# DISTRIBUTION SHEET

<table>
<thead>
<tr>
<th>Project Title/Work Order</th>
<th>Date: 05/05/95</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHC-SD-WM-DP-110, Rev. 0, &quot;45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78&quot;</td>
<td>EDT NO.: EDT-612152</td>
</tr>
<tr>
<td></td>
<td>ECN NO.: N/A</td>
</tr>
</tbody>
</table>

## Name | MSIN | Text With all Attach | EDT/ECN ONLY |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacific Northwest Laboratory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. R. Gormsen</td>
<td>K7-28</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>S. J. Harris</td>
<td>K7-22</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>K. L. Silvers</td>
<td>P7-27</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>U.S. Department of Energy, RI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. A. Babel</td>
<td>S7-54</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Westinghouse Hanford Company</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. N. Appel</td>
<td>G3-21</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>H. Babad</td>
<td>S7-30</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>R. J. Cash</td>
<td>S7-15</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>J. L. Deichman</td>
<td>H4-19</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>G. D. Forehand</td>
<td>S7-31</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>C. E. Golberg</td>
<td>H5-49</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>V. W. Hall</td>
<td>H4-21</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>D. C. Hetzer</td>
<td>S6-31</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>L. Jensen</td>
<td>T6-07</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>J. Jo</td>
<td>R2-12</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>G. D. Johnson</td>
<td>G1-19</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>N. W. Kirch</td>
<td>R2-11</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>J. G. Kristofzski</td>
<td>T6-06</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>M. J. Kupfer</td>
<td>H5-49</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>E. J. Lipke</td>
<td>S7-14</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>N. G. McDuffie</td>
<td>S7-15</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>J. E. Meacham</td>
<td>S7-15</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>P. M. Morant</td>
<td>H4-25</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>B. C. Simpson</td>
<td>R2-12</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>D. A. Turner</td>
<td>S7-15</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>J. A. Voogd</td>
<td>R4-01</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Central Files</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EDMC</td>
<td>H6-08</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>LTIC</td>
<td>T6-03</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>OSTI</td>
<td>L8-07</td>
<td>2</td>
<td>X</td>
</tr>
<tr>
<td>TFIC (Tank Farm Information Center)</td>
<td>R1-20</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>TCRC</td>
<td>R2-12</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
# DISTRIBUTION SHEET

<table>
<thead>
<tr>
<th>To</th>
<th>From</th>
<th>Page 2 of 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution</td>
<td>Characterization Plans and Reports</td>
<td></td>
</tr>
<tr>
<td>Project Title/Work Order</td>
<td>WHC-SD-WM-DP-110, Rev. 0, &quot;45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78&quot;</td>
<td>Date: 05/05/95</td>
</tr>
<tr>
<td>EDT NO.:</td>
<td>EDT-612152</td>
<td>ECN NO.: N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>MSIN</th>
<th>Text With all Attach</th>
<th>EDT/ECN ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Washington State Department of Ecology</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single-Shell Tank Unit Manager</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. E. McKinney</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P.O. Box 47600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olympia, Washington 98504-7600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Environmental Protection Agency</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single-Shell Tank Unit Manager</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. R. Einan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>712 Swift Boulevard, Suite 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richland, Washington 99352</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>U. S. Department of Energy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jim Poppiti</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12800 Middlebrook Rd.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trevion II, EM-36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germantown, MD 20874</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Los Alamos Technical Associates</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. T. DiCenzo</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>750 Swift Boulevard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suite # 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richland, WA 99352</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.
To: (Receiving Organization)  
Distribution  

From: (Originating Organization)  
Characterization Plans and Reports  

Proj./Prog./Dept./Div.:  

Cog. Engr.:  
Jaiduk Jo  

Purchase Order No.:  
N/A  

This document is being released into the Supporting Document System for retrievability purposes.  

Originator Remarks:  

For Release.  

Receiver Remarks:  

45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Document/Drawing No.</th>
<th>Sheet No.</th>
<th>Rev. No.</th>
<th>Title or Description of Data Transmitted</th>
<th>Approval Designator</th>
<th>Reason for Transmittal</th>
<th>Originator Disposition</th>
<th>Receiver Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WHC-SD-WM-DP-110</td>
<td>N/A</td>
<td>0</td>
<td>45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78</td>
<td>Q</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**KEY**

<table>
<thead>
<tr>
<th>Approval Designator (F)</th>
<th>Reason for Transmittal (G)</th>
<th>Disposition (H) &amp; (I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)</td>
<td>1. Approval</td>
<td>4. Reviewed no/comment</td>
</tr>
<tr>
<td></td>
<td>2. Release</td>
<td>4. Reviewed w/comment</td>
</tr>
<tr>
<td></td>
<td>3. Information</td>
<td>5. Reviewed w/comment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason</th>
<th>Disp.</th>
<th>(J) Name</th>
<th>(K) Signature</th>
<th>(L) Date</th>
<th>(M) MSIN</th>
<th>(J) Name</th>
<th>(K) Signature</th>
<th>(L) Date</th>
<th>(M) MSIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>Cog. Engr. J. Jo</td>
<td>Qo</td>
<td>5-5-95</td>
<td></td>
<td>2</td>
<td>1</td>
<td>Cog. Mgr. J.G. Kristofski</td>
<td>JGK</td>
</tr>
</tbody>
</table>

**Signature/Distribution**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Disp.</th>
<th>(J) Name</th>
<th>(K) Signature</th>
<th>(L) Date</th>
<th>(M) MSIN</th>
<th>(J) Name</th>
<th>(K) Signature</th>
<th>(L) Date</th>
<th>(M) MSIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>Cog. Engr. J. Jo</td>
<td>Qo</td>
<td>5-5-95</td>
<td></td>
<td>2</td>
<td>1</td>
<td>Cog. Mgr. J.G. Kristofski</td>
<td>JGK</td>
</tr>
</tbody>
</table>

**Signature of EDT Originator**

A.E. Young  
Signature of EDT Originator  
9-5-95  

**Authorized Representative Date for Receiving Organization**

**Cognizant Manager Date**

**DOE APPROVAL (if required) Ctrl. No.**

1. Approved  
2. Approved w/comments  
3. Disapproved w/comments  

**BD-7400-172-1**
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>45-Day Safety Screen Results for Tank 241-U-202, Push Mode, Cores 75 and 78</td>
<td>WHC-SD-WM-DP-110</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Key Words</th>
<th>6. Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>45-Day Safety Screen Results, Safety Screen Results, Tank 241-U-202, Tank U-202, U-202, Push Mode, Core 75, Core 78</td>
<td>Name: Jaiduk Jo</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>OFFICIAL RELEASE</td>
</tr>
<tr>
<td></td>
<td>BY WHC</td>
</tr>
<tr>
<td></td>
<td>DATE: MAY 10 1985</td>
</tr>
</tbody>
</table>

Signature: Jaiduk Jo

Organization/Charge Code: 8E480/MDR21
45-DAY SAFETY SCREEN RESULTS FOR TANK 241-U-202,
PUSH MODE, CORES 75 AND 78

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DATED: MAY 5, 1995

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

MASTER
**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 .......................................................................... 103
  TGA Worklist # 1053 .......................................................................... 106

This Document consists of pages 1 through 106.
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.
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.

