

DSC Auto 2500

RULES:

- Do not leave old pans in the tray. Either get your pans after your run or use the “disard pans in waste bin” feature.
- Do not leave pans anywhere on the instrument other than the tray. They can interfere with the movement of the autosampler.

SOP:

1. Choose the correct type of pan for your experiment. The majority of samples can be run using the Tzero pans and lids.
2. Weigh a pan and lid for each sample you will run, and one pan/lid to act as a reference. Record the weight of each pan/lid combo.
 - a. Note that the reference pan can be reused indefinitely provided it remains clean and unbent.
3. Load the sample material into the pan. Typical sample mass is 5-20 mg. Record the mass of the pan/lid/sample combination.

Type of Measurement	Sample Size (mg)	Heating Rate (°C/min)
Glass transition	10 to 20	10 to 20
Melting point	2 to 10	5 to 10
Kinetics (Borchardt and Daniels)	5 to 10	5 to 20
Kinetics (ASTM)	2 to 5	0.5 to 20
Heat capacity	10 to 70	20
Purity	1 to 3	0.5 to 1
Crystallinity or oxidative stability	5 to 10	5 to 10

From:

folk.ntnu.no/deng/fra_nt/other%20stuff/DSC_manuals/QDSC/Preparing_DSC_Samples.htm

4. Press the pan/lid using the Tzero press. For Tzero pans, use the black “Black Tzero lower die” and “Black Tzero flat Die”
 - a. These are stored in the third drawer down under the scale
5. Place pans in any positions in the autosampler tray.
6. In the Trios software, in the “General” section on the right, ensure that the gas flow is 50 mL/min
7. Write your recipe by selecting any run that is open in “Design View” (on the left in TRIOS)
 - a. Fill out the form line by line, including the procedure
 - b. Advanced options:
 - i. “Discard pan in waste bin at end of test”
 1. Use this feature unless you want to retrieve your material. If you don’t use this feature, you must come back after your experiment and remove your pans.
8. Once you have written your run in “Design View”, right click on the run and select “copy to running queue”.
9. Adjust the run in design view as needed for the next sample, and then copy that run to the running queue as well.
10. Once you have your entire list of runs in the running queue, start the experiment by pressing the “Play” button
11. Once the process starts, TRIOS will automatically jump to the results tab.

