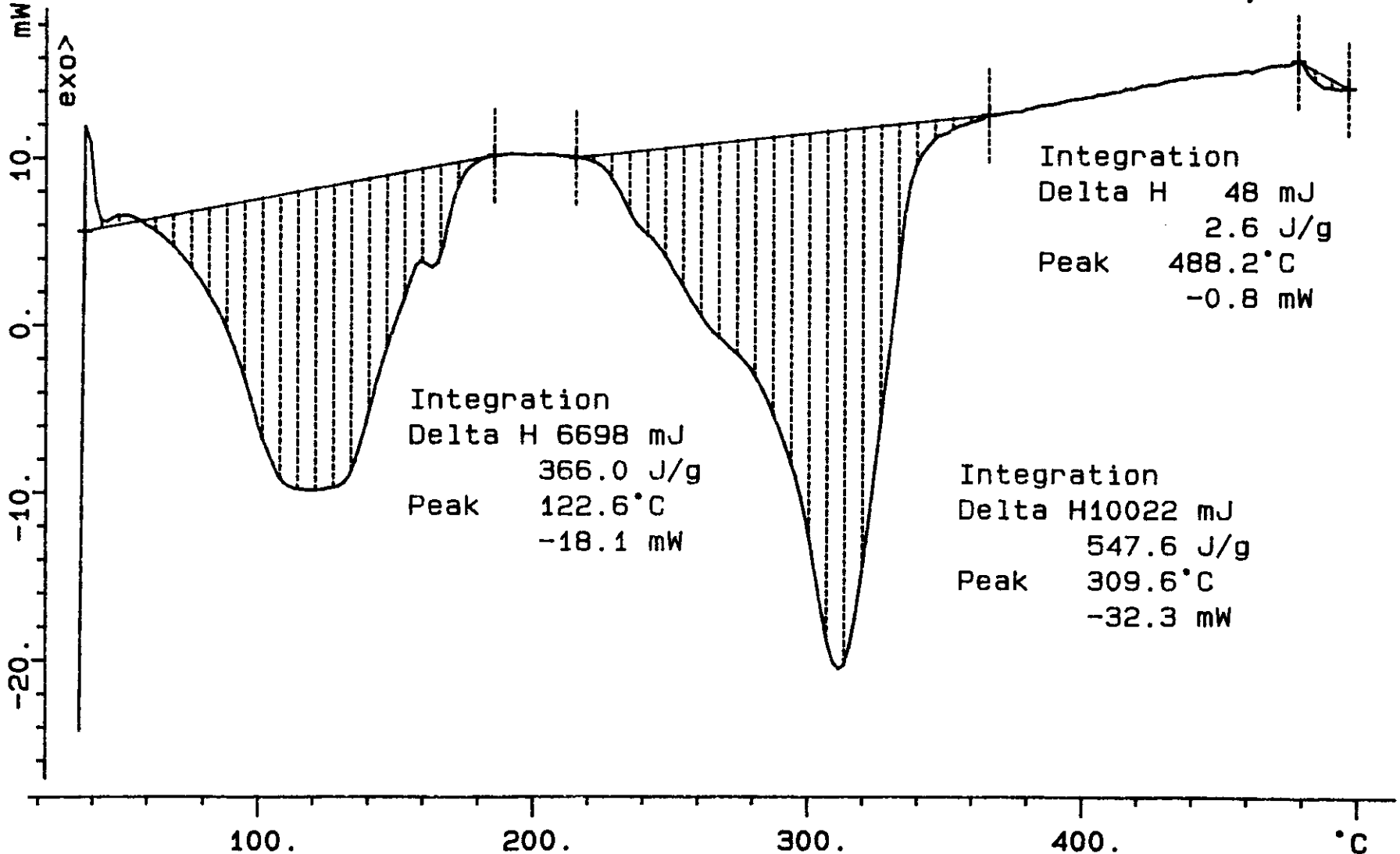
File: 00009.001

Ident: 0.0

DSC METTLER

18-Oct-95

222-S Laboratory



125

LABCORE Data Entry Template for Worklist#

2757

Analyst: R. D. Instrument: DSC0 1 Book # 12N14-A

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

Worklist Comment: Please run S-107 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	27.5	N/A	Joules/g
95000141	S-107	2 SAMPLE	S95T002609	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000141	S-107	3 DUP	S95T002609	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g
95000141	S-107	4 SAMPLE	S95T002610	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000141	S-107	5 DUP	S95T002610	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2757

Rae Ann Green 10-19-95
Analyst Signature Date

Tom O'Brien 10/20/95
Analyst Signature Date

Verified by Blandina Valenzuela
10-23-95

S95T002609 produced two endotherms one at 117.3°C with a delta H of 797.9 J/g and second at 298.8°C with a delta H of 31.9 J/g

Data Entry Comments:

S95T002610 produced two endotherms one at 124.2°C with a delta H of 512.7 J/g and second at 299.4°C with a delta H of 505.6 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 127 TO 131.

DSC STD 12N14-A N2

6.850 mg

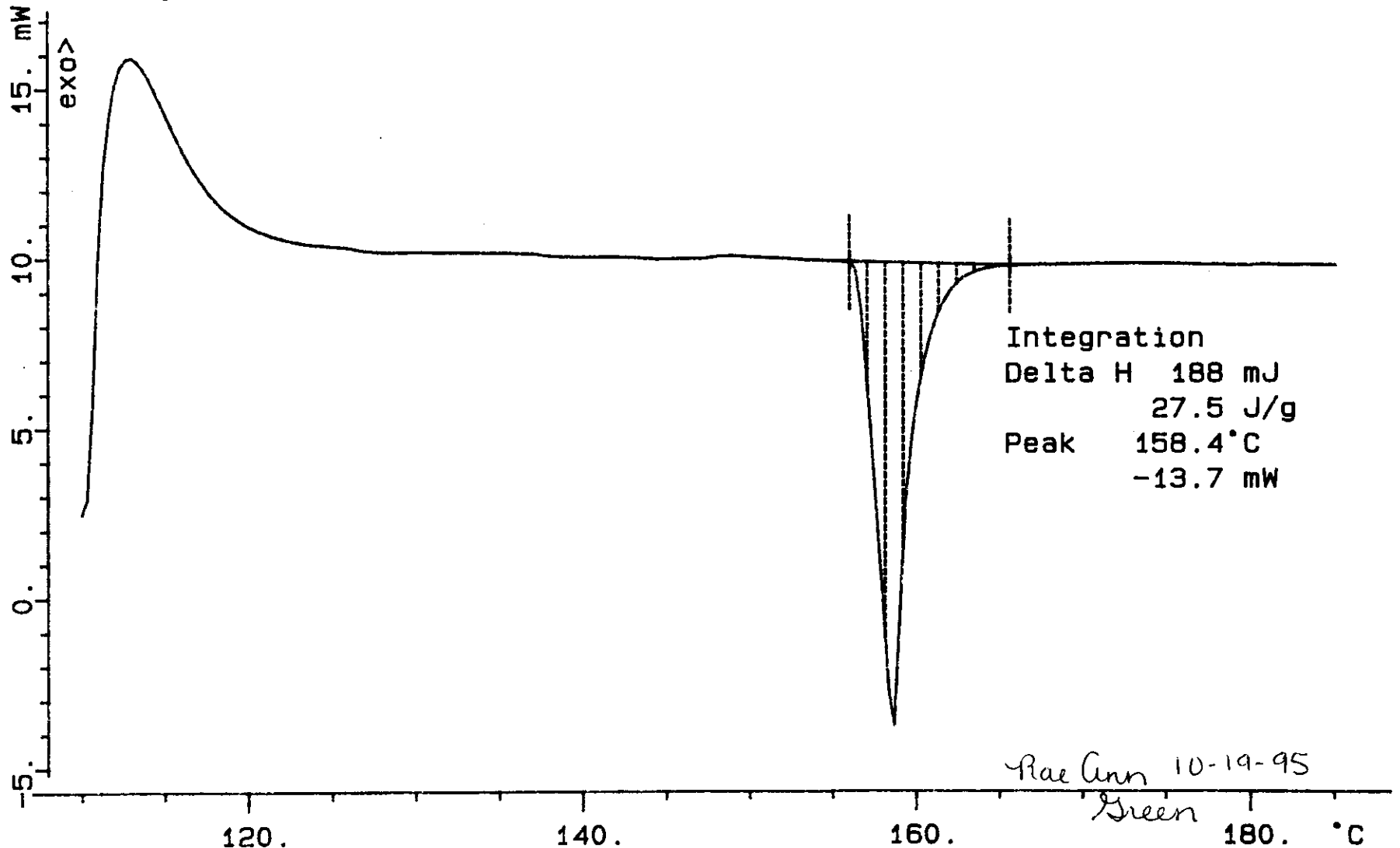
Rate: 10.0 °C/min

File: 00012.001

DSC METTLER 19-Oct-95

Ident: 0.0

222-S Laboratory



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S95T002609 SAM N2

39.000 mg

Rate: 10.0 °C/min

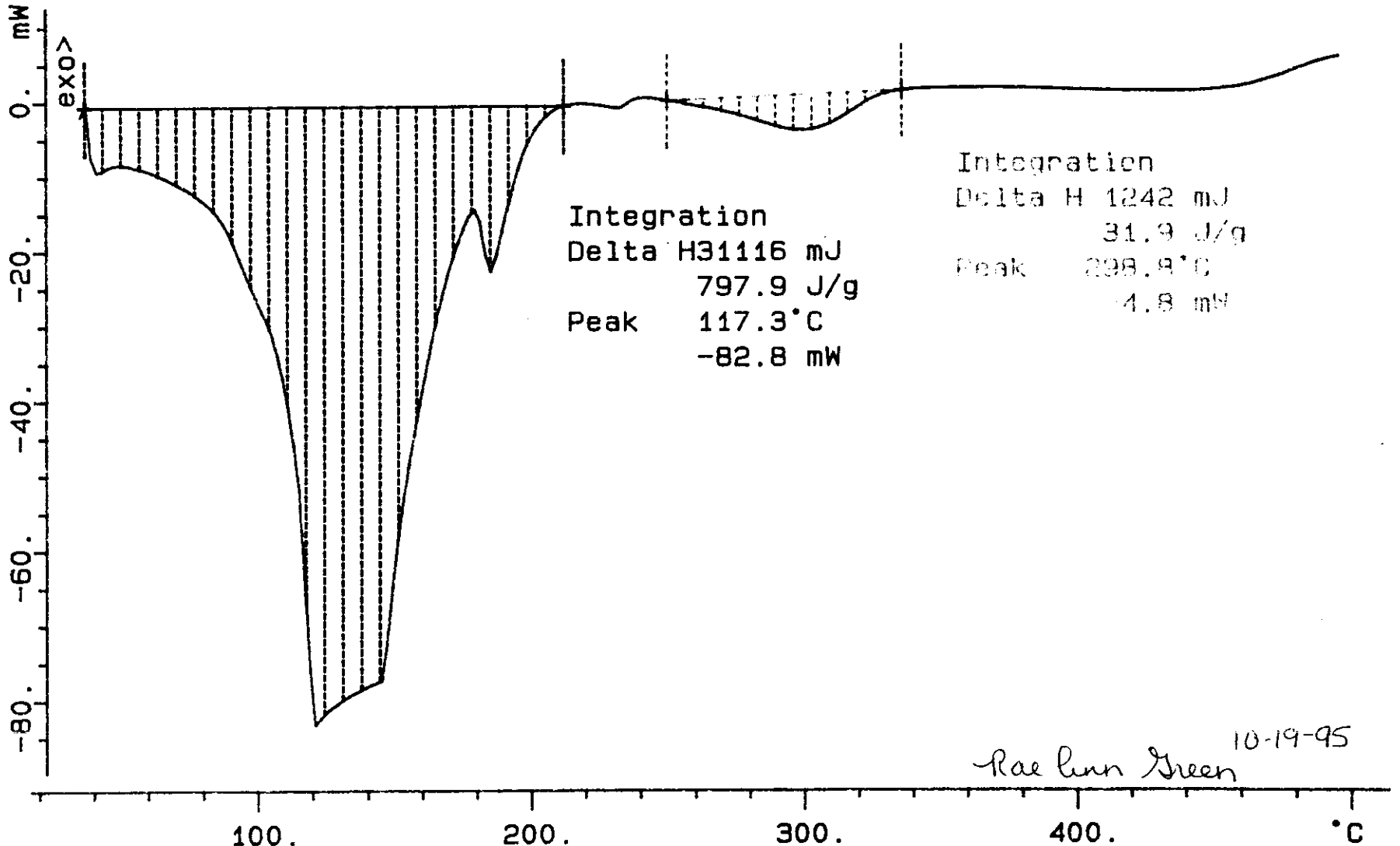
File: 00013.001

DSC METTLER

19-Oct-95

Ident: 0.0

222-S Laboratory



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S95T002609 DUP N2

39.410 mg

Rate: 10.0 °C/min

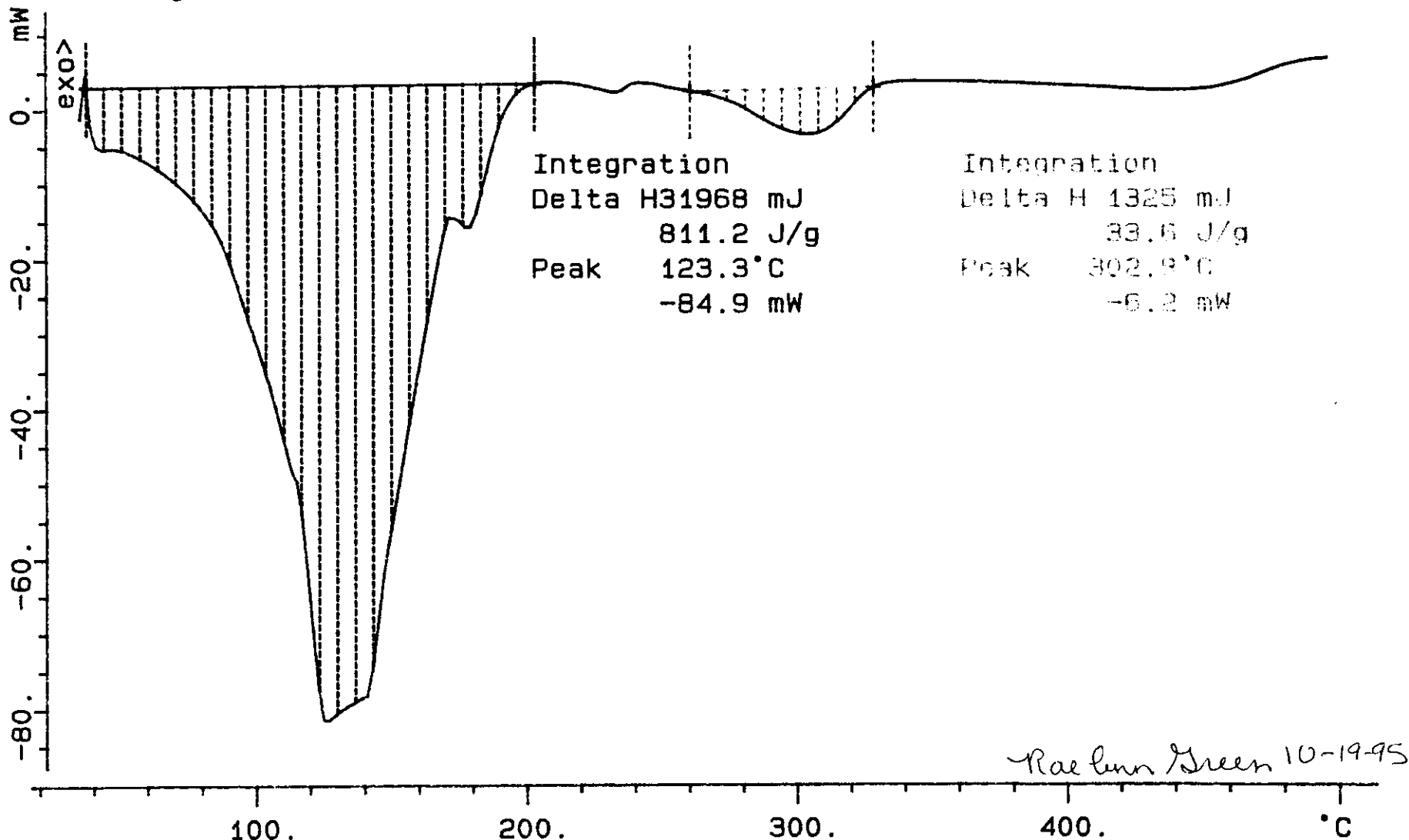
File: 00014.001

DSC METTLER

19-Oct-95

Ident: 0.0

222-S Laboratory



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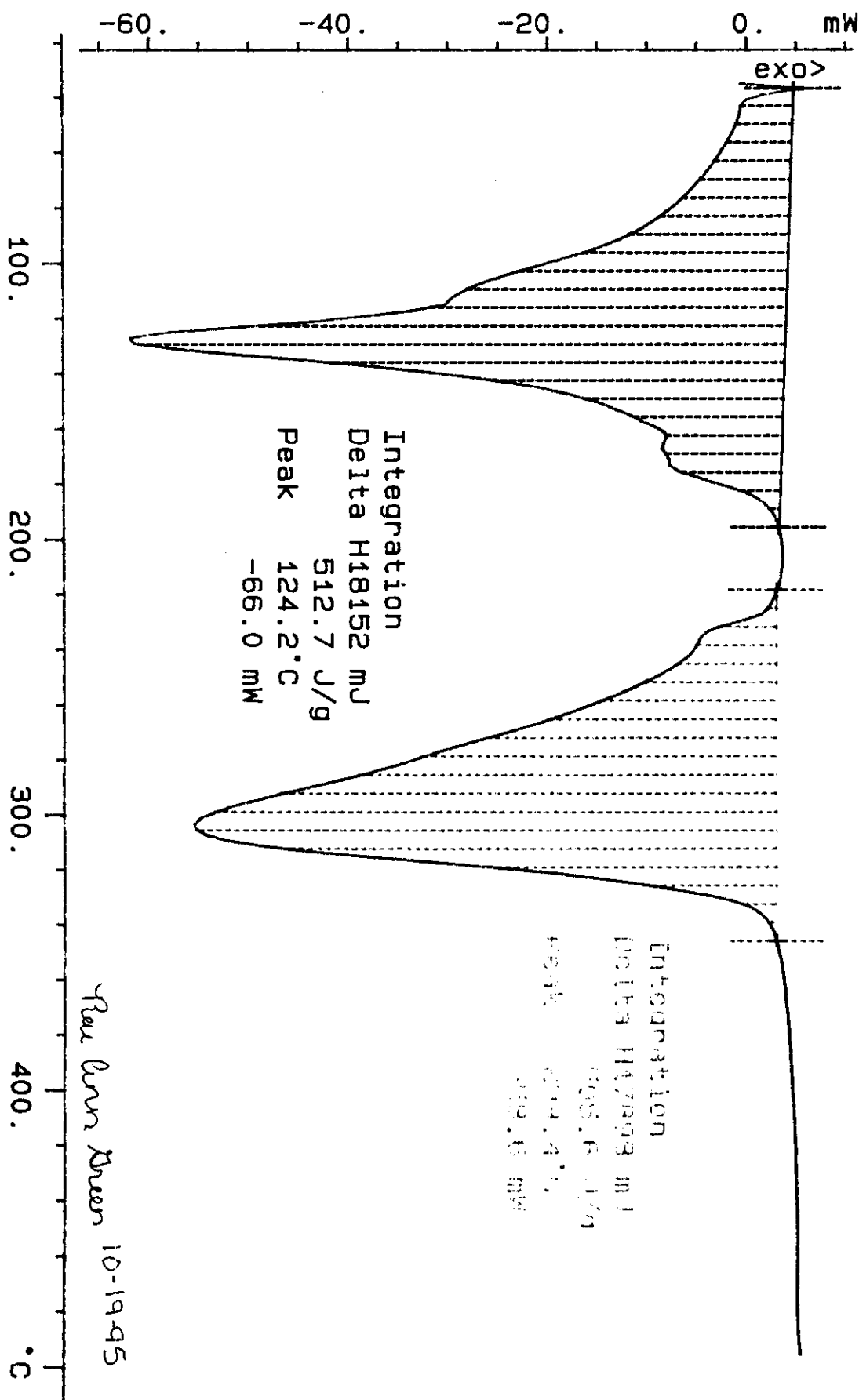
S95T002610 SAM N2
35.401 mg

Rate: 10.0 °C/min

File: 00015.001
Ident: 0.0

DSC METTLER
222-S Laboratory

19-Oct-95



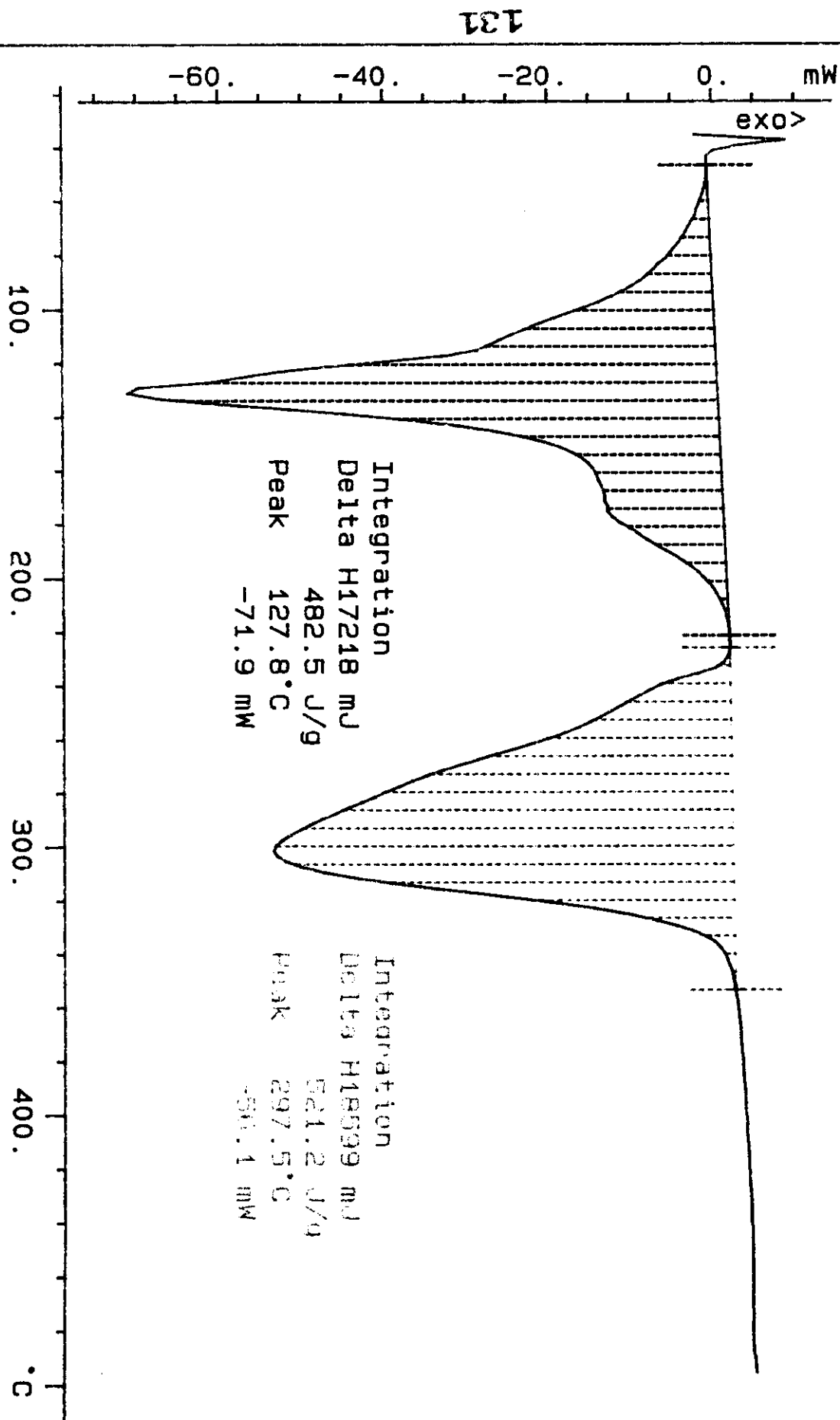
Rev Run Screen 10-19-95

BEST AVAILABLE COPY

2610
S95T002460 DUP N2
35.688 mg
IC-25-15
Box

Rate: 10.0 °C/min

File: 00016.001 DSC METTLER 19-Oct-95
Ident: 0.0 222-S Laboratory



131

LABCORE Data Entry Template for Worklist#

2759

Analyst: ADP Instrument: DSC0 3 Book # 12N14A

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

Worklist Comment: Please run S-107 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-03	SOLID	28.45	27.50	N/A	Joules/g
95000141	S-107	2 SAMPLE	S95T002686	0	DSC-03	SOLID	N/A	Ø		Joules/g
95000141	S-107	3 DUP	S95T002686	0	DSC-03	SOLID	Ø	Ø	N/A	Joules/g
95000141	S-107	4 SAMPLE	S95T002687	0	DSC-03	SOLID	N/A	Ø		Joules/g
95000141	S-107	5 DUP	S95T002687	0	DSC-03	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 2759

