

## TA Instruments

### DSC 2500, DSC 250, DSC 25, & DSC 25P

#### INTRODUCTION

The Lumetics LINK™ software platform scans network locations for new measurement data files, copies data directly to a centralized database, and provides a powerful user interface for rapid multi-measurement multi-technique data aggregation, visualization, analysis, and reporting. LINK employs a client/server-based architecture where the LINK server hardware is provided by the end user and resides on the end user's network. The LINK client is a portable web-based application that may be placed on any computer with network connectivity to the LINK server. For successful import, the LINK webserver requires read access to the folders where user data resides.

TA DSC (Differential Scanning Calorimeters) measure temperatures and heat flows associated with thermal transitions in a material. Common usage includes investigation, selection, comparison and end-use performance evaluation of materials in research, quality control and production applications.

#### DETAILS

LINK requires the TXT data file. The required data file must be exported from the instrument software. If Time or Temperature has two or more same x-axis values, use the average of the values in the database table.

The following raw curve data may be imported, in addition to all available instrument/analysis settings and parameters calculated by the instrument software:

- Analysis Data vs. Temperature (kJ/mol.K)
- Baseline vs. Temperature (jK/mol.K)
- Baseline Subtracted vs. Temperature
- Model vs. Temperature
- Power (μJ/s) vs. Temperature
- Pressure (A) vs. Temperature
- Residual vs. Temperature
- Time (seconds) vs. Temperature
- Sample Purge Flow vs. Temp or Elapsed Time

The TA Instruments DSC TXT data file example is as follows:

```

1
2
3 Models
4 TwoStateScaled Aw 0.754
5 Tm (°C) 77.01
6 ΔH (kJ/mol) 496.2
7 Confidence Level (%) 0
8
9 X: Temp (°C) Y: Analysis Data (kJ / mol·K) Baseline (kJ / mol·K) Power (μJ/s) Time (seconds) Pressure (A) Baseline Subtracted TwoStateScaled Model Residual
10 25.0006 -0.133144422518749 -15.209909029524 -67.777 0.418 0 15.0767646070052 3.08261104404989E-11 15.0767646069744
11 25.07105 -0.134000563909339 -15.209909029524 -69.741 5.418 0 15.0759084656146 3.23034115350427E-11 15.0759084655823
12 25.16878 -0.467294735359533 -15.209909029524 -67.779 10.418 0 14.7426142941644 3.44694396546168E-11 14.74261429413

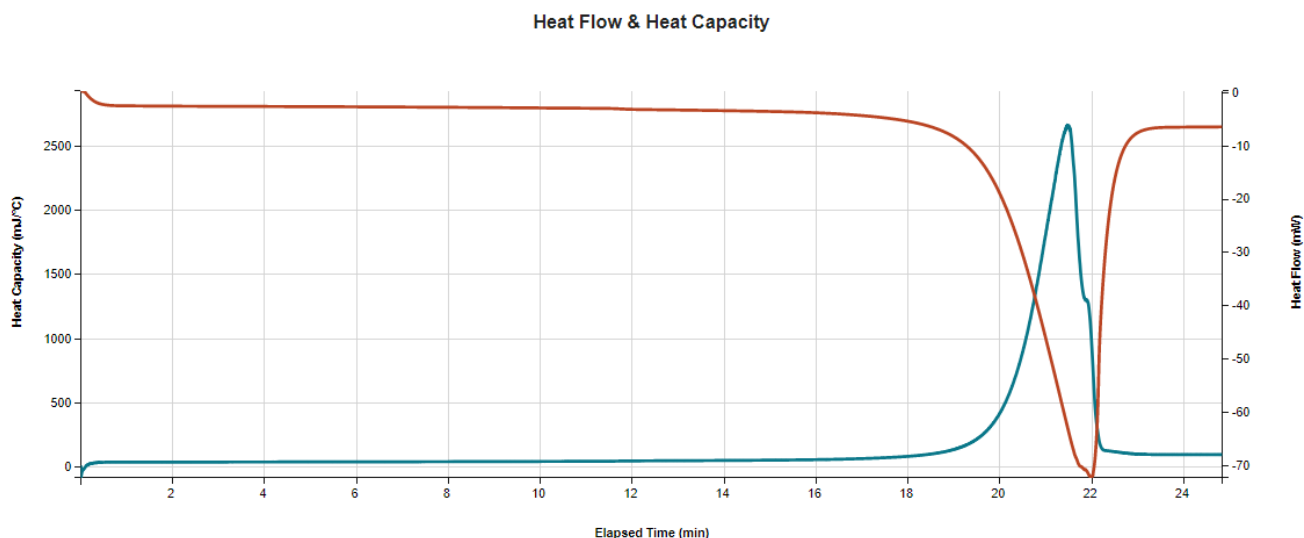
```