SAMPLE DATA SUMMARY
### 45 Day Safety Screen Results for 241-U-202 U-202

**CORE NUMBER:** 75  
**SEGMENT #:** 1  
**SEGMENT PORTION:** n/a

<table>
<thead>
<tr>
<th>Sample#</th>
<th>R</th>
<th>A#</th>
<th>Analyte</th>
<th>Unit</th>
<th>Action Limits</th>
<th>Lower</th>
<th>Upper</th>
<th>Standard %</th>
<th>Blank</th>
<th>Result</th>
<th>Duplicate</th>
<th>Average</th>
<th>RPD %</th>
<th>Spk Rec %</th>
<th>Det Limit</th>
<th>Count</th>
<th>Err%</th>
</tr>
</thead>
<tbody>
<tr>
<td>S95T000585</td>
<td>F</td>
<td>Alpha of Digested Solid</td>
<td>uCi/g</td>
<td>-1.000</td>
<td>78.04</td>
<td>&lt;6.35e-04</td>
<td>1.19e-03</td>
<td>1.07e-3</td>
<td>1.13e-03</td>
<td>10.6</td>
<td>64.40</td>
<td>1.00e-03</td>
<td>80.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Whole Segment:** Whole Segment

<table>
<thead>
<tr>
<th>Sample#</th>
<th>R</th>
<th>A#</th>
<th>Analyte</th>
<th>Unit</th>
<th>Action Limits</th>
<th>Lower</th>
<th>Upper</th>
<th>Standard %</th>
<th>Blank</th>
<th>Result</th>
<th>Duplicate</th>
<th>Average</th>
<th>RPD %</th>
<th>Spk Rec %</th>
<th>Det Limit</th>
<th>Count</th>
<th>Err%</th>
</tr>
</thead>
<tbody>
<tr>
<td>S95T000584</td>
<td></td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>16.500</td>
<td>510.000</td>
<td>98.51</td>
<td>n/a</td>
<td>25.49</td>
<td>26.24</td>
<td>25.86</td>
<td>2.90</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S95T000584</td>
<td></td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>-1.000</td>
<td>15.41</td>
<td>100</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S95T000584</td>
<td></td>
<td>DSC Exotherm using Mettler</td>
<td>Joules/g</td>
<td>-1.000</td>
<td>15.41</td>
<td>100</td>
<td>94.55</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Drainable Liquid:** Drainable Liquid

<table>
<thead>
<tr>
<th>Sample#</th>
<th>R</th>
<th>A#</th>
<th>Analyte</th>
<th>Unit</th>
<th>Action Limits</th>
<th>Lower</th>
<th>Upper</th>
<th>Standard %</th>
<th>Blank</th>
<th>Result</th>
<th>Duplicate</th>
<th>Average</th>
<th>RPD %</th>
<th>Spk Rec %</th>
<th>Det Limit</th>
<th>Count</th>
<th>Err%</th>
</tr>
</thead>
<tbody>
<tr>
<td>S95T000582</td>
<td></td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>None</td>
<td>None</td>
<td>99.17</td>
<td>n/a</td>
<td>72.60</td>
<td>73.24</td>
<td>72.92</td>
<td>0.88</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S95T000582</td>
<td></td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>None</td>
<td>None</td>
<td>n/a</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S95T000582</td>
<td></td>
<td>DSC Exotherm using Mettler</td>
<td>Joules/g</td>
<td>None</td>
<td>None</td>
<td>91.74</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

=> Limit violated  
=> Selected Limit
45 Day Safety Screen Results for 241-U-202

**U-202**

**CORE NUMBER:** 75  
**SEGMENT #:** 2

**SEGMENT PORTION:** n/a

<table>
<thead>
<tr>
<th>Sample#</th>
<th>R#</th>
<th>Analyte</th>
<th>Unit</th>
<th>Action Limits</th>
<th>Standard %</th>
<th>Blank</th>
<th>Result</th>
<th>Duplicate</th>
<th>Average</th>
<th>RPD %</th>
<th>Spk Rec %</th>
<th>Det Limit</th>
<th>Count Err %</th>
</tr>
</thead>
<tbody>
<tr>
<td>S95T000588</td>
<td>0</td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>None</td>
<td>None</td>
<td>99.17</td>
<td>n/a</td>
<td>73.29</td>
<td>72.23</td>
<td>72.76</td>
<td>1.46</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000588</td>
<td>0</td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>None</td>
<td>None</td>
<td>n/a</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**U Upper Half of Segment: U Upper Half of Segment**

<table>
<thead>
<tr>
<th>Sample#</th>
<th>R#</th>
<th>Analyte</th>
<th>Unit</th>
<th>Action Limits</th>
<th>Standard %</th>
<th>Blank</th>
<th>Result</th>
<th>Duplicate</th>
<th>Average</th>
<th>RPD %</th>
<th>Spk Rec %</th>
<th>Det Limit</th>
<th>Count Err %</th>
</tr>
</thead>
<tbody>
<tr>
<td>S95T000590</td>
<td>0</td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>16.000</td>
<td>110.000</td>
<td>99.86</td>
<td>n/a</td>
<td>22.87</td>
<td>22.90</td>
<td>22.88</td>
<td>0.13</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000590</td>
<td>0</td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>-1.000</td>
<td>481.100</td>
<td>n/a</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000590</td>
<td>0</td>
<td>F Alpha of Digested Solid</td>
<td>uCl/g</td>
<td>-1.000</td>
<td>411.100</td>
<td>78.04</td>
<td>&lt;6.35e-04</td>
<td>&lt;7.40e-4</td>
<td>&lt;1.22e-3</td>
<td>n/a</td>
<td>n/a</td>
<td>53.80</td>
<td>2.00e-03</td>
</tr>
</tbody>
</table>

**U Lower Half of Segment: U Lower Half of Segment**

<table>
<thead>
<tr>
<th>Sample#</th>
<th>R#</th>
<th>Analyte</th>
<th>Unit</th>
<th>Action Limits</th>
<th>Standard %</th>
<th>Blank</th>
<th>Result</th>
<th>Duplicate</th>
<th>Average</th>
<th>RPD %</th>
<th>Spk Rec %</th>
<th>Det Limit</th>
<th>Count Err %</th>
</tr>
</thead>
<tbody>
<tr>
<td>S95T000590</td>
<td>0</td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>16.000</td>
<td>110.000</td>
<td>98.51</td>
<td>n/a</td>
<td>43.64</td>
<td>38.71</td>
<td>41.17</td>
<td>12.0</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000590</td>
<td>0</td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>-1.000</td>
<td>481.100</td>
<td>n/a</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000591</td>
<td>0</td>
<td>F Alpha of Digested Solid</td>
<td>uCl/g</td>
<td>-1.000</td>
<td>411.100</td>
<td>82.43</td>
<td>&lt;1.18e-03</td>
<td>&lt;1.18e-3</td>
<td>&lt;1.20e-3</td>
<td>n/a</td>
<td>n/a</td>
<td>79.70</td>
<td>3.00e-03</td>
</tr>
</tbody>
</table>

> Limit violated  
> Selected Limit
## 45 Day Safety Screen Results for 241-U-202

