

# National Institute of Technology Tiruchirappalli

## RESEARCH AND TESTING FACILITIES

Office of the Dean  
(Research & Consultancy)



*Whenever your research inquisitiveness leads you, there are dedicated research facilities to help you for exploring your interests @ National Institute of Technology Tiruchirappalai (NITT)*

*NIT-T develops partnership & collaboration that foster interdisciplinary work. Listed here are some of the research facilities in labs and centers of excellence at NIT-T.*



Greetings from NITT!

It gives me immense pleasure to glance at the hand book on research and testing facilities that showcases the state of art facilities at our institute

Research, Innovation and Consultancy services are vital for knowledge construction. These activities, not only infuse scientific temper but they are also essential inputs for achieving excellence in their areas of interest. Basically research and consultancy services are catalyst in the socio-economic progress of a Nation. Study and transform are basic to the Institute's vision that could be expressed and achieved via high-level professional research and consultancy activities. NITT is a premier Educational Institution in India, imparting quality education in comparison to global criterions. State of art Laboratories and infrastructure with centres of excellence are playing a significant role behind this effort and I acknowledge the office of Dean (R&C) for the same.

We look forward to share the feedback of this hand book towards the scope for further improvement.

Your continuing collaboration and support is appreciated.

Dr.Mini Shaji Thomas

Director

National Institute of Technology, Tiruchirappalli



Academic research is a vital part of educational experience.

The office of Research and Consultancy feels delighted in consolidating the core research facilities of NITT that serves as a resource to faculty and students in order to accelerate their research. These facilities viz., state-of-the-art equipments are open to all qualified users of research community. Many of them are also available to industry partners, catering companies of all sizes a way to access infrastructure that can boost their research and development efforts. The main purpose this book is to strengthen the industry and institute interaction and to look for the feasibility of utilising the research and testing facilities available at centres of Excellence and in various Departments at NITT. We look forward to cater the needs of industries of all capacities which in turn promotes the consultancy activities of NITT. The vision of R &C Team of NITT is to create world class facilities and to consolidate them in a bounded fashion in order to present it to the user research community. It is considered to be the first step marching towards innovation and entrepreneurship.

Dr.M.Umapathy

Dean (Research and Consultancy)



## **Sophisticated Instrumental facilities (SIF) @ NIT-Trichy**

### **Overview**

This booklet provides a summary of the research facilities available at NIT-T, instrument specification, faculty in-charge of each instrument, contact details, instructions for the users, usage charges and mode of payment. Each experimental facility has a faculty as the responsible person and further managed by the office of Dean (R&C) through a scientific officer (SIF).

### **Requisition form**

Requisition forms for the respective facilities can be downloaded from  
<https://www.nitt.edu/home/rc/>

### **Usage Charges**

Charges applicable may vary depending on the nature of users and the instruments. Users are requested to refer to the respective instrumental facility page for the rates applicable. Charges for accessing an instrument varies depending on the nature of users as classified below.

- (i) Internal Users: Faculty, Scientists, Post-doctoral fellows, project staffs, students and interns of NIT-T
- (ii) External Academic Users: Users from other academia, national R&D labs
- (iii) Industry & Other users: Start-ups, company R&D labs, International users

We hope this booklet helps users in identifying & accessing the facilities suitable for their research. We also look forward for an engaging and fruitful collaboration.

For any further details, please contact

Dr. C. Roobala,

Scientific Officer (SIF),

Dean Office (Research&Consultancy).

[sif@nitt.edu](mailto:sif@nitt.edu)

0431-2503030/31/54/59

# Departments

## Facilities available

[Department of Chemical Engineering](#)

[Department of Chemistry](#)

[Department of Electrical and Electronics Engineering](#)

[Department of Electronics and Communication Engineering](#)

[Department of Energy and Environment](#)

[Department of Instrumentation and Control Engineering](#)

[Department of Mechanical Engineering](#)

[Department of Metallurgical and Materials Engineering](#)

[Department of Physics](#)

[Department of Production Engineering](#)

[Siemens Centre of Excellence in Manufacturing](#)

[Centre of Excellence in Corrosion and Surface Engineering  
\(CECASE\)](#)

# Department of Chemical Engineering

Sl.#	Name of the Instrument [MAKE]	Types of samples to be analyzed	Maximum number of samples accepted at a time	Minimum No. of days required for analysis	Cost of analysis in Rs. 18% GST Extra			Faculty in-charge & Requisition Forms
					Academic	R&D/ National Laboratory	Industry	
1.	LA-960 Laser Particle Size Analyzer (PSA) [Horiba]	Solid Powder, Suspension	5	1 Week	400	800	1600	Dr.Sarat Chandra Babu J sarat@nitt.edu 0431-2503635 09486771039  <a href="#">Requisition Forms</a>
2.	Powder Flow Tester (PFT) [Brookfield]	Solid Powder	2	1 Week	10000	15000	25000	
3.	Ultraviolet-Visible Spectroscopy (UV-VIS) [Spectroquant]	Solution	10	1 Week	250	400	800	
4.	Thermogravimetric Analysis (TGA) [Perkin Elmer]	Solid Powder	5	1 Week	1000	2000	4000	Dr.Sarat Chandra Babu J <a href="mailto:sarat@nitt.edu">sarat@nitt.edu</a> 09486771039 0431-2503635 & Dr. Somenath Garai <a href="mailto:sgarai@nitt.edu">sgarai@nitt.edu</a> 09486001177  <a href="#">Requisition Forms</a>
5.	Gas Chromatography with Mass Selective Detector (GC-MS) [Perkin Elmer]	Dry Gas	5	1 Week	1300	2600	5200	
6.	Gas Chromatography with Flame Ionization Detector (GC-FID) [Perkin Elmer]	Non Aqueous Liquid, Dry Gas	5	1 Week	800	1600	3200	
7.	Gas Chromatography with Electron Capture Detector (GC-ECD) [Perkin Elmer]	Dry Gas	5	1 Week	1250	2500	5000	



8.	Gas Chromatography with Thermal Conductivity Detectors (GC-TCD) [Perkin Elmer]	Dry Gas	5	1 Week	800	1600	3200	Dr.Sarat Chandra Babu J <a href="mailto:sarat@nitt.edu">sarat@nitt.edu</a> 0431-2503635 09486771039  & Dr. Somenath Garai <a href="mailto:sgarai@nitt.edu">sgarai@nitt.edu</a> 09486001177 <a href="#">Requisition Forms</a>
9.	Thermogravimetric – GasChromatography/ Mass Spectrometry HYPHENATION (TG- GC/MS) [Perkin Elmer]	Solid Powder	5	1 Week	2500	5000	10000	
10.	BET Surface area Analyzer	Solid Powder	5	2 Week	1000	2000	4000	Dr.Arivazhagan <a href="mailto:ariva@nitt.edu">ariva@nitt.edu</a> 0431-2503111 <a href="#">Requisition Forms</a>
11.	Gas Chromatograph Mass Spectrometer	Gas/Liquid	5	2 Week	1250	1695	195	Dr.P.Sivashanmugam <a href="mailto:psiva@nitt.edu">psiva@nitt.edu</a> 0431-2503106 <a href="#">Requisition Forms</a>

# Department of Chemistry

Sl.#	Name of the Instrument [MAKE]	Types of samples to be analyzed*	Maximum number of samples accepted at a time	Minimum No. of days required for analysis	Cost of analysis in Rs. (GST extra)			Faculty in-charge & Requisition Forms
					Internal	Academic	Industry	
1.	UV-visible spectrometer [JASCO]	Liquid	5	7	100	250	300	Dr. S. Anandan sand@nitt.edu 0431-2503639 <a href="#">Requisition Form</a>
2.	Potentiostat/Galvanostat	i. Solid- soluble in water	5	2	200	i. 400/ sample	i. 800/ sample	Dr. L.Cindrella cind@nitt.edu 0431-2503634 <a href="#">Requisition Form</a>
3.	(Electrochemical workstation) [Metrohm Autolab]	ii. In Buffer medium / organic solvent	5	2	400	ii. 800/ sample	ii.1600/ sample	
4.	Thermogravimetric Analyser [Shimadzu TGA-51]	Solid	2	2	200	800	1600	
5.	Electrometer with Four Probe arrangement [Agilent B2911A]	Thin film, Polymer pellets	5	2	300	600/ sample	1200/ sample	
6.	Contact angle Instrument [Holmarc]	Thin film/ solid with smooth surface	5	2	200	300/ sample	500/ sample	
7.	Spectral Response Analyser [Holmarc]	Transparent thin film	5	2	200	400/ sample	800 / sample	
8.	Solar cell characterization unit [Holmarc]	Solar cell assembled	5	2	200	400/ sample	800 / sample	
9.	UV-visible Spectrometer [Shimadzu]	Solid/Liquid	5	7	100	250	300	Dr. R. Karvembu kar@nitt.edu

10.	FT-IR spectrometer [Thermofisher]	Solid/Liquid	5	7	200/150	250/200	300/250	0431-2503636  <b>Requisition Forms</b> <a href="#">[8]</a> <a href="#">[9]</a> <a href="#">[10]</a> <a href="#">[11]</a> <a href="#">[12]</a> <a href="#">[13]</a> <a href="#">[14]</a> <a href="#">[15]</a>
11.	Chiral – HPLC [Shimadzu]	Solid/Liquid (Metal Free)	5	15	900	1200	1500	
12.	Gas Chromatograph [Shimadzu]	Solid/Liquid (Metal Free)	5	15	500	600	800	
13.	Gas Chromatograph- Mass spectrometer [Shimadzu]	Solid/Liquid (Metal Free)	5	15	900	1000	1500	
14.	Muffle furnace [Lab tech]	Solids	3	3	0	150	200	
15.	Tubular furnace [Sigma Scientific]	Solids	2	3	0	150 (300 for N <sub>2</sub> atmosphere)	200 (500 for N <sub>2</sub> atmosphere)	
16.	Viscometer [Brooke field]	Liquids	10	10	50	100	150	Dr. S. Anandan sand@nitt.edu 0431-2503639  <b>Requisition Forms</b> <a href="#">[16]</a> <a href="#">[17]</a> <a href="#">[18]</a> <a href="#">[19]</a>
17.	FT-IR spectrophotometer [Thermo Scientific Nicolet]	Solids/Liquid	5	10	100	250	300	
18.	UV-Vis with DRS spectrophotometer [Analytical jena]	Liquids/solids	5	10	100	300	400	
19.	Fluorescence spectrophotometer [Shimadzu]	Solution	5	10	200	450	900	
20.	Cyclic Voltametry [Metrohm]	Solution	5	15	500	1000	3000	
21.	Gel Permeation Chromatography [Waters]	Polymers soluble in THF only	3	15	500	1000	3000	
22.	Ion Chromatography [Metrohm]	Solution	3	15	500	1000	3000	



23.	Total Organic Carbon analyzer [Shimadzu]	Solution	3	10	100	250	550	<a href="#">[20]</a> <a href="#">[21]</a> <a href="#">[22]</a>
24.	BET Surface area analyser [Micromeritics]	Solids/Powders/thin films/porous materials	3	15	1000	2000	4000	Dr.S.Velmathi velmathis@nitt.edu 0431-2503640  <b>Requisition Forms</b> <a href="#">[23]</a> <a href="#">[24]</a> <a href="#">[25]</a> <a href="#">[26]</a> <a href="#">[27]</a> <a href="#">[28]</a>
25.	UV-Vis NIR with DRS Spectrophotometer [Shimadzu]	Liquids/solids	5	10	100	250	300	
26.	Fluorescence spectrophotometer [Shimadzu]	Solution	5	10	100	300	400	
27.	Polarimeter [Rudolph]	Optically active samples	5	7	100	200	300	
28.	Gel Permeation Chromatography [Waters]	Polymers soluble in CHCl <sub>3</sub> , THF	3	15	-	1000	3000	
29.	500 MHz NMR Spectrometer [Bruker Advance 500]s	Solution	4	15	100	500	2000	
					150	1000	3000	
30.	Luminescence Spectrophotometer [Fluoromax4CP]	Solid/Liquid	5	1	500	1000	3000	Dr.V.M.Biju vmbiju@nitt.edu 0431-2503638  <a href="#">Requisition Forms</a>
				1	1000	2000	6000	
31.	FAR- MID-FT- IR Spectrometer [Perkin Elmer Wavenumber range 30-450 cm <sup>-1</sup> 450-4000 cm <sup>-1</sup> ]	Solid- Moisture Free	5	10	500 (Far IR) 250 (Mid IR)	1000 (Far IR) 500 (Mid IR)	2500 (FAR-IR) 1500 (MID IR)	Dr. A. Sreekanth sreekanth@nitt.edu 0431-2503642  <a href="#">Requisition Forms</a>

32.	UV-Visible Spectrometer (Shimadzu)	Solid/Liquid	5	7	100	250	300	Dr.V.M.Biju vmbiju@nitt.edu 0431-2503638 <a href="#">Requisition Forms</a>
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# Department of Electrical and Electronics Engineering