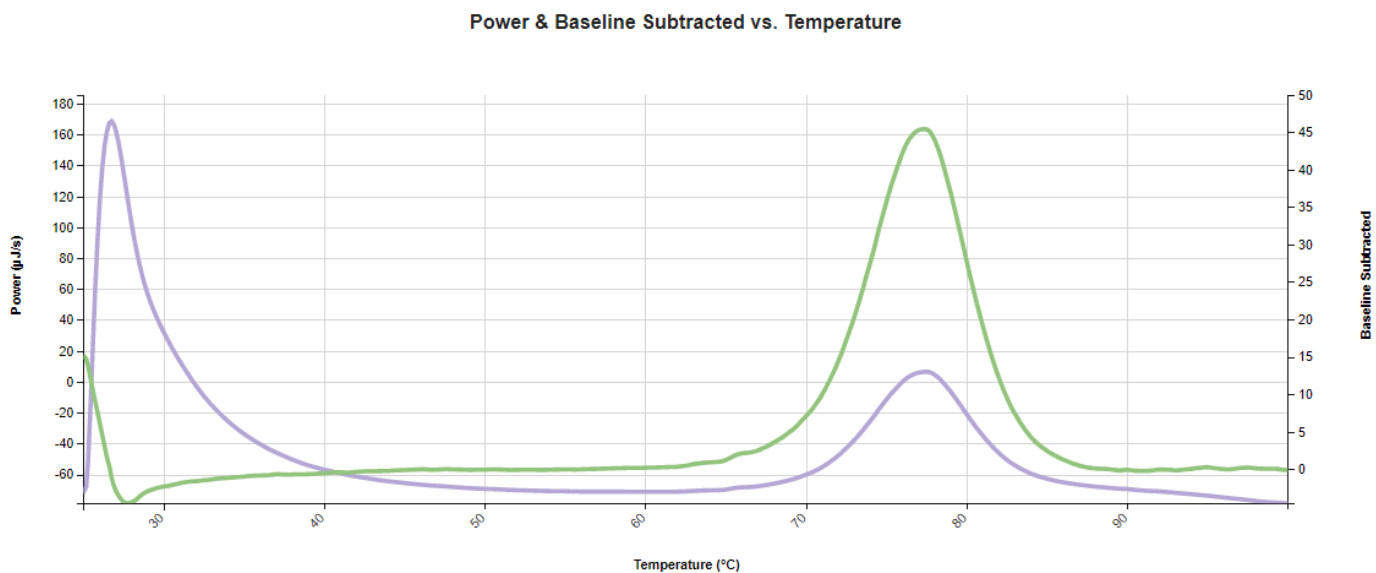
## EXAMPLES

Included below are sample dashboards from TA DSC measurement files:

### 1. Line Chart plotting raw data curves for Heat Capacity & Heat Flow vs. Elapsed Time



### 2. Line Chart plotting raw data curves for Power & Baseline Subtracted vs. Temperature



### 3. Tabular Summary examples

Measurement Summary Table – Measurement Results

LINK Record ID #	Sample Name	Tm (°C) - AVG	delta-H (kJ/mol) - AVG	Time (seconds) (Temperature (°C) >=1) - AVG	Residual (Temperature (°C) >=1) - AVG	Power (µJ/s) (Temperature (°C) >=1) - AVG	Model (Temperature (°C) >=1) - AVG	Baseline Subtracted (Temperature (°C) >=1) - AVG	Baseline (kJ / mol-K) (Temperature (°C) >=1) - AVG	Analysis Data (kJ / mol-K) (Temperature (°C) >=1) - AVG
1	LINK	77.01	496.20	790680.61	-28.41	-25658.41	2799.42	2771.01	-6957.29	-4186.28



## Measurement Summary Table – Instrument Settings

LINK Record ID #	InstrumentName	Sample Name	Operator	Sub-Population	File Name	Aw - AVG	Model	Confidence Level (%) - AVG
1	TA DSC	LINK	Lumetics	Total Population	1.txt	0.75	TwoStateScaled	0

### TA DSC DASHBOARDS

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LINK contains an extensive built-in dashboard library from LINK version 2.4.0.210401 and later. This function contains specific pre-created dashboards for all instruments and application groups.

### CONTACT LUMETICS

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For direct assistance, please contact Lumetics LINK™ Support:

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