See attached for signatures
Analyst Signature Date 10/31/95
Verified by Blandina
Valenzuela
11-8-95

 11-1-95
Analyst Signature Date

Data Entry Comments:

S95T002686 produced two endotherms; one at
103.7°C with a delta H of 477.0 J/g, two at 316.5°C with a delta
H 485.2 J/g. S95T002687 produced an endotherm at 10.93°C delta H
of 510.7 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#

2759

Analyst:

ADP

Instrument: DSC0

Book # 12N14A

Method: LA-514-118 Rev/Mod

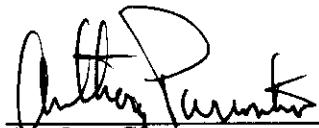
CO

Worklist Comment: Please run S-107 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-013	SOLID			N/A	Joules/g
95000141	S-107	2 SAMPLE	S95T002686	0	DSC-013	SOLID	N/A			Joules/g
95000141	S-107	3 DUP	S95T002686	0	DSC-013	SOLID			N/A	Joules/g
95000141	S-107	4 SAMPLE	S95T002687	0	DSC-013	SOLID	N/A			Joules/g
95000141	S-107	5 DUP	S95T002687	0	DSC-013	SOLID			N/A	Joules/g

Final page for worklist #

2759


Analyst Signature

10-23-95
Date

Analyst Signature

Date

Data Entry Comments:

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

Curve 1: DSC

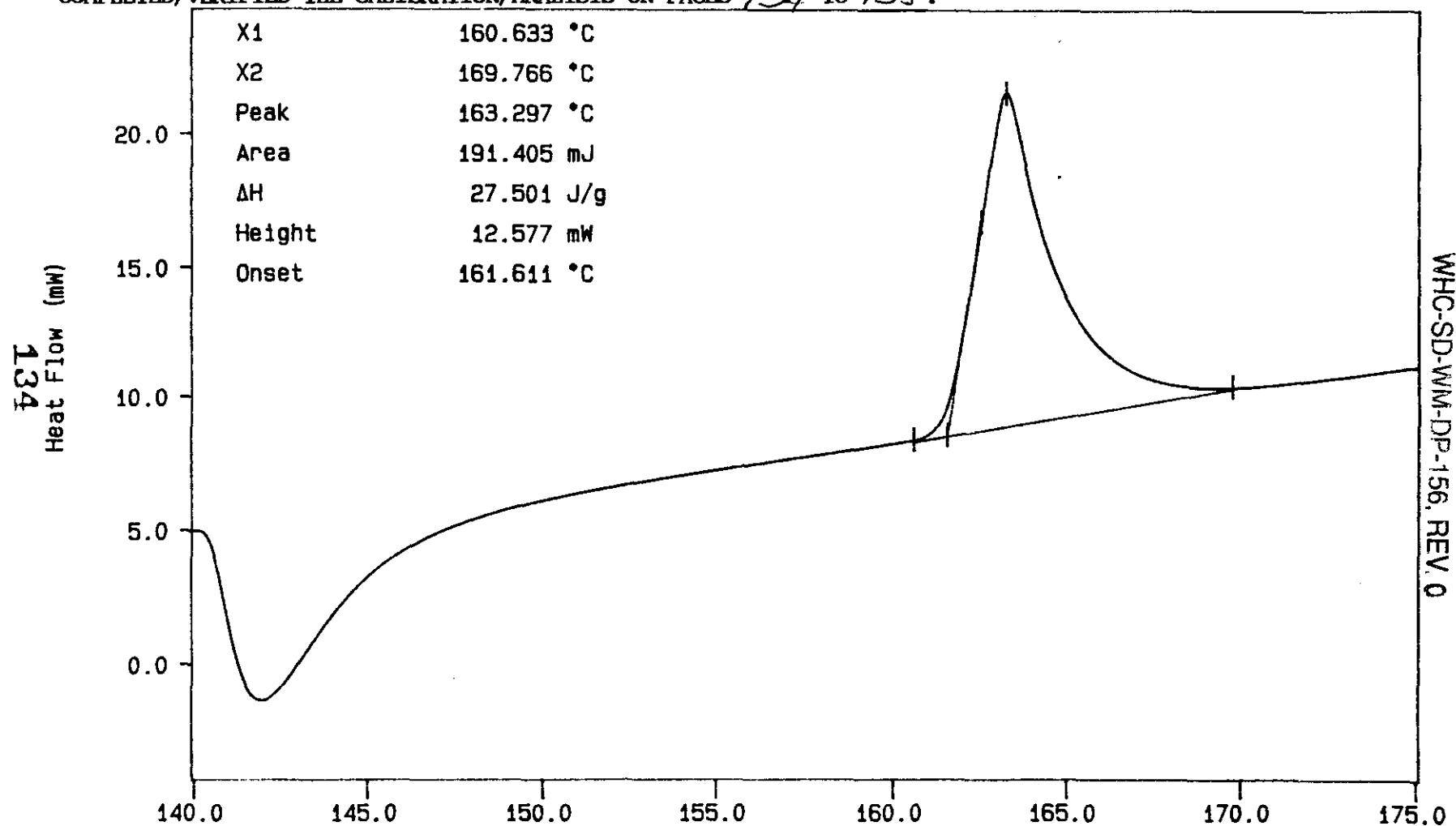
File info: IND102303 Mon Oct 23 07:54:25 1995

Sample Weight: 6.960 mg

Indium at 10C/min

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 134 TO 138.



N2 exotherm down

TEMP1: 140.0 C TIME1: 0.0 min RATE1: 10.0 C/min
TEMP2: 175.0 C

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Tue Oct 31 13:56:22 1995

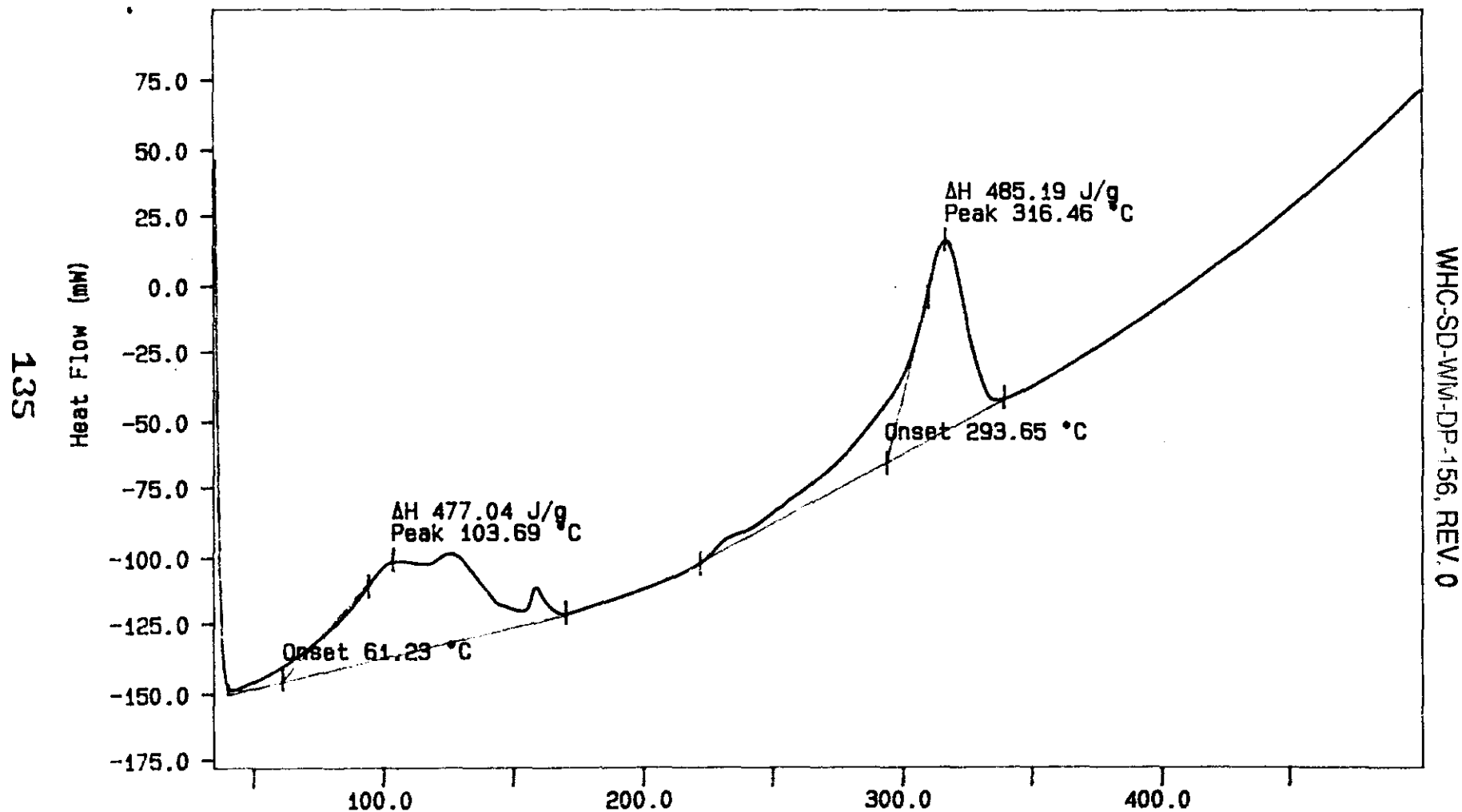
Curve 1: DSC

File info: SAM102301 Mon Oct 23 01:24:53 1995

Sample Weight: 26.240 mg

S95T002686 SAM

BEST AVAILABLE COPY



exotherm down, N2 purge gas

TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

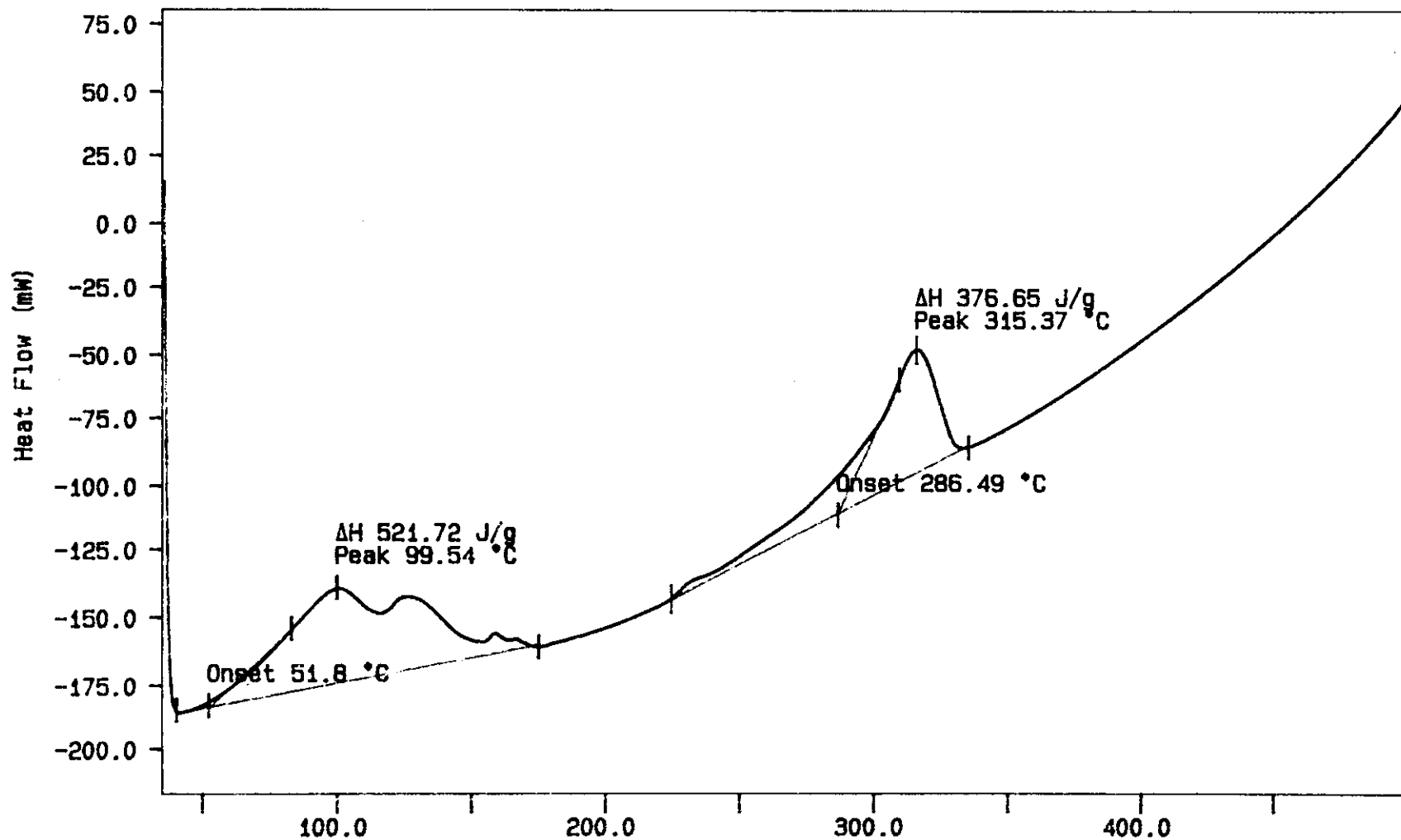
Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Oct 23 02:00:17 1995

Curve 1: DSC
File info: SAM102302 Mon Oct 23 03:01:09 1995
Sample Weight: 24.680 mg
S95T002686 DUP

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136



WHC-SD-WM-DP-156, REV.0

exotherm down, N2 purge gas
TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Oct 23 03:05:40 1995

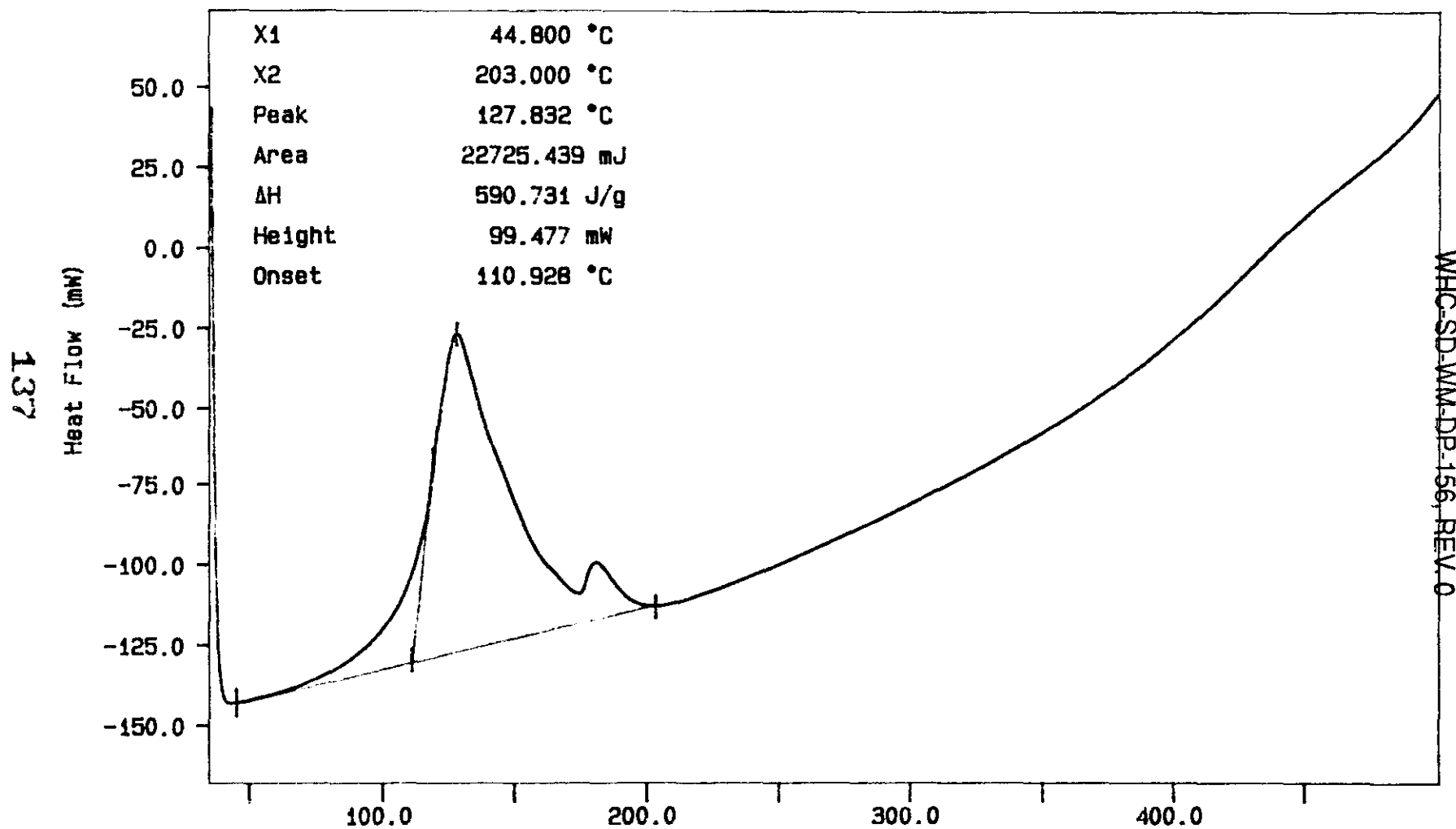
Curve 1: DSC

File info: SAM102303 Mon Oct 23 04:00:05 1995

Sample Weight: 38.470 mg

S95T002687 SAM

BEST AVAILABLE COPY



exotherm down, N2 purge gas

TEMP1: 35.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Oct 23 04:08:04 1995

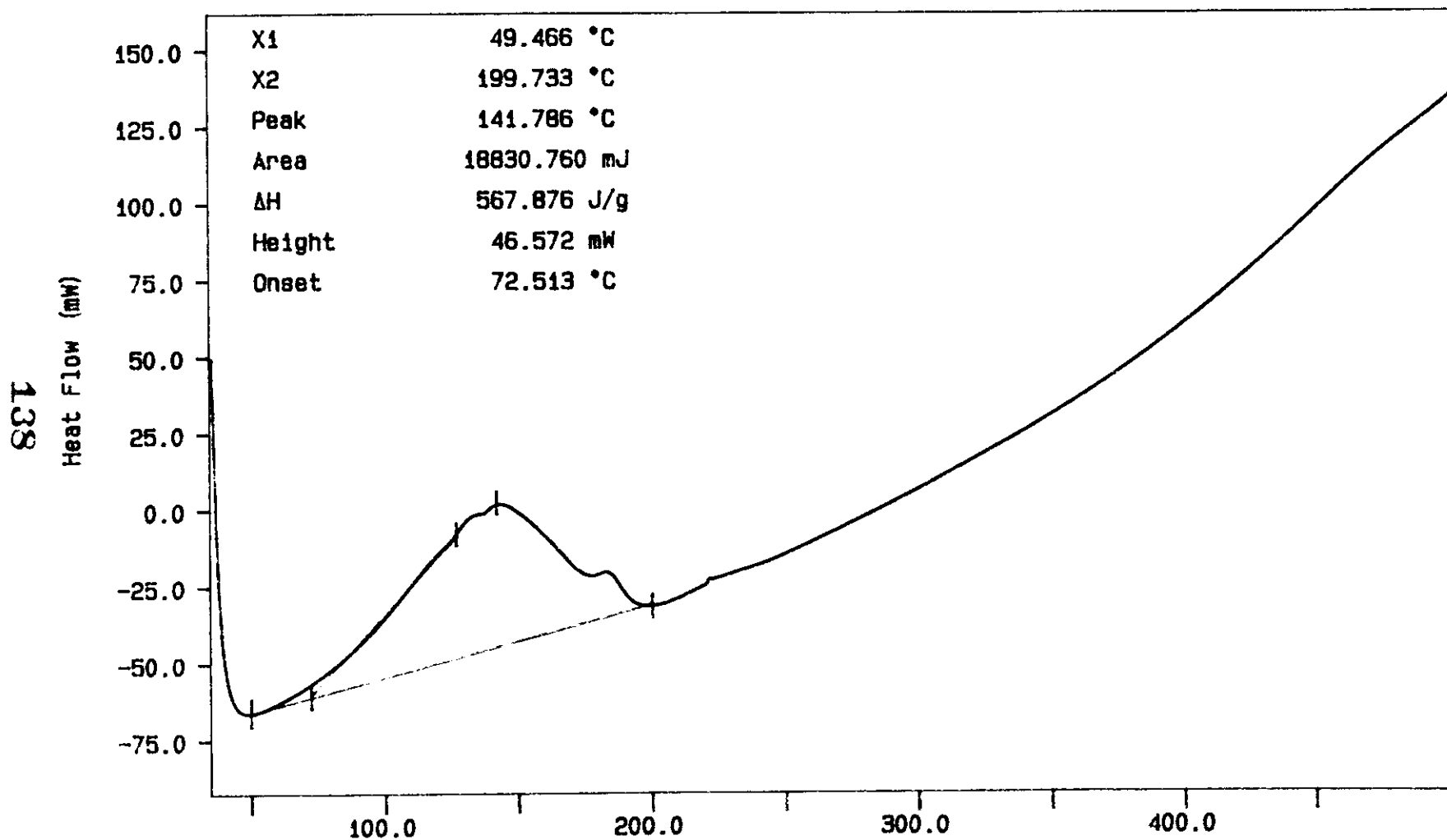
Curve 1: DSC

File info: SAM102304 Mon Oct 23 05:01:18 1995

Sample Weight: 33.160 mg

S95T002687 DUP

BEST AVAILABLE COPY



WHC-SD-WM-DP-156, REV.0

exotherm down, N2 purge gas
TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C)

AD PURINTON
PERKIN-ELMER
7 Series Thermal Analysis System
Mon Oct 23 05:02:07 1995

LABCORE Data Entry Template for Worklist#

2760

Analyst: ADP **Instrument:** DSC0 1 **Book #** 12N14-A

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

Worklist Comment: Please run S-107 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>30.0</u>	<u>N/A</u>	Joules/g
95000141	S-107	2 SAMPLE	S95T002688	0		DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000141	S-107	3 DUP	S95T002688	0		DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
		4 STD				DSC-01	SOLID	<u>28.45</u>	<u>30.4</u>	<u>N/A</u>	Joules/g
95000141	S-107	5 SAMPLE	S95T002689	0		DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000141	S-107	6 DUP	S95T002689	0		DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000147	S-107	7 SAMPLE	S95T002653	0		DSC-01	SOLID	<u>N/A</u>	<u>20.4</u>		Joules/g
		8 STD				DSC-01	SOLID	<u>28.45</u>	<u>29.4</u>	<u>N/A</u>	Joules/g
95000147	S-107	9 DUP	S95T002653	0		DSC-01	SOLID	<u>20.4</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
95000147	S-107	10 SAMPLE	S95T002654	0		DSC-01	SOLID	<u>N/A</u>	<u>25.3</u>		Joules/g
95000147	S-107	11 DUP	S95T002654	0		DSC-01	SOLID	<u>25.3</u>	<u>40.0</u>	<u>N/A</u>	Joules/g
95000147	S-107	12 SAMPLE	S95T002657	0		DSC-01	SOLID	<u>N/A</u>	<u>20.5</u>		Joules/g
95000147	S-107	13 DUP	S95T002657	0		DSC-01	SOLID	<u>20.5</u>	<u>15.5</u>	<u>N/A</u>	Joules/g
		14 STD				DSC-01	SOLID	<u>28.45</u>	<u>29.7</u>	<u>N/A</u>	Joules/g
95000147	S-107	15 SAMPLE	S95T002658	0		DSC-01	SOLID	<u>N/A</u>	<u>14.5</u>		Joules/g
95000147	S-107	16 DUP	S95T002658	0		DSC-01	SOLID	<u>14.5</u>	<u>15.1</u>	<u>N/A</u>	Joules/g

See attached for signatures
See attached for comments
Data Entry Comments: 11/13/95
11/14/95 BDV

Verified by
Blandina Valenzuela
11/14/95

S95T002688 produced three endotherms one at 134.3°C with a delta H of 640.8 J/g, second at 221.2°C with a delta H of 2.6 J/g and third with a delta H of 13.2 J/g at 450.8°C.