Sl.#	Name of the Instrument	Cost of analysis in Rs. (GST extra)		Faculty in-charge & Requisition Forms
		Academic	Industry	
1.	Testing of DC & AC Machines	2500	2500	Dr.S.Senthilkumar <a href="mailto:skumar@nitt.edu">skumar@nitt.edu</a> 0431-2503261 <a href="#">Requisition Form</a>
2.	Testing of DC & AC Power suppliers	2500	2500	
3.	Performance Prediction of PV System.	2000	2000	Dr.K.Sundareswaran 0431-2503255 kse@nitt.edu <a href="#">Requisition Form</a>
4.	Forecasting Applications and Decision Analysis for Electrical Systems using AI	2000	2000	Dr.Sishaj P Simon 0431-2503265 <a href="mailto:sishajpsimon@nitt.edu">sishajpsimon@nitt.edu</a> <a href="#">Requisition Form</a>
5.	Energy savings through Demand Side Management and Home Automation	2000	2000	
6.	Feasibility analysis and Energy Enhancement through mirroring schemes for PV Systems	2000	2000	
7.	Design aspects and analysis of Electric vehicle	2500	2500	Dr. P.Srinivasa Rao Nayak  0431-2503269 <a href="mailto:psnayak@nitt.edu">psnayak@nitt.edu</a> <a href="#">Requisition Form</a>
8.	Performance evaluation of electrical equipment's in Power Plants	2000	2000	Dr.N.Kumaresan Dr.P. Raja 0431-2503257 0431-2503264 <a href="mailto:nkumar@nitt.edu">nkumar@nitt.edu</a> <a href="mailto:prija@nitt.edu">prija@nitt.edu</a> <a href="#">Requisition Form</a>
9.	Energy auditing	2000	2000	Dr.N.Kumaresan Dr. Vivek Mohan <a href="mailto:nkumar@nitt.edu">nkumar@nitt.edu</a> 0431-2503257 <a href="#">Requisition Form</a>
10.	Testing & evaluation of Variable speed drives Converters & choppers DFIG / Induction generators	4000	4200	Dr.C.Nagamai 0431-2503254 cnmani@nitt.edu <a href="#">Requisition Form</a>



11.	Testing of Solar converters	2000	2000	Dr. P. Raja 0431-2503264 <a href="mailto:praja@nitt.edu">praja@nitt.edu</a> <a href="#">Requisition Form</a>
12.	Relay testing.	3000 for a particular Relay operation (like 50/51 or 21P/21N etc.).	3000 for a particular Relay operation (like 50/51 or 21P/21N etc.).	Dr.Jaya Bharata Reddy Dr. P. Raja 0431-2503270 0431-2503264 <a href="mailto:jbreddy@nitt.edu">jbreddy@nitt.edu</a> <a href="#">Requisition Form</a>
13.	Design and modelling of commercial Solar PV plant	2% of plant cost	2% of plant cost	Dr.G.Saravana Ilango 0431-2503259 <a href="mailto:gsilango@nitt.edu">gsilango@nitt.edu</a>  <a href="#">Requisition Form</a>
14.	Performance Evaluation & Reliability of PV modules	500 module	500 module	
15.	Electrical system Design for commercial Buildings and Inverters.	2% of plant cost will be decided based on mutual interest	2% of plant cost will be decided based on mutual interest	
16.	Design of Electric Drives for Electric Vehicles and Renewable Energy Systems.			
17.	Design and development of IoT based Power Electronic Switches for Smart Home Appliances			
18.	Design and development of Wireless Sensor Network and IoT for Industrial Applications	2% of the network cost	2% of the network cost	Dr.S.Sudha 0431-2503258 <a href="mailto:sudha@nitt.edu">sudha@nitt.edu</a>  <a href="#">Requisition Form</a>
19.	Design and Development of knowledge representation tools and information extraction techniques	2000	2000	
20.	Electronic Circuit Modelling, Testing and Validation.	2000	2000	Dr. S. Moorthi 0431-2503267 <a href="mailto:srimoorthi@nitt.edu">srimoorthi@nitt.edu</a> <a href="#">Requisition Form</a>

21.	Deployment of IoT in Smart micro grid environment	2000	2000	Dr. M. P. Selvan, Dr. S. Moorthi, Dr. M. VenkataKirthiga 0431-2503262 0431-2503267 0431-2503263 <a href="mailto:selvanmp@nitt.edu">selvanmp@nitt.edu</a> <a href="mailto:srimoorthi@nitt.edu">srimoorthi@nitt.edu</a> <a href="mailto:mvkirthiga@nitt.edu">mvkirthiga@nitt.edu</a> <a href="#">Requisition Form</a>
22.	Design and Testing of Pre-paid and Smart Energy Meters	2000	2000	Dr.M.P.Selvan 0431-2503262 <a href="mailto:selvanmp@nitt.edu">selvanmp@nitt.edu</a> <a href="#">Requisition Form</a>
23.	Design and Testing of Home Energy Management System for Smart Buildings	2000	2000	
24.	Development and Testing of Meter Data Management Systems for Smart Utilities	2000	2000	
25.	Battery specification design for Electric vehicle application	2500	2500	Dr. V.Sankaranarayanan 0431-2503268 <a href="mailto:vsankar@nitt.edu">vsankar@nitt.edu</a> <a href="#">Requisition Form</a>
26.	Design of Battery Management System			
27.	Design of Electric vehicle charger for various types			
28.	Design and selection of electric drive for EV applications			
29.	Controller design and testing for power converters			
30.	Controller design and validation for robots including mobile robots and flying robots			
31.	1.Real time Power Quality Monitoring in Distributed Micro grid Systems 2.Real time Energy Management and Cost Analysis	2500	2500	Dr.Karthik Thirumala Dr. Vivek Mohan 0431-2503251 0431-2503258 <a href="mailto:thirumala@nitt.edu">thirumala@nitt.edu</a> <a href="#">Requisition Form</a>
32.	Re-engineering approach towards measuring instruments, actuators and digital controllers	2000	2000	Dr.M.Venkatakirthiga Dr.S.Moorthi, Dr.P.Raja 0431-2503263 0431-2503267 0431-2503264

				<a href="mailto:mvkirthiga@nitt.edu">mvkirthiga@nitt.edu</a> <a href="mailto:srimoorthi@nitt.edu">srimoorthi@nitt.edu</a> <a href="mailto:priya@nitt.edu">priya@nitt.edu</a> <a href="#">Requisition Form</a>
33.	Testing and evaluation of Electrical installation.	2% of the installation cost	2% of the installation cost	Dr.S. Arul Daniel Dr.N.Kumaresan 0431-2503256 0431-2503257 <a href="mailto:daniel@nitt.edu">daniel@nitt.edu</a> <a href="mailto:nkumar@nitt.edu">nkumar@nitt.edu</a> <a href="#">Requisition Form</a>



# Department of Electronics and Communication Engineering

Sl.#	Name of the Instrument	Quantity	Charge for Usage in Rs. (per day for 1 No.)					Faculty in-charge & Requisition Forms
			Internal users	Academic Institutions	R&D labs	Small Industries	Others	
1.	Xilinx Virtex 7 Development Board	1	1000	1500	2000	2500	3000	<p style="text-align: center;">Dr. G Lakshminarayanan. 0431 2503307 <a href="mailto:laksh@nitt.edu">laksh@nitt.edu</a></p> <p style="text-align: center;"><b><u>Requisition Forms</u></b></p>
2.	Xilinx Virtex 5 Development Board	2	500	1000	1000	1500	1500	
3.	Xilinx Kintex 7 FPGA DSP kit	2	1000	1500	2000	2500	3000	
4.	Xilinx Zync FPGA Board	1	1000	1500	2000	2500	3000	
5.	Xtreme DSP Kit for Virtex-4	2	500	1000	1250	1500	1750	
6.	Xilinx Spartan 3E Kit	15	400	600	1000	1000	1000	
7.	Altera DE1 Cyclone II Kit	2	400	600	1000	1000	1000	
8.	Altera DE2 Cyclone II Kit	1	400	600	1000	1000	1000	
9.	WARP V3 Kit	2	1000	1500	2000	2500	3000	
10.	WARP FMC RF-2X245 Dual Radio Board	1	1000	1500	2000	2500	3000	
			Charge for Usage in Rs. (per week)					
11.	RF Signal Generator 9kHz – 3GHz	1	1000	1500	2000	2500	3000	<p style="text-align: center;">Dr. G Lakshminarayanan. 0431 2503307 <a href="mailto:laksh@nitt.edu">laksh@nitt.edu</a></p>
12.	Agilent Spectrum Analyzer N9320B 3GHz	1	1500	2000	2000	2500	2500	
13.	Mixed signal oscilloscope 350MHz-2GHz	1	1500	2000	2000	2500	3000	
14.	Tektronix MSO 4104 Oscilloscope 1GHz	1	1500	2000	2000	2500	2500	
			Charge for Usage in Rs. (per week)					
15.	Rohde & Schwarz Signal & Spectrum Analyzer 9 GHz	1	3000	3500	4000	4500	5500	

16.	Keysight 16822A 68-Channel Portable Logic Analyzer	1	5000	5500	6000	6500	7000	

# Department of Energy and Environment

Sl.#	Name of the Instrument [MAKE]	Types of samples to be analyzed	Minimum No. of days required for analysis	Cost of analysis in Rs (PS- Per Sample; PHr- Per hour)				Faculty in-charge & Requisition Forms
				Internal users	Educational Institutions	Govt. R&D and labs	Private Industry	
1.	Thermogravimetric Analyzer (TGA) [Perkin Elmer TGA4000]	Solid & Liquid	15	675/hr	900/hr	1350/hr	2700/hr	Dr. M. Premalatha 0431-2503130 <a href="mailto:latha@nitt.edu">latha@nitt.edu</a>  <a href="#">Requisition Forms</a>
2.	Differential Scanning Calorimeter (DSC) [Perkin Elmer DSC6000]	Solid & Liquid	15	900/hr	1200/hr	1800/hr	3600/hr	
3.	CHNSO Analyzer [Perkin Elmer CHNS2400]	Solid	15	1500/PS for CHN	2500/PS for CHN	4500/PS for CHN	9000/PS for CHN	
				500 for Each Additional Element				
4.	FTIR [Perkin Elmer Spectrum II]	Solid & Liquid	15	150/PS	200/PS	750/PS	1500/PS	
5.	UV Visible Spectrometer [Spectroquant Pharo 300]	Liquid	7	300/PS	400/PS	600/PS	1200/PS	
6.	TOC Analyzer [Analytik Jena Multi NC 3100]	Solid & Liquid	15	100/PS	250/PS	1800/PS	3600/PS	
7.	Bomb Calorimeter [IKA C5000]	Solid & Liquid	15	1000/PS	1500/PS	2250/PS	4500/PS	
8.	Moisture Analyzer [Metrohm 860 Thermoprep 870 KF Titrino Plus 899 Coulometer]	Liquid	15	1000/PS	1350/PS	2025/PS	4050/PS	
		Solid	15	1275/PS	1700/PS	2550/PS	5100/PS	
9.	UV Visible/NIR Spectrometer [Perkin Elmer LAMBDA 750]	Solid & Liquid	15	100/PS	250/PS	1000/PS	2000/PS	
10.	TG-IR [Perkin Elmer TGA8000 hyphenated with DFrontier]	Solid & Liquid	5	4500/PS	6000/PS	9000/PS	12000/PS	

# Department of Instrumentation and Control Engineering

Sl.#	Name of the Instrument [MAKE]	Specification	Minimum No. of days required for analysis	Charge in Rs. (per sample/ test)				Faculty in-charge & Requisition Forms
				Internal users	Educational Institutions	R&D labs & others	Small scale Industry	
1.	PROBE STATION/ PSDB1160 / Signatone	6" manual micro wave probe station Measurement sizes and shapes up to 1.35 inches in thickness.	5	100	200	300	200	<p>Dr. G. Uma</p> <p>0431- 250 3359</p> <p>guma@nitt.edu</p> <p><a href="#">Requisition Forms</a></p>
2.	Laser displacement sensor IFC2451 / Microepsilon	<p>Operation Distance - 0.0157 to 1.18 inch</p> <p>Operating Temperature - 41 to 122 F</p> <p>Multi peak measurement- 2 peaks</p> <p>Measuring rate- 100Hz to 10kHz</p>	5	100	200	300	200	
3.	Shaker/ Ets Dynamics Model: VTS 50 Power amplifierLA-100	<p>Rated Force - Sine: 50N</p> <p>Max Acceleration Bare Armature- 5g</p> <p>Velocity-1.6 m/s</p> <p>Displacement- 10mm max</p> <p>Useful frequency range- 5 to 20KHz</p> <p>Impedance- 2 ohm</p> <p>Signal-to-Noise</p>	5	100	200	300	200	

			Ratio (dB)- 93 dBA  Maximum operating current- 6A Amplifier Output- 150 W  Power Supply – AC,230V, 50Hz  Output Voltage- 15V						
4.	LCR meter IM3536 / HIOKI		Frequency- DC, 4 Hz to 8 MHz  Voltage-10 mV to 5 V  Current-10 $\mu$ A to 100 mA	3	100	200	300	200	
5.	Video EEG	Routine EEG without Video	32 Channels (Monopolar), Montage reconfigurable format, Sampling Rate: up to 8 KHz, Built in impedance check & self-calibration	3	500	500	500	500	V Sridevi 0431-2503361 sridevi@nitt.edu <a href="#">Requisition Form</a>
		Routine vEEG	Battery Powered Amplifier, 24 Bit ADC Resolution, Noise: < 0.1 $\mu$ V RMS CMRR>110dB, High input impedance> 1 GOhm, Programmable photic stimulator with frequency of 1-60Hz; (left field / right field / both)		750*	750*	750*	750*	
		Three hour video-EEG			1500*	1500*	1500*	1500*	
		Eight hours Video EEG			3000*	3000*	3000*	3000*	