**U-202**

**CORE NUMBER:** 78  
**SEGMENT #:** 1  
**SEGMENT PORTION:** n/a

<table>
<thead>
<tr>
<th>Sample#</th>
<th>RA#</th>
<th>Analyte</th>
<th>Unit</th>
<th>Action Limits</th>
<th>Standard %</th>
<th>Blank</th>
<th>Result</th>
<th>Duplicate</th>
<th>Average</th>
<th>RPD %</th>
<th>Spk Rec %</th>
<th>Det Limit</th>
<th>Count Err %</th>
</tr>
</thead>
<tbody>
<tr>
<td>S95100621</td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>&lt;1.000 %</td>
<td>110.000 %</td>
<td>99.81 %</td>
<td>n/a</td>
<td>24.45</td>
<td>22.24</td>
<td>23.34</td>
<td>9.47 %</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95100621</td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>-1.000 %</td>
<td>110.000 %</td>
<td>111.4 %</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00e+00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95100621</td>
<td>DSC Exotherm using Mettler</td>
<td>Joules/g</td>
<td>-1.000 %</td>
<td>110.000 %</td>
<td>99.43 %</td>
<td>n/a</td>
<td>24.45</td>
<td>22.24</td>
<td>23.34</td>
<td>9.47 %</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95100630</td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>&lt;1.000 %</td>
<td>110.000 %</td>
<td>99.81 %</td>
<td>n/a</td>
<td>24.45</td>
<td>22.24</td>
<td>23.34</td>
<td>9.47 %</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95100630</td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>-1.000 %</td>
<td>110.000 %</td>
<td>111.4 %</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00e+00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95100630</td>
<td>DSC Exotherm using Mettler</td>
<td>Joules/g</td>
<td>-1.000 %</td>
<td>110.000 %</td>
<td>99.04 %</td>
<td>n/a</td>
<td>24.45</td>
<td>22.24</td>
<td>23.34</td>
<td>9.47 %</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95100632</td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>&lt;1.000 %</td>
<td>110.000 %</td>
<td>99.81 %</td>
<td>n/a</td>
<td>24.45</td>
<td>22.24</td>
<td>23.34</td>
<td>9.47 %</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95100632</td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>-1.000 %</td>
<td>110.000 %</td>
<td>111.4 %</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00e+00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95100632</td>
<td>DSC Exotherm using Mettler</td>
<td>Joules/g</td>
<td>-1.000 %</td>
<td>110.000 %</td>
<td>99.43 %</td>
<td>n/a</td>
<td>24.45</td>
<td>22.24</td>
<td>23.34</td>
<td>9.47 %</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

- **=>** Limit violated  
- **=>** Selected Limit
# Day Safety Screen Results for 241-U-202

**U-202**

**CORE NUMBER:** 78  
**SEGMENT #:** 2  
**SEGMENT PORTION:** n/a

<table>
<thead>
<tr>
<th>Sample#</th>
<th>R#</th>
<th>Analyte</th>
<th>Unit</th>
<th>Action Limits</th>
<th>Blank</th>
<th>Result</th>
<th>Duplicate</th>
<th>Average</th>
<th>RPD %</th>
<th>Spk Rec %</th>
<th>Det Limit</th>
<th>Count Err %</th>
</tr>
</thead>
<tbody>
<tr>
<td>S95T000636</td>
<td>% Water by TGA on Perkin Elmer</td>
<td>None</td>
<td>%</td>
<td>Lower None</td>
<td>97.30</td>
<td>n/a</td>
<td>72.27</td>
<td>72.23</td>
<td>72.25</td>
<td>0.06</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000636</td>
<td>DSC Exotherm on Perkin Elmer</td>
<td>Joules/g</td>
<td>None</td>
<td>None</td>
<td>101.9</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000636</td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>None</td>
<td>None</td>
<td>n/a</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000643</td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>%</td>
<td>16.900</td>
<td>110.000</td>
<td>99.63</td>
<td>n/a</td>
<td>41.5</td>
<td>38.07</td>
<td>13.6</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000643</td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>-1.000</td>
<td>481.100</td>
<td>n/a</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000643</td>
<td>DSC Exotherm using Mettler</td>
<td>Joules/g</td>
<td>-1.000</td>
<td>481.100</td>
<td>106.5</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000644</td>
<td>% Water by TGA using Mettler</td>
<td>%</td>
<td>%</td>
<td>16.900</td>
<td>110.000</td>
<td>98.67</td>
<td>n/a</td>
<td>24.43</td>
<td>23.96</td>
<td>24.20</td>
<td>1.94</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000644</td>
<td>DSC Exotherm Dry Calculated</td>
<td>Joules/g Dry</td>
<td>-1.000</td>
<td>481.100</td>
<td>n/a</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000644</td>
<td>DSC Exotherm using Mettler</td>
<td>Joules/g</td>
<td>-1.000</td>
<td>481.100</td>
<td>110.4</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0</td>
<td>0.00</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000646</td>
<td>Alpha of Digested Solid</td>
<td>uCi/g</td>
<td></td>
<td>1.000</td>
<td>41.100</td>
<td>82.43</td>
<td>&lt;1.18e-03</td>
<td>&lt;1.18e-3</td>
<td>&lt;1.16e-3</td>
<td>n/a</td>
<td>n/a</td>
<td>81.50</td>
</tr>
<tr>
<td>S95T000650</td>
<td>F Alpha of Digested Solid</td>
<td>uCi/g</td>
<td></td>
<td>-1.000</td>
<td>41.100</td>
<td>84.46</td>
<td>&lt;2.49e-03</td>
<td>&lt;5.32e-3</td>
<td>&lt;4.71e-3</td>
<td>n/a</td>
<td>n/a</td>
<td>89.60</td>
</tr>
</tbody>
</table>

* => Limit violated

---

**SC-SD-WA-DP-110, REV. 0**
### 45 Day Safety Screen Results for 241-U-202

**U-202**

**CORE NUMBER: 78**  
**SEGMENT #: FB**  
**SEGMENT PORTION: n/a**

#### Action Limits

<table>
<thead>
<tr>
<th>Sample #</th>
<th>Analyte Description</th>
<th>Analyte Unit</th>
<th>Lower</th>
<th>Upper</th>
<th>Standard %</th>
<th>Blank</th>
<th>Result</th>
<th>Duplicate</th>
<th>Average</th>
<th>RPD</th>
<th>Spk Rec</th>
<th>Det Limit</th>
<th>Count</th>
<th>Spk Err%</th>
</tr>
</thead>
<tbody>
<tr>
<td>S95T000654</td>
<td>% Water by TGA on Perkin Elmer %</td>
<td>None</td>
<td>None</td>
<td>97.30</td>
<td>n/a</td>
<td>99.59</td>
<td>99.52</td>
<td>0.14</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000654</td>
<td>DSC Exotherm on Perkin Elmer Joules/g</td>
<td>None</td>
<td>None</td>
<td>101.9</td>
<td>n/a</td>
<td>0.00</td>
<td>0.00</td>
<td>0.000</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S95T000654</td>
<td>DSC Exotherm Dry Calculated Joules/g Dry</td>
<td>None</td>
<td>None</td>
<td>n/a</td>
<td>n/a</td>
<td>0.00e+00</td>
<td>0.00</td>
<td>0.000</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

---

- >= Limit violated
- => Selected Limit
LABCORE Data Entry Template for Worklist# 1019

Analyst: SAE  Instrument: DSC01  Book #: 127/14-7

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

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STD</td>
<td>DSC-01</td>
<td>U/A</td>
<td></td>
<td>SOLID</td>
<td>28.45</td>
<td>26.9</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>2 SAMPLE</td>
<td>595T000584</td>
<td>0</td>
<td>DSC-01</td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>3 DUP</td>
<td>595T000584</td>
<td>0</td>
<td>DSC-01</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>4 SAMPLE</td>
<td>595T000590</td>
<td>0</td>
<td>DSC-01</td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>5 DUP</td>
<td>595T000590</td>
<td>0</td>
<td>DSC-01</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
</tbody>
</table>

Final page for worklist # 1019

Signed by: [Signature]  4/5/95  Analyst Signature  Date

Verified by: Blandina Valenzuela  4/5/95

Data Entry Comments:
- 595T000584 - light, thick, yellow liquid @ 0/5, thin upper phase. Produced 3 endothermic
- 595T000590 - light, thin, yellow liquid w/large, 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.
DSC STD 12N14-A
6.340 mg
Rate: 10.0 °C/min
Ident: 0.0