S95T002689 produced one large endotherm at 122.6°C with a delta H of 848.7 J/g

S95T002653 produced one large endotherm at 111.3°C with a delta H of 569.4 J/g

S95T002654 produced one endotherm at 125.4°C with a delta H of 899.6 J/g

S95T002657 produced ^{11/14/95 spot} ~~two~~ two endotherms one at 117.3°C with a delta H of 672.6 J/g and second at 271.4°C with a delta H of 136.3 J/g.

S95T002658 produced two endotherms one at 121.3°C with a delta H of 826.8 J/g and another at 458.7°C with a delta H ^{4/14/95 spot} of 67.2 J/g

Verified by
Blandina
Valenzuela

WHC-SD-WM-DP-156, REV. 0

LABCORE Data Entry Template for Worklist#

2760

Analyst: ADP

Instrument: DSC0

Book # 12N14-AMethod: LA-514-113 Rev/Mod CO

Worklist Comment: Please run S-107 DSCs 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
95000141	S-107	2 SAMPLE	S95T002688	0	DSC-01	SOLID	N/A			Joules/g
95000141	S-107	3 DUP	S95T002688	0	DSC-01	SOLID			N/A	Joules/g
95000141	S-107	4 SAMPLE	S95T002689	0	DSC-01	SOLID	N/A			Joules/g
95000141	S-107	5 DUP	S95T002689	0	DSC-01	SOLID			N/A	Joules/g
95000147	S-107	6 SAMPLE	S95T002653	0	DSC-01	SOLID	N/A			Joules/g
95000147	S-107	7 DUP	S95T002653	0	DSC-01	SOLID			N/A	Joules/g
95000147	S-107	8 SAMPLE	S95T002654	0	DSC-01	SOLID	N/A			Joules/g
95000147	S-107	9 DUP	S95T002654	0	DSC-01	SOLID			N/A	Joules/g
95000147	S-107	10 SAMPLE	S95T002657	0	DSC-01	SOLID	N/A			Joules/g
95000147	S-107	11 DUP	S95T002657	0	DSC-01	SOLID			N/A	Joules/g
95000147	S-107	12 SAMPLE	S95T002658	0	DSC-01	SOLID	N/A			Joules/g
95000147	S-107	13 DUP	S95T002658	0	DSC-01	SOLID			N/A	Joules/g

Final page for worklist #

2760

[Signature] 11-11-95
Analyst Signature Date

[Signature] 11-14-95
Analyst Signature Date

[Signature] 11-11-95 1530
[Signature] 11-11-95

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 142 TO 157.

BEST AVAILABLE COPY

DSC STD 12N14-A N2

8.020 mg

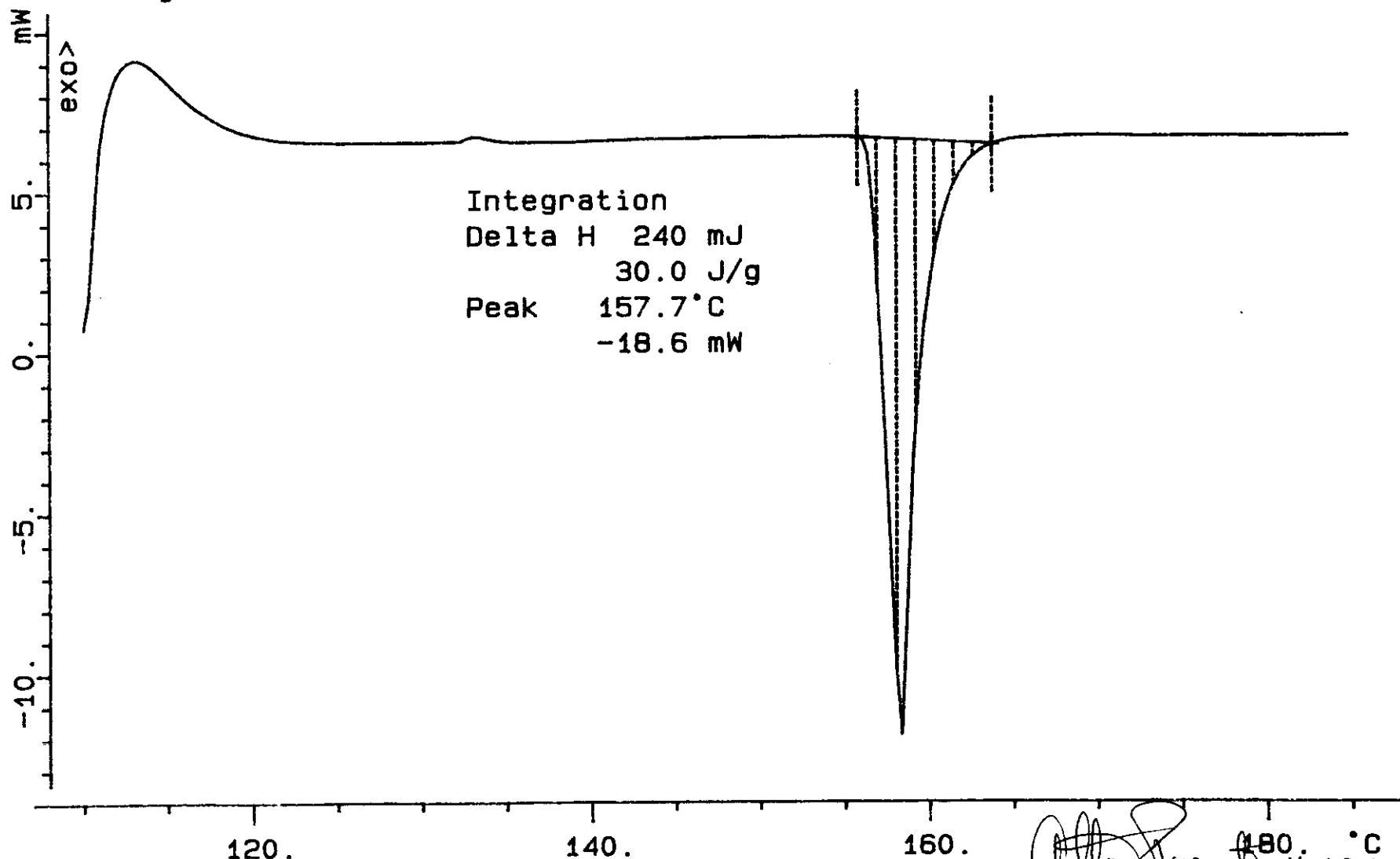
Rate: 10.0 °C/min

File: 00105.001

DSC METTLER 05-Nov-95

Ident: 0.0

222-S Laboratory



BEST AVAILABLE COPY

S95T002688 SAM N2

30.907 mg

Rate: 10.0 °C/min

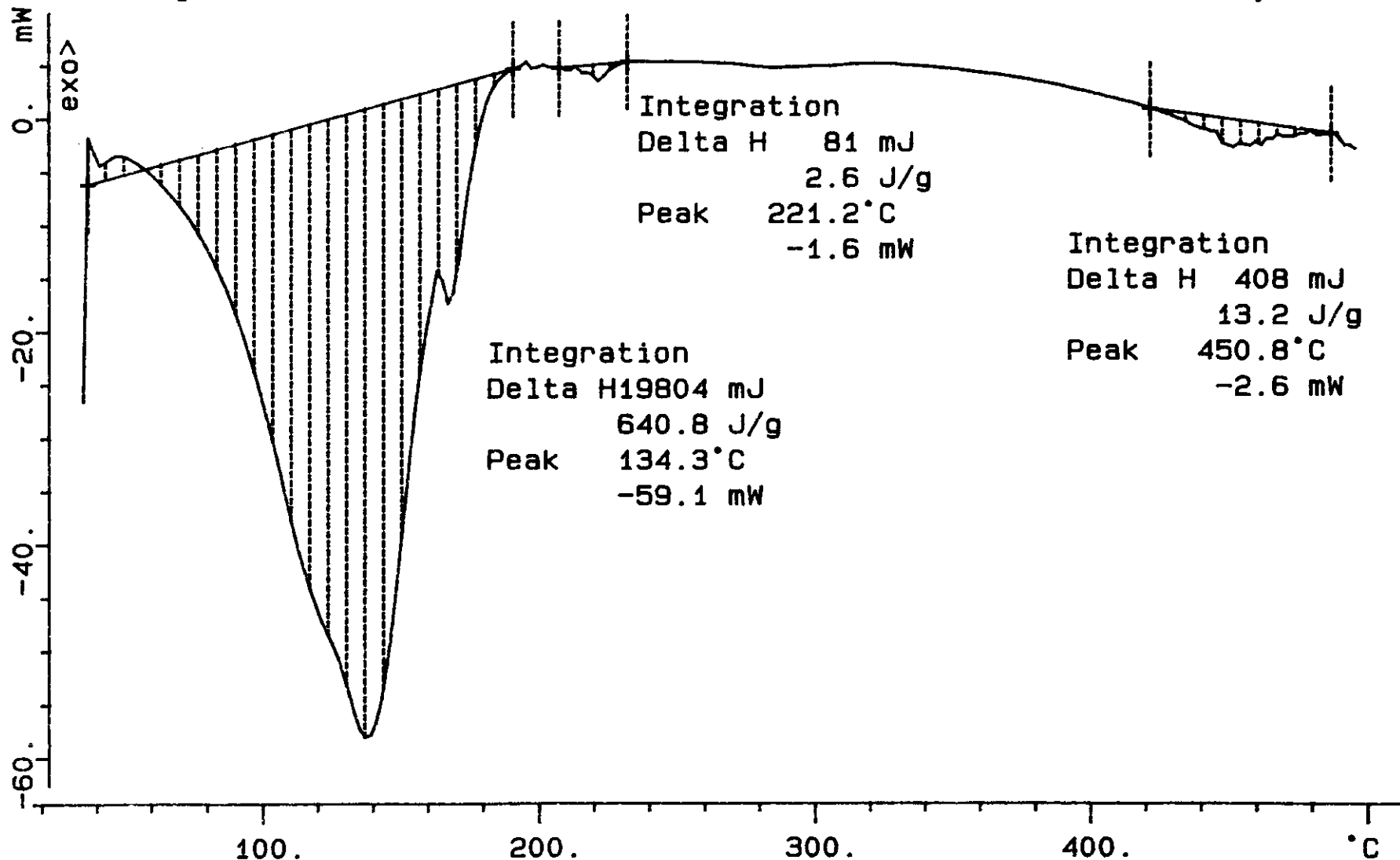
File: 00106.001

DSC METTLER

05-Nov-95

Ident: 0.0

222-S Laboratory



143

BEST AVAILABLE COPY

S95T002688DUP N2

32.642 mg

Rate: 10.0 °C/min

File: 00001.001

DSC METTLER

05-Nov-95

Ident: 0.0

222-S Laboratory

exo

50. mW

Integration

Delta H 52 mJ

1.6 J/g

Peak 221.1°C

-0.7 mW

Integration

Delta H 168 mJ

5.2 J/g

Peak 291.1°C

-1.1 mW

Integration

Delta H21153 mJ

648.0 J/g

Peak 130.1°C

-62.3 mW

100.

200.

300.

400.

°C

144

WHC-SD-WM-DP-156, REV. 0

BEST AVAILABLE COPY

DSC STD 12N14-A N2

8.020 mg

Rate: 10.0 °C/min

File: 00007.001

DSC METTLER

06-Nov-95

Ident: 0.0

222-S Laboratory

exo>

10. mW

Integration

Delta H 244 mJ

30.4 J/g

Peak 157.9°C

-18.4 mW

120.

140.

160.

180. °C

Anthony Peruto
11-6-95

W-0-33-M-A-D-156, REV.0

BEST AVAILABLE COPY

S95T002689 SAM N2

27.617 mg

Rate: 10.0 °C/min

File: 00008.001

DSC METTLER

06-Nov-95

Ident: 0.0

222-S Laboratory

exo >

50. mW

146

Integration
Delta H23440 mJ
848.7 J/g
Peak 122.6 °C
-55.2 mW

100.

200.

300.

400.

°C

BEST AVAILABLE COPY

S95T002689 DUP N2

51.924 mg

Rate: 10.0 °C/min

File: 00010.001

DSC METTLER

06-Nov-95

Ident: 0.0

222-S Laboratory

exo

50. mW

Integration

Delta H 33662 mJ

648.3 J/g

Peak 121.4 °C

-75.8 mW

Integration

Delta H 1507 mJ

29.0 J/g

Peak 436.3 °C

-4.5 mW

100.

200.

300.

400.

°C

147

WHC-SD-WM-DP-156, REV. 0

BEST AVAILABLE COPY

S95T002653 SAM N2

67.144 mg

Rate: 10.0 °C/min

File: 00012.001 DSC METTLER 06-Nov-95

Ident: 0.0

222-S Laboratory

exo>

50. mW

148

Integration
Delta H 38234 mJ
569.4 J/g
Peak 111.3°C
-82.7 mW

Integration
Delta H 1367 mJ
20.4 J/g
Peak 353.8°C
3.1 mW

100.

200.

300.

400.

°C

BEST AVAILABLE COPY

DSC STD 12N14A

8.020 mg

Rate: 10.0 °C/min

File: 00027.001

DSC METTLER

10-Nov-95

Ident: 0.0

222-S Laboratory

EXO >

10. mW

Integration

Delta H 235 mJ

29.4 J/g

Peak 157.9 °C

-17.3 mW

120.

140.

160.

180. °C

Wk Spk 11/10/95

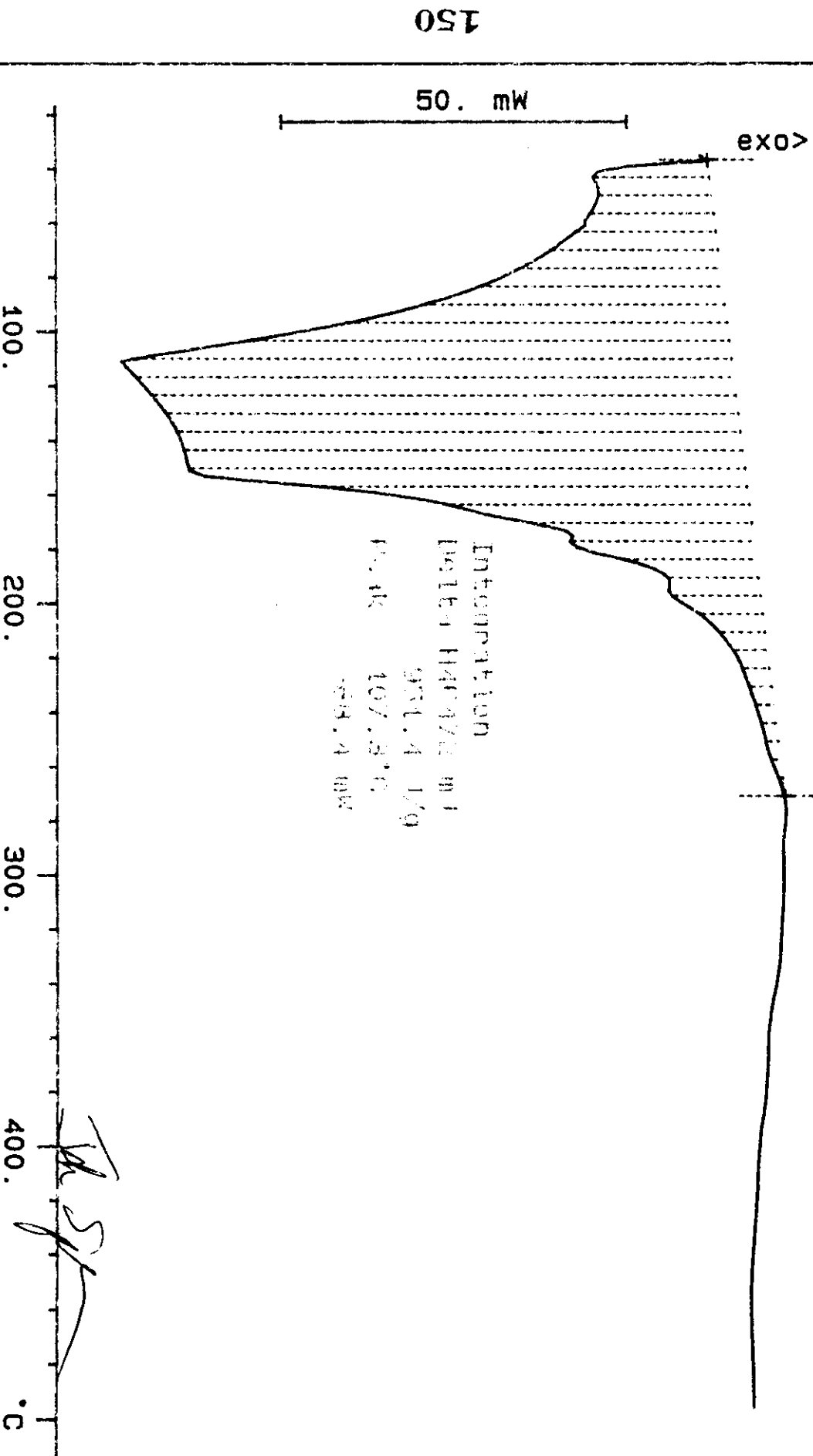
WHC-SD-WM-DP-156, REV. 0

149

BEST AVAILABLE COPY

S95T002653 N2 D₂O ⁵³ 11/10/95
48.847 mg Rate: 10.0 °C/min

File: 00028.001 DSC METTLER 10-Nov-95
Ident: 0.0 222-S Laboratory



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S95T002654 ~~BUP~~ N2

32.080 mg

Rate: 10.0 °C/min

File: 00030.001

DSC METTLER

10-Nov-95

Ident: 0.0

222-S Laboratory

EXOTHERM

50. mW

Integration

Delta H 28859 mJ

899.6 J/g

Peak 125.4 °C

-84.9 mW

Integration

Delta H 812 mJ

25.3 J/g

Peak 435.7 °C

2.2 mW

100.

200.

300.

400.

°C

151

WHC-SD-WM-DE-156, REV. 0

BEST AVAILABLE COPY

S95T002654 DUP N2

46.840 mg

Rate: 10.0 °C/min

File: 00032.001

DSC METTLER

10-Nov-95

Ident: 0.0

222-S Laboratory

exo

50.0 mW

152

Integration
Delta H 38018 mJ
811.7 J/g
Peak 117.3°C
-86.8 mW

Integration
Delta H 1872 mJ
49.0 J/g
Peak 443.8°C
5.5 mW

100.

200.

300.

400.

°C

WHC:SD-WM-DP-156, REV.0

BEST AVAILABLE COPY

S95T002657 SAM N2

54.645 mg

Rate: 10.0 °C/min

File: 00034.001

DSC METTLER

10-Nov-95

Ident: 0.0

222-S Laboratory

exo

50. mW

153

Integration
Delta H 1119 mJ
20.5 J/g
Peak 415.0°C
2.9 mW

Integration
Delta H 36752 mJ
672.6 J/g
Peak 117.3°C
-78.5 mW

Integration
Delta H 7451 mJ
136.3 J/g
Peak 271.4°C
-22.8 mW

100.

200.

300.

400.

°C

WHC-SD-WM-DP-156, REV. 0

BEST AVAILABLE COPY

S95T002657 DUP N2

46.526 mg

Rate: 10.0 °C/min

File: 00036.001

DSC METTLER

10-Nov-95

Ident: 0.0

222-S Laboratory

exo>

50. mW

154

Integration

Delta H 4934 mJ

106.1 J/g

Peak 270.3°C

-14.8 mW

Integration

Delta H 32602 mJ

700.7 J/g

Peak 123.3°C

-82.9 mW

Integration

Delta H 721 mJ

15.5 J/g

Peak 405.4°C

1.9 mW

100.

200.

300.

400.