6.	Distributed Control System	FCS, Processor, I/O AI/AO/DI/DO Cards, Wireless Sensor, ABB/AB/Seimens PLC/ other test rigs etc.	10	1500 per day	4000 per day	4500 per day	8000 per day	Dr.K.Srinivasan <a href="mailto:srinikkn@nitt.edu">srinikkn@nitt.edu</a> 0431-2503363 <a href="#">Requisition Forms</a>
7.	Matlab, Simulink & Tools & Boxes	R2019a for Windows Large-scale computing software	-	8000 per day	15000 per day	10000 per day	20000 per day	Dr.Ramakalyan Ayyagari <a href="mailto:rkalyan@nitt.edu">rkalyan@nitt.edu</a> 0431-2503357 <a href="#">Requisition Forms</a>
8.	Impedance Analyzer (E4990A 20 Hz to 20 MHz )	Built-in DC bias range: 0 V to $\pm 40$ V, 0 A to $\pm 100$ mA Measurement parameters: $ Z $ , $ Y $ , $\theta$ , R, X, G, B, L, C, D, Q, Complex Z, Complex Y, Vac, Iac, Vdc, Idc  Data analysis function: Equivalent circuit analysis, limit line test	7	400	600	1000	1000	Dr. K. Dhanalakshmi 0431 – 250 3360 <a href="mailto:dhanlak@nitt.edu">dhanlak@nitt.edu</a> <a href="#">Requisition Forms</a>
9.	* Pratham 3.0 Bigger FDM 3D Printer Build Volume: 300*300*300 mm	PLA+	1	15	20	20	25	Dr.M.Umapathy Dr.G.Uma 0431-250-3359 <a href="mailto:umapthy@nitt.edu">umapthy@nitt.edu</a> <a href="mailto:guma@nitt.edu">guma@nitt.edu</a>  <a href="#">Requisition Forms</a>
10.	* Pratham 3.0 Bigger FDM 3D Printer Build Volume: 300*300*300 mm	ABS	1	18	25	25	30	
11.	* Pratham 3.0 Bigger FDM 3D Printer Build Volume: 300*300*300 mm	Nylon	1	23	28	28	35	

\* This will be charged for recordings with general activation procedures. The additional amount will be charged for study specific activations. These charges are valid till 31st, March 2020.

The application for constitution of Institute Ethical Committee (IEC) is under preparation and obtaining IEC for research study will be charged extra.

\*Si.No.:9,10,11 Charges in Rs per gram (Minimum 100 gm)+GST

# Department of Mechanical Engineering

S I. #	Name of the Instrument [MAKE]	Types of samples to be analyzed	Maximum number of samples accepted at a time	Minimum No. of days required for analysis	Cost of analysis in Rs./- (GST extra)		Faculty in-charge & Requisition Forms
					Academic	Industry	
Characterization of Nano particles							
1.	Ultrasonic – Nano Fluid Preparation [Lark View Innovative]	Liquid	5	5	300	500	Dr. S. Suresh ssuresh@nitt.edu 09842483638 0431-250 3422/3426  <b>Requisition Forms</b>  <a href="#">[1]</a>  <a href="#">[2]</a>  <a href="#">[3]</a>  <a href="#">[4]</a>
2.	Contact angle Meter [ACAM - D3 Apex Instruments]	Thin film/ solid with smooth surface	10	3	150	250	
3.	Laser Flash Apparatus [NETZECH – LFA-467]	Solid (25.4mm diameter, 2-3 mm thickness	10	5	1500	1700	
4.	KD2 Pro Liquid thermal Conductivity [Decagon KD2 Pro]	Liquid (minimum 50ml in centrifuge)	10	2	250	500	
Materials Joining and Mechanical Testing							
5.	Universal Tensile Testing Machine – 1 KN, 25 KN, 50 KN & 100 KN (Tensile / Bend / Flexural / Compression) [Tinius Olsen, Poland]	Metals / Composites / Plastics / Polymers	No Limit	Based on no. of samples	200	250	Dr.T.Ramesh / Dr. N. Siva Shanmugam tramesh@nitt.edu nsiva@nitt.edu 0431-2503418, 0431-2503425  <a href="#">Requisition Forms</a>
6.	Cold Metal Transfer Machine (Welding Trials) [Fronius, Austria]	Metals			300 for < 100 mm length	350	

7.	Plasma Arc Welding/ Micro-Plasma Arc welding (Welding Trials) [Fronius, Austria]	Metals	No Limit	Based on no. of samples	200 for < 100 mm length	250	
8.	Tungsten Inert Gas welding Machine – GTAW (Welding Trials) [Fronius, Austria]	Metals			150 for < 100 mm length	200	
9.	Robotic Gas Metal Arc Welding Machine (Welding Trials) [OTC Daihen, Japan]	Metals			300 for < 100 mm length)	350	
10.	Hardness Tester (HR & HB) [ASI, India]	Metals			100 for 3 indentations	150	
	Wire cut EDM (Specimen Preparation) [Concord, China]	Metals			250/Hour	300	
11.	Diesinker EDM [Hightech, China]	Metals			150/Hour	200	
12.	Plasma Cutting Machine [ESAB, Sweden]	Metals			150/Per cut	200	
13.	Laser Cutting Machine [Suresh Indu, Pune]	Wood, Acrylic, paper, etc.			300 for < 100 mm length	350	
<b>Characterization of powder particles &amp; Noise Measurement</b>							
14.	Noise measurement [PCB Electronics]	i. Octave Band analysis ii. Industrial Noise level measurement (Noise survey and Noise mapping)	N/A (Onsite measurement)	N/A (Onsite measurement)	i. 500 ii. 300 Additional TA/DA Will be applicable TA at actual	i. 1500 ii. 1000 1,00,000 for entire plant	Dr. S. P. Sivapirakasam spshivam@nitt.edu 9944547215



						400/hour	
<b>Bio fuel synthesis testing and Analysis</b>							
18.	Single Cylinder Carburetor Petrol Engine Performance Study using Petrol and alcohol fuel [Legion Brothers]	Liquid	2	7	3000	6000	
19.	Single Cylinder DI Diesel Engine Performance study using Diesel, Biodiesel and Biodiesel Blends [Legion Brothers]	Liquid	2	10	3000	6000	Dr. AR. Veerappan aveer@nitt.edu  & Dr. R. Anand anandachu@nitt.edu  0431-2503423 9444838909  <b>Requisition Forms</b>  <a href="#">Fuels Laboratory</a>  <a href="#">Thermal Laboratory</a>
20.	Single Cylinder CRDI Diesel Engine Performance study using Diesel, Biodiesel and Biodiesel blends [Legion Brothers]	Liquid	1	5	5250	10500	
21.	Multi Cylinder Carburetor Petrol Engine Performance study using petrol and alcohol fuel [Niyo Engineers]	Liquid	2	8	3000	6000	
22.	Multi Cylinder DI Diesel Engine Performance study using Diesel, Biodiesel and Biodiesel Blends [Niyo Engineers]	Liquid	2	10	3000	6000	
23.	Multi Cylinder MPH Petrol Engine Performance study using petrol and alcohol fuel [Niyo Engineers]	Liquid	2	9	6750	13500	Dr. AR. Veerappan aveer@nitt.edu  & Dr. R. Anand anandachu@nitt.edu  0431-2503423 9444838909
24.	Multi Cylinder MPH Petrol Engine Performance study using Diesel, Biodiesel and	Liquid	2	8	6750	13500	

	Biodiesel blends [Niyo Engineers]						<b>Requisition Forms</b>  <a href="#">Fuels Laboratory</a>  <a href="#">Thermal Laboratory</a>
25.	Single Cylinder Variable Compression ratio Engine Performance study using Diesel, Biodiesel and Biodiesel blends [Legion Brothers]	Liquid	2	7	3750	7500	
26.	Single Cylinder Diesel Engine with EGR performance study using Diesel, Biodiesel and Biodiesel Blends [Legion Brothers]	Liquid	2	10	3750	7500	
27.	Single Cylinder Dual Fuel Engine performance study using Diesel and LPG [Legion Brothers]	Liquid	1	7	6750	13500	
28.	Single Cylinder Carburetor Petrol Engine Emission Study using Petrol and alcohol fuel	Liquid	2	9	3000	6000	
29.	Single Cylinder DI Diesel Engine Emission study using Diesel, Biodiesel and Biodiesel Blends [Legion Brothers]	Liquid	2	5	3000	6000	
30.	Single Cylinder CRDI Diesel Engine Emission study using Diesel, Biodiesel and Biodiesel blends [Legion Brothers]	Liquid	2	12	5250	10500	
31.	Multi Cylinder Carburetor Petrol Engine Emission study using petrol and alcohol fuel [Niyo Engineers]	Liquid	2	10	3000	6000	



32.	Multi Cylinder DI Diesel Engine Emission study using Diesel, Biodiesel and Biodiesel Blends [Niyo Engineers]	Liquid	2	10	3000	6000	Dr. AR. Veerappan aveer@nitt.edu  & Dr. R. Anand anandachu@nitt.edu  0431-2503423 9444838909  <b>Requisition Forms</b>  <a href="#">Fuels Laboratory</a>  <a href="#">Thermal Laboratory</a>
33.	Multi Cylinder MPH Petrol Engine Emission study using Diesel, Biodiesel and Biodiesel blends [Niyo Engineers]	Liquid	2	10	6750	13500	
34.	Multi Cylinder MPFI Diesel Engine Emission study using Diesel, Biodiesel and Biodiesel blends [Niyo Engineers]	Liquid	2	10	6750	13500	
35.	Single Cylinder Variable Compression Ratio Engine Emission study using Diesel, Biodiesel and Biodiesel blends [Legion Brothers]	Liquid	2	10	3750	7500	
36.	Single Cylinder Diesel Engine with EGR Emission study using Diesel, Biodiesel and Biodiesel Blends [Legion Brothers]	Liquid	2	8	3750	7500	
37.	Single Cylinder Dual Fuel Engine Emission study using Diesel and LPG [Legion Brothers]	Liquid	2	8	3750	13500	
38.	Single Cylinder Carburetor Petrol Engine Combustion study using Petrol and alcohol fuel [Legion Brothers]	Liquid	2	7	3750	7500	

39.	Single Cylinder DI Diesel Engine Combustion study using Diesel, Biodiesel and Biodiesel Blends [Legion Brothers]	Liquid	3	8	3750	7500	0431-2503423 9444838909  <b>Requisition Forms</b>  <a href="#">Fuels Laboratory</a> <a href="#">Thermal Laboratory</a>
40.	Single Cylinder CRDI Diesel Engine Combustion study using Diesel, Biodiesel and Biodiesel blends [Legion Brothers]	Liquid	2	10	4500	9000	
41.	Multi Cylinder Carburetor Petrol Engine Combustion study using petrol and alcohol fuel [Niyo Engineers]	Liquid	2	12	3750	7500	
42.	Multi Cylinder DI Diesel Engine Combustion study using Diesel, Biodiesel and Biodiesel Blends [Niyo Engineers]	Liquid	2	10	3750	7500	
43.	Multi Cylinder MPH Petrol Engine Combustion study using petrol and alcohol fuel [Niyo Engineers]	Liquid	2	10	4500	9000	
44.	Multi Cylinder MPH Petrol Engine Combustion study using Diesel, Biodiesel and Biodiesel blends [Niyo Engineers]	Liquid	2	10	4500	9000	
45.	Single Cylinder Variable Compression ratio Engine Combustion study using Diesel, Biodiesel and Biodiesel blends [Legion Brothers]	Liquid	2	8	5250	10500	

46.	Single Cylinder Diesel Engine with EGR Combustion study using Diesel, Biodiesel and Biodiesel Blends [Legion Brothers]	Liquid	2	12	5250	10500	Dr. AR. Veerappan aveer@nitt.edu  &  Dr. R. Anand anandachu@nitt.edu  0431-2503423 9444838909  <b>Requisition Forms</b>  <a href="#">Fuels Laboratory</a>  <a href="#">Thermal Laboratory</a>
47.	Single Cylinder Dual Fuel Engine Combustion study using Diesel and LPG [Legion Brothers]	Liquid	2	10	6750	13500	
48.	Copper Strip Corrosion [Micro Mech Instruments]	Liquid	5	5	150	450	
49.	Flash and Fire Point [Micro Mech Instruments]	Liquid	6	5	100	200	
50.	Calorific Value [Micro Mech Instruments]	Liquid	10	5	700	800	
51.	Carbon Residue [Micro Mech Instruments]	Liquid	5	5	500	600	
Fuel testing and Analysis							
52.	Gas-chromatography [Thermo Scientific]	Liquid	5	7	900	1800	Dr. R. Anand anandachu@ nitt.edu 0431-2503423 9444838909
53.	Microwave-assisted transesterification – 1 liter [Catalyst Systems]	Liquid	3	7	970	1900	
54.	Ultrasonic-assisted transesterification – 500 mL [Lark Innovative Fine Technology]	Liquid	5	5	820	1600	
55.	Microwave Pyrolysis oil – 1 liter [VB Ceramics]	Solid/Liquid	2	7	2500	5100	
56.	Electrical Pyrolysis oil – 1 liter	Solid/Liquid	2	5	1400	2900	Dr. R. Anand anandachu@ nitt.edu