File: 00016.001 DSC METTLER 23-Apr-95
222-S Laboratory

Integration
Delta H 170 mJ
26.9 J/g
Peak 158.7 °C
-12.0 mW

---

Integration
Delta H 170 mJ
26.9 J/g
Peak 158.7 °C
-12.0 mW
BEST AVAILABLE COPY

S95T000584 N2
27.075 mg
Rate: 10.0 °C/min
Ident: 0.0

Integration
Delta H 57 mJ
2.1 J/g
Peak 176.9°C
-1.0 mW

Integration
Delta H 20518 mJ
757.8 J/g
Peak 123.7°C
-72.2 mW

Integration
Delta H 14238 mJ
525.9 J/g
Peak 273.3°C
-57.0 mW

File: 00018.001
DSC METTLER
23-Apr-95
222-S Laboratory
S95T000584 (DUP) N2

19.175 mg

Rate: 10.0 °C/min

Ident: 0.0

222-S Laboratory

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

Integration
Delta H 11669 mJ
608.5 J/g
Peak 105.2°C
-43.8 mW

Integration
Delta H 12214 mJ
637.0 J/g
Peak 275.7°C
-54.6 mW

File: 00020.001
DSC METTLER
24-Apr-95
S95T000584 (DUP2) N2

Rate: 10.0 °C/min

Integration
Delta H 47 mJ
3.1 J/g
Peak 177.0°C
-0.7 mW

Integration
Delta H 9588 mJ
636.0 J/g
Peak 105.3°C
-38.9 mW

Integration
Delta H10139 mJ
672.5 J/g
Peak 275.9°C
-50.3 mW
S95T000590 N2
18.492 mg
Rate: 10.0 °C/min

Integration
Delta H 2514 mJ
136.0 J/g
Peak 280.5°C
-9.7 mW

Integration
Delta H 21689 mJ
1172.9 J/g
Peak 133.5°C
-77.3 mW
S95T000590 (DUP) N2
23.844 mg
Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory

Integration
Delta H 2962 mJ
124.2 J/g
Peak 282.4°C
-10.9 mW

Integration
Delta H 30885 mJ
1295.3 J/g
Peak 137.4°C
-78.9 mW

T (mW)
50.0

Time (s)
100.0
200.0
300.0
400.0
°C
LABCORE Data Entry Template for Worklist# 1020

Analyst: [REDACTED]  Instrument: DSC01  Book # 12N14A

Method: LA-514-113 Rev/Mod E-

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R</th>
<th>A</th>
<th>-------TEST------</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STD</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>28.45</td>
<td>37.2</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>2</td>
<td>SAMPLE</td>
<td>S95T000598</td>
<td>0</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>Ø</td>
<td>Joules/g</td>
<td></td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>3</td>
<td>DUP</td>
<td>S95T000598</td>
<td>0</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>Ø</td>
<td>Ø</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1020

Verified by Blandina Valenzuela  5/1/95

Data Entry Comments: S95T000598 produced three endothermic one at 110.5°C with a delta H of 118.5 J/g, second at 176.9°C with a delta H of 100.5 J/g, and the third at 373.4°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.
DSC STD 12N14-A

File: 00017.001  DSC METTLER  30-Apr-95
6.590 mg  Rate: 10.0 °C/min  Ident: 0.0  222-S Laboratory

Integration
Delta H  179 mJ
27.2 J/g
Peak  159.0 °C
-12.4 mW

5/1/95 for 180 °C
Blandina Valenzuela
RD Meyers
S95T000598 N2

11.882 mg

Rate: 10.0 °C/min

Integration

Delta H: 13290 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
LABCORE Data Entry Template for Worklist# 1021

**Analyst:** ADP  **Instrument:** DSC01  **Book #** J2N14-A

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

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R</th>
<th>A</th>
<th>TEST</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STD</td>
<td>DSC-01</td>
<td>SOLID</td>
<td></td>
<td></td>
<td></td>
<td>2845</td>
<td>31.7</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>4 SAMPLE</td>
<td>S95T000630</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td>0</td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>5 DUP</td>
<td>S95T000630</td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td>0</td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Final page for worklist # 1021**

---

**Data Entry Comments:** Sample produced two endothermic features at approx. 314°C with a peak at 516°C and second at 576°C with a peak at 632°C. The second endotherm is believed to be Alumina (Hydrate).

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.
**Integration**

- **Delta H**: 201 mJ
- **31.7 J/g**
- **Peak**: 158.7°C
- **-12.2 mW**
DSC S95T000630 DUP
19.724 mg
Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory

Integration
Delta H10295 mJ
522.0 J/g
Peak 116.1 °C
-64.1 mW

Integration
Delta H12296 mJ
623.4 J/g
Peak 275.7 °C
-52.8 mW
LABCORE Data Entry Template for Worklist# 1022

Analyst: S.M.  Instrument: DSC01  Book #: 1.2N/14-A

Method: LA-514-113 Rev/Mod # 13

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R</th>
<th>A</th>
<th>--------</th>
<th>TEST-----</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STD</td>
<td>DSC-01</td>
<td>SOLID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28.45</td>
<td>30.4</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>2 SAMPLE</td>
<td>S95T000632</td>
<td>0</td>
<td></td>
<td>DSC-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>Ø</td>
<td>Ø</td>
<td>Joules/g</td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>3 DUP</td>
<td>S95T000632</td>
<td>0</td>
<td></td>
<td>DSC-01</td>
<td>SOLID</td>
<td>Ø</td>
<td>Ø</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1022

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 with a layer of "water" at the top.

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 STD 12N14-A

File: 00020.001 DSC METTLER 30-Apr-95

6.590 mg Rate: 10.0 °C/min

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

222-B Laboratory
Integration
Delta H 92 mJ
2.8 J/g
Peak 178.9°C
-1.4 mW

Integration
Delta H 557 mJ
472.3 J/g
Peak 117.6°C
-72.7 mW
S95T000632 (DUP) N2
32.204 mg
Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory

Integration
Delta H  89 mJ
2.8 J/g
Peak  178.9°C
-1.3 mW

Integration
Delta H 19133 mJ
594.1 J/g
Peak  271.3°C
-58.1 mW

Integration
Delta H 14925 mJ
463.4 J/g
Peak  110.0°C
-65.8 mW

File: 00029.001 DSC METTLER 01-May-95
LABCORE Data Entry Template for Worklist# 1024

Analyst: S MF Instrument: DSC01 Book # 12 N 4 A
Method: LA-514-113 Rev/Mod B-1
Worklist Comment: Please run U-202 DSC under N2. bdv

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R</th>
<th>A</th>
<th>-----TEST-----</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STD</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>28.45</td>
<td>30.3</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>4 SAMPLE</td>
<td>595T000643</td>
<td>0</td>
<td>DSC-01 SOLID</td>
<td>N/A</td>
<td>Ø</td>
<td>Joules/g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>5 DUP</td>
<td>595T000643</td>
<td>0</td>
<td>DSC-01 SOLID</td>
<td>Ø</td>
<td>Ø</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1024

See attached for signatures 5/1/95

Analyst Signature Date 5/1/95

Verified by Blandina Valenzuela 5/2/95

Data Entry Comments: 595T000643 produced two endotherms, one at 115.5°C with a

Delta H of 50.35% and the second at 265.65°C with a delta H of 109.68%

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: ZaF. Instrument: DSC01 Book # 12N14-A

Method: LA-514-113 Rev/Mod

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>MATRIX</th>
<th>ACTUAL FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 STD</td>
<td></td>
<td>DSC-01</td>
<td>SOLID</td>
<td></td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000054 U-202</td>
<td>2 SAMPLE</td>
<td>S95T000610 0</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000054 U-202</td>
<td>3 DUP</td>
<td>S95T000610 0</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>4 SAMPLE</td>
<td>S95T000643 0</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>5 DUP</td>
<td>S95T000643 0</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1024

Analyst Signature Date

Data Entry Comments:

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.
LABCORE Data Entry Template for Worklist# 1025

Analyst: DWS  Instrument: DSC01  Book #: 12014-A

Method: LA-514-113 Rev/Mod β-1

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A ----TEST------</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 STD</td>
<td>DSC-01</td>
<td>SOLID</td>
<td>28.45</td>
<td>31.4</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 SAMPLE</td>
<td>U-202</td>
<td>DSC-01</td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 DUP</td>
<td>U-202</td>
<td>DSC-01</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1025

Analyst Signature: 9-25-95  Date: 9-25-95

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 aluminium hydroxide, was at 267.3°C with a delta H of
496.0 J/g.