°C

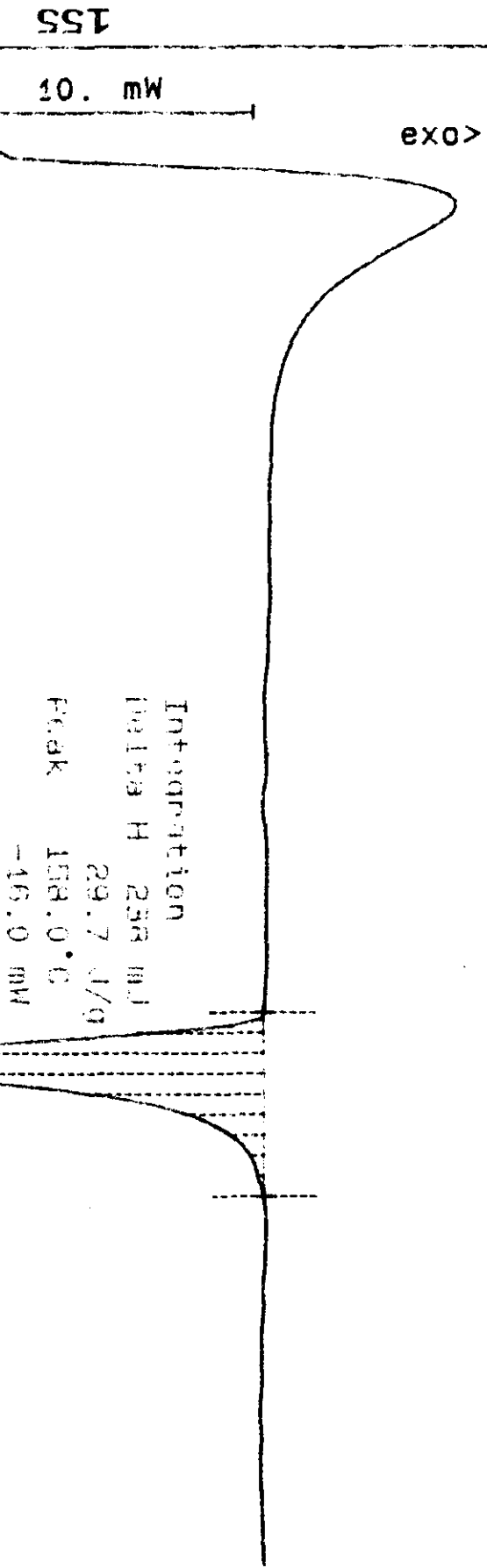
WHC-SD-WM-DP-156, REV. 0

BEST AVAILABLE COPY

DSC STD 12N14A
8.020 mg

Rate: 10.0 °C/min

File: 00038.001 DSC METTLER 11-Nov-95
Ident: 0.0 222-S Laboratory



Integration
Heat H 238 mJ
29.7 J/g
Peak 155.0 °C
-16.0 mW

James M. Fulton 11/11/95

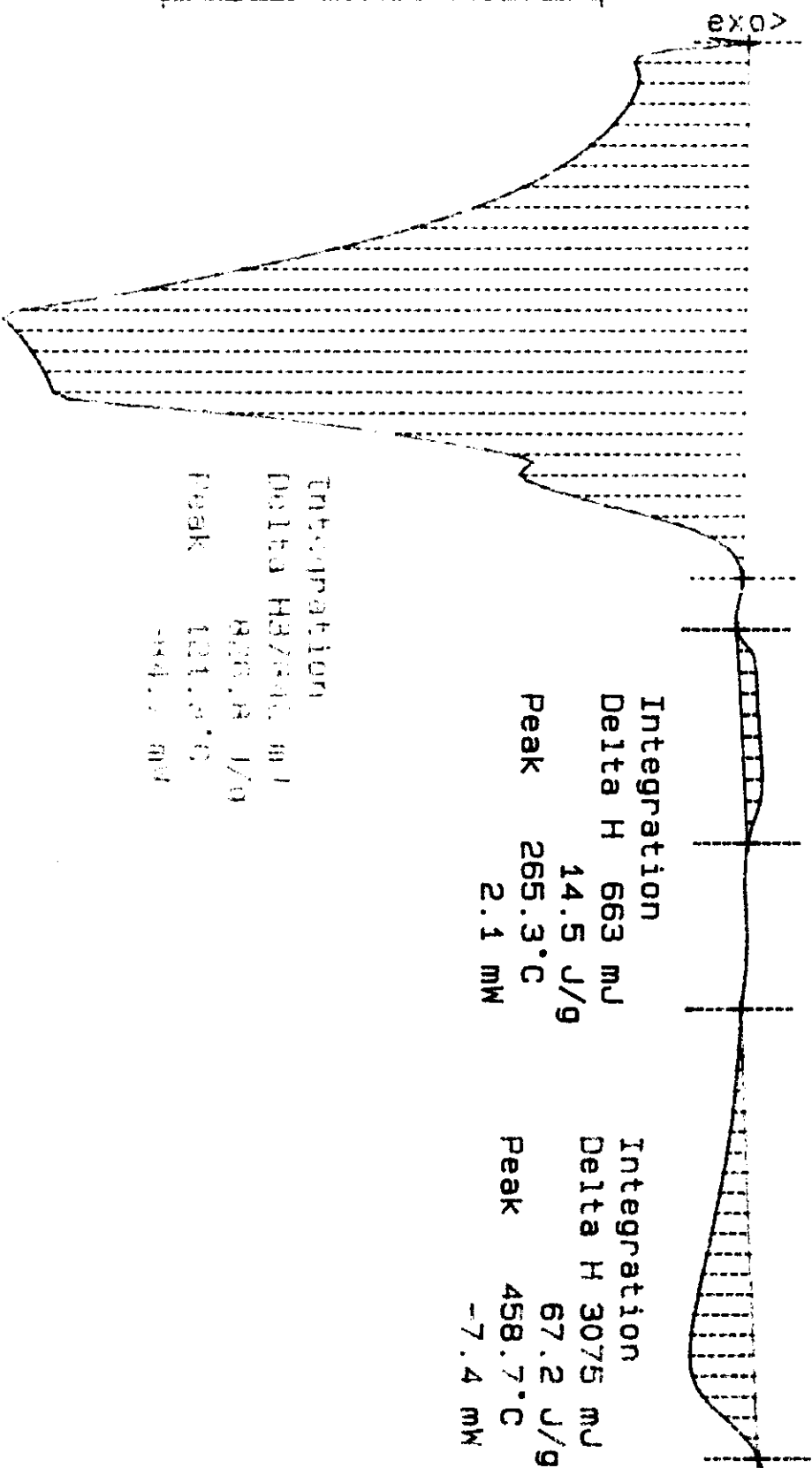
BEST AVAILABLE COPY

S95T002658 N2
45.772 mg

Rate: 10.0 °C/min

File: 00040.001 DSC METTLER 11-Nov-95
Ident: 0.0 222-S Laboratory

<exo>



Integration

Delta H 83740. mJ

836.8 J/g

Peak 121.0°C

-44.2 mW

Integration

Delta H 663 mJ

14.5 J/g

Peak 265.3°C

2.1 mW

Integration

Delta H 3075 mJ

67.2 J/g

Peak 458.7°C

-7.4 mW

156

BEST AVAILABLE COPY

S95T002658 DUP N2

36.806 mg

Rate: 10.0 °C/min

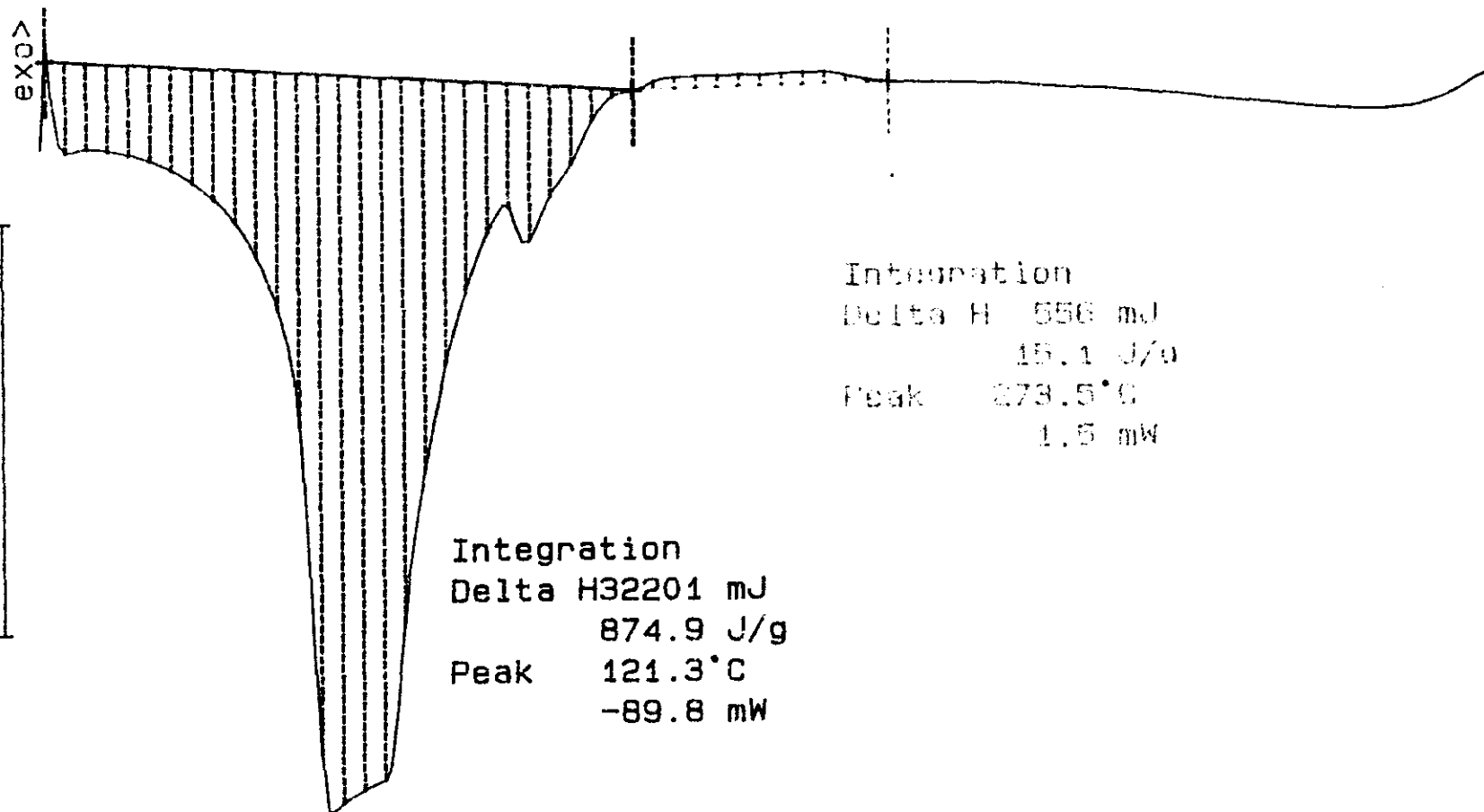
File: 00042.001

DSC METTLER

11-Nov-95

Ident: 0.0

222-S Laboratory



LABCORE Data Entry Template for Worklist#

2768

Analyst: RS Instrument: DSC0 1 Book # 12N14A

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

Worklist Comment: Please run S-107 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>29.6</u>	<u>N/A</u>	Joules/g
95000147	S-107	2 SAMPLE	S95T002665	0		DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000147	S-107	3 DUP	S95T002665	0		DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 2768

Rae Ann Green 10-18-95
Analyst Signature Date

Tom N. H. H. H. 10/14/95
Analyst Signature Date

Verified by Blandina Valenzuela
10-23-95

Data Entry Comments: Sample produced a large endotherm at 124.8°C with
a delta H of 782.6 J/g and a second one at 434.8°C with a
delta H of 35.2 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 159 TO 161.

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DSC STD 12N14A N2

6.850 mg

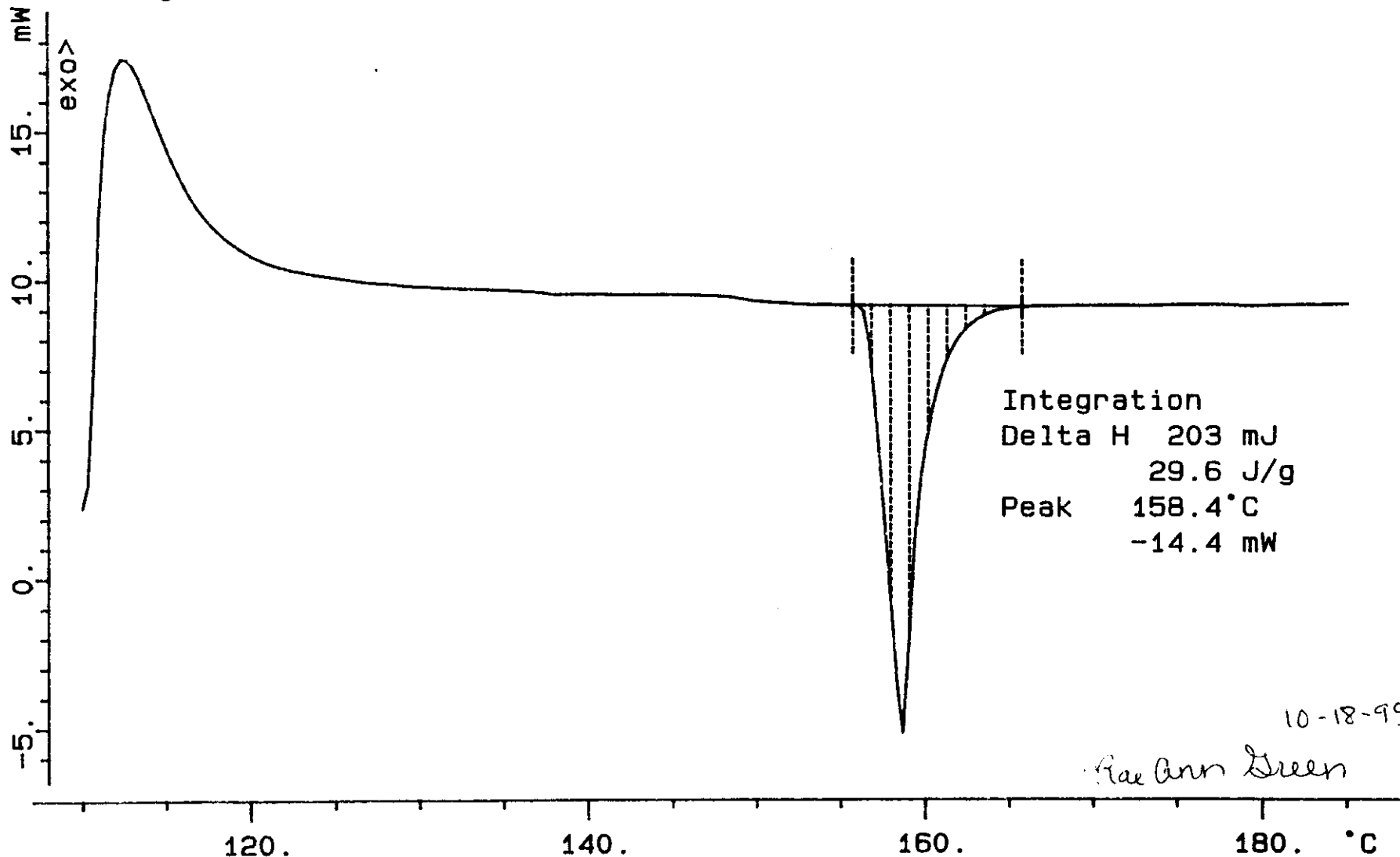
Rate: 10.0 °C/min

File: 00091.001

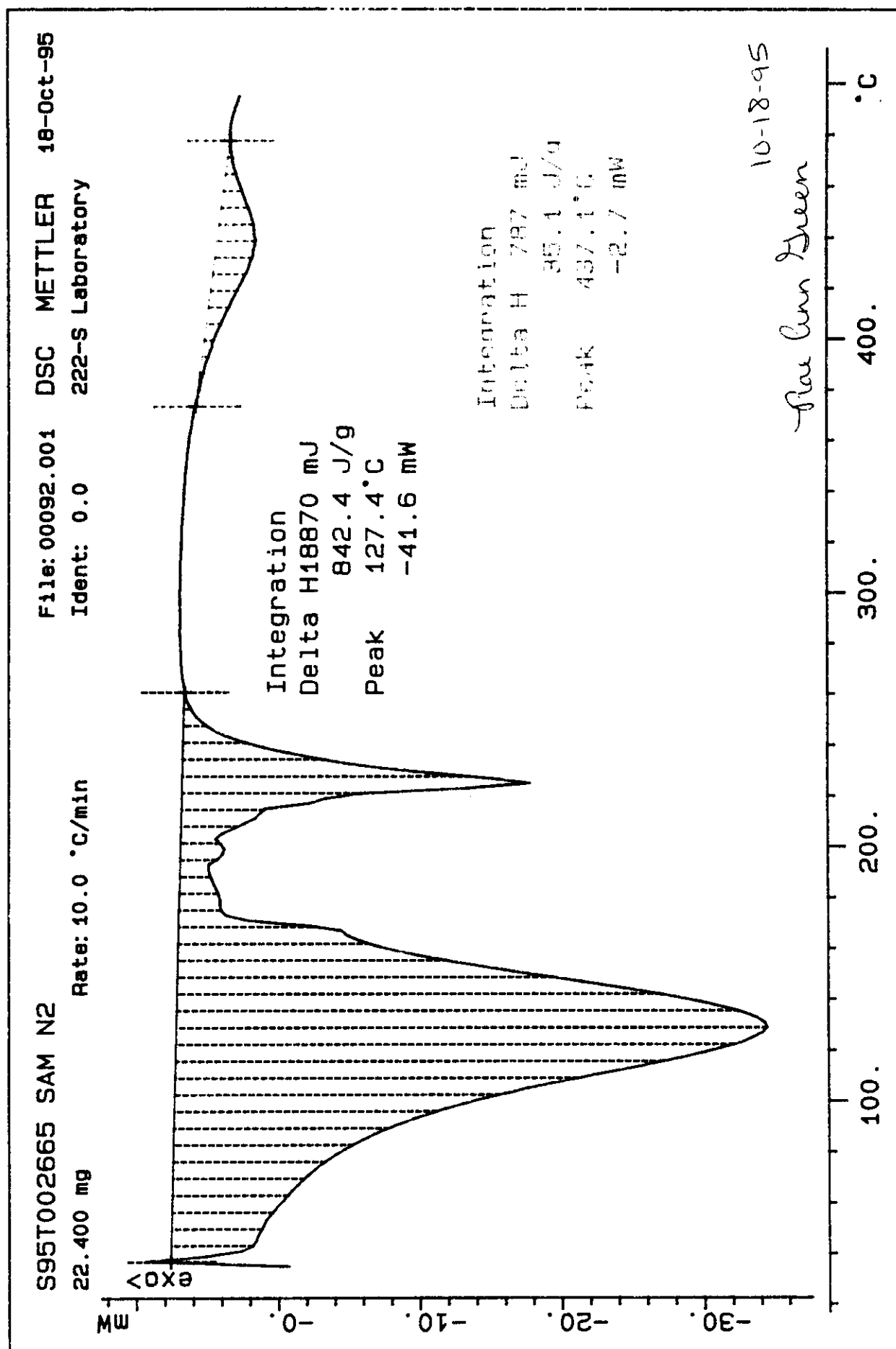
Ident: 0.0

DSC METTLER 18-Oct-95

222-S Laboratory



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S95T002665 DUP N2

26.400 mg

Rate: 10.0 °C/min

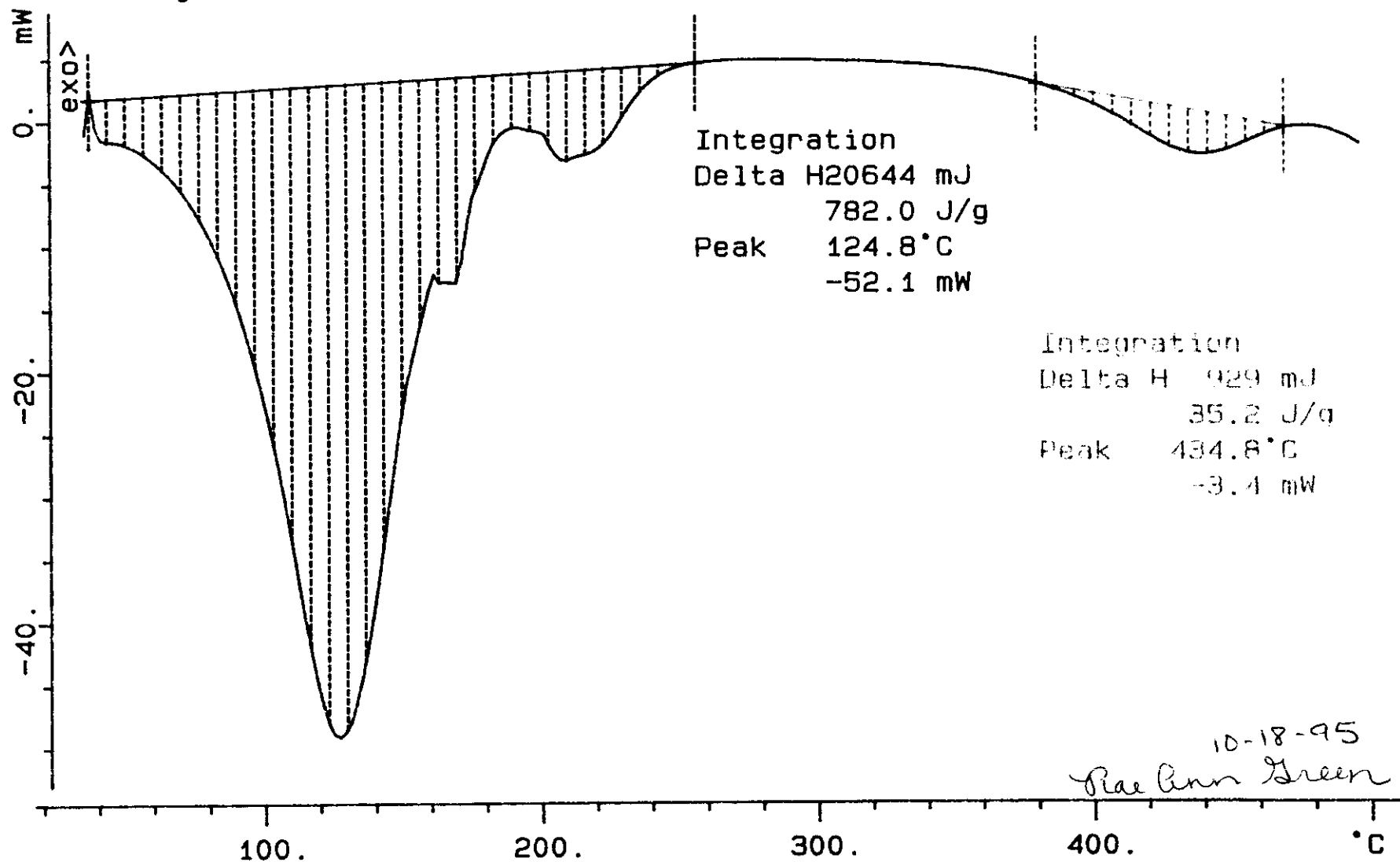
File: 00093.001

Ident: 0.0

DSC METTLER

18-Oct-95

222-S Laboratory



161

LABCORE Data Entry Template for Worklist#

2769

Analyst: PJM Instrument: DSC0 3 Book # 12N14A

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

Worklist Comment: Please run S-107 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>28.00</u>	<u>N/A</u>	Joules/g
95000141	S-107	2 SAMPLE	S95T002601	0	DSC-03	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000141	S-107	3 DUP	S95T002601	0	DSC-03	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
		4 STD			DSC-01	LIQUID	<u>28.45</u>	<u>29.3</u>	<u>N/A</u>	Joules/g
95000141	S-107	5 SAMPLE	S95T002602	0	DSC-01	LIQUID	<u>N/A</u>	<u>37.4</u>		Joules/g
95000141	S-107	6 DUP	S95T002602	0	DSC-01	LIQUID	<u>37.4</u> <u>35</u> <u>10-17-95</u>	<u>35.4</u>	<u>N/A</u>	Joules/g