57.	Filtration – Centrifuge (500 mL) [Lark Innovative Fine Technology]	Solid/Liquid	5	5	150	320	0431-2503423 9444838909  <b>Requisition Forms</b>  <a href="#">Fuels Laboratory</a>  <a href="#">Thermal Laboratory</a>
58.	Vacuum Distillation - 1 liter [Sigma Scientific]	Liquid	3	4	200	420	
59.	Kinematic viscosity [Brookfield]	Liquid	10	2	100	200	
60.	Cloud and Pour point [Sub-Zero]	Liquid	10	7	140	300	
61.	Acid value and Free fatty acid	Liquid	10	5	90	120	
62.	Saponification value	Liquid	2	7	220	400	
63.	Iodine value	Liquid	2	7	260	480	
64.	Tubular furnace [Sigma Scientific]	Solid	2	3	150 (300 for N <sub>2</sub> atmosphere)	200 (500 for N <sub>2</sub> atmosphere)	
Calibration of Pressure Gauge							
65.	Dead Weight Pressure gauge calibration [Pressurements, Ltd in the United Kingdom (0 – 700 kg/cm <sup>2</sup> )]	Pressure Gauges	1	3	1000 to 2000 based on the range	1000 to 2000 based on the range	Dr. K. R. Balasubramanian <a href="mailto:krbala@nitt.edu">krbala@nitt.edu</a> 9443561873 0431-2503419  <a href="#">Requisition Form</a>

# Department of Metallurgical and Materials Engineering

Sl.#	Name of the Instrument (Make & Model)	Tests/Experiments can be performed	Charges (in Rs.)			Faculty in- charge & Requisition Forms
			Internal	External		
				Academia	Industry	
1.	Friction Stir Welding	Joining of sheets and plates (charges for max length of 150 mm)	500	1000	2000	Dr. S. Muthu kumaran 0431- 2503468 <a href="mailto:smuthu@nitt.edu">smuthu@nitt.edu</a> <a href="#">Requisition Forms</a>
2.	Stereo Microscope	Surface morphology (charges per sample)	250	500	1000	
3.	Micro hardness testing	Hardness measurement (charges per indentation)	25	50	100	
4.	Microscope Leica Dm750m	Microstructure (charges per sample)	200	500	500	Dr. S. P. Kumaresh Babu  0431- 2503462  babu@nitt. edu  <a href="#">Requisition Forms</a>
5.	Micro-Hardness test Matzuwa MMTX7	Hardness measurement (charges per sample)	200	500	500	
6.	Abrasive Cutting machine ATM Brilliant 200	Sample preparation (charges per cut)	30	50	50	
7.	Electrochemical Corrosion testing ACM GILL	Potentiodynamic polarization and impedance analysis (charges per sample)	200	500	500	
8.	Salt spray test Ascot, UK-SIS450	Corrosion analysis (charges per 24 hours)	500	2000	2000	
9.	Thermal Analyzer Perkin Elmer	Calorimetry/Thermogravimetr ic (charges per sample)	500	2000	2000	
10.	Water jet Erosion tester Ducom TR411	Corrosion analysis (charges per sample)	500	2000	2000	
11.	Magnesium-stir casting furnace Swamequip -custom	Magnesium melting and casting (charges per sample)	1000	2000	2000	Dr. S. P. Kumaresh Babu  0431- 2503462  babu@nitt.
12.	Aluminum squeeze casting furnace Swamequip -custom	Squeeze casting of aluminum SS (charges per sample)	1000	2000	2000	
13.	Heat treatment furnace Thermo lab	Heat treatment (charges per hour)	50	100	100	
14.	Stress corrosion cracking Cortest	Stress corrosion analysis (charges per sample/day)	50	200	200	

15.	Diamond cutter Struers minitom	Slow speed sectioning of specimen (charges per sample/day)	100	300	300	edu
16.	Ball milling	Particle size reduction (charges per hour)	200	500	500	<a href="#">Requisition Forms</a>
17.	Electrolyte etching machine Struers –electropol -5	Electrolytic etching of specimen (charges per sample)	100	300	300	
18.	Spark plasma sintering (upto 1200°C) (DST) Dr.SINTER LAB SPS -5155	Sintering of powder compacts (Excluding Die charge per sample) (Including Die charges per sample)	2000 3500	4000 5500	7500 10,000	
19.	Seebeck coefficient and electrical resistance system (upto 700°C) (MHRD) LINSEIS LSR3 SEEBECK	Electrical Resistance analysis (charges per sample)	2000	3000	5000	Dr. S. Kumaran  0431-2503482
20.	Tensile / Compression /Bend test (ARDB &ISRO) Tinius olsen H50ks/DAK T-72302	Strength of the material (charges per sample)	150	300	1000	
21.	Vickers hardness Test (DST) Wilson 402(MVD)	Hardness measurement (charges per sample – 3 indentations)	100	200	1000	
22.	Microscope (ARDB) Olympus Bx53MTRF-S	Microstructure (charges per sample – 3 images)	100	200	1000	<a href="#">Requisition Forms</a>
23.	High Energy ball milling (DST & DRDO) 1.FRITSCH PULVERISETTE 2.RETSCH PM400	Particle size reduction (charges per hour – SS medium) (charges per hour – WC medium)	200 300	500 750	750 1000	
24.	Magnesium casting Facility (ARDB) VB CERAMICS	Magnesium melting and casting (charges per casting)	2000	3000	Consultancy <sup>#</sup>	
25.	Arc Melting Facility (DST) VB CERAMICS	Melting of alloys (charges per sample)	500	1000	Consultancy <sup>#</sup>	Dr. S. Kumaran  0431-2503482
26.	Density Measurement Kit (DST) SHIMADZU AY220	Density of sintered compacts (charges per sample)	100	200	500	
27.	Apparent / Tap density / Flow rate measurements (DRDO)	Metal powder characteristics (charges per sample/trail)	50	100	500	

28.	Support for Powder Metallurgy /Casting / ECAP	Projects (Compaction + Sintering) for max. 10 samples	---	10,000	Consultancy <sup>#</sup>	<a href="#">Requisition Forms</a>
29.	Tensile test – 8 – 16 mm rod TFUC -400, Metest equipments & Services, Chennai	Strength of the material (charges per sample)	1000	1000	2000	<p>Dr. B. Ravisankar</p> <p>0431-2503460</p> <p><a href="mailto:brs@nitt.edu">brs@nitt.edu</a></p> <p><a href="#">Requisition Forms</a></p>
30.	Tensile test – above 16 mm TFVC -400, Metest equipments & Services, Chennai	Strength of the material (charges per sample)	1250	1250	3000	
31.	Tensometer (without graph) Hitech India Equipments Pvt Ltd	Strength of the material (charges per sample)	250	250	500	
32.	Tensometer (with graph) Tensometer Limited, England	Strength of the material (charges per sample)	500	500	1000	
33.	Hardness (3 indentations) Rockwell Fuel Instruments & Engineers Pvt Ltd	Hardness (charges per sample)	250	250	500	
34.	Impact (Room Temperature) - Fine Testing Machines	Impact strength (charges per sample)	250	250	500	
35.	Impact (below °C temperature) –Fine Testing Machines	Impact strength (charges per sample)	500	500	1000	
36.	Optical microstructure(without photo) –Suxma services conation Technologies, Pune	Microstructure (charges per sample)	300	300	600	
37.	Optical microstructure(with photo in CD) – Suxma services conation Technologies, Pune	Microstructure (charges per sample)	600	600	1200	
38.	ECAP – facilities – RT Hydrosmith, Coimbatore	Severe plastic deformation (charges per sample)	500	500	1000	
39.	ECAP – facilities – high temperatures Hydrosmith, Coimbatore	Severe plastic deformation (charges per sample)	1000	1000	2000	
40.	Diffusion Bonding of samples below 500°C Fluidics, Coimbatore	Diffusion joining of materials (charges per sample)	1000	1000	3000	



41.	Diffusion Bonding of samples above 500°C Fluidics, Coimbatore	Diffusion joining of materials (charges per sample)	2000	2000	5000	
42.	DEFORM simulation software	Forming simulation studies (charges per day)	500	500	2000	
43.	Formability testing Jinan Testing equipment IE Corporation, China	Formability test (charges per sample)	500	500	1000	
44.	Modulus measurement – using NDT Olympus 45MG, NDT USA	Youngs modulus measurement (charges per sample)	250	250	500	
45.	Fatigue testing machine (Flat plate bending) Fine Testing Machine FTG -8	Strength under cyclic loading (charges per sample)	500	500	1000	
46.	FESEM * Carl Zeias, Gemini 300 Germany	Field Emission SEM (charges per sample)	2000	2500	4000	<p>Dr. N. Ramesh Babu</p> <p>0431-2503464</p> <p><a href="mailto:nrb@nitt.edu">nrb@nitt.edu</a></p> <p><a href="#">Requisition Forms</a></p>
47.	FESEM+EDS * -Carl Zeias, Gemini 300 Germany	Field Emission SEM+EDS (charges per sample)	2500	3000	5000	
48.	FESEM+WDS* Carl Zeias, Gemini 300, Germany	Field Emission SEM+WDS (charges per sample)	4000	5000	8000	
49.	EBSD* Carlzeias, Gemini 300, Germany	EBSD (max. 2 hours)	4000	5000	8000	
50.	SEM* Hitachi S3000H, Japan	SEM (charges per sample)	800	1000	1500	
51.	SEM+EDS* Hitachi S3000H, Japan	SEM+EDS (charges per sample)	1500	2000	3000	
52.	XRD* Rigaku-Ultima-IV, Japan	XRD (charges per sample)	300	600	1200	
53.	Optical Profilometer* Taylor-Hobsan Talisurf	Surface morphology/Roughness (charges per sample)	1000	2000	3000	
54.	Scratch Testing Unit* Revtest CSM Instrument Switzerland	Scratch resistance (charges per sample)	2500	5000	8000	
55.	Corrosion Testing (PDP)* ACM Instruments, UK	PotentiodynamicS polarization (charges per sample)	500	1000	2000	

56.	Corrosion Testing (EIS)* ACM Instruments, UK	Impedance analysis (charges per sample)	1000	2000	4000	
57.	Contact angle measurement* DSA100 –CRUSS, Germany	Contact angle measurement (charges per sample)	500	1000	2000	
58.	PEO coating unit (DC)* MILMAN, Pune	PEO coating unit (DC) (charges per sample)	500	1000	2000	
59.	PEO coating unit (AC)*	PEO coating unit (AC) (charges per sample)	1000	1500	3000	
60.	Mechanochemical synthesis/ Ball milling (dry milling only) FRITSH - Pulverischev	Ceramics only (charges per hour per sample)	500	1000	2000	
61.	Indentation fracture toughness test/micro- hardness UHL -VMHT	Ceramics-non metallic (charges per sample)	500	1000	2000	Dr. V. Muthupandi  0431- 2503457  vmuthu@nitt. edu <a href="#">Requisition Forms</a>
62.	Electrochemical corrosion testing AC -GILL	Tafel (charges per sample)	250	400	800	
63.	Electrochemical corrosion testing	Sensitization behaviour (charges per sample)	500	800	1500	
64.	Electrochemical corrosion testing (EIS)	Impedance analysis (charges per sample)	1000	2000	3000	
65.	Miniature Tensile Test facility –Tinius –Olser, UK H25KL	Strength of the material (charges per sample)	300	500	1000	Dr. K. Sivaprasad  0431- 2503466  <a href="mailto:ksp@nitt.edu">ksp@nitt.edu</a>  <a href="#">Requisition Forms</a>
66.	Micro arc oxidation facility Milman Pune, DC power Source	PEO coating unit (DC) (charges per sample)	600	1200	2500	
67.	High Energy Ball Mill INSMART, Hyd	Particle size reduction (charges per hour)	200	500	500	
68.	Digital Balance with density kit	Density of samples (charges per sample)	100	200	500	
69.	High temperature muffle furnace (up to 1400degC)	Heat treatment (charges per hour)	200	300	500	
70.	Muffle furnace (up to 1200degC)	Heat treatment (charges per hour)	50	200	300	

71.	Hot Compaction Facility	Hot compaction (Excluding Die charge per sample) (Including Die charges per sample)	1000 2000	2000 3000	4000 SS 6000	
72.	Pin on disc wear testing machine	Two-body wear (per sample)	500	1000	2000	
73.	SMAW	Up to 5 mm thick plates	100	200	500	
74.	TIG Welding	Up to 2 mm thick plate Autogenous welding	100	200	500	Dr. S. Jerome 0431- 2503465  jerome@nitt. edu  <a href="#">Requisition</a>  <a href="#">Forms</a>
75.	TIG Welding	Up to 5 mm thick plate Autogenous	200	500	1000	
76.	TIG Welding with Filler addition	Up to 5 mm thick plates	300	750	2000	
77.	CMT welding	Up to 2 mm thick plate	300	750	2000	
78.	Plasma Welding	Up to 10 mm thick plate	500	1000	4000	