Units shown for QC (SBK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number,
R = Replicate Number, A = Aliquot Code.
DSC STD 12N14-A

6.340 mg

Rate: 10.0 °C/min

Integration

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

File: 00028.001 DSC METTLER 24-Apr-95
Ident: 0.0 222-S Laboratory

Signature: [Signature]

Date: 4-25-95
S95T000644 N2
33.503 mg
Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory

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
LABCORE Data Entry Template for Worklist# 1028

**Analyst:** DWJ  **Instrument:** DSC01  **Book #** 52W14-A

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

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>MATRIX TEST</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>95000039 U-202</td>
<td>1</td>
<td>STD</td>
<td>95T000582</td>
<td>DSC-01</td>
<td>LIQUID 25.45 26.1</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000039 U-202</td>
<td>2</td>
<td>SAMPLE</td>
<td>95T000582</td>
<td>DSC-01</td>
<td>LIQUID N/A 0</td>
<td></td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000039 U-202</td>
<td>3</td>
<td>DUP</td>
<td>95T000582</td>
<td>DSC-01</td>
<td>LIQUID 0</td>
<td></td>
<td>N/A Joules/g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000039 U-202</td>
<td>4</td>
<td>SAMPLE</td>
<td>95T000588</td>
<td>DSC-01</td>
<td>LIQUID N/A</td>
<td></td>
<td>Joules/g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000039 U-202</td>
<td>5</td>
<td>DUP</td>
<td>95T000588</td>
<td>DSC-01</td>
<td>LIQUID 0</td>
<td></td>
<td>N/A Joules/g</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1028

Verified by Blandina Valenycula 5/8/95

Data Entry Comments:

- 95T000586 produced two endothermic reactions at 104.3°C with a latent H of 22.3 J/g.
- 95T000588 produced two endothermic reactions at 109.3°C with a latent H of 24.7 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. Every day shift, the chemist corrected the data on the thermograms.
DSC STD 12N14-A

6.525 mg  Rate: 10.0 °C/min

Integration
Delta H  170 mJ
26.1 J/g
Peak  160.6 °C
-8.4 mW

File: 00061.001  DSC METTLER  03-May-95
Ident: 0.0  222-S Laboratory

Signature:
5-4-95  5-5-95  80Y
**BEST AVAILABLE COPY**

S95T000582 N2
12.402 mg
Rate: 10.0 °C/min

Integration
Delta H 271 mJ
21.9 J/g
Peak 229.3°C
-2.4 mW

Integration
Delta H 17350 mJ
1399.0 J/g
Peak 115.4°C
-86.9 mW
S95T000588 (DUP) N2
12.523 mg
Rate: 10.0 °C/min

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

Integration
Delta H 19125 mJ
1527.2 J/g
Peak 111.3 °C
-88.6 mW
LABCORE Data Entry Template for Worklist# 1029

Analyst: [Signature]  
Instrument: DSC01  
Book #: [JN4-A]

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

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 STD</td>
<td>DSC-01</td>
<td>LQD</td>
<td></td>
<td></td>
<td></td>
<td>28.45</td>
<td>29.1</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000052  U-202</td>
<td>DSC-01</td>
<td>LQD</td>
<td>S95T000621</td>
<td>0</td>
<td></td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000052  U-202</td>
<td>DSC-01</td>
<td>LQD</td>
<td>S95T000621</td>
<td>0</td>
<td></td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
</tbody>
</table>

Final page for worklist # 1029

Analyst Signature: [Signature]  
Date: 5/3/95

Verifed by Blandina Valenzuela 5/5/95

Data Entry Comments: 950000521 produced three endotherms in a 100 mL crucible.  
- 1st endotherm at 1348.3°C, second at 1398.3°C with a delta H of 1.1 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.
Integration
Delta H 295 mJ
24.2 J/g
Peak 227.2°C
-2.4 mW

Integration
Delta H 17045 mJ
1395.0 J/g
Peak 111.6°C
-78.2 mW
LABCORE Data Entry Template for Worklist# 1030

Analyst: SNF  Instrument: DSC01' 03  Book #: 1WKH-A
Method: LA-514-114 Rev/Mod  E D
Worklist Comment: Please run U-202 DSC under N2. bdv

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>METHOD</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 STD</td>
<td>DSC-03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28.45</td>
<td>28.98</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>2 SAMPLE S95T000636 0</td>
<td>DSC-03</td>
<td>LIQUID</td>
<td>N/A</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>3 DUP S95T000636 0</td>
<td>DSC-03</td>
<td>LIQUID</td>
<td>N/A</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>4 SAMPLE S95T000654 0</td>
<td>DSC-03</td>
<td>LIQUID</td>
<td>N/A</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>5 DUP S95T000654 0</td>
<td>DSC-03</td>
<td>LIQUID</td>
<td>N/A</td>
<td>N/A</td>
<td>Joules/g</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1030

Verified by Blandina Valenzuela 5/5/95

Data Entry Comments:

1. Endotherm produced two endotherms on a differential scan at 162.2°C and second at 237.4°C with a delta T of 35°C. The sample produced an endotherm at 98.92°C with a delta T of 235°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# 1030

Analyst:** SMF** 
Instrument: DSC01 
Book #: 12\(\times\)14-17 

Method: LA-514-H3 Rev/Mod **BC**

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>------TEST------</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 STD</td>
<td></td>
<td></td>
<td></td>
<td>651</td>
<td>BDV</td>
<td>DSC-01</td>
<td>LIQUID</td>
<td></td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>2 SAMPLE</td>
<td>S95T000636</td>
<td>0</td>
<td>651</td>
<td>BDV</td>
<td>DSC-01</td>
<td>LIQUID</td>
<td>N/A</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>3 DUP</td>
<td>S95T000636</td>
<td>0</td>
<td>651</td>
<td>BDV</td>
<td>DSC-01</td>
<td>LIQUID</td>
<td>N/A</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>4 SAMPLE</td>
<td>S95T000636</td>
<td>0</td>
<td>651</td>
<td>BDV</td>
<td>DSC-01</td>
<td>LIQUID</td>
<td>N/A</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>5 DUP</td>
<td>S95T000636</td>
<td>0</td>
<td>651</td>
<td>BDV</td>
<td>DSC-01</td>
<td>LIQUID</td>
<td>N/A</td>
<td>N/A</td>
<td>Joules/g</td>
</tr>
</tbody>
</table>

Final page for worklist # 1030

Data Entry Comments:

895T000636 - Bright yellow liquid
895T000634 - 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 10°C/min. Signature below represents chemical technologist/chemist that completed/verified the calibration/analysis on pages 52 to 54.