Final page for worklist #

2769

See attached for signatures
Analyst Signature PJM Date 10-17-95

PJM 10/18/95
Analyst Signature Date

Verified by Blandina Valenzuela
10-23-95

S95T002601 produced an endotherm at 117.0°C with a delta H of 1495.5 J/g

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#

2769

Analyst: RL McCown

Instrument: DSC0 _____

Book # 12N14A

Method: LA-514-111 Rev/Mod _____

Worklist Comment: Please run S-107 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01 3	LIQUID			N/A	Joules/g
95000141	S-107	2 SAMPLE	S95T002601	0	DSC-01 3	LIQUID	N/A			Joules/g
95000141	S-107	3 DUP	S95T002601	0	DSC-01 3	LIQUID			N/A	Joules/g
95000141	S-107	4 SAMPLE	S95T002602	0	DSC-01 3	LIQUID	N/A			Joules/g
95000141	S-107	5 DUP	S95T002602	0	DSC-01 3	LIQUID			N/A	Joules/g

Final page for worklist #

2769

RL McCown 10/13/95
Analyst Signature Date

Analyst Signature Date

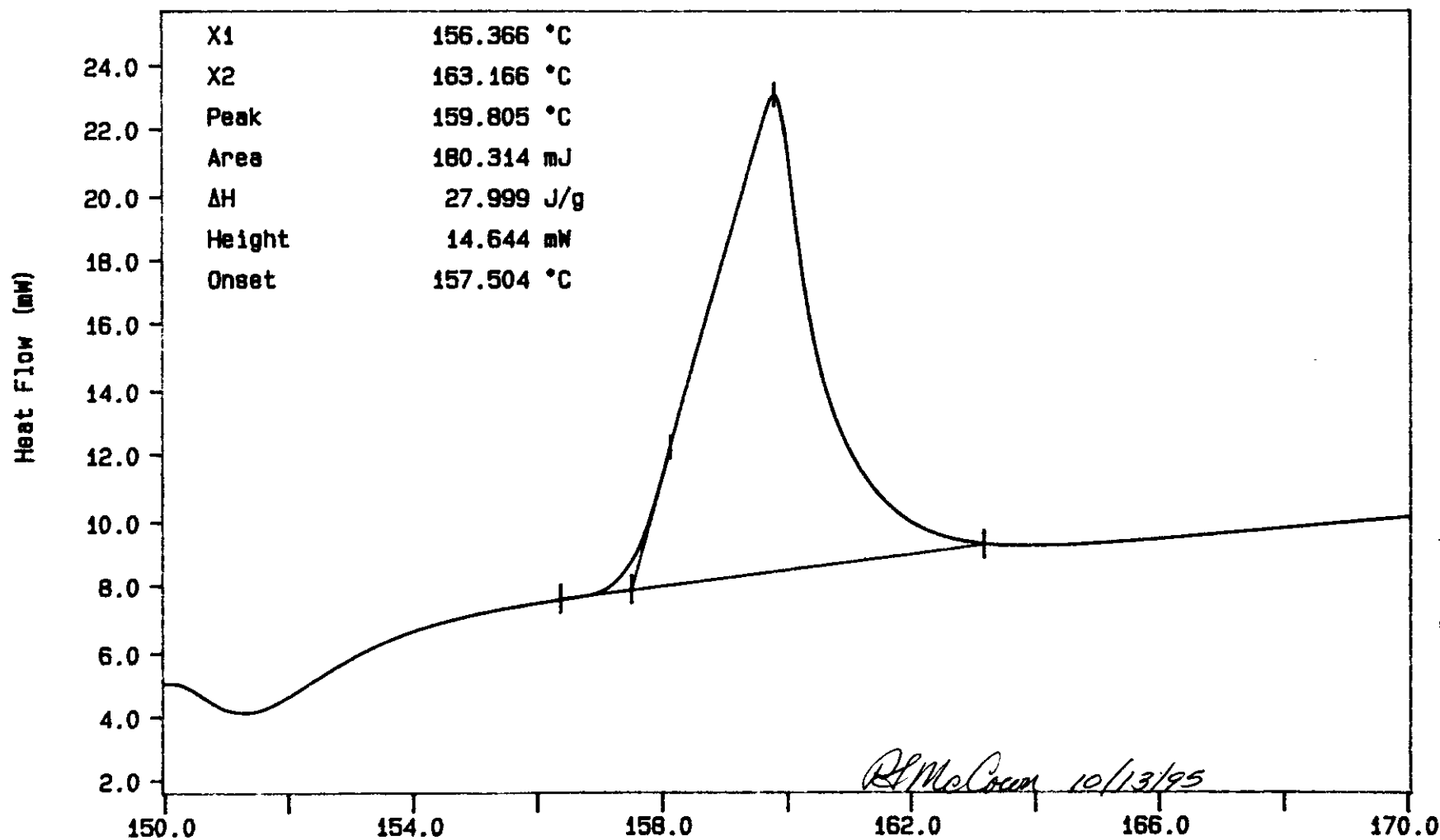
Data Entry Comments:

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.

Curve 1: DSC
File info: IND101301 Fri Oct 13 00:17:19 1995
Sample Weight: 6.440 mg
12N14A Indium at 10C/min

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164



PJ McCown 10/13/95

N2, EXOTHERM DOWN
TEMP: 150.0 °C TIME: 0.0 min RATE: 10.0 °C/min
TEMP: 170.0 °C

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 13 00:20:08 1995

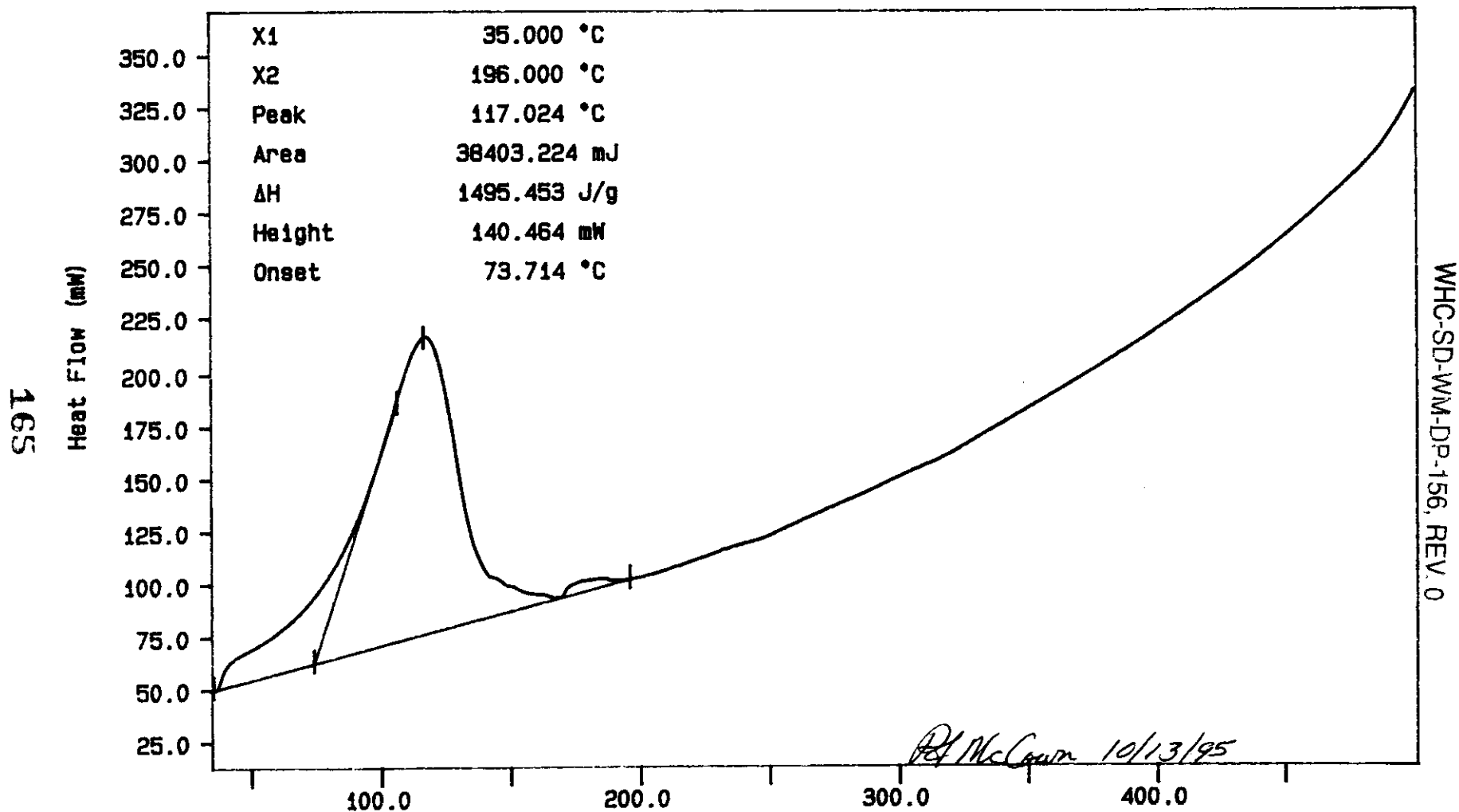
Curve 1: DSC

File info: SAM101301 Fri Oct 13 02:48:41 1995

Sample Weight: 25.680 mg

S95T002601 SAMPLE

BEST AVAILABLE COPY



exotherm down, N2 purge gas

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

Temperature (°C)

PJ MCCOWN

PERKIN-ELMER

7 Series Thermal Analysis System

Fri Oct 13 02:55:33 1995

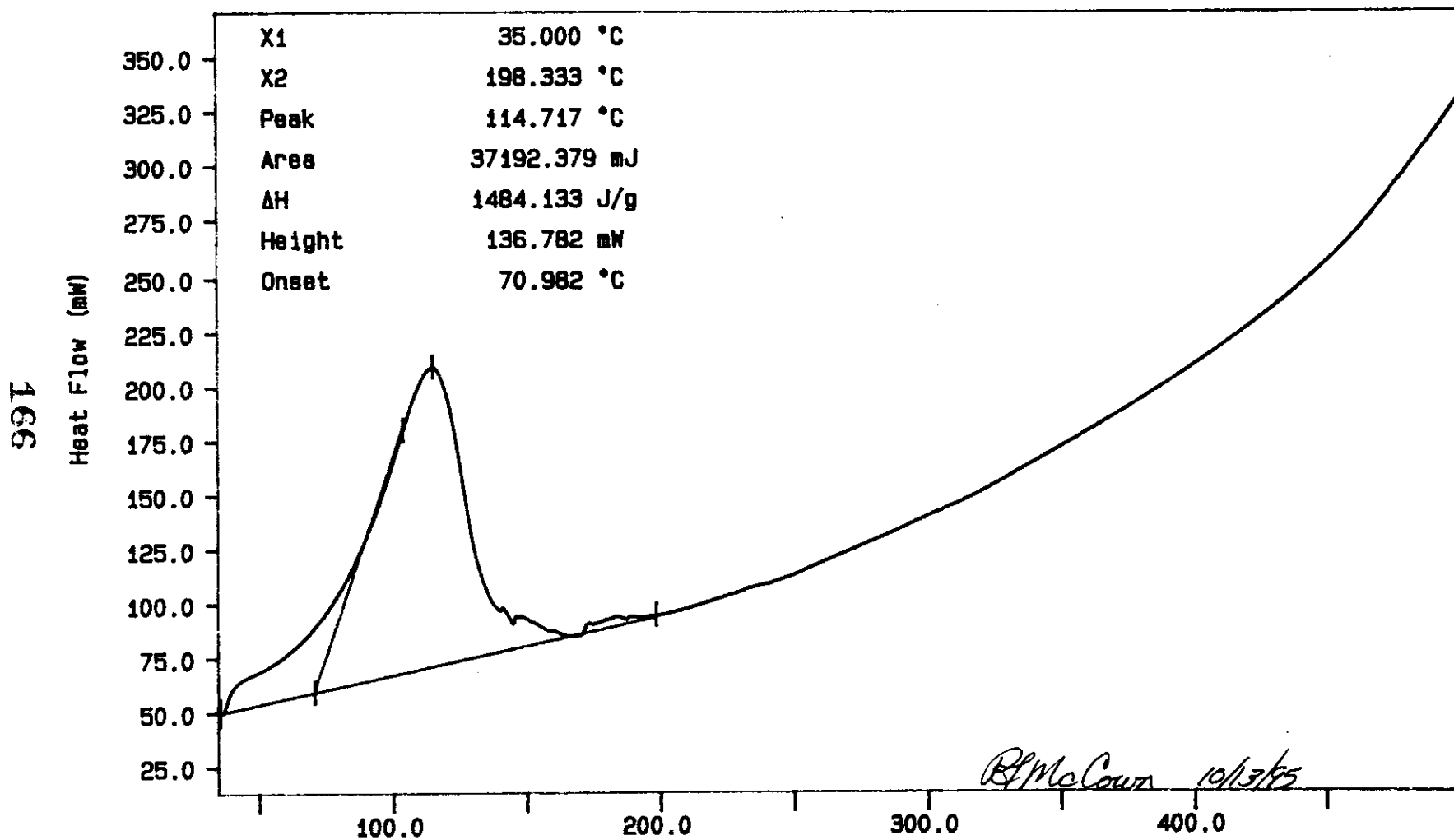
Curve 1: DSC

File info: SAM101302 Fri Oct 13 04:10:54 1995

Sample Weight: 25.060 mg

S95T002601 DUP

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exotherm down, N2 purge gas

TEMP1: 35.0 °C TIME1: 0.0 min RATE1: 10.0 °C/min
TEMP2: 500.0 °C

Temperature (°C)

PJ MCCOWN
PERKIN-ELMER
7 Series Thermal Analysis System
Fri Oct 13 04:48:56 1995

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DSC STD 12N14A

6.850 mg

Rate: 10.0 °C/min

File: 00007.001

DSC METTLER

13-Oct-95

Ident: 0.0

222-S Laboratory

R. McCown 10/13/95

ΔCp

10. mW

Integration

Delta H 201 mJ

29.3 J/g

Peak 158.2°C

-13.5 mW

120.

140.

160.

180. °C

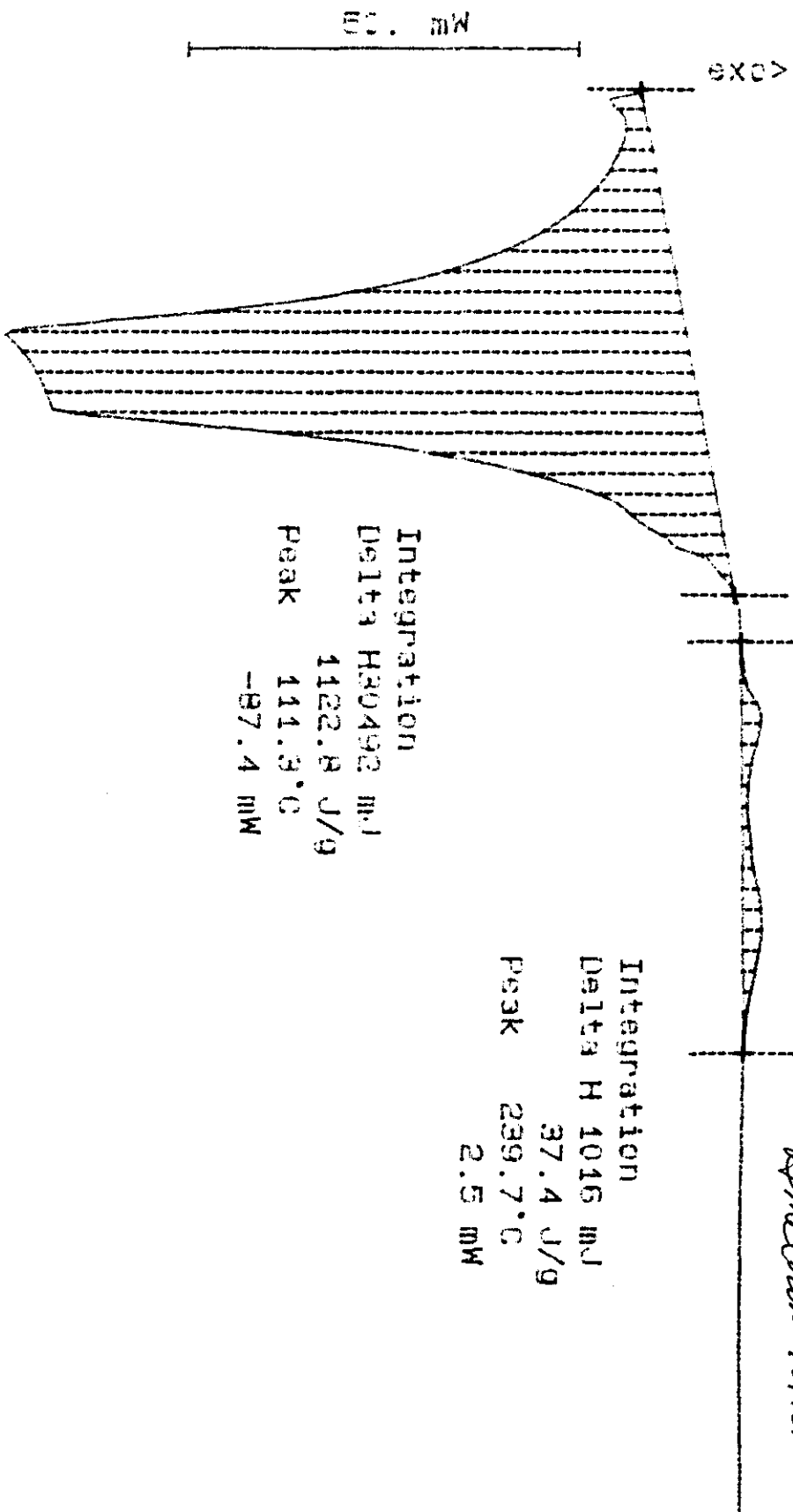
BEST AVAILABLE COPY

S95T002602 SAM N2
27.156 mg

Rate: 10.0 °C/min

File: 00009.001 DSC METTLER 13-Oct-95
Ident: 0.0 222-S Laboratory

McLaren 10/13/95



Integration
Delta H 80492 mJ
1122.8 J/g
Peak 111.3 °C
-87.4 mW

Integration
Delta H 1016 mJ
37.4 J/g
Peak 239.7 °C
2.5 mW

168

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S95T002602 DUP N2
29.302 mg

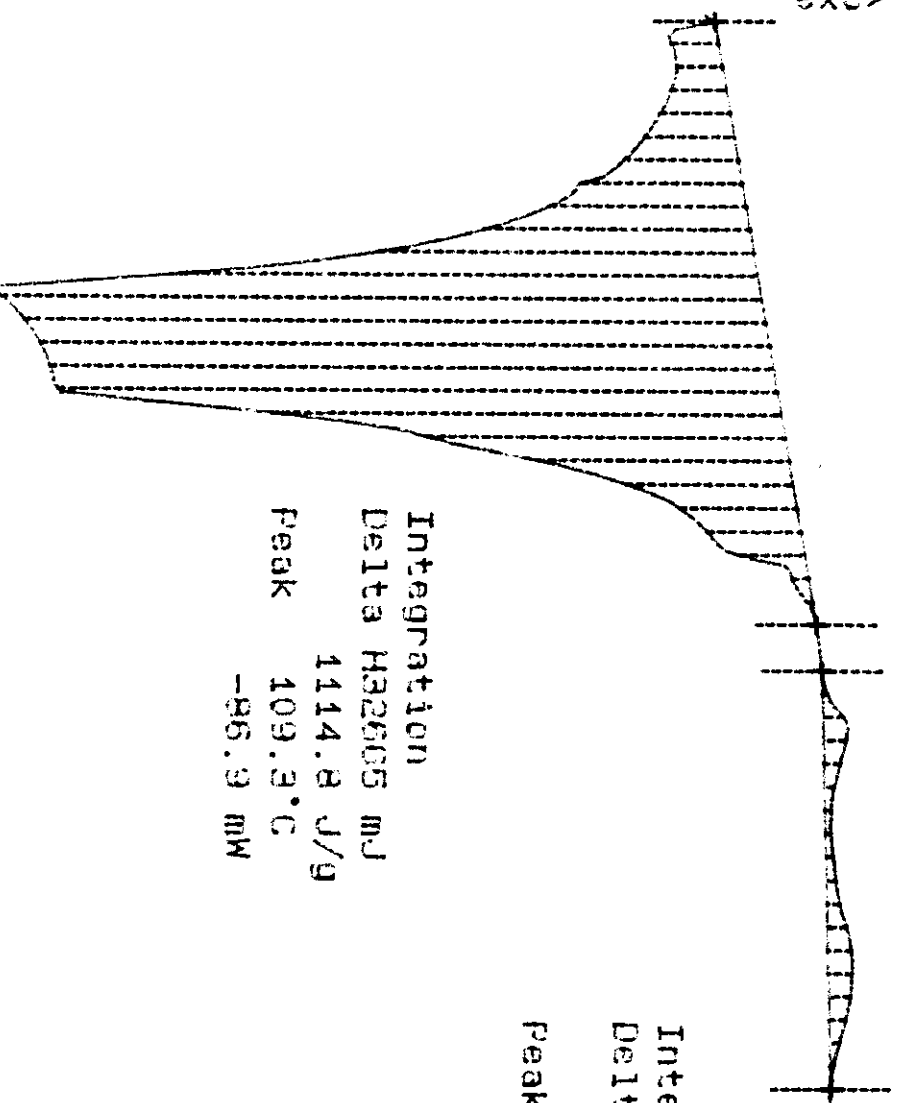
Rate: 10.0 °C/min

File: 00044.001 DSC METTLEH 13-Oct-95
Ident: 0.0 222-S Laboratory

McGowan 10/13/95

< exo

10.0 mW



Integration
Delta H32605 mJ
1114.8 J/g
Peak 109.3°C
-86.3 mW

Integration
Delta H 1038 mJ
35.4 J/g
Peak 303.9°C
2.8 mW

100. 200. 300. 400. °C

LABCORE Data Entry Template for Worklist#

2770

Analyst: PJM Instrument: DSC0 1 Book # 12N14A

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

Worklist Comment: Please run S-107 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>28.4</u>	<u>N/A</u>	Joules/g
95000141	S-107	2 SAMPLE	S95T002626	0	DSC-01	LIQUID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000141	S-107	3 DUP	S95T002626	0	DSC-01	LIQUID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist # 2770

See attached for signatures
Analyst Signature [Signature] Date 10/31/95

[Signature] 11-1-95
Analyst Signature Date

Verified by Blandina
Valenzuela

Data Entry Comments:

Sample produced an endotherm at 101.3°C with a
delta H of 1115.4 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#

2770

Analyst: RMCCorm Instrument: DSC0 Book # 12N14A

Method: LA-514-113 Rev/Mod _____

Worklist Comment: Please run S-107 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
95000141	S-107	2 SAMPLE	S95T002626	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
95000141	S-107	3 DUP	S95T002626	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g
95000141	S-107	4 SAMPLE	S95T002627	0	DSC-01	LIQUID	N/A	_____	_____	Joules/g
95000141	S-107	5 DUP	S95T002627	0	DSC-01	LIQUID	_____	_____	N/A	Joules/g