#-Charges upon the technical work

\*Charges inclusive of GST (Sl.No. 46-61; for external users); FESEM charges (Sl. No. 46-49) in Table are for solid inorganic samples. For polymeric materials and for powders Rs 1500 charges extra;

# Department of Physics

Sl.#	Name of the Instrument	Specification	Minimum No. of days required for analysis	Charge in Rs. (per sample)					Faculty in-charge & Requisition Forms
				Internal users	External (GST extra)				
					Academic Institutions	R&D Labs	Small Scale Industries	Others	
1.	FTIR (Fourier Transform- Infra Red) Spectrometer <u>Model:</u> Thermo Scientific Nicolet iS5	Beam Splitter - KBr/Ge mid-infrared optimized Laser Temperature controlled solid-state near-IR diode laser	7	100	200	300	300	1000	Dr. M. Ashok 0431- 250 3610 ashokm@nitt.edu  <a href="#">Requisition Forms</a>
2.	UV- Visible Spectrometer <u>Model:</u> UV-1700	Spectral band: 1 nm (190 to 900 nm)	7	50	100	200	300	1000	
3.	Raman spectrometer <u>Model:</u> Enspectr R532	Laser wavelength: 532 nm Spectral range: 100- 4000 cm-1	7	200	400	500	500	1500	
4.	Cyclic voltammetry <u>Model:</u> Palmsens3	Current: 10uA-30mA Voltage: 10V	7	200	400	500	500	1500	
5.	Solar simulator (lamp only) <u>Model:</u> Oriel LCS-100 small area Sol1A	Beam Size: 1.5 x 1.5 inch (38 x 38 mm) Lamp Power: 100 W Xenon	-	50 (1 hr)	100 (1 hr)	200 (1 hr)	300 (1 hr)	1000 (1 hr)	
6.	XRF Elemental analysis	Ti and higher elements Olympus delta element	1	100 (1 hr)	200 (1 hr)	200 (1 hr)	500 (1 hr)	1000 (1 hr)	
7.	Photocatalysis set-up	Visible light 150W, UV Light 150 W	7	300	500	500	500	1500	
8.	C-scan	2 immersion transducers, 25MHz and 5MHz and TraCSS	7	300	500	500	500	1500	

9.	Olympus OmniScan SX	Probe Type: Phased array 5MHz, 64 Elements	7	300	500	500	500	1500	
10.	Liquid Nitrogen Plant, NL280	High purity liquid nitrogen	1-2	100 L	200 L	200 L	250 SSL	-	Dr. Justin Joseyphus
11.	Vibrating sample magnetometer, Model 7404	Room temperature, 2 T	14	600 sample	1200 sample	3000 sample	5000 sample	-	0431-2503614 <a href="mailto:rjustinj@nitt.edu">rjustinj@nitt.edu</a>
12.	Thermogravimetric analyser, EXSTAR TG/DTA6200	Temperature upto 1000°C, TG/DTA	14	600 sample	1200 sample	3000 sample	5000 sample	-	<b>Requisition Forms</b> <a href="#">[10]</a> <a href="#">[11]</a> <a href="#">[12]</a>
13.	Hall Measurement System, ECOPIA HMS-5000	0.5 Tesla permanent magnet, LT up 100K using LN2	7	200	500	500	750	-	Dr. Santhosh Kumar 0431-2503611 santhoshmc@nitt.edu
14.	Specrofluorometer JASCO, FP-8500	Xe lamp, Scanning Wavelength range: 200 nm to 850 nm	7	100	250	250	300	-	<b>Requisition Forms</b> <a href="#">[13]</a>
15.	Uv-vis-NIR spectrometer JASCO, V -670	Scanning Wavelength range: 190 nm to 3200 nm Absorbance, Transmittance and Diffuse reflectance measurement	7	100	250	250	300	-	<a href="#">[14]</a> <a href="#">[15]</a>
16.	Atomic force microscope, Park system NX10	• Topography <u>Advanced modes</u> MFM • (DC EFM) • I-AFM	20	1000 2500	2000 5000	4000 10000	4000 10000	4000 10000	Dr. J. Hemalatha 0431-2503608 hemalatha@nitt.edu
17.	Magneto resistance measurement set up Marine India	• Resistance 10 ohm to 100 G ohm • DC magnetic field 0.75 Tesla	15	1000	2000	4000	4000	4000	<b>Requisition Forms</b> <a href="#">[16]</a> <a href="#">[17]</a>
18.	Nd: YAG Laser, PRO -230-10,	1. Four harmonics available. 1064	7	250	500	5000	5000	5000	

	Spectra Physics, USA	nm, 532 nm, 355nm, and 266 nm 2. Pulse energy max. 1.3 J at 1064nm. 3. pulse duration: 10 ns at 1064 nm 4. Repetition rate: 10 Hz 5. Beam Diameter: 9.5mm							Dr.D.Sastikumar 0431-2503601 9488600672 <a href="mailto:sasti@nitt.edu">sasti@nitt.edu</a>
									<b>Requisition Forms</b> <a href="#">[18]</a>
19.	Infrared thermography camera sc 7500/ (flir - automation technology) (Germany)	Temperature range- 0 to 1500° c lens- 25 mm thermal sensitivity- 25milli kelvin spectral response- 2.5-5.1 µm fov 20° x 16°	7	250	500	5000	5000	5000	<a href="#">[19]</a>
20.	HR Tem Tecnaï G2 30 S-Twin	HR Tem, 300 kV	14	2000	5000	5000	7000	-	Dr.A.Chandra Bose 0431-2503605 <a href="mailto:acbose@nitt.edu">acbose@nitt.edu</a>
21.	Cyclic Voltammeter Biologic 150	Three electrode system, µHz to MHz range	14	10000 sample/ week	20000 sample /week	30000 sample /week	30000 sample /week	-	<b>Requisition Forms</b> <a href="#">[20]</a>
22.	Impedance analyser, Solartron, 1260	1 µHz to 33 MHz	14	RT measurements 500 High Temp 2000	RT measurements 1000 High Temp 3000	RT measurements 1000 High Temp 3000	RT measurements 2000 High Temp5 000	-	<a href="#">[21]</a> <a href="#">[22]</a>
23.	Precision Multiferoic Tester  M/s. Radiant Technologies Inc. USA	Voltage Range:±100V Voltage Range external amplifier:10kV  (To study Ferroelectric, piezoelectric, magneto-	2 - 3	Nil	500 measur ement	750 measur ement	-	-	Dr. N.V.Giridharan 0431-2503613 9443689391 <a href="mailto:giri@nitt.edu">giri@nitt.edu</a>  <b>Requisition Form</b>

		capacitance properties of specimens)							
24.	Lab Ram HR Evolution Micro Raman Spectrometer LabRam HR Evo Model : 356399 (Horiba Jobin Yvon IBH.Ltd)	Air Cooled Frequency doubled Nd: YAG Laser 532 nm 50 mW Power meter from 400 to 1.1 micron including density filter	7	500	1000	2000	2500	3500	<p>Dr. B. Karthikeyan 0431-2503612  9994372825 bkarthik@nitt.edu</p> <p><b>Requisition Forms</b></p> <p><a href="#">[24]</a></p> <p><a href="#">[25]</a></p> <p><a href="#">[26]</a></p> <p><a href="#">[27]</a></p>
25.	Time Resolved Fluorescence Spectrometer  Model Delta Flex-01-NL TCSPC LifeSpec-II Picosecond Fluorescence Life (Horiba Jobin Yvon IBH.Ltd)	<ul style="list-style-type: none"> <li>LifeSpec-II Picosecond Fluorescence Life Time Spectrometer</li> <li>Model Delta Flex-01-NL TCSPS Life System</li> <li>F900 Spectrometer</li> </ul> Software for windows included	7	1000	2000	2000	3000	3000	
26.	Nd-YAG Laser Second Harmonic Generation Quanta-RayINDI Pulsed Nd-YAG Laser (Spectra Physics)	<ul style="list-style-type: none"> <li>Flash lamp pump source</li> <li>Pulse wavelength : 532 nm</li> <li>Z-Scan (without fitting)</li> </ul>		2000 3000	3000 4000	5000 5000	5000 5000	5000 5000	
27.	Fluorescence Spectrometer FluoroMax-4 Spectrofluorometer (Horiba Scientific)	<ul style="list-style-type: none"> <li>Excitation Source: Xenon Lamp</li> <li>Range: 250-800 nm</li> </ul>		500	1000	1000	1000	1000	



28.	LCR Hi-TESTER , (HIOKI 3532-50)	Measurement parameters:  Z , R, C, tan δ; Test frequency range: 42 Hz to 5 MHz; at room temperature	7	200	500	500	1000	1000	Dr. S.Manivannan  0431-2503616 <a href="mailto:ksmani@nitt.edu">ksmani@nitt.edu</a> <a href="#">u</a>  <a href="#">Requisition Forms</a>
29.	Source Measurement Unit, (KEITHLEY 2450)	V-Source Range: 20 mV to 200 V; V-measuring resolution- 10 nV, I-Source range:10 nA to 1A; I-measuring resolution: 10 fA; Resistance measurement range: 2 Ω to 200 MΩ; Resistance measurement resolution: 10 μΩ; Built- in capacitive touch screen display.	7	200	500	500	1000	1000	
30.	Low temperature photolumines Ecnce (ltpl)	Horiba-ihf550 instruments inc., , ars, kimmon laser	7	RT: 1500  LT (77K):  2000	RT : 2000  LT (77K):  3000	RT : 2000  LT (77K):  3000	RT : 3000  LT (77K):  4000	RT : 3000  LT 77K):  4000	Dr.N.Gopalakris hnan  <a href="mailto:ngk@nitt.edu">ngk@nitt.edu</a>  0431-2503607  <a href="#">Requisition Form</a>

# Department of Production Engineering

Sl.#	Name of the Instrument [MAKE]	Types of samples to be analyzed*	Maximum number of samples accepted at a time	Minimum No. of days required for analysis	Cost of analysis in Rs. (GST extra)		Faculty in-charge & Requisition Forms
					Academic	Industry	
1.	Pin on Disc Wear Tester [DUCOM]	Solid	10	1	175	275	<b>Dr. Ing- M. Duraiselvam</b>  <a href="mailto:durai@nitt.edu">durai@nitt.edu</a>  0431-2503509 9994373486  <a href="#">Requisition Forms</a>
2.	Lubricated Wear Tester [DUCOM]	Solid	10	3	175	275	
3.	Corrosion Wear Tester [DUCOM]	Solid	10	3	175	275	
4.	Roller and roller Wear Tester [DUCOM]	Solid	10	3	275	350	
5.	Universal Wear Tester/ White light interferometer [R-TECH INSTRUMENT]	Solid	25	3	300	400	
6.	Scratch test [DUCOM]	Solid	10	3	75	100	
7.	Laser Micro-machining [Aimilc]	Conductive material	05	7	300	400	
8.	Metallographic sample preparation [METCO]	Solid	10	1	50	100	
9.	Optical microscope [OLYMPUS]	Powder and solid	20	1	50	100	
10.	Multi Process Micro-machining Centre [Mikro-Tools Pvt Ltd, Singapore]	Metal/Non-metal Workpieces	One	NA	500 per hour	700 per hour	<b>Dr J Jerald</b> <a href="mailto:Jerald@nitt.edu">Jerald@nitt.edu</a> 0431-2503518 9442530103 9442530803 <a href="#">Requisition Forms</a>
11.	Surface Roughness Tester (Contact type) [Mitutoyo Ltd]	Metal/Non-metal Workpieces	One	NA	250 per hour	350 per hour	
12.	FDM Based 3D Printer	Rapid Manufacturing Lab			450 Cubic inch	650 Cubic inch	<b>Dr.S. Vinodh</b> <a href="mailto:vinodh@nitt.edu">vinodh@nitt.edu</a> 0431-2503520 9952709119 <a href="#">Requisition Forms</a>

# Siemens Centre of Excellence in Manufacturing

Sl.#	Name of Lab	Charges in Rs.(Per Hour) + GST			Faculty in-charge & Requisition Forms
		Academic	Institutes/ R&D Labs	Industry	
1.	Product Design and Validation Lab	NIL	500	750	Dr. M. Duraiselvam Professor <a href="mailto:durai@nitt.edu">durai@nitt.edu</a>  0431-2503509 9994373486  <a href="#">Requisition Forms</a>
2.	Advanced Manufacturing Lab				
3.	Test and Optimisation Lab				
4.	CNC Controller Lab				
5.	Internet of Things (IoT) Lab				
6.	Automation Lab				
7.	Mechatronics Lab				
8.	Process Instrumentation Lab				
9.	Electrical & Energy Savings Lab				
10.	CNC Machines Lab	NIL (Consumables are at the responsibility of the user)	1000 (consumables extra)	1500 (consumables extra)	
11.	Robotics Lab		1500 (consumables extra)	2000 (consumables extra)	
12.	Rapid Prototyping Lab	350/cubic inch	500 cubic inch	650 cubic inch	