<table>
<thead>
<tr>
<th>X1</th>
<th>154.866 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2</td>
<td>161.900 °C</td>
</tr>
<tr>
<td>Peak</td>
<td>157.516 °C</td>
</tr>
<tr>
<td>Area</td>
<td>193.781 mJ</td>
</tr>
<tr>
<td>ΔH</td>
<td>28.979 J/g</td>
</tr>
<tr>
<td>Height</td>
<td>15.879 mW</td>
</tr>
<tr>
<td>Onset</td>
<td>155.169 °C</td>
</tr>
</tbody>
</table>

Perkin-Elmer

N2 exotherm down
TEMP: 140.0 °C TIMES: 0.0 min RATE: 10.0 °C/min

SM FULTON
Westinghouse Hanford Co.
222-S Lab
Wed May 3 08:46:31 1995
Curve 1: DSC
Sample Weight: 12.670 mg
S95T000636, 10C/min

ΔH 1836.17 J/g
Peak 115.87 °C

ΔH 25.81 J/g
Peak 227.38 °C

Onset 90.78

Onset 212.7 °C

Exotherm down, nitrogen purge gas
Temperature (°C)

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Wed May 3 13:25:51 1995
Curve 1: DSC
File info: SAM050304 Wed May  3 14:17:41 1995
Sample Weight: 12.040 mg
S95T000636 (DUP), 10°C/min

ΔH 1748.12 J/g
Peak 115.66 °C

Onset 98.0 °C

ΔH 24.87 J/g
Peak 228.02 °C
Onset 213.61 °C

exotherm down, nitrogen purge gas

Temperature (°C)  SM Fulton
                   Westinghouse Hanford Co.
                   222-S Lab
                   Wed May  3 14:25:55 1995
Curve 1: DSC
Sample Weight: 8.210 mg
S95T000654, 10C/min

Best Available Copy

Perkin-Elmer

X1 36.400 °C
X2 120.866 °C
Peak 106.298 °C
Area 18541.248 mJ
ΔH 2258.374 J/g
Height 237.963 mW
Onset 98.906 °C

exotherm down, nitrogen purge gas

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Wed May 3 09:51:15 1995

Temperature (°C)
Exotherm down, nitrogen purge gas

Heat Flow (mW)

Temperature (°C)
Curve 1: DSC
Sample Weight: 8.870 mg
S95T000654 (DUP), 10/min

<table>
<thead>
<tr>
<th>X1</th>
<th>35.000 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2</td>
<td>114.800 °C</td>
</tr>
<tr>
<td>Peak</td>
<td>106.687 °C</td>
</tr>
<tr>
<td>Area</td>
<td>19309.940 mJ</td>
</tr>
<tr>
<td>ΔH</td>
<td>2176.994 J/g</td>
</tr>
<tr>
<td>Height</td>
<td>229.555 mW</td>
</tr>
<tr>
<td>Onset</td>
<td>96.757 °C</td>
</tr>
</tbody>
</table>

Perkin-Elmer

Temperature (°C) 35.0 400.0
Exotherm down, nitrogen purge gas

SM Fulton
Westinghouse Hanford Co.
222-S Lab
Wed May 3 11:40:57 1995
LABCORE Data Entry Template for Worklist# 1034

**Analyst:** DWS  
**Instrument:** TGA01  
**Method:** LA-560-112 Rev/Mod A-Z  
**Worklist Comment:** Please run U-202 TGA under N2, bdv

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

Final page for worklist # 1034

**Verified by:** Blandina Valenzuela 5/5/95

Data Entry Comments: The instrument was changing the dates on the chart, the instrument corrected the dates 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.
TGA STD 42N8-A
16.621 mg
Rate: 10.0 °C/min

Ident: 0.0
222-S Laboratory

Step Analysis
Height -9.76 mg
-58.70 %
ResiC. 6.86 mg
41.30 %
Dpeak 82.5°C
Step Analysis
Height: 10.41 mg
-73.24 %
ResiC. 3.80 mg
26.76 %
Dpeak 81.0°C
Step Analysis
Height -9.64 mg
-73.29 %
ResiC. 3.51 mg
26.71 %
Dpeak 77.0 ºC
S95T00588 (DUP) N2
13.577 mg
Rate: 10.0 °C/min
Ident: 0.0

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:** [Signature]  
**Instrument:** TGA01  
**Book #** 42NB-A

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

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R</th>
<th>A</th>
<th>---</th>
<th>TEST</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>STD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TGA-01</td>
<td></td>
<td>50.1</td>
<td>58.74</td>
<td>N/A</td>
<td>%</td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>SAMPLE</td>
<td>S95T0000621</td>
<td>0</td>
<td></td>
<td></td>
<td>TGA-01</td>
<td></td>
<td>N/A</td>
<td>73.42</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>DUP</td>
<td>S95T0000621</td>
<td>0</td>
<td></td>
<td></td>
<td>TGA-01</td>
<td></td>
<td>73.42</td>
<td>73.64</td>
<td>N/A</td>
<td>%</td>
</tr>
</tbody>
</table>

Final page for worklist # 1035

**Analyst Signature** [Signature]  
**Date** 5-3-95

Identified by Blandina Valencia  
**Date** 5-4-95

**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.
TGA STD 42NB-A

23.688 mg

Rate: 10.0 °C/min

Step Analysis

Height - 13.92 mg
-58.74 %

ResiC. 9.77 mg
41.26 %

Dpeak 92.5°C
Step Analysis
Height 9.77 mg
-73.64 %
ResiC. 3.50 mg
26.36 %
Dpeak 79.0°C
LABCORE Data Entry Template for Worklist# 1036

Analyst: SHF  Instrument: TGA01 03  Book #: 15-1A

Method: LA-514-114 Rev/Mod BDV

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R</th>
<th>A</th>
<th>------</th>
<th>TEST------</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STD</td>
<td>TGA-03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LIQUID</td>
<td>53.19</td>
<td>53.59</td>
<td>N/A</td>
<td>%</td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>2</td>
<td>S95T000636</td>
<td>0</td>
<td></td>
<td>TGA-03</td>
<td></td>
<td>LIQUID</td>
<td>N/A</td>
<td>72.27</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>3</td>
<td>S95T000636</td>
<td>0</td>
<td></td>
<td>TGA-03</td>
<td></td>
<td>LIQUID</td>
<td>72.27</td>
<td>72.23</td>
<td>N/A</td>
<td>%</td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>4</td>
<td>S95T000654</td>
<td>0</td>
<td></td>
<td>TGA-03</td>
<td></td>
<td>LIQUID</td>
<td>N/A</td>
<td>99.66</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>5</td>
<td>S95T000654</td>
<td>0</td>
<td></td>
<td>TGA-03</td>
<td></td>
<td>LIQUID</td>
<td>99.66</td>
<td>99.72</td>
<td>N/A</td>
<td>%</td>
</tr>
</tbody>
</table>

Final page for worklist # 1036

See attached for signatures

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

Verified by: Blandina Valenzuela  5/5/95

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.
LABCORE Data Entry Template for Worklist# 1036

Analyst: SMF  Instrument: TGA01  Book # 42N'8-A

Method: LA-560-112 Rev/Mod

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STD</td>
<td>TGA-01</td>
<td>LIQUID</td>
<td></td>
<td>N/A</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>2 SAMPLE</td>
<td>S95T000637 0</td>
<td>TGA-01</td>
<td>LIQUID</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>3 DUP</td>
<td>S95T000637 0</td>
<td>TGA-01</td>
<td>LIQUID</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>4 SAMPLE</td>
<td>S95T000654 0</td>
<td>TGA-01</td>
<td>LIQUID</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052</td>
<td>U-202</td>
<td>5 DUP</td>
<td>S95T000654 0</td>
<td>TGA-01</td>
<td>LIQUID</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1036

Analyst Signature Date

Data Entry Comments:

S95T000637 - 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: TGA

File info: TER050301 Wed May 3 08:58:12 1995
Sample Weight: 18.839 mg

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

42N8A Terliq

| X1     | 26.793 °C |
| X2     | 246.985 °C|
| Y1     | 99.974 Wt. %|
| Y2     | 42.382 Wt. %|
| ΔY     | -57.593 Wt. %|