Final page for worklist # 2770

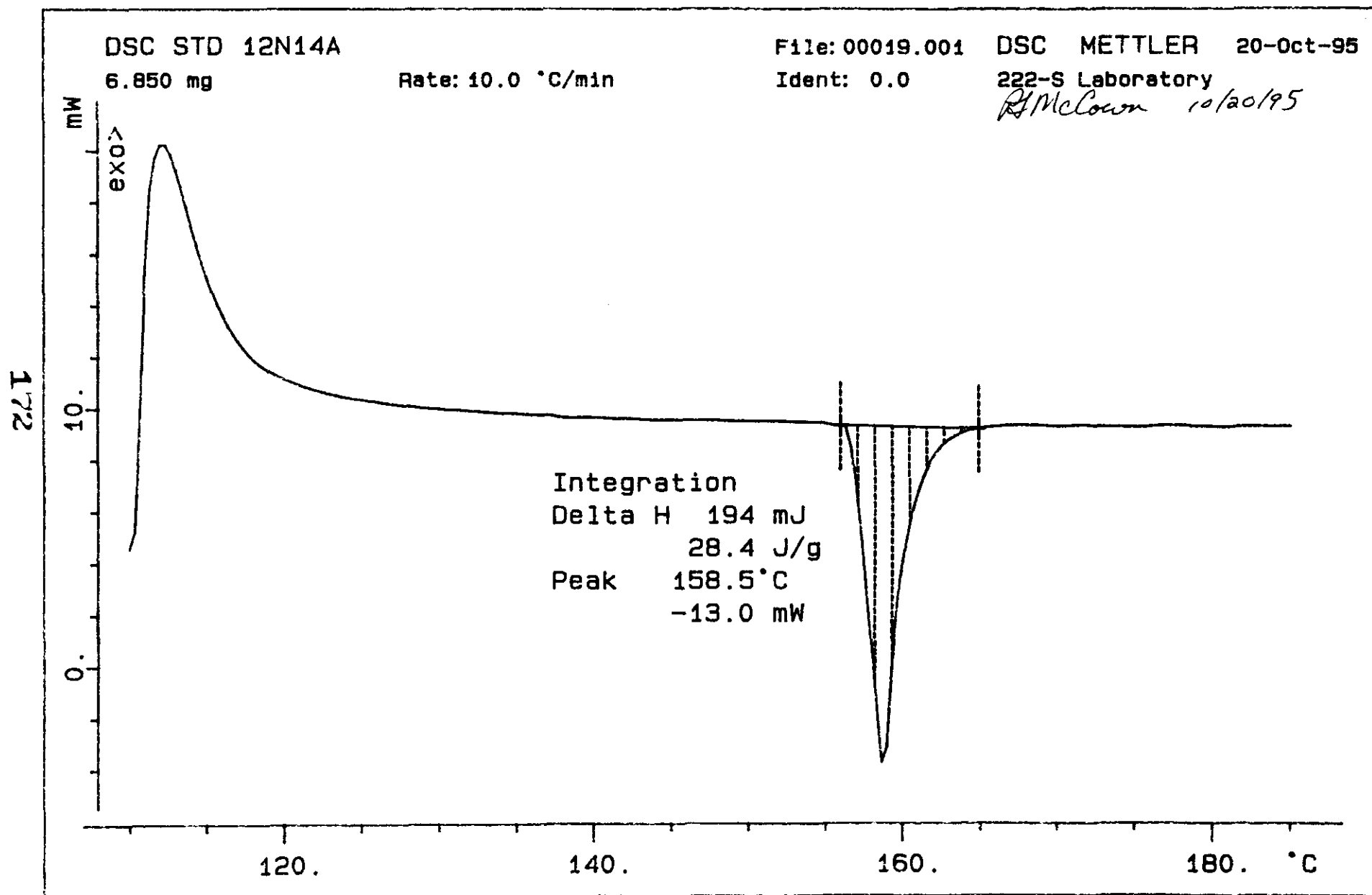
RMCCorm 10/24/95
Analyst Signature Date

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



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S95T002626 SAM N2

19.058 mg

Rate: 10.0 °C/min

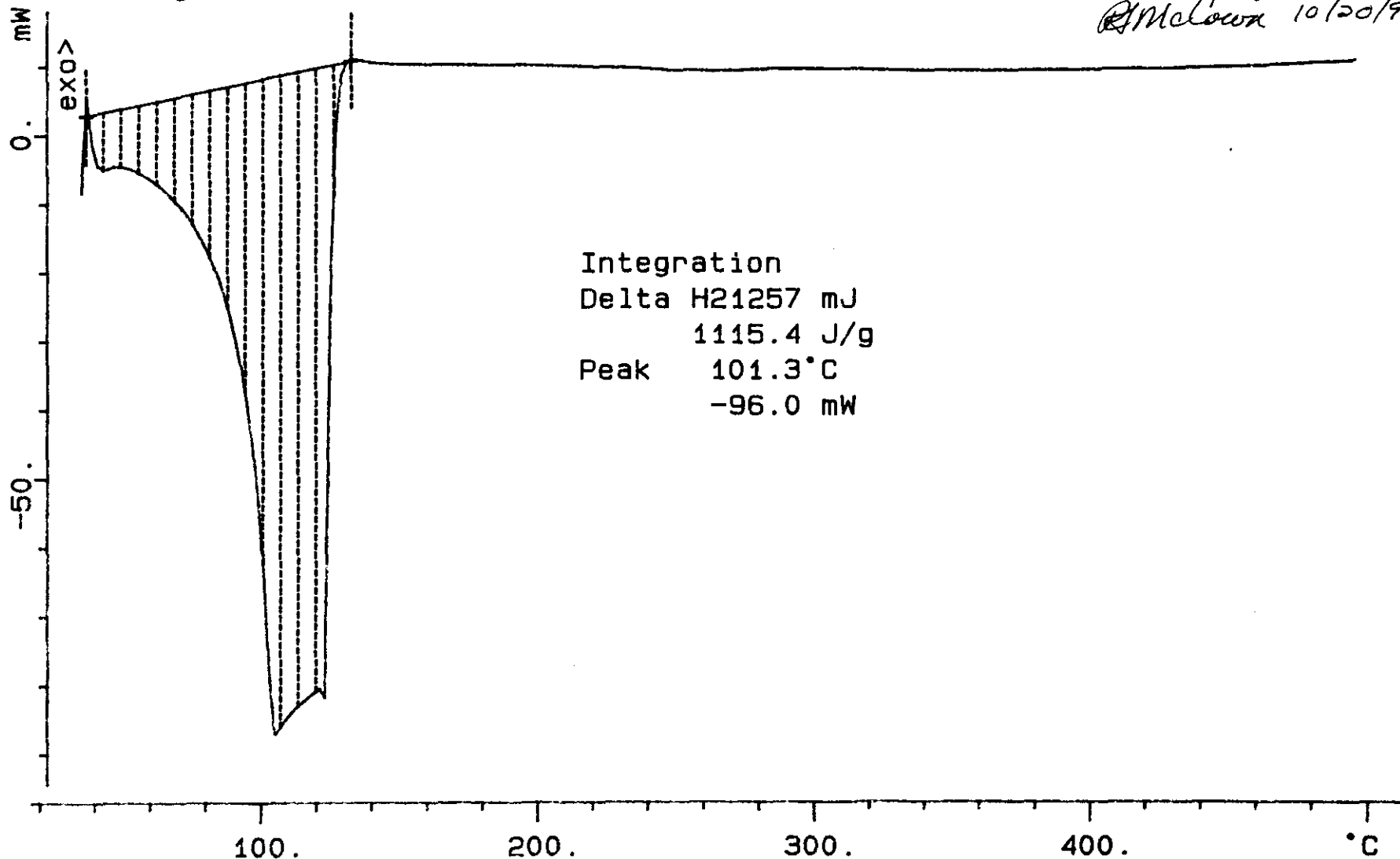
File: 00021.001

DSC METTLER 20-Oct-95

Ident: 0.0

222-S Laboratory

R. McLown 10/20/95



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S95T002626 DUP N2

19.440 mg

Rate: 10.0 °C/min

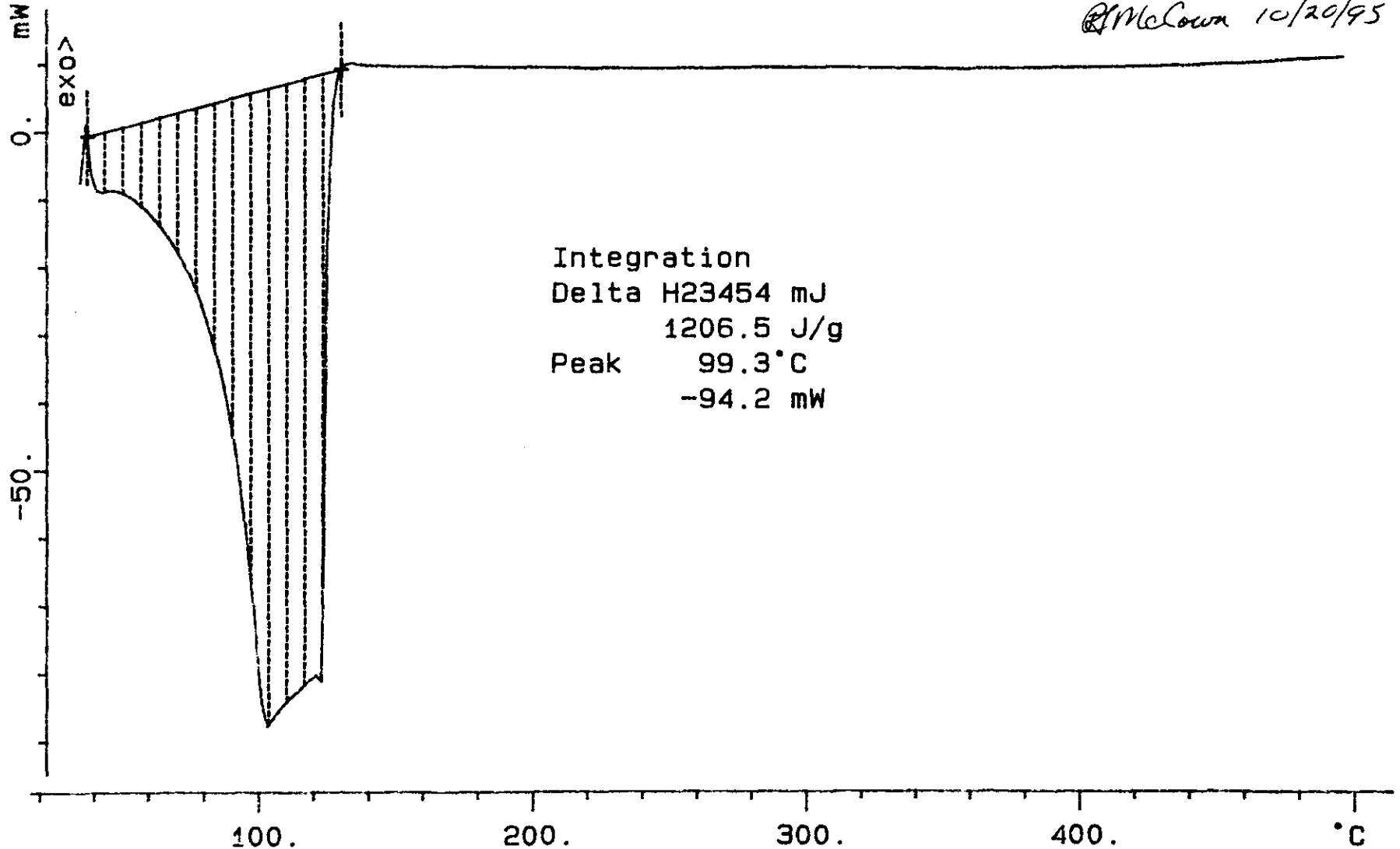
File: 00023.001

DSC METTLER 20-Oct-95

Ident: 0.0

222-S Laboratory

R. McLown 10/20/95



174

LABCORE Data Entry Template for Worklist#

2950

Analyst: JDS Instrument: DSC0 1 Book # 12N14A

Method: LA-514-113 Rev/Mod C-1/C-0 12/4/95 bdv

Worklist Comment: Please run DSCs under N2. bdv 5107

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	<u>28.45</u>	<u>26.4</u>	<u>N/A</u>	Joules/g
95000028	C-105	2 SAMPLE	S95T002852	0	DSC-01	SOLID	<u>N/A</u>	<u>62.6</u>		Joules/g
95000028	C-105	<u>3 DUP</u>	S95T002852	0	DSC-01	SOLID	<u>62.6</u>	<u>106.4</u>	<u>N/A</u>	Joules/g
95000028	C-105	4 TRIPL	S95T002852	0	DSC-01	SOLID	<u>62.6</u>	<u>64.5</u>	<u>N/A</u>	Joules/g
95000028	C-105	5 SAMPLE	S95T002854	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000028	C-105	6 DUP	S95T002854	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g
		7 STD			DSC-01	SOLID	<u>28.45</u>	<u>36.6</u>	<u>N/A</u>	Joules/g
95000141	S-107	8 SAMPLE	S95T002603	0	DSC-01	SOLID	<u>N/A</u>	<u>62.2</u>		Joules/g
95000141	S-107	9 DUP	S95T002603	0	DSC-01	SOLID	<u>62.2</u>	<u>62.8</u>	<u>N/A</u>	Joules/g
		10 STD			DSC-01	SOLID	<u>28.45</u>	<u>26.5</u>	<u>N/A</u>	Joules/g
95000141	S-107	11 SAMPLE	S95T002604	0	DSC-01	SOLID	<u>N/A</u>	<u>Ø</u>		Joules/g
95000141	S-107	12 DUP	S95T002604	0	DSC-01	SOLID	<u>Ø</u>	<u>Ø</u>	<u>N/A</u>	Joules/g

Final page for worklist #

2950

Analyst Signature JDS

Date 11/15/95

Analyst Signature ESJ

Date 11-17-95

S95T002852 produced two endotherms one at 131.3°C with a delta H of 759.7 J/g and second at 254.7°C with a delta H of 47.1 J/g. A triplicate was run due to high RPDs btwn sample & dup.

S95T002854 produced two endotherms one at 117.3°C with a delta H of 710.6 J/g and second at 230.0°C with a delta H of 230.0 J/g.

Data Entry Comments: S95T002603 produced an endotherm at 105.3°C with a delta H of 820.5 J/g.

S95T002604 produced an endotherm at 123.3°C with a delta H of 714.1 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 176 TO 182

DSC STD 12N14A

8.020 mg

Rate: 10.0 °C/min

File: 00086.001

DSC METTLER

15-Nov-95

Ident: 0.0

222-S Laboratory

exo

10. mW

Integration

Delta H 212 mJ

26.4 J/g

Peak 158.0 °C

-15.2 mW

120.

140.

160.

180. °C

JAL *[Signature]* 11/15/95

176

WHC-SD-WM-TP-156, REV. 0

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DSC STD 12N14A

8.020 mg

Rate: 10.0 °C/min

File: 00076.001 DSC METTLER 14-Nov-95

Ident: 0.0 222-S Laboratory

Integration

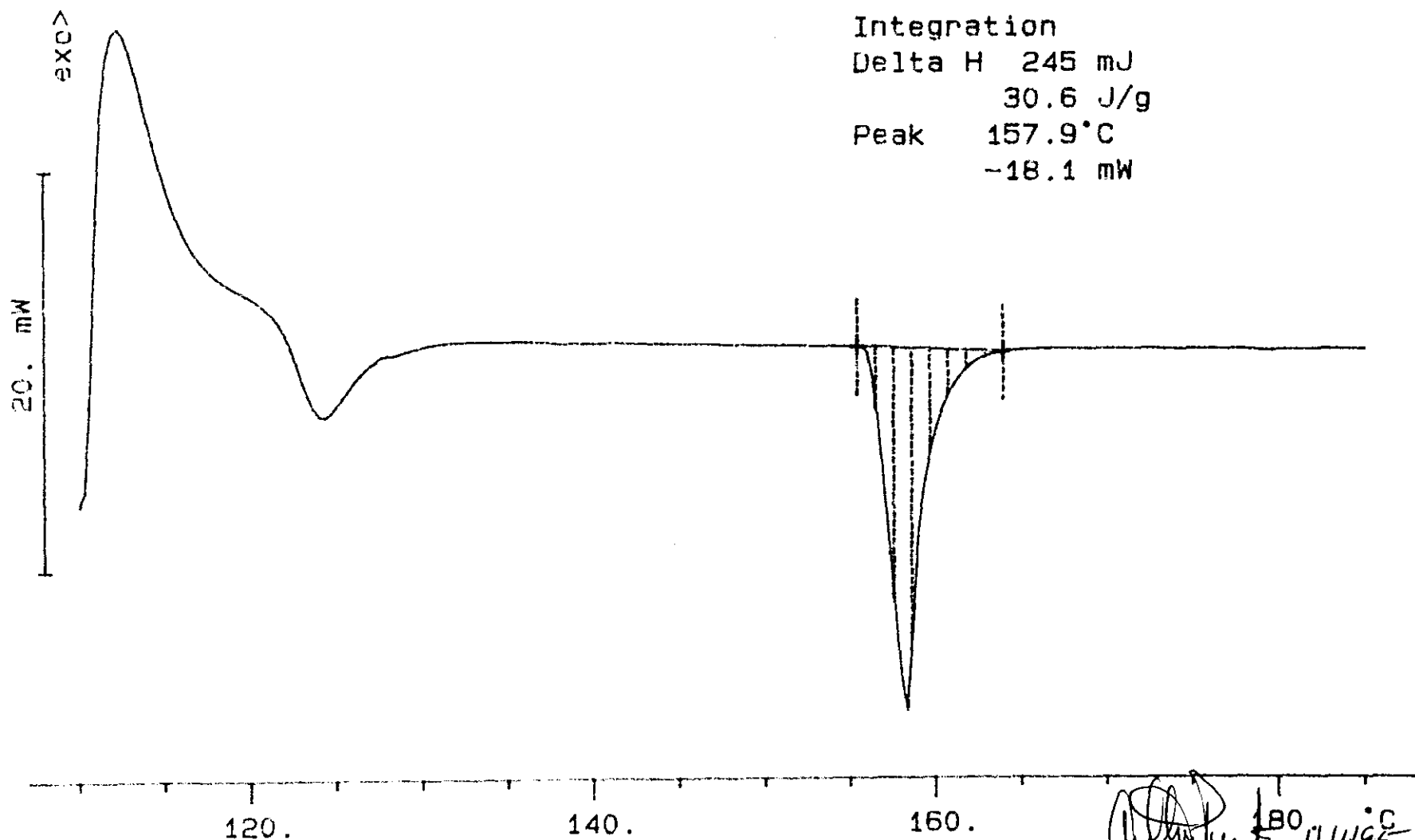
Delta H 245 mJ

30.6 J/g

Peak 157.9°C

-18.1 mW

177



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S95T002603 SAM N2

47.715 mg

Rate: 10.0 °C/min

File: 00082.001

DSC METTLER

14-Nov-95

Ident: 0.0

222-S Laboratory

EXX

178
mW . C

Integration

Delta H 2968 mJ

62.2 J/g

Peak 149.5 °C

4.2 mW

100.

200.

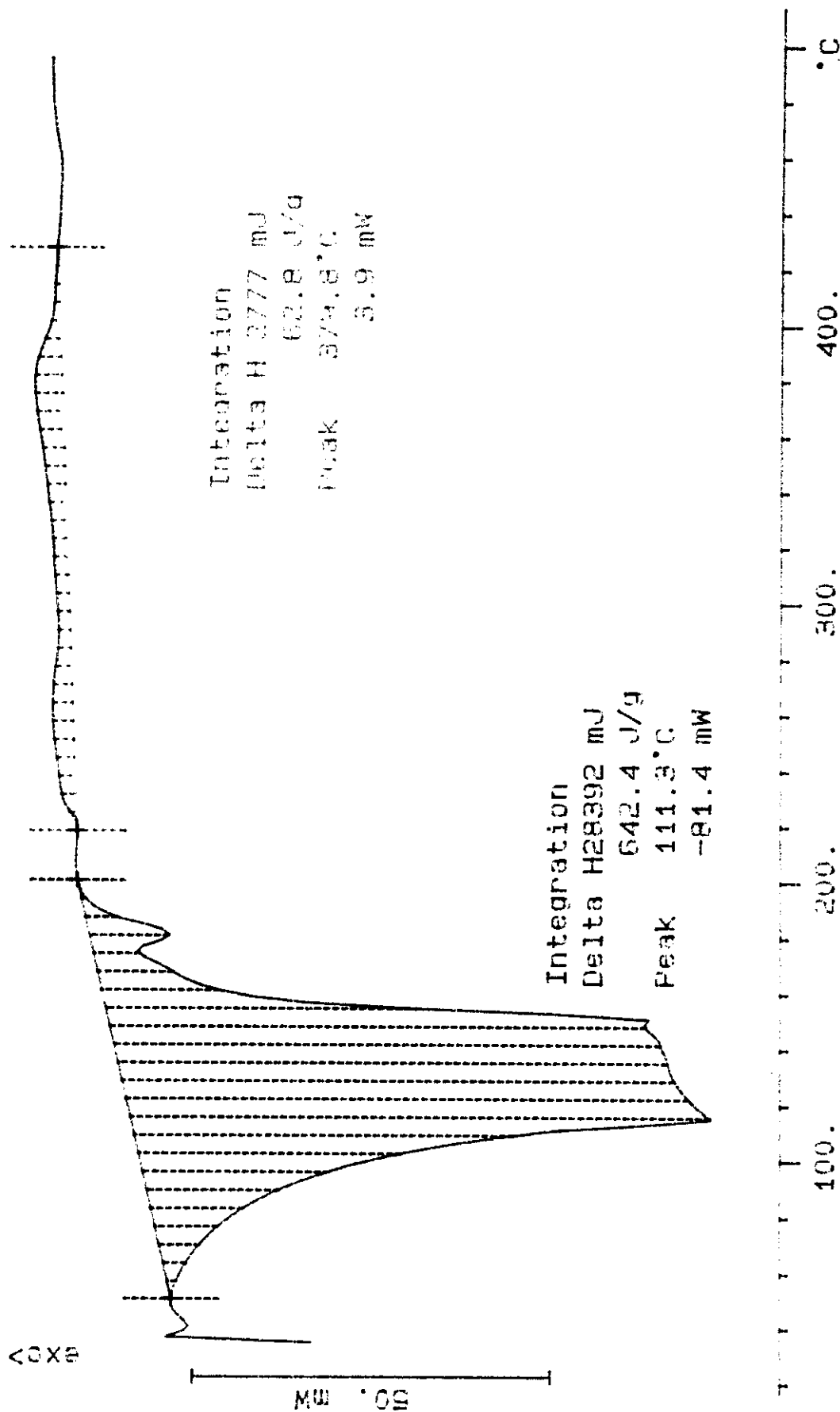
300.

400.

°C

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S95T002603 DUF N2
44.200 mg
Rate: 10.0 °C/min
File: 00084.001 DSC METTLER 14-Nov-95
Ident: 0.0 222-S Laboratory



BEST AVAILABLE COPY

DSC STD 12N14A

8.020 mg

Rate: 10.0 °C/min

File: 00086.001

DSC METTLER

15-Nov-95

Ident: 0.0

222-S Laboratory

exo

10. mW

Integration
Delta H 212 mJ
20.8 J/g
Peak 158.6 °C
15.3 mJ

120.

140.

160.

180.

