Dear Sir/Madam,

Greetings from the National Engineering College, K.R. Nagar, Kovilpatti

It is our pleasure to inform you that we have established the Instrumentation Facility Centre at our Chemistry Research Centre, National Engineering College, K.R. Nagar, Kovilpatti-628503. It is equipped with IR, UV-Vis, Spectrofluorometer, Electrochemical analyzer and High Performance Liquid Chromatography for characterizing the materials.

We gladly welcome Faculties, Research scholars, Researchers from Laboratories, and Industries to utilize our Instrumentation facility.

You can send your samples through courier or postal services to the address given below. Characterization results are sent to you by mail as fast as possible.

National Engineering College, K.R. Nagar, Kovilpatti-628503

Chemistry Research Centre Instrumentation Facility (CRCIF)

SHIMADZU UV-2450 UV Visible Spectrophotometer with Peltier system (10-110 °C)

Measurements

Spectrum (solid and liquid),

Kinetics (include time course),

Photometric (include quantization)

Technical Details

Wavelength Slew rate : 3200 nm/min

Wavelength scan rate : 900-190 nm/min

Monitor scan rate : 2500 nm/min

Absorbance : 4-5 Abs

Transmittance, Reflectance : up to 100%

JASCO FP-8300 Spectrofluorometer with Peltier system (10-110 °C)

Measurements

Characterization of fluorescent Probe

Protein dynamics

Quantitative analysis

Cellular membrane studies

Enzyme kinetics

Technical Details

Six-digit dynamic range

Auto-SCS and Auto-Gain functions

High sensitivity S/N > 1,600, RMS

High-speed scanning up to 20,000 nm/min

Wavelength range, 200 to 900 nm

SHIMADZU 8400S Fourier Transform Infrared Spectrophotometer (FTIR)

Measurement

IR Spectrum (Powder Sample)

PLS quantitation

Curve fitting, Mapping

Macro platform

Pharma Report Program

Technical Details

wave number range : 3,800cm^{-1} - 350cm^{-1}

Measuring Mode : KBR pellet

Light Source : High brightness ceramic

CHI-Electrochemical workstation with spectrophotometry-620E

Measurement

Cyclic Voltammetry (CV)

Linear Sweep Voltammetry (LSV)

Chronoamperometry (CA)

Chronocoulometry (CC)

Differential Pulse Voltammetry (DPV)

Normal Pulse Voltammetry (NPV)

Square Wave Voltammetry (SWV)

Bulk Electrolysis with Coulometry (BE)

Impedance - Time (IMPT)

Impedance - Potential (IMPE)

Open Circuit Potential - Time (OCPT)

Technical Details

Zero resistance ammeter

Reference electrode input impedance:

$1x10^{12}$ ohm

Fast waveform update: 10 MHz @ 16-bit

CV and LSV scan rate: 0.000001 to 10,000 V/s

Automatic and manual iR compensation

SHIMADZU Liquid Chromatography- LC2010C (HPLC)

Technical Details

Light source; Deuterium lamp,Low pressure mercury lamp
Flow rate: 0.001-5 mL/min
Deep well plates; Max. 4 plates (up to 384 samples with 96 plates)
Temperature setting range; 4-60 Degree C,1 Degree C step
Wavelength range:190-600 nm

Analysis charges per sample Inclusive of consumable cost and sample preparation					
S.No	Analysis	Nature of Measurements	Charges per sample		
			Category I Industries	Category II Govt. R&D Labs	Category III Edu. Institutions
1.	FT-IR	Powder	500	400	150
2	Uv-Vis.,	Liquid/powder	500	200	100
3.	Spectro fluorometer	Liquid	500	200	100
4.	Electrochemical measurements (CV and impedance room temperature)	Liquid	500	400	150
5.	HPLC	Liquid	2000	1000	500

Address for submitting the sample: **The Head, Chemistry Research Centre Instrumentation Facility, National Engineering College, K.R. Nagar, Kovilpatti-628503.**