

Dos and Don'ts in the TGADTA and DSC Lab (SAIF IIT Bombay)

1. I will abstain from utilizing any personal electronic devices during my designated TA duty hours.
2. I will attentively listen to and follow the instructions provided by Meenal and Dr. Nutan while performing my duties.
3. I will utilize laboratory instruments with great care and concentration.
4. When operating the TGDTA/DSC instrument, I will carefully observe and adhere to the instructions listed on the Material Safety Data Sheet (MSDS), including the heating program and decomposition temperature.
5. In DSC, the final heating temperature (as per the heating program) will not surpass the decomposition temperature mentioned on the MSDS.
6. Prior to running any samples, I will ensure that the gas supply is properly regulated.
7. I will never operate the TGDTA or DSC instrument without turning on the purge gas.
8. I will always use appropriate sample pans that are compatible with the instruments.
9. Aluminium pans will be used for heating upto a max of 600 °C. Aluminium melts at 660 °C. For heating above 600 °C, I will use either Platinum (Pt) pans or Ceramic pans, and for temperature above 1000 °C, I will use ONLY Ceramic pans.
10. I can clearly differentiate between Pt and Aluminium pans. Further I also know that Aluminium pans are one-time use, while Pt pans are very expensive and should be used carefully.
11. During DSC runs, I will intermittently monitor the thermogram for any disturbances, such as a continuous wavy baseline, and immediately halt heating or notify Meenal/Dr. Nutan to prevent further sample decomposition, which could damage the DSC cell.
12. I will meticulously measure the weights of samples and correctly enter them in the method editor.
13. I will handle the weighing balance with extreme care.
14. In DSC, the sample pans will be crimped securely to prevent any spills during the runs.
15. Plotting of data will be performed with diligence and with a thorough understanding of the specific requirements of the User.
16. I will ensure that there is enough Liq. Nitrogen in the Dewar before starting the experiment.
17. I will not leave the laboratory before my designated time without notifying.
18. Unless due to legitimate health concerns, I will not request leave or any modifications to my duty schedule.
19. I will arrive promptly at the designated time for TA duty (9:30 am for forenoon session & 2 pm for the afternoon session).
20. I will document all work and samples performed each day in the laboratory log book.
21. At the conclusion of each TA duty day, I will record my attendance in the register.