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 3 09:03:07 1995
Curve 1: TGA
Sample Weight: 13.753 mg
S9ST000636, 10°C/min

BEST AVAILABLE COPY

Temperature (°C)  Weight (wt. %)

X1  28.650 °C
X2  234.172 °C
Y1  100.279 Wt. %
Y2  28.014 Wt. %
ΔY  -72.265 Wt. %

N2
TEMP: 35.0 °C  TIME: 0.0 min  RATE: 10.0 °C/min

N2
TEMP: 800.0 °C  TIME: 0.0 min

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 3 13:19:43 1995
Curve: TGA
File info: SAM050304 Wed May 3 14:20:06 1995
Sample Weight: 13.408 mg
S95T000636, 10C/min
(DUP) 5/5/95

20.0 -

N2 Temperture

X1  20.650 °C
X2  232.030 °C
Y1  99.947 Wt. %
Y2  27.713 Wt. %
ΔY -72.234 Wt. %

S95T000636 (DUP)

Weight (Wt. %)

Temperature (°C)

SM Fulton
PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 3 14:32:05 1995
Curve 1: TGA
Sample Weight: 9.448 mg
S95T000654, 10C/min

Sample Height: 9.448 rng

Temperature (°C):
X1: 29.205 °C
X2: 121.843 °C
Y1: 99.893 Wt. %
Y2: 0.233 Wt. %
ΔY: -99.660 Wt. %

Sample Weight:
N2: 39.8 g
TIME: 0.0 min RATE: 10.0 C/min

2.0M
1.0M
0.0M
-10.0M

PERKIN-ELMER
7 Series Thermal Analysis System
Wed May 3 15:38:13 1995
SM Fulton
Curve 1: TGA
Sample Weight: 8.704 mg
S95T000654 (DWP), 10C/min

Sample Weight: 8.704 mg

Sample Temperature (°C)

Weight (Wt. %)

N2

Temperature (°C)  SM Fulton

PERKIN-ELMER

7 Series Thermal Analysis System

Wed May 3 11: 47: 00 1995
LABCORE Data Entry Template for Worklist# 1047

Analyst:  
Instrument:  
Method: LA-560-112 Rev/Mod  
Worklist Comment: Please run U-202 TGA under N2 bdv

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R</th>
<th>A</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STD</td>
<td>TGA-01</td>
<td></td>
<td></td>
<td></td>
<td>SOLID</td>
<td>59.19</td>
<td>58.31</td>
<td>N/A</td>
<td>%</td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>2</td>
<td>SAMPLE</td>
<td>S95T000584</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>25.99</td>
<td>26.24</td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>3</td>
<td>DUP</td>
<td>S95T000584</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>43.64</td>
<td>38.71</td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>4</td>
<td>SAMPLE</td>
<td>S95T000590</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>43.64</td>
<td>36.88</td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>5</td>
<td>DUP</td>
<td>S95T000590</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>43.64</td>
<td>36.88</td>
</tr>
<tr>
<td>95000039</td>
<td>U-202</td>
<td>6</td>
<td>DUP2</td>
<td>S95T000590</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>43.64</td>
<td>36.88</td>
</tr>
</tbody>
</table>

Data Entry Comments:  
S95T000545- Light yellow thick liquid with clear than upper phase. S95T000546- Light yellow liquid with large (1/4") air bubbles. S95T000547 produced a second weight loss step of 17.93% at 281.0°C. S95T000590 produced a second weight loss step of 3.42% at 371.0°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 #: 491-A

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

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>-------TEST-------</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 STD</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>0 N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>%</td>
</tr>
</tbody>
</table>
| 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

Analyst Signature: __________  Date: 4-24-95

Data Entry Comments:

- S95T000548 - light yellow thick liquid
  - w/ clear thin upper phase
- S95T000590 - light yellow liquid or large (~") 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.
TGA STD 42N8-A

18.145 mg

Rate: 10.0 °C/min

Step Analysis
Height: 10.58 mg
-58.31 %
ResiC.: 7.56 mg
41.69 %
Dpeak 85.8 °C

File: 00017.001 TG METTLER 23-Apr-95
Ident: 0.0 222-S Laboratory

Signature: [Signature]
Date: 4-24-95

D. M. Fulton
S95T000584 N2
25.575 mg

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

Step Analysis
Height -6.52 mg
-25.49 %
ResiC. 19.02 mg
74.38 %
Dpeak 69.0°C

Step Analysis
Height -4.58 mg
-17.93 %
ResiC. 14.21 mg
55.58 %
Dpeak 281.0°C
Step Analysis
Height -8.41 mg
-43.64 %
ResiC. 10.86 mg
56.36 %
Dpeak 121.0 °C

Step Analysis
Height -0.67 mg
-3.48 %
ResiC. 10.06 mg
52.22 %
Dpeak 271.0 °C
Step Analysis
Height -7.69 mg
-38.71 %
ResiC. 12.17 mg
61.29 %
Dpeak 103.0°C

Step Analysis
Height -1.47 mg
-7.40 %
ResiC. 10.64 mg
53.58 %
Dpeak 273.0°C
Steep: 273.0°C
56.03% Resid.
8.16 mg
7.47% Height = 1.11 mg

Steep: 105.0°C
63.15% Resid.
9.36 mg
36.88% Height = 5.47 mg

Ident: 0.0 C/min
Rate: 10.0 C/min
Time: 00:00:27.001
TG METTLER 24-APR-96

Sample: 957000520(DUP2)-NZ

WTC-SD-WM-DP-110, REV.0
**LABCORE Data Entry Template for Worklist# 1048**

**Analyst:** HDP  
**Instrument:** TGA01  
**Book #** 42N8-A  

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STD</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>59.19</td>
<td>91.11</td>
<td>N/A</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SAMPLE</td>
<td>S95T000598</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>22.87</td>
<td>N/A</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>DUP</td>
<td>S95T000598</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>22.87</td>
<td>22.90</td>
<td>N/A</td>
<td>%</td>
<td></td>
</tr>
</tbody>
</table>

**Final page for worklist # 1048**

**Analyst Signature** 5-3-95  
**Date** 5-3-95

**Verified by Blandina Valenzuela** 5/4/95

**Data Entry Comments:** Sample produced a second weight loss drop at 18.47% at 279°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.
TGA STD 42N8-A
File: 00053.001
15.190 mg, Rate: 10.0 °C/min
Ident: 0.0
222-S Laboratory

Step Analysis
Height -8.98 mg
-59.11%
ResiC. 6.20 mg
40.77%
Dpeak 81.0°C
Step Analysis
Height -4.63 mg
-22.87 %
ResiC. 15.59 mg
77.01 %
Dpeak 61.0°C

Step Analysis
Height -3.74 mg
-18.47 %
ResiC. 11.67 mg
57.68 %
Dpeak 279.0°C
S95T000598 DUP N2
19.294 mg Rate: 10.0 °C/min

Step Analysis
Height -4.42 mg
-22.90%
Residue 14.85 mg
76.95%
Dpeak 51.0°C

Step Analysis
Height -3.48 mg
-18.02%
Residue 11.19 mg
58.00%
Dpeak 285.0°C
LABCORE Data Entry Template for Worklist# 1050

Analyst: ADP  Instrument: TGA01  Book #: H2N8-A

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

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 STD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TGA-01</td>
<td>59.19</td>
<td>59.08</td>
<td>N/A</td>
<td>%</td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>2 SAMPLE</td>
<td>S95T000630</td>
<td>0</td>
<td>TGA-01</td>
<td>24.11</td>
<td>24.11</td>
<td>N/A</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>3 DUP</td>
<td>S95T000630</td>
<td>0</td>
<td>TGA-01</td>
<td>18.90</td>
<td>18.90</td>
<td>N/A</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>4 TRIPL</td>
<td>S95T000630</td>
<td>0</td>
<td>TGA-01</td>
<td>17.29</td>
<td>17.29</td>
<td>N/A</td>
<td>%</td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1050