# Centre of Excellence in Corrosion and Surface

Sl.#	Name of InstrumentS [Make]	Types of samples to be analyzed	Max. number of samples accepted at a time	Minimum No. of days required for analysis	Cost of analysis in Rs. per sample per parameter plus applicable GST charges		Faculty in-charge & Requisition Forms
					Academic s	Industrie s	
1.	Vacuum & High temperature Tribometer [ DUCOM Instruments Pvt. Ltd., Bangalore]	Solid	2	7	700	1900	<b>Dr. S.Natarajan</b> Professor Telephone: +91-431-2503327 / 2504348 <a href="mailto:sn@nitt.edu">sn@nitt.edu</a> <a href="mailto:cecace@nitt.edu">cecace@nitt.edu</a> <a href="mailto:cecacehod@nitt.edu">cecacehod@nitt.edu</a> <a href="mailto:ofccecacelabs@nitt.edu">ofccecacelabs@nitt.edu</a> <a href="#">Requisition Forms</a>
2.	2 body and 3 body abrasion unit [ DUCOM Instruments Pvt. Ltd., Bangalore]	Solid	2	7	700	1900	
3.	Hot air jet erosion Equipment [ DUCOM Instruments Pvt. Ltd., Bangalore]	Solid	2	7	700	1900	
4.	Reciprocating wear testing unit [ Magnum Engineers, Bangalore]	Solid	2	7	800	2000	
5.	Laser materials processing workstation (surface melting / cutting/ welding) [ JK Lasers, UK]	Solid	2	7	1300	3700	
6.	Multichannel Potentiostat [Princeton Applied Research Corporation, New Jersey, (PARC), USA]	Solid	2	7	800	2000	
7.	High temperature Impedence analyser [Princeton Applied Research Corporation, New Jersey, (PARC), USA]	Solid	2	7	800	2000	
8.	Optical microscopy with image analyser [Olympus, USA]	Solid	2	7	700	1900	
9.	High temperature oxidation furnace [ VB Ceramics Consultants, Chennai]	Solid	2	7	800	2000	

10.	High temperature hot corrosion furnace [ VB Ceramics Consultants, Chennai]	Solid	2	7	800	2000	
11.	Pulse rectifier(for plating, anodizing etc.,) [Ionics Power Solutions Pvt. Ltd., Hyderabad]	Solid	2	7	800	2000	



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR UV-VIS-ABSORPTION MEASUREMENTS**

Name :	
Designation :	
Department :	
Institution (Internal/ External):	
Company (small scale/ large scale):	
Email ID & Phone :	
Request for : UV-Vis- spectral analysis	
Number of Samples :	Details of Samples :
Nature of Samples :	
[Not meant for radioactive / hygroscopic samples]	
Wavelength range [nm] :	Solvent :

Signature of the Candidate

Date:

with date

Signature of the Supervisor/Head of the

Department/ Head of the Institution

**Instructions:**

1. Charges – Rs. 118/- for solution spectra and Rs. 295/- For solid state per sample for Academic and Rs. 236/- for solution spectra and Rs. 590/- For solid state per sample for Industry
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of “The Director, NIT, Trichy” payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Sample with suspended particles are not suitable for analysis. Check the solubility before submission
6. Tick appropriate option, in the column of Institute and company.

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FORM FOR UV-VISIBLE SPECTROPHOTOMETER ANALYSIS**  
**(EXTERNAL USERS)**

Date:

Name:

Position:

Institution/ Organization:

Email ID:

Contact Number:

Number of samples:

Nature of sample: Solid/ Liquid

Air and moisture sensitive: Yes/ No

Sample Code/s:

Solvent to be used in case of Solution Spectrum:

Spectral region to be measured: \_\_\_\_\_ to \_\_\_\_\_ nm.

Signature of the Applicant

Signature of the Guide/ Manager

Instructions:

1. Users are requested to submit the filled in form, samples and a new CD for analytical reports to the faculty-in-charge.
2. Sample required is 10ml. solution or 5 - 100 mg in solid state.
3. Sample will not be given back.
4. Mode of Payment- Demand draft in favour of "**The Director, NIT, Trichy**"



For Office use:

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge

**Analysis Charge details**

S.No.	Analysis Type	Price	
		Academic (INR)	Industries (INR)
1.	Absorbance mode (liquid)	200	250
2.	DRS mode (solid samples only)	250	300

For any details, Please Contact.

Dr. R. Karvembu, Professor

Faculty-in charge- UV-visible Spectrophotometer

Department of Chemistry, NITT

Email: [kar@nitt.edu](mailto:kar@nitt.edu)



## **Requisition Form for FT-IR Analysis (External Users)**

Date:

Name:

Position:

Institution/ Organization:

Email ID & Contact Number:

Number of samples:

Nature of sample: Solid/ Liquid/ Film/Gel

Air and moisture sensitive: Yes/ No

Sample details:

Signature of the Applicant

Signature of the Guide/ Manager

Instructions:

1. Users are requested to submit the filled in form, samples and a new CD for analytical reports to the faculty-in-charge.
2. Quantity of solid samples should be 5 mg and 0.5 mL for liquids.
3. Mode of Payment- Demand draft in favor of "**The Director, NIT, Trichy**"

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For Office use:

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

**Signature of Faculty-In-charge**

Analysis Charge details

S.No.	Analysis type	Academic (INR)	Industries (INR)
1.	KBr mode (solid samples)	250	300
2.	ATR mode (liquid samples only)	200	250

For any details, Please Contact

Dr. R. Karvembu, Professor.

Faculty-in charge - FT-IR Spectrometer

Department of Chemistry, NITT

Email: [kar@nitt.edu](mailto:kar@nitt.edu)



National Institute of Technology, Tiruchirappalli-620015  
Department of Chemistry

**Requisition for Chiral - HPLC analysis (External Users)**

Date:

Name:

Designation:

Department:

Institution:

Email ID & Phone:

Number of Samples:

Nature of Samples:

Details of Samples:

Concentration:

Solvent:

Signature of the Candidate

Signature of the Guide/Head of the Department

Date:

Date:

**Instructions:**

1. Charges per sample - Rs. 1200/- (For Academic); Rs. 1500/- (For Industry) including all taxes.
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of **“The Director, NIT, Trichy” payable at Trichy.**
3. Users are requested to submit the filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Only **chiral samples** are permitted since only Chiral ODH column is used.
5. Maximum of **five samples** are permitted for each form.
6. Minimum quantity of samples for analysis: **Solid (20 mg) and Liquid (1 mL)**
7. Sample with suspended particles are not suitable for analysis. Samples must be soluble in the mobile phase (**Hexane: IPA) (90: 10)**

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any: Signature of Faculty-In-charge



## GC Sample Submission Form (External Users)

Name:

Designation:

Affiliation:

Contact number:

E-mail address:

### **Sample information for GC:**

No. of samples. \_\_\_\_\_ (maximum of 5 samples from a group for a week)

Sample code(s): \_\_\_\_\_

Molecular formula: \_\_\_\_\_

Molecular weight: \_\_\_\_\_

Melting point: \_\_\_\_\_ ☐ C (for solids)

Boiling point: \_\_\_\_\_ ☐ C (for liquids)

Method of purification & chemical nature of solvents used:

Expected chemical nature of molecules in elution, with respect to polarity \_\_\_\_\_ Specify if any metals / metal ions present \_\_\_\_\_

\*Column details: RTX-5 Column (only column available)

### **\*GC conditions:**

Column temperature:

FID detector temperature:

Injector temperature:

Gas flow rate:

Signature of the  
student

Signature of Guide

Signature of HOD

Signature of instrument  
in-charge

### **User Information**

1. Charges per sample - Rs. 600/- (For Academic); Rs. 800/- (For Industry) including all taxes.
2. To make the analysis economical, minimum of 10 samples should be analyzed at a time.
3. Users are requested to submit the samples to the instrument in-charge. Samples will be analyzed in presence of the user. User may analyze on his own once the instrument is moved to SIF room.
4. Make sure the samples to be analyzed are in high purity.
5. Metal containing samples cannot be analyzed.
6. Use of pen drive is strictly prohibited. Only CD & DVD are permitted.
7. User has to inform the instrument in-charge immediately if he/she finds fault in the instrument.
8. Keep the working place neatly.
9. Use your own vials (provided by Shimadzu). Label the vials to avoid confusion.



National Institute of Technology, Tiruchirappalli-620015  
Department of Chemistry

**GC-MS Sample Submission Form**

Reference No.: \_\_\_\_\_ Date of submission: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Contact number: \_\_\_\_\_

E-mail address: \_\_\_\_\_

**Sample information for GC-MS:**

No. of samples. \_\_\_\_\_ (maximum of 4 samples from a group for a week)

Sample code(s): \_\_\_\_\_

Molecular formula: \_\_\_\_\_

Molecular weight: \_\_\_\_\_

Melting point: \_\_\_\_\_ °C (for solids)

Boiling point: \_\_\_\_\_ °C (for liquids)

Approximate mass range: \_\_\_\_\_

Method of purification & chemical nature of solvents used: \_\_\_\_\_

Expected chemical nature of molecules in elution, with respect to  
polarity \_\_\_\_\_ Specify if any metals / metal ions present \_\_\_\_\_

\*Column details: RTX-5 Column (only column available)

**\*GC conditions:**

Column temperature: \_\_\_\_\_

FID detector temperature: \_\_\_\_\_

Injector temperature: \_\_\_\_\_

Gas flow rate: \_\_\_\_\_

Signature of the  
student

Signature of Guide

Signature of HOD

Signature of instrument  
in-charge

### **User Information**

1. Charges per sample - **Rs. 1050/- (For Academic); Rs. 1500/- (For Industry) including all taxes.**
2. Mass detector should be in vacuum at least 12 hours before starting the analysis.
3. To make the analysis economical, minimum of 10 samples should be analyzed at a time.
4. Users are requested to submit the samples to the instrument in-charge. Samples will be analyzed in presence of the user. User may analyze on his own once the instrument is moved to SIF room.
5. Make sure the samples to be analyzed are in high purity.
6. Metal containing samples cannot be analyzed.
7. Use of pen drive is strictly prohibited. Only CD & DVD are permitted.
8. User must inform the instrument in-charge immediately if he/she finds fault in the instrument.
9. Keep the working place neatly.
10. Use your own vials (provided by Shimadzu). Label the vials to avoid confusion.





National Institute of Technology, Tiruchirappalli-620015  
Department of Chemistry

**Requisition for the usage of Muffle Furnace (External Users)**

Name:

Designation:

Department:

Institution:

Email ID & Phone:

Number of Samples:

Details of Samples:

Nature of Samples:

Signature of the Candidate

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

Date:

Date:

**Instructions:**

1. Charges per sample - Rs. 150/- (Internal); Rs. 200/- (For External) including all taxes only for 6 hours.
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of “The Director, NIT, Trichy” payable at Trichy.
3. Users are requested to submit the filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Fixed heating rate: 2 °C per minute.
5. Maximum of three samples are permitted for each form.
6. Samples should not produce any toxic form of substances on heating.

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



## **Requisition for the usage of Tubular Furnace (External Users)**

Name:

Designation:

Department:

Institution:

Email ID & Phone:

Number of Samples:

Details of Samples:

Nature of Samples:

Signature of the Candidate

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

Date:

Date:

### **Instructions:**

1. Charges per sample – **Rs. 150/- (Internal); Rs. 200/- (External). For inert atmosphere, charges per sample – Rs. 300/- (Internal); Rs. 500/- (External) including all taxes.**
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of “**The Director, NIT, Trichy**” payable at Trichy.
3. Users are requested to submit the filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Due to Temperature programmed heating, maximum heating of 1200 °C is allowed.
5. Maximum of three samples are permitted for each form.
6. Samples should not produce any toxic form of substances on heating.

### **For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



## **Requisition for Viscosity measurements (External Users)**

Name:

Designation:

Department:

Institution:

Email ID & Phone:

Number of Samples (Maximum=10):

Details of Samples:

Nature of Samples:

Range of viscosity possible: 1-10 cp

Concentration/s:

Solvent/ Solutions:

Signature of the Candidate

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

Date:

Date:

### **Instructions:**

1. Charges - Rs. 100 for academic and 150 for industries including all taxes.
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of **“The Director, NIT, Trichy”** payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples with solvents.
5. Sample with suspended particles are not suitable for analysis. Check the solubility before submission.

### **For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR FT-IR ANALYSIS**

Name :	
Designation :	
Department :	
Institution (Internal/ External):	
Company (small scale/ large scale):	
Email ID & Phone :	
Request for : FT-IR analysis	
Number of Samples :	Mode of Sample: ATR/Pellet
Nature of Samples :	
Information required:	
Required region :	

Signature of the Candidate  
Date:  
with date

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

**Instructions:**

1. Charges – Rs. 177/- per sample for Academic and Rs. 295/- For Industry
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of “The Director, NIT, Trichy” payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Sample with suspended particles are not suitable for analysis. Check the solubility before submission
6. Tick appropriate option, in the column of Institute and company.

