



**HOLY CROSS COLLEGE (AUTONOMOUS)**

TIRUCHIRAPPALLI - 620002



## **CENTRALIZED INSTRUMENTATION FACILITY**

### **About CIF:**

The Centralized Instrumentation Facility (CIF) has been established by Department of Science and Technology (DST). The Purpose of establishing these centers is to provide data collection facility from analytical equipment's to scientific community for their advanced research with nominal charges. The facility has grown into a major Centre for spectral measurements, molecular and crystal structure determination and materials characterization.

### **Vision:**

To be a premier hub for innovation, excellence, and interdisciplinary collaboration in instrumentation science and technology, empowering industries and academia with cutting-edge solutions for measurement, control, and automation.

### **Mission:**

- Advance the frontiers of instrumentation through research, development, and technology transfer.
- Provide state-of-the-art facilities and expertise to support precision measurement, calibration, and control systems.
- Promote sustainable and smart instrumentation practices for a better tomorrow.

### **Objectives:**

To carry out analysis of samples received from academics, research institutions and other organizations. To provide instrumental facilities for analyst as an outsource, to undertake project and research works. To organize periodic short-term workshops on the application of various spectroscopic and analytical techniques for students, teachers and personnel. To carry out and support various sponsored research object.

### Instruments:

| S.NO | NAME OF THE INSTRUMENT                              | MAKE AND MODEL                          | SAMPLE TYPE                  |
|------|-----------------------------------------------------|-----------------------------------------|------------------------------|
| 1    | UV-Visible Spectrophotometer                        | Hitachi / U-2910                        | Liquid                       |
| 2    | Palmtop Raman Spectrometer                          | Jasco/ PR-1w (Spec: 785nm)              | Solid<br>Liquid<br>Thin-film |
| 3    | Powder X-Ray Diffraction (XRD)                      | Bruker/ D8 Advance                      | Solid<br>Thin-film           |
| 4    | Atomic Absorption Spectrometer (AAS)                | Agilent Technologies/ AA55              | Liquid                       |
| 5    | Gas Chromatography Mass Spectrometry (GC-MS/MS)     | Thermo Fisher/ Trace GC Ultra (ITQ 900) | Solid<br>Liquid              |
| 6    | Fourier Transform Infrared Spectrophotometer (FTIR) | Shimadzu/ Affinity-1 (Miracle 10)       | Solid<br>Liquid<br>Thin-Film |
| 7    | High Performance Liquid Chromatography (HPLC)       | Agilent Technologies/ 1220 Infinity LC  | Liquid                       |
| 8    | Electro Chemistry Vertex Workstation                | Ivium Technology/ Vertex (V-55648)      | Solid<br>Liquid              |

### Organisers:



**Dr. P. SHANTHI, M.Sc., M.Phil., Ph.D.,**  
CIF Coordinator  
Associate Professor  
PG and Research Department of Botany  
Holy Cross College (Autonomous), Trichy - 02

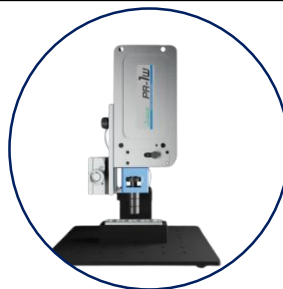
**Mr. N. GANESAN, M.Sc.,**  
Lab Technician  
Centralized Instrumentation Centre  
Holy Cross College (Autonomous), Trichy - 02



Powder X-Ray Diffraction



Raman Spectroscopy



FT – IR Spectroscopy



UV-Visible Spectroscopy



PRECISION IN RESULTS



GC – MS/MS



HPLC



Atomic Absorption Spectroscopy



Electrochemistry

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