

RESEARCH AT THE DEPARTMENT OF CHEMISTRY

Department of Chemistry at TCE has excellent infrastructure for Academics and research. The research in the Department focuses on themes including Solid Waste Management, Plastic waste recycling, Green Chemistry, Corrosion and coatings, Biopolymers, Solar Cells, Nano fertilizers, Materials for energy and environmental applications. Our research facilities on campus have facilitated researchers, academicians and industry experts from all over to them to pursue their research ambitions and pursuits.



Scanning Electron Microscope



Electrochemical Work Station



Optical Fiber Spectrophotometer



Fourier Transform Infra-Red Spectrophotometer



Solar Simulator with I-V Measurement System

SOFESTICATED INSTRUMENT FACILITY AT DEPARTMENT OF CHEMISTRY

[Click here](#)

Major Instruments Chemistry lab

1. Differential Scanning Calorimetry

Faculty Incharge – Dr RamaLinga Chandrsekhar

Contact No. – **9894532757** , email:arcchem@tce.edu

Cost per Sample – Rs 2000 + GST per sample

2. Scanning Electron Microscope

Faculty Incharge -Dr M Velayathum

Contact No. – 9842378423 , email:mvchem@tce.edu

Cost per Sample –

Acedamic institution – Internal candidate – Rs 350 + GST

External Candidate – 600 + GST per sample

Research institutes/ industries – 1500+ GST Rs + GST per sample

3. Thermogravimetric Analyzer

Faculty Incharge -Dr RamaLinga Chandrsekhar

Contact No. – **9894532757** email:mvchem@tce.edu

Cost per Sample – Rs 2000 + GST per sample

4. Fourier Transform Infrared Spectrophotometer

Faculty Incharge- Dr RamaLinga Chandrsekhar

Contact No. – **9894532757**, email:mvchem@tce.edu

Cost per Sample – Rs 500 + GST per sample

5. Electrochemical Workstation – Model : 6CHI660A

Faculty Incharge -Dr V Velkannan,

Contact No. – 9840839171, email: velkannan@tce.edu

Cost per Sample – Rs 350 + GST per sample

6. UV-Visible spectrophotometer

Faculty Incharge- Dr M. Kottaisamy,

Contact No. – 94894804140, email:hodchem@tce.edu

Cost per Sample – Rs 300 + GST per sample

7. Spin coater

Faculty Incharge -Dr M. Kottaisamy

Contact No. – 94894804140, email:hodchem@tce.edu

Cost per Sample – Rs Rs 200 + GST for 1 hr

8. Brook Field Viscometer

Faculty Incharge- Dr RamaLinga Chandrsekhar

Contact No. –**9894532757**, email:mvchem@tce.edu

Cost per Sample – Rs 2000 + GST per sample

9. Optical Fluorescence Microscope

Faculty Incharge- Dr RamaLinga Chandrsekhar

Contact No. –**9894532757**, email:mvchem@tce.edu

Cost per Sample – Rs 500 + GST per sample

10. Compression Testing Machine

Faculty Incharge- Dr RamaLinga Chandrsekhar

Contact No. –**9894532757**, email:mvchem@tce.edu

Cost per Sample – Rs 500 + GST per sample

11. Road Related testing- Job Mix Design

Faculty Incharge- Dr RamaLinga Chandrsekhar

Contact No. –**9894532757**, email:mvchem@tce.edu

Cost per Sample – 25000 + GST

12. Plastic Tar Road Laying

Faculty Incharge- Dr RamaLinga Chandrsekhar

Contact No. –**9894532757**, email:mvchem@tce.edu

Cost per Sample – 5 % of the total Project cost

13. Road Material Characterization like : Binder Content, Field Density,

Thickness

Faculty Incharge- Dr RamaLinga Chandrsekhar

Contact No. –**9894532757**, email:mvchem@tce.edu

Cost per Sample – Rs 5000 + GST per sample

14. Bitumen Characterization

Faculty Incharge- Dr RamaLinga Chandrsekhar

Contact No. –**9894532757**, email:mvchem@tce.edu

Cost per Sample – Rs 15000 + GST per sample

15. Skid resistance

Faculty Incharge- Dr RamaLinga Chandrsekhar

Contact No. –**9894532757**, email:mvchem@tce.edu

Cost per Sample – Rs 15000 + GST per sample

16. Road Performance Studies

Faculty Incharge- Dr RamaLinga Chandrsekhar

Contact No. –**9894532757**, email:mvchem@tce.edu

Cost per Sample – Rs 50,000 + GST per sample

Instrument Details at Polymer Research Lab and Road Research Lab

S. No	Name of the Instrument	Model and make	Testing Charges in Rs. Per Sample	Usage
1.	Differential Scanning Calorimeter	Shimadzu – DSC60	2000 + GST	Thermal analysis
2.	Scanning Electron Microscope	TESCAN-VEGA 3	Acedamic institution – Internal candidate – Rs 350 + GST External Candidate – 600 + GST Research institutes/ industries – 1500+ GST	Surface Morphology
3.	Thermo Gravimetric Analyzer	Shimadzu – TGA -50	2000 + GST	Thermal analysis
4.	FTIR	Shimadzu- IR Prestige-21	500 + GST	Chemical Composition
5	Electrochemical Workstation	6CHI660A	500 + GST	Corrosion – Electrochemical

				Impedence, Taffle Polarisation
6	UV-Visible spectrophotometer	Ocean Optics 2000	300 + GST	Sample composition
7.	Spin Coater	VBCC	200 per hour	Material Coating
4.	Brook Field Viscometer	Brook Field	2000 + GST	Viscosity Measurements
5.	Optical Fluorescence Microscope	Lawrence and Mayo	500 + GST	Microscopic Studies
6.	Compression Testing Machine	AIMIL	500 + GST	Structural
7.	Road Related testing- Job Mix Design	AIMIL	25000 + GST	Road Design
8.	Plastic Tar Road Laying	NA	5 % of the total Project cost	Road Design
9.	Road Material Characterization like 1. Binder Content 2. Field Density 3. Thickness	AIMIL	5000 + GST	Material Property
10.	Bitumen Characterization	Viscosity, Thermal and Material	15000 + GST	Material Property
11.	Skid resistance	Techno fabs	15000 + GST	Pavement surface analysis
12.	Road Performance Studies	Aimil	50,000 + GST	Pavement Performance Studies

*GST 18% applicable to all testing samples