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR UV-VIS-ABSORPTION MEASUREMENTS**

Name :	
Designation :	
Department :	
Institution (Internal/ External):	
Company (small scale/ large scale):	
Email ID & Phone :	
Request for : UV-Vis- spectral analysis	
Number of Samples :	Details of Samples :
Nature of Samples :	
[Not meant for radioactive / hygroscopic samples]	
Wavelength range [nm] :	Solvent :

Signature of the Candidate

Date:

with date

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

**Instructions:**

1. Charges – Rs. 118/- for solution spectra and Rs. 295/- For solid state per sample for Academic and Rs. 236/- for solution spectra and Rs. 590/- For solid state per sample for Industry
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of “The Director, NIT, Trichy” payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Sample with suspended particles are not suitable for analysis. Check the solubility before submission
6. Tick appropriate option, in the column of Institute and company.

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR FLUORESCENCE MEASUREMENTS**

Name :		
Designation :		
Department :		
Institution (Internal/ External):		
Company (small scale/ large scale):		
Email ID & Phone :		
Request for : Fluorescence spectra [Emission / Excitation]		
Excitation :                      nm	Emission :	nm
Number of Samples :	Details of Samples :	
Nature of Samples :		
[Not meant for radioactive / hygroscopic samples]		
Wavelength range [nm] :	Solvent :	

Signature of the Candidate

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

Date:

Date:

**Instructions:**

1. Charges - Rs. 295/- per sample for Academic and Rs.590/- per sample for Industry.
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of "The Director, NIT, Trichy" payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Sample with suspended particles are not suitable for analysis. Check the solubility before submission.
6. Tick appropriate option, in the column of Institute and company.

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR CYCLIC VOLTAMMETRY MEASUREMENTS**

Name :	
Designation :	
Department :	
Institution (Internal/ External):	
Company (small scale/ large scale):	
Email ID & Phone :	
Request for : Cyclic Voltammetry	
Number of Samples :	Details of Samples :
Working Window:	
Electrode system:	
Working electrode:	Electrolyte :

Signature of the Candidate

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

Date:

Date:

**Instructions:**

1. Charges – Rs. 472/- tax Per sample for Academic and 944/- for Industry
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of “The Director, NIT, Trichy” payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Tick appropriate option, in the column of Institute and company

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR GPC (Polymer MW) MEASUREMENTS**

Name :		
Designation :		
Department :		
Institution (Internal/ External)::		
Company (small scale/ large scale):		
Email ID & Phone :		
Request for : Molecular weight determination of polymer (only THF solvent)		
Number of Samples :	Details of Samples :	
Nature of Samples :		
[Not meant for radioactive / hygroscopic samples]		
Expected MW :	Solvent :	
Conditions: Flow rate/ Detector/Column		

Signature of the Candidate

Date:

Signature of the Supervisor/Head of the

Department/ Head of the Institution

Date:

**Instructions:**

1. Charges - Rs. 1180/- Per sample For academics and Rs. 3540/- for Industry samples
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of "The Director, NIT, Trichy" payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Polymers not soluble in THF or  $\text{CHCl}_3$  are not suitable for analysis. Check the solubility before submission and Tick appropriate option, in the column of Institute and company

**For Office use:**

Payment details:

Sample Received on:

Remarks if any:

Signature of Faculty-In-charge





**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR ION CHROMATOGRAPHY MEASUREMENTS**

Name :		
Designation :		
Department :		
Institution (Internal/ External):		
Company (small scale/ large scale):		
Email ID & Phone :		
Request for : ION CHROMATOGRAPHY		
Number of Samples :	Details of Samples :	
Nature of Samples :		
[Not meant for radioactive / hygroscopic samples]		
Expected ion:	Solvent :	
Conditions: Flow rate/ Detector/Column		

Signature of the Candidate

Date:

Signature of the Supervisor/Head of the

Department/ Head of the Institution

Date:

**Instructions:**

1. Charges - Rs. 1180/- Per sample For academics and Rs. 3540/- for Industry samples
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of "The Director, NIT, Trichy" payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Tick appropriate option, in the column of Institute and company.

**For Office use:**

Payment details:

Sample Received on:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR ATOMIC FORCE MICROSCOPY MEASUREMENTS**

Name :		
Designation :		
Department :		
Institution (Internal/ External):		
Company (small scale/ large scale):		
Email ID & Phone :		
Request for : AFM		
Number of Samples :	Details of Samples :	
Nature of Samples :		
[Not meant for radioactive / hygroscopic samples]		
Toxic (Yes/No):	Coated:	
Conditions:	Magnetic (Yes/No) :	

Signature of the Candidate

Date:

Signature of the Supervisor/Head of the

Department/ Head of the Institution

Date:

**Instructions:**

1. Charges - Rs. 1770/- Per sample For academics and Rs. 3540 for Industry samples
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of "The Director, NIT, Trichy" payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Tick appropriate option, in the column of Institute and company.

**For Office use:**

Payment details:

Sample Received on:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR TOTAL ORGANIC CARBON MEASUREMENTS**

Name :		
Designation :		
Department :		
Institution (Internal/ External):		
Company (small scale/ large scale):		
Email ID & Phone :		
Request for : Total Organic Carbon		
Number of Samples :	Details of Samples :	
Nature of Samples :		
[Not meant for radioactive / hygroscopic samples]		
Temperature:	Solvent :	
Conditions:		

Signature of the Candidate

Date:

Signature of the Supervisor/Head of the

Department/ Head of the Institution with date

**Instructions:**

1. Charges - Rs. 295/- Per sample For academics and Rs. 590/- for Industry samples
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of "The Director, NIT, Trichy" payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Sample with suspended particles are not suitable for analysis. Check the solubility before submission
6. Tick appropriate option, in the column of Institute and company.

**For Office use:**

Payment details:

Sample Received on:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**BET SURFACE AREA ANALYSER**

**User Information**

**Date:**

Name :

Designation :

Affiliation :

Address for Communication :

Phone Number :

E-mail Address :

**Sample Information**

\*No of samples : \_\_\_\_\_

\*Sample Code : \_\_\_\_\_

\* Weight of Sample : \_\_\_\_\_

\*Temperature Conditions : \_\_\_\_\_

\*Surface Area Expected : \_\_\_\_\_

\*Special Instruction :

**Signature of the Student**

**Signature of the Research Supervisor/HoD/Principal**

**Instructions:**

1. Users are requested to submit the Filled in form, samples and a new CD for Analytical reports to the faculty-in-charge.
2. Users are requested to submit sufficient quantity of samples
3. Details about the hazardous, toxic or radioactive nature of the sample should be mentioned clearly.
4. Temperature stability should be mentioned

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge

## Analysis Charge details

S.No.	Analysis Charges Per sample	Academic (INR) (excluding tax)	Industries (INR)*
1.	Surface area measurement only	500 + 18 % service tax	2000+ 18 % service tax
2.	Surface area + pore size + pore diameter measurements	1000+ 18 % service tax	3000+ 18 % service tax



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR UV-VIS-ABSORPTION MEASUREMENTS**

Name :

Designation :

Department :

Institution :

Email ID & Phone :

Request for : UV-Vis- spectral analysis

Number of Samples :                      Details of Samples :

Nature of Samples :

[Not meant for radioactive / hygroscopic samples]

Wavelength range [nm] :                      Solvent :

Signature of the Candidate

Date:

Signature of the Supervisor/Head of the

Department/ Head of the Institution

Date:

**Instructions:**

1. Charges - Rs. 100/- for solution spectra and Rs. 250/- For solid state- DRS analysis + 18% Service tax per sample
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of "The Director, NIT, Trichy" payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Sample with suspended particles are not suitable for analysis. Check the solubility before submission

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR FLUORESCENCE MEASUREMENTS**

Name :

Designation :

Department :

Institution :

Email ID & Phone :

Request for : PL spectra [Emission / Excitation]

Excitation :        nm

Emission :        nm

Number of Samples :                      Details of Samples :

Nature of Samples :

[Not meant for radioactive / hygroscopic samples]

Wavelength range [nm] :

Solvent :

Signature of the Candidate

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

Date:

Date:

**Instructions:**

1. Charges - Excitation – Rs. 250/- and Emission – Rs. 250/- + 18% Service tax per sample
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of “The Director, NIT, Trichy” payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Sample with suspended particles are not suitable for analysis. Check the solubility before submission

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR OPTICAL ROTATION MEASUREMENTS**

Name :

Designation :

Department :

Institution :

Email ID & Phone :

Request for : Optical Rotation

Number of Samples :                      Details of Samples :

Nature of Samples :

[Not meant for radioactive / hygroscopic samples]

Concentration :    Solvent :

Signature of the Candidate

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

Date:

Date:

**Instructions:**

1. Charges - Rs. 100/- + 18% Service tax Per sample
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of "The Director, NIT, Trichy" payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Sample with suspended particles are not suitable for analysis. Check the solubility before submission

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge





**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR GPC (Polymer MW) MEASUREMENTS**

Name :	
Designation :	
Department :	
Institution :	
Email ID & Phone :	
Request for : Molecular weight determination of polymer	
Number of Samples :	Details of Samples :
Nature of Samples :	
[Not meant for radioactive / hygroscopic samples]	
Expected MW :	Solvent :
Conditions: Flow rate/ Detector/Column	

Signature of the Candidate

Date:

Signature of the Supervisor/Head of the

Department/ Head of the Institution

Date:

**Instructions:**

1. Charges - Rs. 1000/-+ 18% Service tax Per sample For academics and Rs. 3000/-+ 18% tax for Industry samples
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of "The Director, NIT, Trichy" payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.
5. Polymers not soluble in THF or  $\text{CHCl}_3$  are not suitable for analysis. Check the solubility before submission

**For Office use:**

Sample Received on:

Payment details:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**NMR Analysis Requisition Form**

Date:

Name					
Designation					
Affiliation					
Contact No.					
email Address					
No. of Samples (max 5 analysis)					
Sample Name					
Sample ID (Office use)					
Solvent					
Experiment (Tick the appropriate Box)	<sup>1</sup> H <input type="checkbox"/> <sup>13</sup> C <input type="checkbox"/> DEPT 45 <input type="checkbox"/> DEPT 90 <input type="checkbox"/> DEPT 135 <input type="checkbox"/>	<sup>1</sup> H <input type="checkbox"/> <sup>13</sup> C <input type="checkbox"/> DEPT 45 <input type="checkbox"/> DEPT 90 <input type="checkbox"/> DEPT 135 <input type="checkbox"/>	<sup>1</sup> H <input type="checkbox"/> <sup>13</sup> C <input type="checkbox"/> DEPT 45 <input type="checkbox"/> DEPT 90 <input type="checkbox"/> DEPT 135 <input type="checkbox"/>	<sup>1</sup> H <input type="checkbox"/> <sup>13</sup> C <input type="checkbox"/> DEPT 45 <input type="checkbox"/> DEPT 90 <input type="checkbox"/> DEPT 135 <input type="checkbox"/>	<sup>1</sup> H <input type="checkbox"/> <sup>13</sup> C <input type="checkbox"/> DEPT 45 <input type="checkbox"/> DEPT 90 <input type="checkbox"/> DEPT 135 <input type="checkbox"/>
Other Experiments					
Remarks (Solubility, No. of scans, any safety issues)					

Signature of the Student

Signature of the Research Supervisor/HoD/Principal

**Instructions:**

1. Users are requested to submit the Filled in form, samples and a new CD for Analytical reports to the faculty-in-charge.
2. Users are requested to submit sufficient quantity of samples to take less abundant nuclei such as  $^{13}\text{C}$  NMR etc. (It is much better within the range of **0.12 -0.18 Molar**).
3. Sample with suspended particles could be endangered to the shimming. Check the solubility before submission

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge

Analysis Charge details

S.No.	Type of Analysis Per sample	Academic (INR)	Industries (INR)
1.	Proton NMR analysis	500 + 18 % service tax	1000+ 18 % service tax
2.	$^{13}\text{C}$ NMR analysis	700+ 18 % service tax	1500+ 18 % service tax
3.	Combined $^1\text{H}$ and $^{13}\text{C}$ NMR	1000+ 18 % service tax	2500+ 18 % service tax
4.	DEPT 45, 90, 135	2500+ 18 % service tax	5000+ 18 % service tax
5.	All 2D experiments	3000/experiment+ 18 % service tax	6000/ experiment+ 18 % service tax

Mode of Payment- Demand draft in favor of "The Director, NIT, Trichy"

For any details Please Contact

Dr. S. Velmathi

Faculty-in charge- NMR Spectrometer

Department of Chemistry, NITT

Email:velmathis@nitt.edu

Ph: 91-09486067404



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**LUMINESCENCE SPECTROPHOTOMETER ANALYSIS –REQUISITION FORM**

Date:

1	Name															
2	Register No.															
3	a) Email ID b) Mobile															
4	Purpose (PG Project/Ph.D. work)															
5	Nature of samples															
6	Number of samples															
7	Experimental mode (Tick the appropriate mode)	<table border="1"><tr><td>Steady state</td><td></td></tr><tr><td>Stability of complex</td><td></td></tr><tr><td>Temperature controlled spectra</td><td></td></tr><tr><td>Life time</td><td></td></tr><tr><td>Fluorescence</td><td></td></tr><tr><td>Phosphorescence</td><td></td></tr><tr><td>Quantum Yield</td><td></td></tr></table>	Steady state		Stability of complex		Temperature controlled spectra		Life time		Fluorescence		Phosphorescence		Quantum Yield	
Steady state																
Stability of complex																
Temperature controlled spectra																
Life time																
Fluorescence																
Phosphorescence																
Quantum Yield																
8	Operated by (to be filled by guide)															
9	Accompanied by															

Signature of the Student	Research Guide
Head of the Department	Staff In-charge

**NOTE:** Please provide a new CD for collecting your data. Memory stick is not accepted due to VIRUS problems.



**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**FAAS Analysis**

Date:

1	Name	
2	Register No. & Department	
3	Name of College (for external samples)	
4	Email ID Mobile	
5	Metal ions to be analyzed	
6	Number of samples per metal ion	
7	Amount per sample	
8	Approximate concentration of metal ion in each sample (ppm)	
9	Solvent used for dilution	

Signature of the Student	Research Guide
Head of the Department Chemistry, NIT Trichy	Staff In-charge Dr. V. M. Biju

**Note: Blank & standard solutions should be brought by the student.**

**Blank solution: used for dilution.**

**Standard solutions: Solutions of at least four different concentrations of the corresponding metal ions prepared in the solvent used for dilution. The sample concentration should fall in this range.**

Analysis Charge details

<b>S.No.</b>	<b>Analysis type</b>	<b>Academic (INR)</b>	<b>Industries (INR)</b>
<b>1.</b>	<b>Liquid samples</b>	<b>150</b>	<b>250</b>

For any details, Please Contact.