°C

Anthony P. Smith
11/15/95

WHC-SD-WM-DP-156 REV.0

BEST AVAILABLE COPY

S95T002604 SAM N2

48.230 mg

Rate: 10.0 °C/min

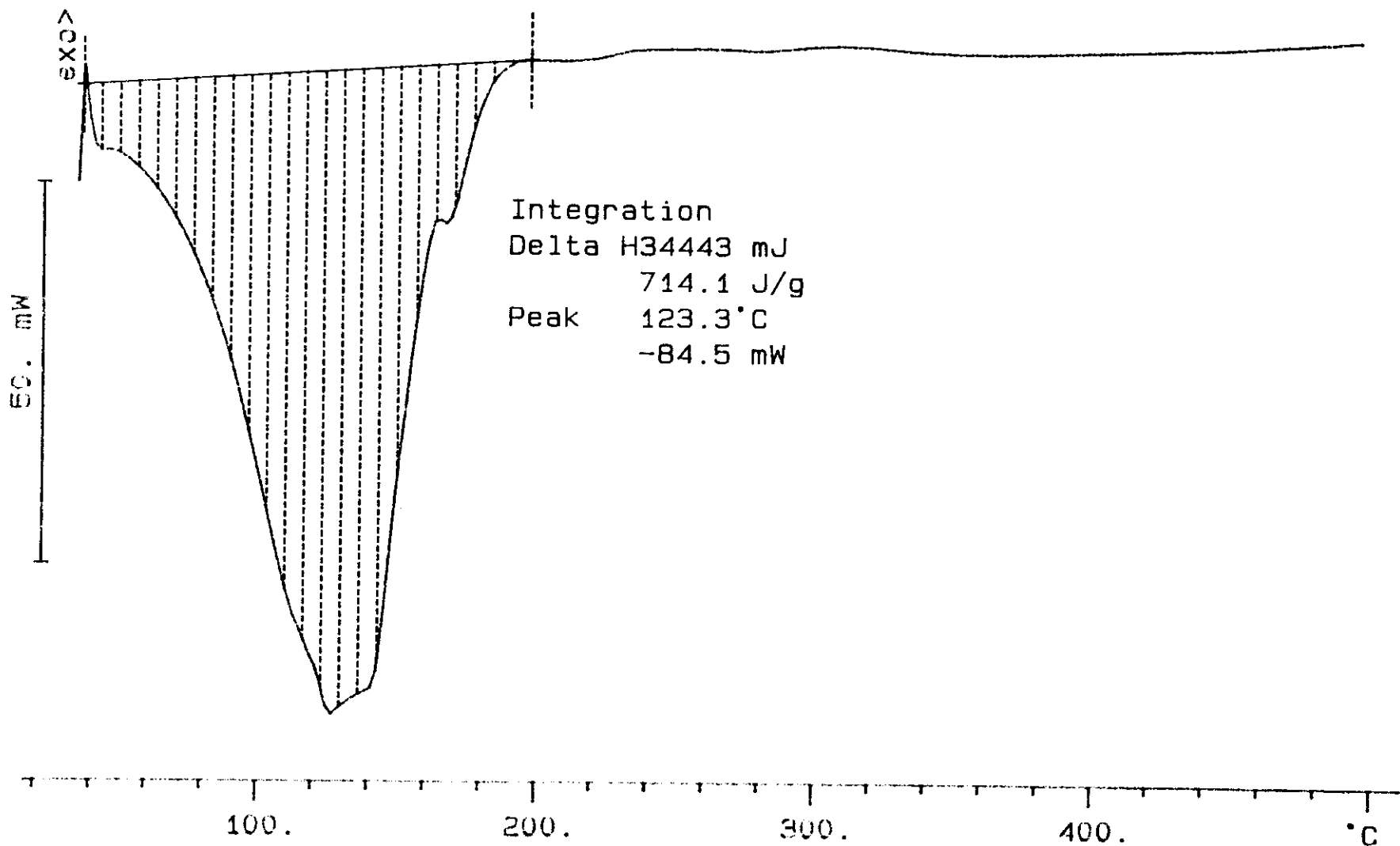
File: 00098.001

DSC METTLER

15-Nov-95

Ident: 0.0

222-S Laboratory



BEST AVAILABLE COPY

S95T002604 DUP N2

File: 00100.001 DSC METTLER 15-Nov-95

55.236 mg

Rate: 10.0 °C/min

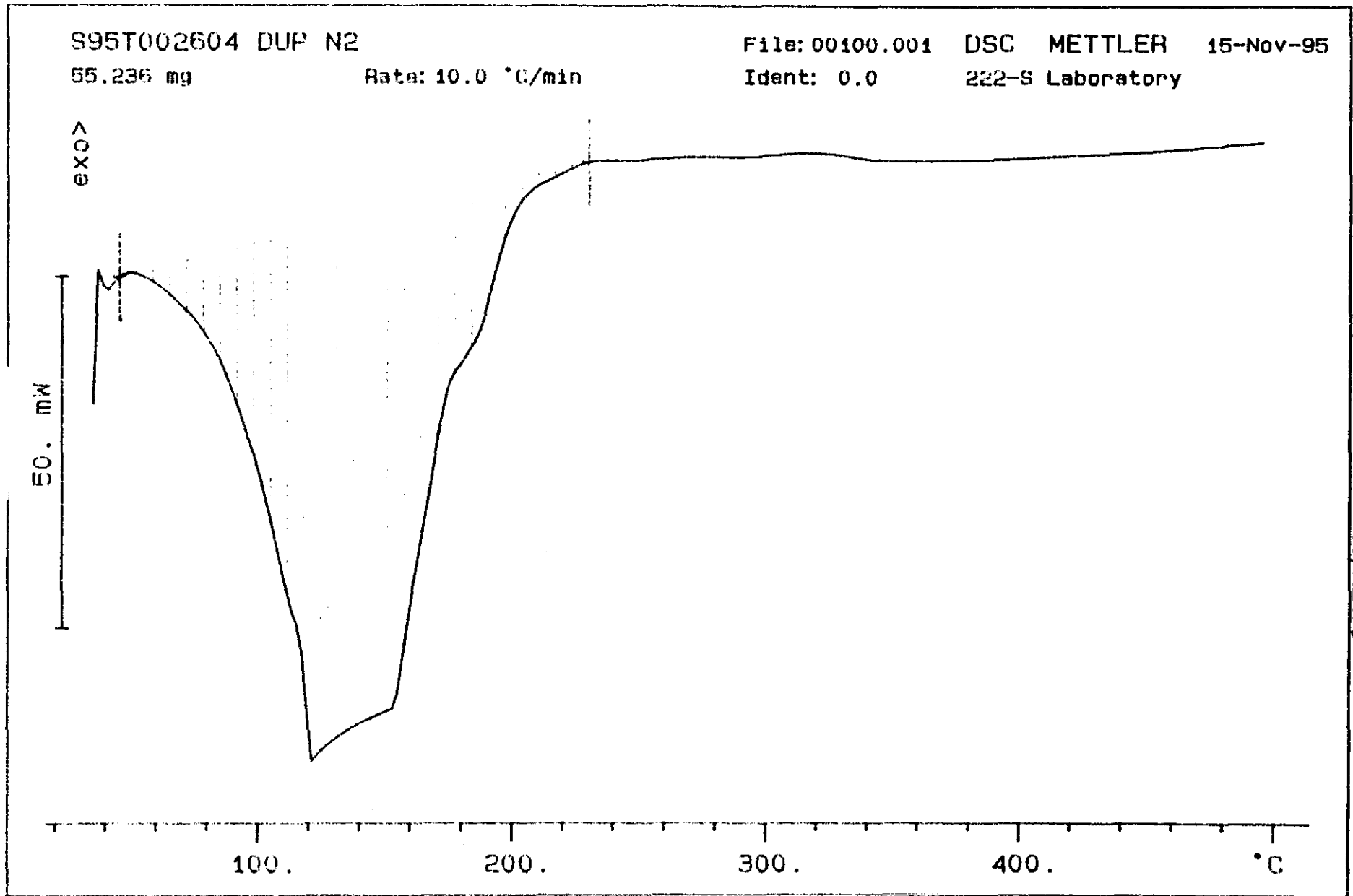
Ident: 0.0

222-S Laboratory

EXX

50. mW

182



LABCORE Data Entry Template for Worklist#

3533

Analyst: SMF Instrument: DSC0 1 Book # 12N14A

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

Worklist Comment: RUSH SAMPLE!!!! please run S-107 DSCs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	TEST	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			DSC-01	SOLID	28.45	26.0	N/A	Joules/g
95000147	S-107	2 SAMPLE	S95T002635	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000147	S-107	3 DUP	S95T002635	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g
95000141	S-107	4 SAMPLE	S95T002690	0	DSC-01	SOLID	N/A	Ø		Joules/g
95000141	S-107	5 DUP	S95T002690	0	DSC-01	SOLID	Ø	Ø	N/A	Joules/g

Final page for worklist # 3533

Analyst Signature Lusie M. Jetter Date 11-16-95

Analyst Signature [Signature] Date 11-17-95

Verified by Blandina Valenzuela Date 11-21-95

Sample S95T002635 produced three endotherms one at 125.4°C with a delta H of 994.3 J/g and second at 300.9°C with a delta H of 72.8 J/g, and third at 441.3°C with a delta H of 99.3 J/g

S95T002690 produced two endotherms, one at 189.5°C with a delta H of 827.9 J/g and second at 436.7°C with a delta H of 23.5 J/g

Data Entry Comments:

BEST AVAILABLE COPY

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 184 TO 188.

DSC STD 14N12A

8.020 mg

Rate: 10.0 °C/min

File: 00102.001

DSC METTLER

16-Nov-95

Ident: 0.0

222-S Laboratory

exo

10. mW

Integration

Delta H 209 mJ

26.0 J/g

Peak 158.1 °C

-14.3 mW

120.

140.

160.

180.

°C

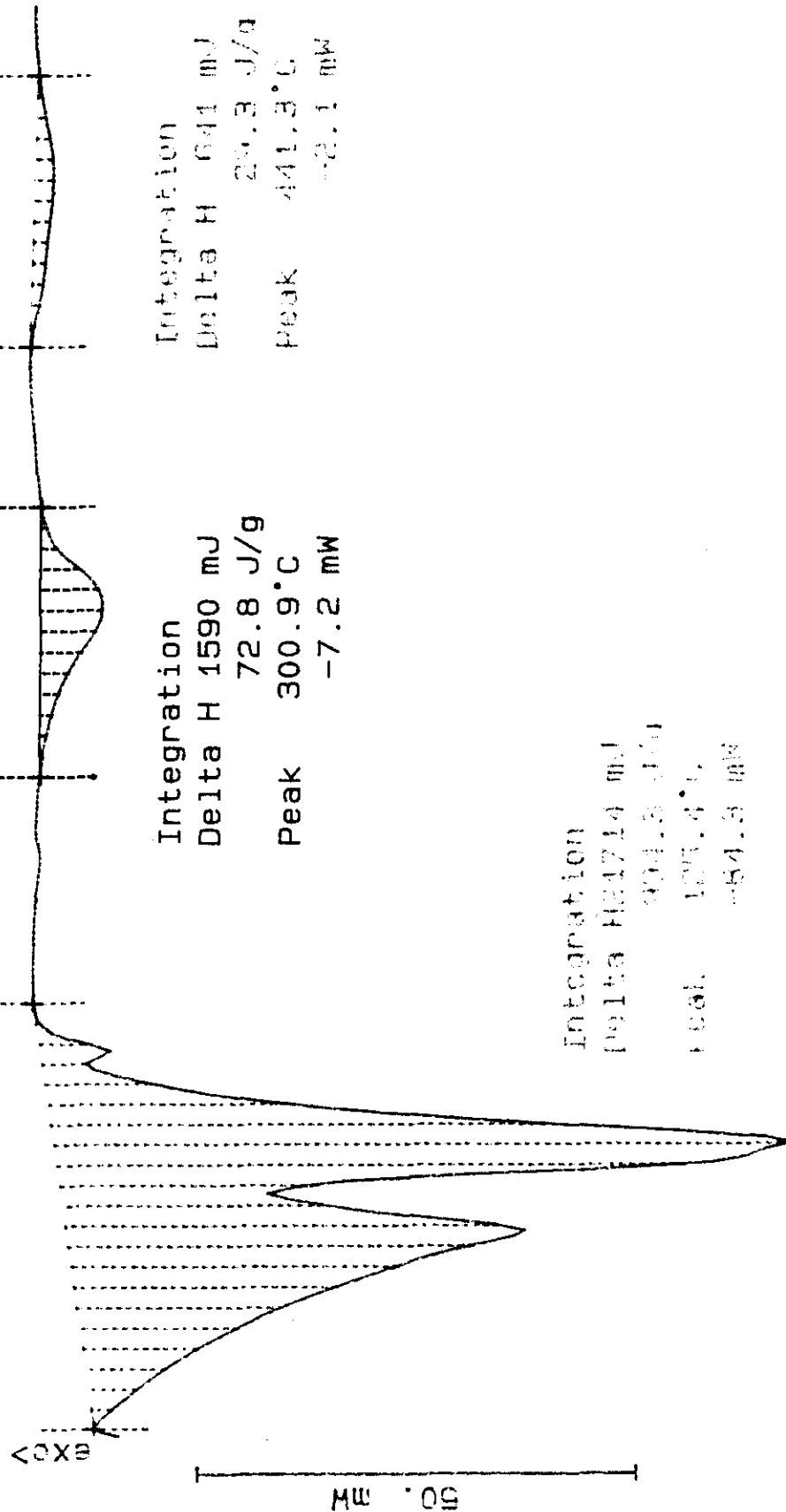
Susan M. Dalton 11-16-95

184

WHC-SD-WM-DP-156, REV. 0

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S95T002635 DUP N2
 21.834 mg
 File: 00107.001 DSC METTLER 16-Nov-95
 Rate: 10.0 °C/min Ident: 0.0 222-S Laboratory



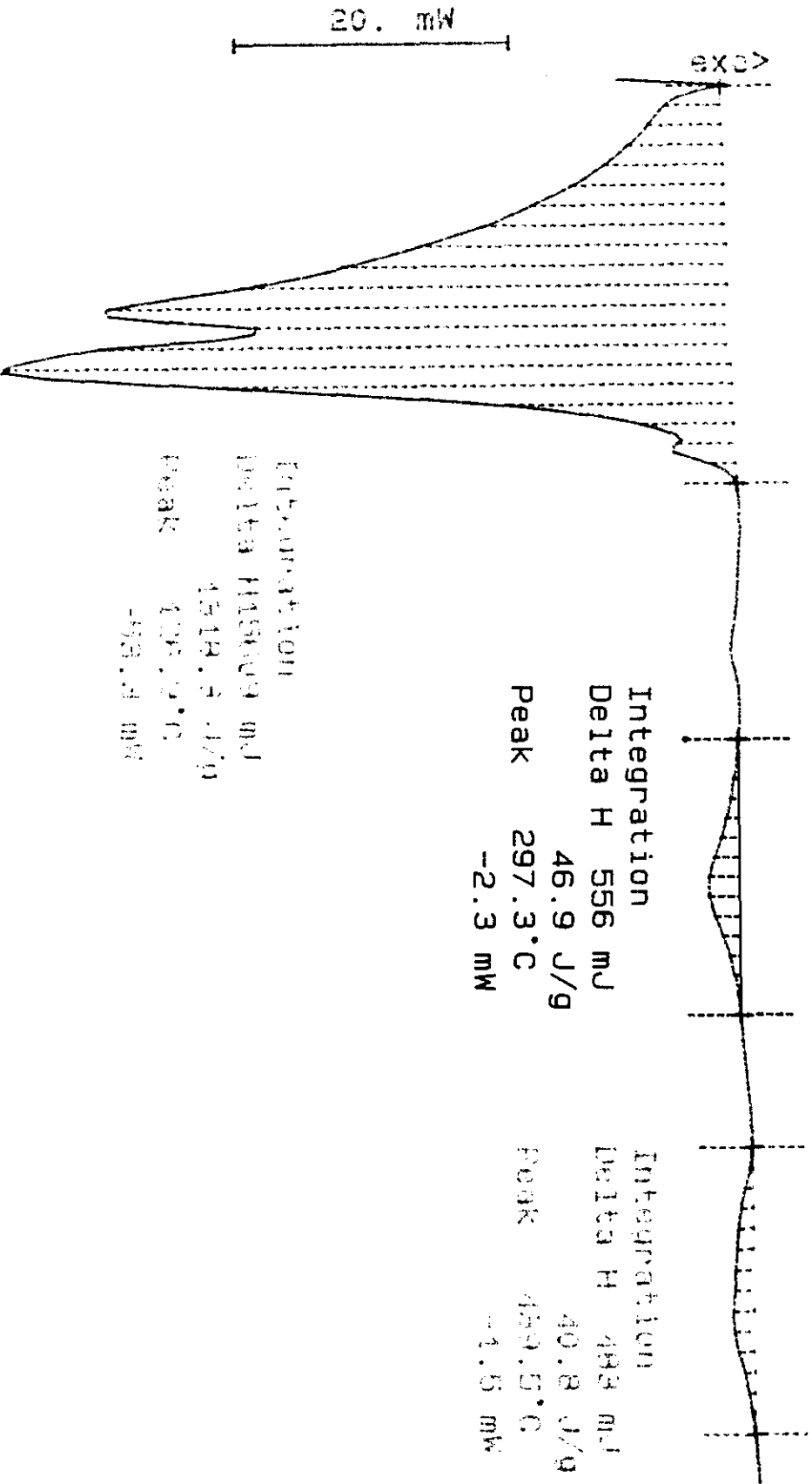
BEST AVAILABLE COPY

395T002635 N2
11.836 mg

Rate: 10.0 °C/min

File: 00106.001
Ident: 0.0

DSC METTLER 16-Nov-95
222-S Laboratory



100. 200. 300. 400. °C

BEST AVAILABLE COPY

395T002690 N2

58.049 mg

Rate: 10.0 °C/min

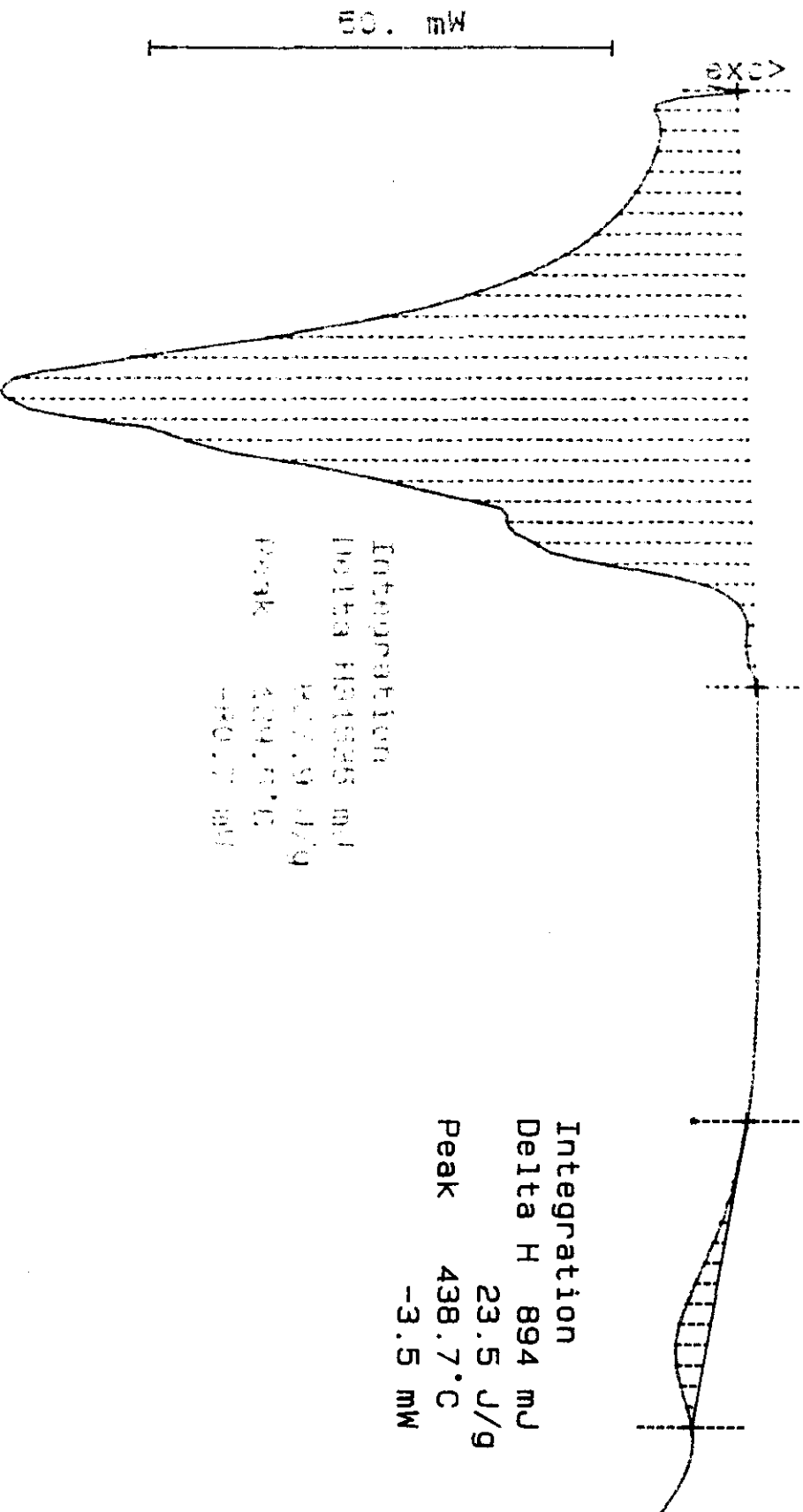
File: 00108.001

Ident: 0.0

DSC METTLER

16-Nov-95

222-S Laboratory



BEST AVAILABLE COPY

395T002690DUP N2

20.271 mg

Rate: 10.0 °C/min

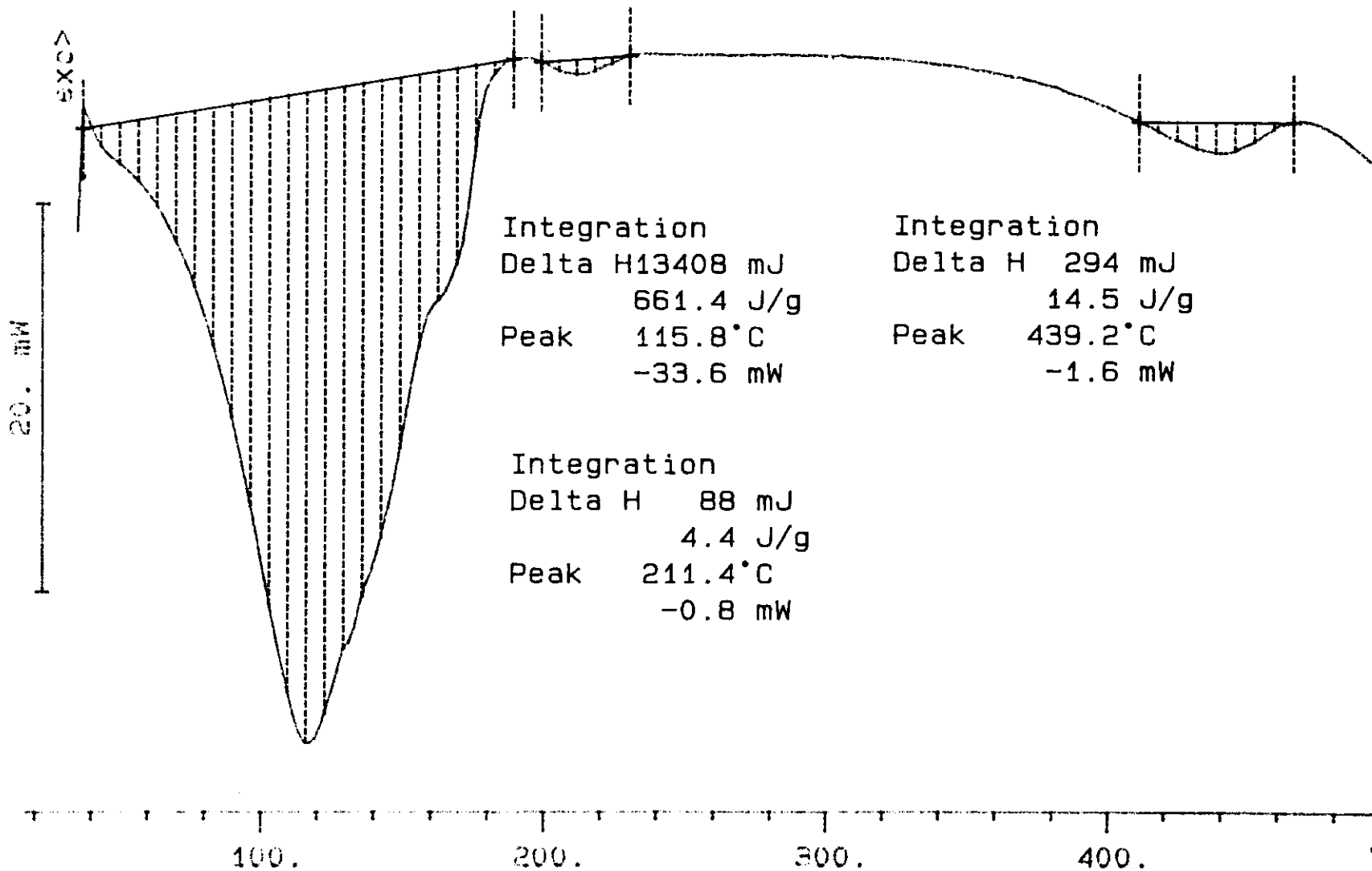
File: 00109.001

DSC METTLER

16-Nov-95

Ident: 0.0

222-S Laboratory



LABCORE Data Entry Template for Worklist#

2542

Analyst: SMF Instrument: TGA0 1 Book # 65N8A

Method: LA-560-112 Rev/Mod B-0

Worklist Comment: Please run S-107 TGAs under N2. bdv

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-----TEST-----	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 STD			TGA-01	LIQUID	<u>59.74</u>	<u>60.69</u>	N/A	%
95000138	S-107	2 SAMPLE	S95T002443	0	TGA-01	LIQUID	N/A	<u>69.55</u>		%
								<u>65.45</u>		
95000138	S-107	3 DUP	S95T002443	0	TGA-01	LIQUID	<u>69.55</u>	<u>69.04</u>	10-18-95 <u>BDV</u>	%
								<u>69.04</u>		
95000138	S-107	4 SAMPLE	S95T002446	0	TGA-01	LIQUID	N/A	<u>68.96</u>	10-18-95 <u>BDV</u>	%
								<u>69.04</u>		
95000138	S-107	5 DUP	S95T002446	0	TGA-01	LIQUID	<u>68.96</u>	<u>65.45</u>	10-18-95 <u>BDV</u>	%
								<u>65.45</u>		

Final page for worklist #

2542

Susie M. Fulton 10.16.95
Analyst Signature Date
1545

[Signature] 10/17/95
Analyst Signature Date

Verified by Blandina Valenzuela 10-18-95

S95T002443 produced a second weight loss step of 2.44% at approximately 170°C

Data Entry Comments:

S95T002446 produced a second weight loss step of 2.05% at approximately 170°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.