[Signatures]

Data Entry Comments: It peaks 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 was

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: AP Instrument: TGA01 Book # 42 N8 - A

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

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R</th>
<th>A</th>
<th>-----</th>
<th>TEST-----</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 STD</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>59.1</td>
<td>5.6</td>
<td>N/A</td>
<td>%</td>
<td>SOLID</td>
<td>59.1</td>
<td>5.6</td>
<td>N/A</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>4 SAMPLE</td>
<td>S95T000630</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>5 DUP</td>
<td>S95T000630</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1050

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.
Step Analysis
Height - 8.98 mg
-59.08 %
Residue 6.20 mg
40.80 %
Dpeak 81.0°C
Step Analysis
Height -4.57 mg
-18.90 %
ResiC. 19.59 mg
81.10 %
Dpeak 63.0°C

Step Analysis
Height -5.04 mg
-20.87 %
ResiC. 14.33 mg
59.33 %
Dpeak 283.0°C
TGA STD 42N8-A
16.621 mg
Rate: 10.0 °C/min
Step Analysis
Height -9.76 mg
-58.72 %
Resid. 6.86 mg
-41.27 %
Dpeak 82.5 °C

File: 00062.001 TG METTLER 03-May-95
Ident: 0.0
222-S Laboratory
S95T000630 (TRIPL) N2
35.831 mg Rate: 10.0 °C/min

Step Analysis
Height -6.91 mg
-19.27 %
ResiC. 28.93 mg
80.73 %
Dpeak 69.0°C

Step Analysis
Height -6.92 mg
-19.32 %
ResiC. 21.70 mg
60.55 %
Dpeak 287.0°C
LABCORE Data Entry Template for Worklist# 1051

Analyst: JMF Instrument: TGA01 Book # 42NE-A
Method: LA-560-112 Rev/Mod A-2
Worklist Comment: Please run U-202 TGA under N2. bdv

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 STD</td>
<td></td>
<td></td>
<td></td>
<td>TGA-01</td>
<td>59.19</td>
<td>58.85</td>
<td>N/A</td>
<td>%</td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>2 SAMPLE</td>
<td>S95T000632 0</td>
<td>SOLID</td>
<td>24.45</td>
<td>22.24</td>
<td>N/A</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>3 DUP</td>
<td>S95T000632 0</td>
<td>SOLID</td>
<td>24.45</td>
<td>22.24</td>
<td>N/A</td>
<td>%</td>
<td></td>
</tr>
</tbody>
</table>

Final page for worklist # 1051

Blandina Valenzuela for SM Fulton 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 18.7% 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.
Step Analysis
Height -8.64 mg
-24.45 %
ResiC. 26.57 mg
75.17 %
Dpeak 65.0°C

Step Analysis
Height -6.64 mg
-18.78 %
ResiC. 19.62 mg
55.50 %
Dpeak 309.0°C
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 # A-2

Method: LA-560-112 Rev/Mod

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

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R A</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>STD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TGA-01</td>
<td>59.19</td>
<td>58.97</td>
<td>N/A</td>
<td>%</td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>2 SAMPLE</td>
<td>S95T000643</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
<td>36.24</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>3 DUP</td>
<td>S95T000643</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>36.24</td>
<td>41.52</td>
<td>N/A</td>
<td>%</td>
</tr>
<tr>
<td>95000052 U-202</td>
<td>4 TRIP</td>
<td>S95T000643</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>36.24</td>
<td>34.81</td>
<td>N/A</td>
<td>%</td>
</tr>
</tbody>
</table>

Final page for worklist # 1052

See attached for signatures 5-1-95

Verified by Blandina Valenzuela 5-1-95

Data Entry Comments:
S95T000643 produced a second weight loss step of 9.58% at 3030 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# 1052

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PROJECT</th>
<th>S TYPE</th>
<th>SAMPLE#</th>
<th>R</th>
<th>A</th>
<th>MATRIX</th>
<th>ACTUAL</th>
<th>FOUND</th>
<th>DL</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 STD</td>
<td>TGA-01</td>
<td>95000054</td>
<td>U-202</td>
<td>2</td>
<td>SAMPLE</td>
<td>595T000610</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
</tr>
<tr>
<td>2 Sample</td>
<td>TGA-01</td>
<td>95000054</td>
<td>U-202</td>
<td>3</td>
<td>DUP</td>
<td>595T000610</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
</tr>
<tr>
<td>3 Sample</td>
<td>TGA-01</td>
<td>95000052</td>
<td>U-202</td>
<td>4</td>
<td>SAMPLE</td>
<td>595T000643</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
</tr>
<tr>
<td>4 Sample</td>
<td>TGA-01</td>
<td>95000052</td>
<td>U-202</td>
<td>5</td>
<td>DUP</td>
<td>595T000643</td>
<td>0</td>
<td>TGA-01</td>
<td>SOLID</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Final page for worklist # 1052

Analyst Signature Date Analyst Signature Date

Data Entry Comments:

595T000610 - Product

595T000643 - Light yellow material with 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.
TGA STD 42N8-A
14.470 mg
Rate: 10.0 °C/min

Step Analysis
Height -8.53 mg
-58.97 %
Residual 5.94 mg
41.03 %
D-peak 79.2 °C

File: 00021.001 TG METTLER 30-Apr-95
Ident: 0.0 222-S Laboratory

Signature Below represents Chemical Technologist/Chemist that completed/verified the calibration/analysis on pages 91 to 102.
Step Analysis
Height -14.29 mg
-36.24 %
ResiC. 25.14 mg
63.76 %
Dpeak 135.0 °C

Step Analysis
Height -3.38 mg
-8.58 %
ResiC. 21.46 mg
54.43 %
Dpeak 303.0 °C
Step Analysis
Height: -14.41 mg
-41.52 %
ResiC: 20.29 mg
58.48 %
Dpeak: 151.0°C

Step Analysis
Height: -1.35 mg
-3.89 %
ResiC: 18.60 mg
53.59 %
S95T000643 (TRIP) N2
30.171 mg
Rate: 10.0 °C/min

Step Analysis
Height: 10.50 mg
-34.81 %
ResiC. 19.67 mg
65.19 %
Dpeak 127.0 °C

Step Analysis
Height: -2.97 mg
-9.85 %
ResiC. 16.43 mg
54.44 %
Dpeak 301.0 °C
LABCORE Data Entry Template for Worklist# 1053

Analyst: DVJ  
Instrument: TGA01  
Book #: 9208A

Method: LA-560-112 Rev/Mod 0

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

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

Final page for worklist # 1053

Analyst Signature: 4-15-95
Date: 4-25-95

Verified by: Blandina Valenzuela 4/25/95

Data Entry Comments: S95T000644 produced a second weight less step @ 17.61% at 227°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.
Step Analysis

Height-10.47 mg
-58.40%
ResiC. 7.46 mg
41.60%
Dpeak 90.8°C
Step Analysis
Height -9.68 mg
-24.43 %
ResiC. 29.94 mg
75.57 %
Dpeak 83.0°C

Step Analysis
Height -6.98 mg
-17.61 %
ResiC. 22.96 mg
57.96 %
Dpeak 287.0°C
Step Analysis

Height -8.51 mg
-23.96 %
ResiC. 27.02 mg
76.04 %

Step Analysis

Height -6.43 mg
-18.11 %
ResiC. 20.58 mg
57.93 %
Dpeak 287.0°C