

	Chemistry Department Bldg. 8 Research Group	SOP #	
		Revision #	
Prepared by	Diane Catlin	Implementation Date	
SOP Owner	Tom Allston	Last Reviewed Date	

I. Purpose

To promote the effective use of the Shimadzu IR Prestige to obtain an infrared spectrum of a sample.

II. Scope

This SOP is intended for in-group use by trained and certified personnel in the Chemistry Department.

III. Prerequisites

The experimenter must be trained in proper instrument techniques before using this SOP.

IV. Responsibilities

The responsibility for this instrument lies with Tom Allston
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V. Procedures and information

1. Loosen black oval knob in middle of GladiATR holder to release handle, and lift handle up to next stop. Clean the ATR crystal and ATR crystal plate with an appropriate cleaner on a kimwipe (e.g. isopropyl alcohol, do NOT use acetone). Leave the handle up.
2. Click on the IRsolution icon to open the program.
3. "Previous Background Data" window will come up. Click "Yes" to the option to "Remove the marked data?" The instrument is ready to go when the BS:CsI, Lamp, and Laser lights on the upper right side of the window are all green. Also, the status report in the lower left corner will say "Ready."
4. Under the Data tab, the parameters can be changed depending on the sample.

5. Under the “Measure” button, you will see a line for Data file. Click the “...” button to select the folder needed and save your data by typing in your file name and click “Save.”
6. Under “Measure” press BKG (background). The “Please prepare sample compartment for background scan” window will pop up. Press “OK” to begin the scans. The measurement then takes place (as indicated by the bottom left hand corner “scanned x of # scans” or if the scans have been completed “FTIR measurement ready.”
7. The program automatically goes to “View.” The background is automatically subtracted out from the sample scan.
8. For a solid sample place enough of the solid on the crystal surface to fully cover it. Put the handle down on to the sample. If using a liquid sample put the liquid crystal plate on the instrument by screwing it on the crystal holder. Put a few drops of sample in the area over the crystal and leave the handle up.
9. Under “Measure” press Sample. Change target file name under Data File.
10. Under the Manipulation 1 drop down menu, select peak table (at bottom of selection). The parameters to the right can be changed to optimize peaks.
11. The peaks are displayed by selecting “Calc”. If you get too many peaks, reduce the parameters starting with changing just the minimum area to a larger number. The peak table is displayed by selecting OK.”
12. To print go to File, then Print. The “Please select template first” will pop up. Click “OK.” Choose “spectrum&peak_table_1.ptm” and click “Open.” (l:Landscape or p:Portrait). Select the printer: \\argon\GOS_A155 and then select “Properties.” Under the Printing Shortcuts tab, change the paper size from A4 to Letter and click “OK.”
13. Clean crystal plate and apparatus with cleaner and kimwipe and go on to next sample.