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 190 TO 194.

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TGA STD 65N8A

File: 00053.001 TG METTLER 16-Oct-95

14.461 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

Step Analysis

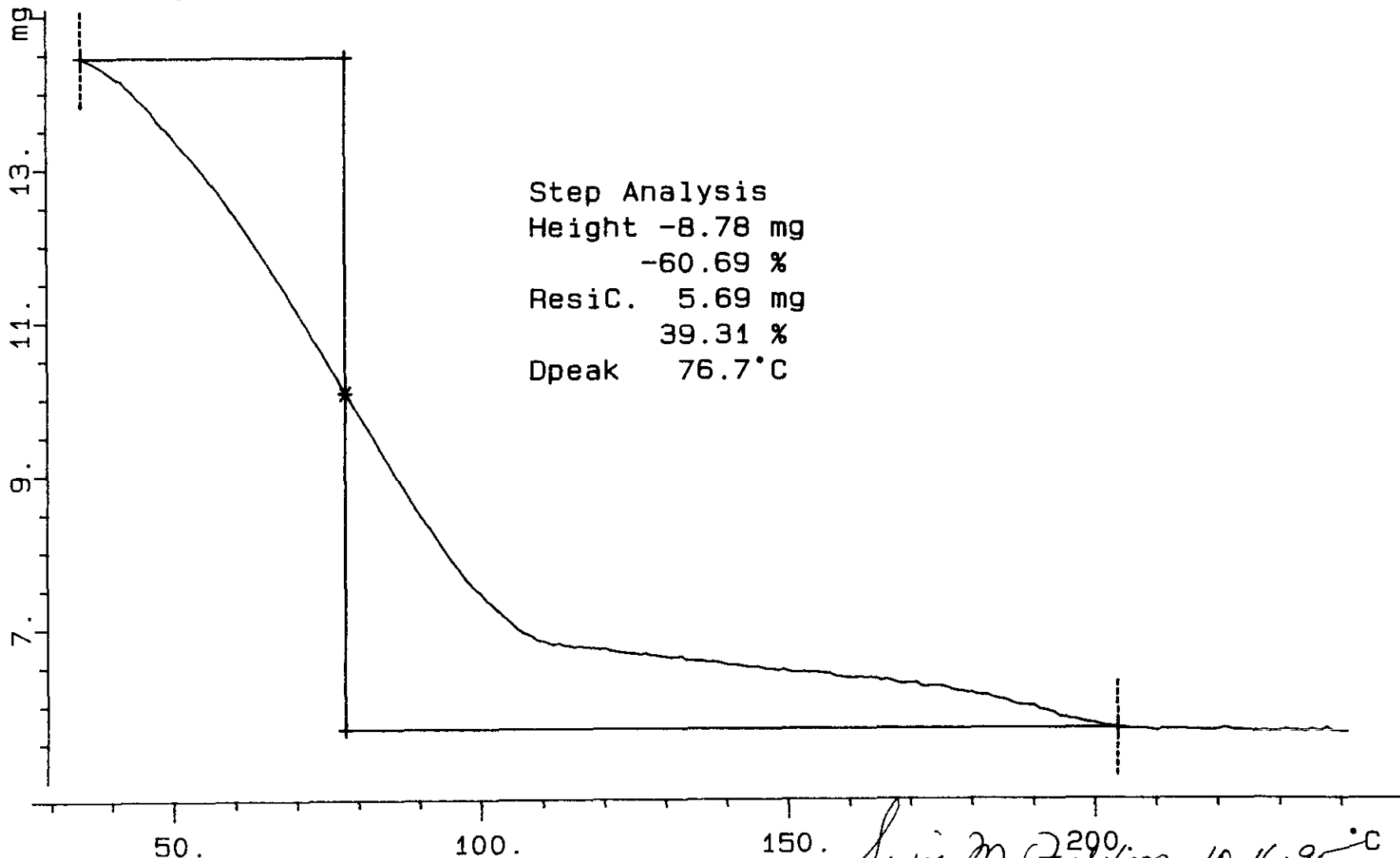
Height -8.78 mg

-60.69 %

ResidC. 5.69 mg

39.31 %

Dpeak 76.7 °C



Susie M. Fulton 10-16-95

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S95T002443 N2

14.549 mg

Rate: 10.0 °C/min

File: 00056.001

TG

METTLER

16-Oct-95

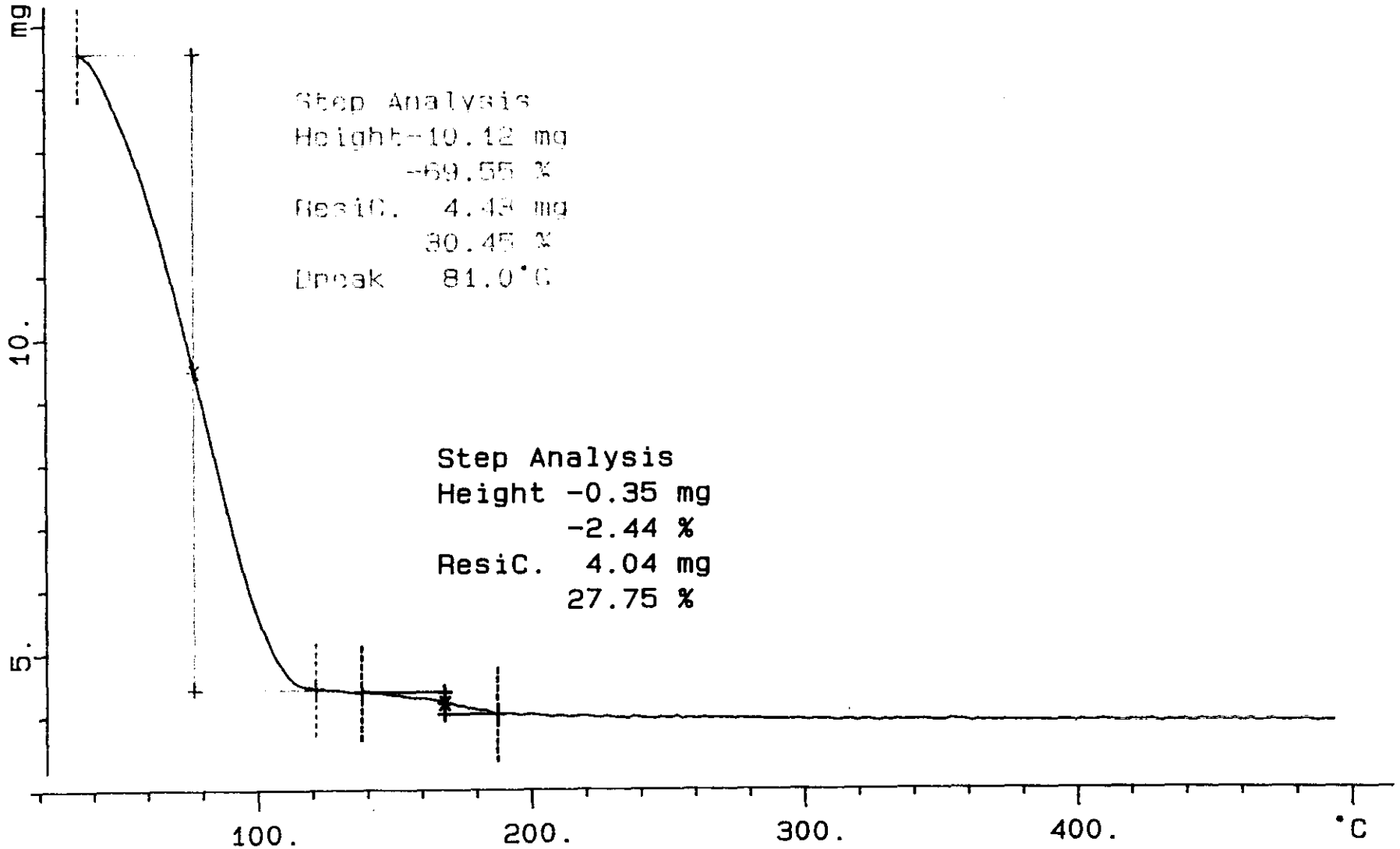
Ident: 0.0

222-S Laboratory

Step Analysis
Height -10.12 mg
-69.55 %
ResidC. 4.43 mg
30.45 %
Onset 81.0 °C

Step Analysis
Height -0.35 mg
-2.44 %
ResidC. 4.04 mg
27.75 %

191



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S95T002443 DUP N2

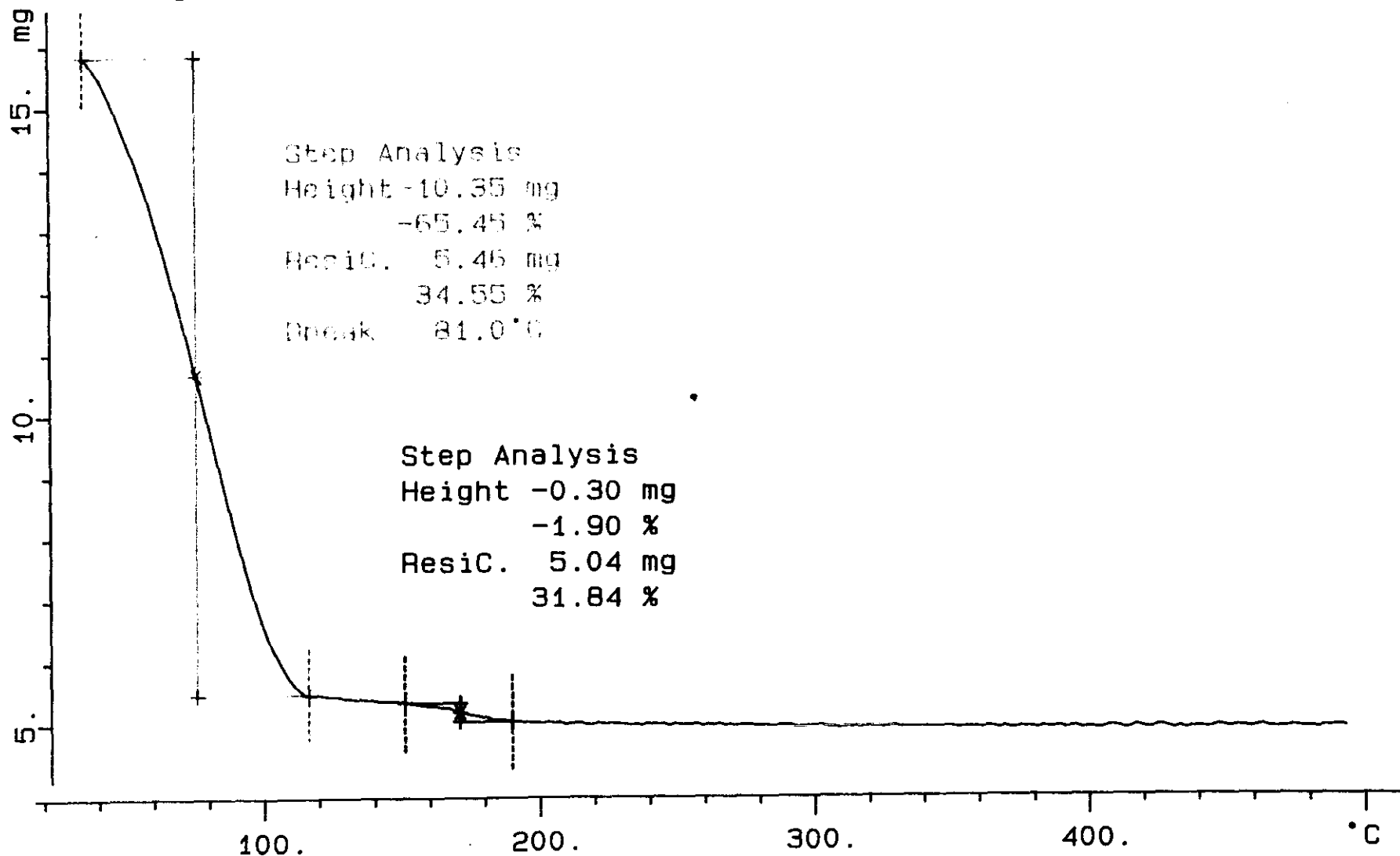
File: 00057.001 TG METTLER 16-Oct-95

15.816 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory



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S95T002446 N2

File: 00054.001

TG

METTLER

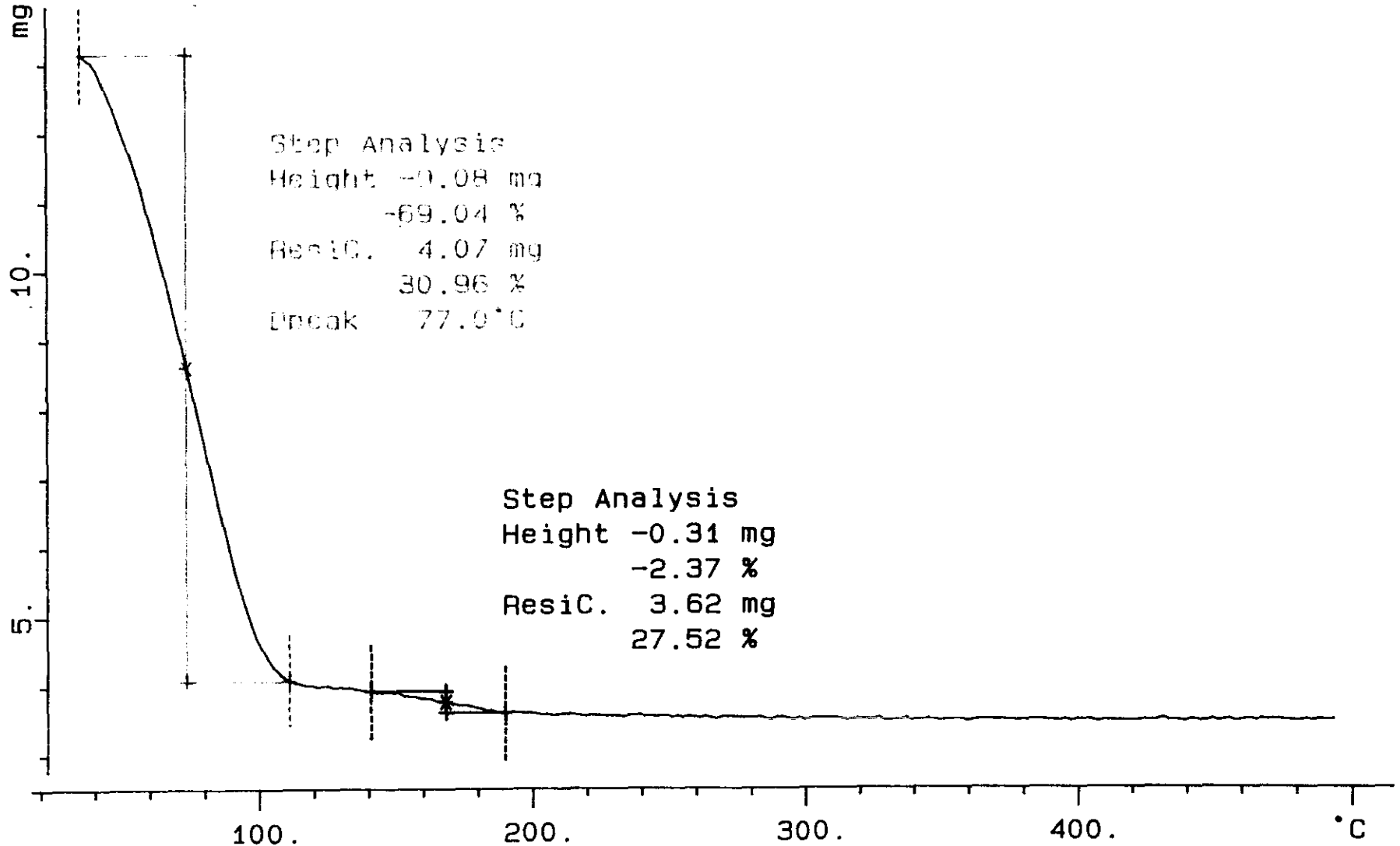
16-Oct-95

13.148 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory



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S95T002446 DUP N2

File: 00055.001

TG

METTLER

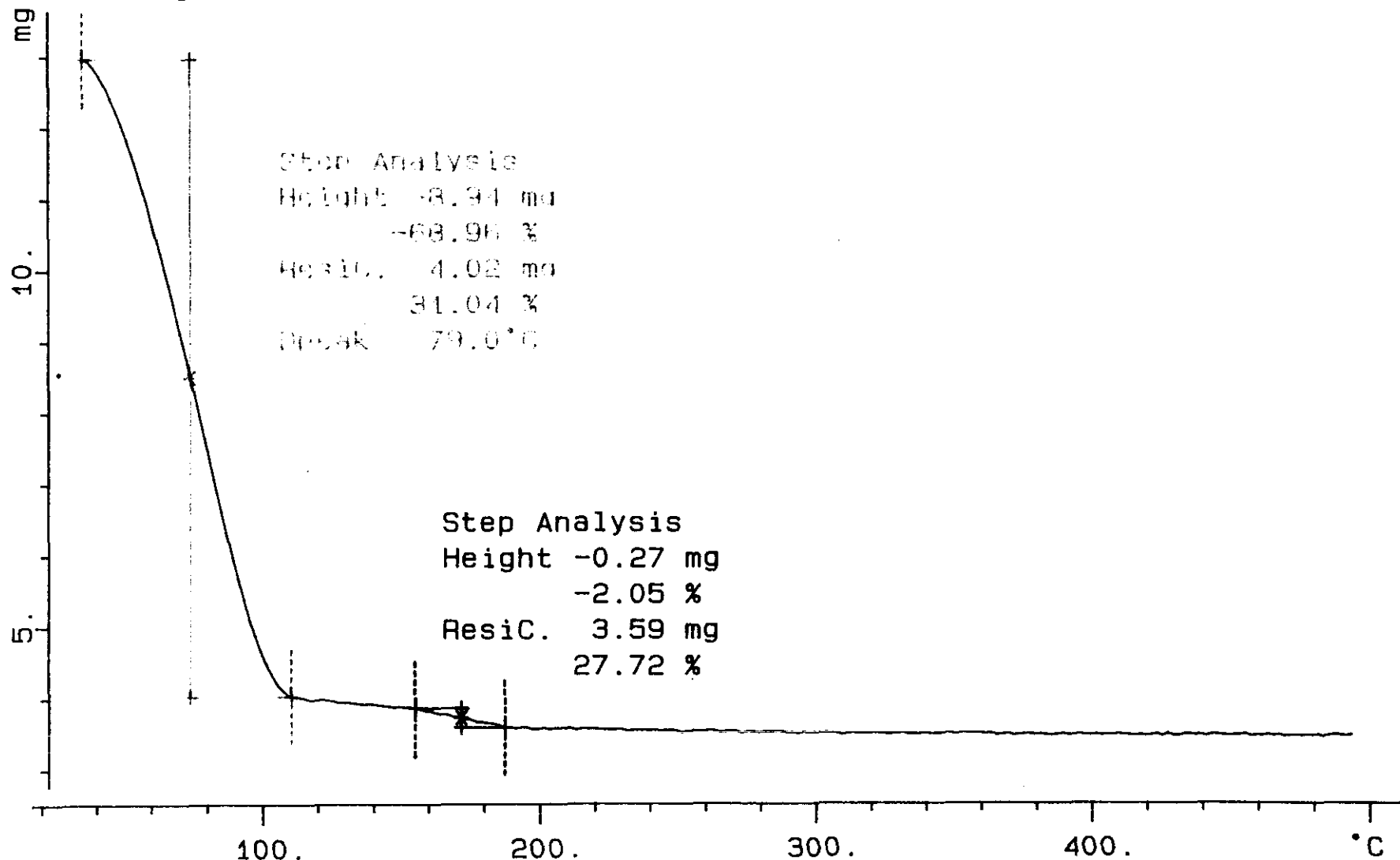
16-Oct-95

12.963 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory



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WHC-SD-WM-DP-156, REV. 0