Dr. V.M.Biju

Associate Professor

Faculty-in charge: - UV-visible Spectrophotometer

Department of Chemistry

NIT,Trichy

Email: vmbiju@nitt.edu



National Institute of Technology, Tiruchirappalli-620015  
Department of Chemistry

**Requisition Form for UV-Visible Spectrophotometer Analysis**  
**(External Users)**

Date:

Name:

Position:

Institution/ Organization:

Email ID:

Contact Number:

Number of samples:

Nature of sample: Solid/ Liquid

Air and moisture sensitive: Yes/ No

Sample Code/s:

Solvent to be used in case of Solution Spectrum:

Spectral region to be measured: \_\_\_\_\_ to \_\_\_\_\_ nm.

Signature of the Applicant

Signature of the Guide/ Manager

**Instructions:**

1. Users are requested to submit the filled in form, samples and a new CD for analytical reports to the faculty-in-charge.
2. Sample required is 10ml. solution or 5 - 100 mg in solid state.
3. Sample will not be given back.
4. Mode of Payment- Demand draft in favour of "**The Director, NIT, Trichy**"

For Office use:

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge

**Analysis Charge details**

S.No.	Analysis Type	Price	
		Academic (INR)	Industries (INR)
1.	Absorbance mode (liquid)	200	250
2.	DRS mode (solid samples only)	250	300

For any details, Please Contact.

Dr. V.M.Biju

Associate Professor

Faculty-in charge: - UV-visible Spectrophotometer

Department of Chemistry

NIT,Trichy

Email: vmbiju@nitt.edu





**National Institute of Technology, Tiruchirappalli-620015**  
**Department of Chemistry**

**REQUISITION FOR FAR- MID-FT- IR SPECTROMETER MEASUREMENTS**

Date:

Name :	
Designation :	
Department :	
Institution :	
Email ID & Phone :	
Request for : FAR- MID-FT- IR Spectrometer	
Number of Samples :	Details of Samples :
Nature of Samples :	
[Not meant for radioactive / hygroscopic samples]	
Wavelength range [nm] :	Solvent :
Write a description in 300 words, how the sample is synthesized/ obtained, about the toxicity, Melting point BP, other physical properties etc per sample. Attach separate sheet for the description. Any request for analysis request without description will be rejected.	

Signature of the Candidate

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

Date:

Date:

**Instructions:**

1.  $30 - 400 \text{ cm}^{-1}$  and  $400 - 4000 \text{ cm}^{-1}$  cannot be measured in a single slot.
2. Charges – Internal Samples (Dept. of Chemistry) : Free of Cost  
Internal Samples (NITT): 25% Discount  
External (Academic): Far IR (2000/-) , MID IR (500/-)  
External (Industry): Far IR (4500/-) , MID IR (1500/-)  
  
+ 18% Service tax per sample

3. Charges for the testing should be sent through an advance Demand Draft drawn in favor of “The Director, NIT, Trichy” payable at Trichy.
4. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
5. Users are requested to submit sufficient quantity of samples.
6. Sample with suspended particles are not suitable for analysis. Check the solubility before submission

**For Office use:**

Sample Received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**National Institute of Technology, Tiruchirappalli-620015**

**Department of Energy and Environment  
Testing and Analysis Laboratory  
(An ISO 9001:2008 Certified Laboratory)**

**Testing & Analysis-Application Form**

Name :

Designation :

Affiliation :

Address for communication :

Internal user: \_\_\_\_\_ Educational Institution: \_\_\_\_\_ Govt. R&D laboratory: \_\_\_\_\_ Private Firms: \_\_\_\_\_

Email : \_\_\_\_\_ Phone number : \_\_\_\_\_

Required Analysis : **TGA\*/DSC\*/FTIR/CHNSO/BC/TOC/UV Vis- NIR/UV Vis Spectrometer/TG-IR/Moisture Analyzer**

Temperature range in  $^{\circ}\text{C}$  (DSC and TGA): Heat rate

in  $^{\circ}\text{C}/\text{min}$  (DSC, TGA and TG-IR): Environment

Testing conditions\*\* : (Oxygen/Nitrogen): ppm/percentage (Moisture Analyzer) Blank (UV Vis-NIR):

Wavelength range (UV Vis-NIR):

Reason for analysis :

**Sample Information**

Number of samples :

Sample(s) code :

Nature of the sample(s) : **Organic/Inorganic/Biomass/Composites/ any other (Specify):**

**Solid/Liquid:**

Sample storage conditions if any :

Ensure sample prepared as per guidelines : YES/NO

**\*\*If the testing conditions of the samples differs for each sample, kindly mention those in detail**

**\*For DSC & TGA**

Time required for testing one sample :  $t = \frac{T_{final} - T_{initial}}{\text{Heat rate}}$

Time required for 'n' samples :  $t_{total} = n * t$

Cost for testing 'n' samples :

Analysis report will be delivered only after payment of the fee. All payments should be sent in the form of **Demand Draft** in favour of **The Director, NIT Tiruchirappalli** payable at NIT Tiruchirappalli (SBI Branch Code: **01617**)

**Certification and undertaking by financially responsible person (HOD / Principal / Guide / Managing Director)**

It is to certify that the applicant is a student / employee of our organization.

Name:

Affiliation with seal:

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**Office use**

Sample code	Mass (mg)	Location	Others

Analyzed by :

Approved by :

Date :

**Note:** Upon receiving your report please send your acknowledgement, feedback/complaint to [ceesat.consultancy@gmail.com](mailto:ceesat.consultancy@gmail.com)



**Department of Metallurgical and Materials Engineering  
National Institute of Technology, Tiruchirappalli-620015**

**Form for Testing/ Process/ Analysis/ Service**

**User Details**

Name, Roll No, Programme (B.Tech/Mtech/PhD) of the user:

Name of the user supervisor with email and mobile:

User Department and Institute:

**Test Details**

Nature of the test/Process/Analysis/Service:

Equipment/Instrument to be used:

No of Samples:

**Sample Details:**

Sample material:

Measurement Range:

Any special remarks/precautions regarding the samples:

**Payment Details**

DD No.

Date:

Amount:

**Declaration**

This is to certify that the sample belongs the user and user's supervisor mentioned in this form and the samples are non-toxic/non-inflammable/ non-hazardous

The user and user's supervisor agree to pay the charges prescribed by NIT Trichy as DD in favor of "The Director, NIT Trichy".

**Signatures**

User:

User's supervisor:

Instrument Faculty In-charge:

HoD(For external users):

**For operator's use**

Any remarks:



**Department of Production Engineering  
National Institute Of Technology, Tiruchirappalli-620015**

**LaSET Laboratory Requisition form**

Name :

Name of the Department & Organization :

Mobile Number and E-mail :

Name of the Test/Experiment:

No. of samples :

Description about sample [Material Name/Dimension]:

Demand Draft Details:

**Signature of applicant**

**Signature of In-charge**

**Signature of HoD**



# National Institute of Technology, Tiruchirappalli

## Department of Production Engineering

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### **REQUEST FOR PROTOTYPE DEVELOPMENT USING 3D PRINTER**

**Date:**

1. Name of the applicant:
2. Course: B.Tech/M.Tech/Ph.D
3. Roll No. (For NITT students):
4. Name of the Department & Organisation:
5. Contact phone/mobile and email address:
6. No. of Prototypes to be made:
7. Application of prototype (Design visualization/ Functional testing/ Field testing):

Part model in .stl file format to be mailed to prodrmlab@nitt.edu

**Signature of applicant**

**Signature of Supervisor**

---

### **For Laboratory Purpose**

#### **Engineering parameters for prototype development**

Model material consumption:

Support material consumption:

Build pattern:

Layer thickness:

Cost in INR:

**Signature of Laboratory Incharge**



**Centre of Excellence in Corrosion and Surface Engineering  
(CECASE)  
National Institute of Technology, Tiruchirappalli-620015**



Requisition for use of Laboratory Facilities for Students' Projects / Sponsored Projects / Research  
Projects/ Consultancy Work

S.No: \_\_\_\_\_

Date: \_\_\_\_\_

1. Name of the requestor :
2. Organization/Department :
3. Staff Number /RollNumber :
4. Name of the Consultancy work / Sponsored Project :
5. Facility of the Lab required :
6. Name of the parameter per sample to be investigated :
7. No. of total experiments / Time period required :
8. Proposed Date & Time for use :

**Important Note:**

All the rates specified in the NITT Institute website are for per sample, per parameter only. Decision on exact amount for payment will be made based on overall requirements of the consumer. On payment of the overall charges, the work will be taken up for item .No.7, based on availability of the instrument. The Instrument/Equipment will be operated only by trained project technicians of CECASE. Time slot will be based on priority such as Institute project requirements, etc.

Sample preparation for respective tests should be done by the consumer only as per the specification of the equipment.

For details / clarifications contact: [cecasehod@nitt.edu](mailto:cecasehod@nitt.edu) with a copy to [ofccecaselabs@nitt.edu](mailto:ofccecaselabs@nitt.edu)

Signature of the Requestor	
Signature of the Project guide	
Whether Permission granted or not (Yes / No)	
(If NO), Reason for not granting permission	
(If YES), Date and Time allotted	
Project Technician assigned	

For Office use:                      Date                      :                      Ref. No. Assigned: NITT/CECASE/

Details of entry in CECASE log book (Page No. & Serial No.):

User's Signature with Date:

Signature of the  
faculty coordinator

Signature of the overall faculty coordinator

Signature of Head/CECASE





**Siemens Centre of Excellence in Manufacturing**  
**National Institute of Technology, Tiruchirappalli-620015**

**REQUISITION FORM**

1. Name :
2. Name of the Department & Organization :
3. Mobile Number and E-mail :
4. Name of the Lab intend to be used :
5. Purpose of usage: :  
Training/Project/Consultancy/others
6. No. of hours of usage :
7. Payment Details :

**Signature of applicant**

**Signature of Lab coordinator**

**Head of CoE**

Note: Send an enquiry email to [nittcoe@gmail.com](mailto:nittcoe@gmail.com) before filling S.No 4-7



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Requisition form- New Generation lab**

Date:

1.	Name of the Faculty / Student		
2.	Name & Address of the Institute / Department		
3.	Sample Details (Toxicity, Powder, Solid, Thin film, metal etc.,)		
4.	Name of samples with sample code		
5.	Facility wish to use	FTIR/Raman/UV-VIS/ Cyclic voltammetry / Solar simulator/ Spin coater/Probe sonicator/ Photocatalysis/ C-scan/ Phased array/ Furnace/ Vacuum Oven/Centrifuge/ Hot air oven/other facilities	
5a	Region of interest (like spectral range, frequency, temperature, time, rotation speed )		
6.	Demand Draft Details in the name of “The Director, NIT, Trichy”.	Amount	
		Demand Draft No.	
		Date of payment	
		Name of the Bank	
7.	Contact phone number		
8.	Contact e-mail id		

In all the publications of research work, I shall acknowledge the facility. If any damage caused to my usage I will take care of the cost of damage.

Signature (Student)

I certify that the user is a student/employee of our organization and also that the samples are prepared for his/her research purpose only.

Signature of their Head of Department    Signature (Research Supervisor)

Faculty-in-charge  
New Generation lab of Physics Department, NIT-Trichy



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Liquid Nitrogen requisition form**

Name of the applicant :  
Designation : Student: PhD/ M.Sc/ M.Tech  
Affiliation :  
E-mail :  
Mobile :  
Quantity (Liters)\* :

**Place & Date**

**Signature of the applicant**

Certification and undertaking by financially responsible person (HoD/ Principal/ Guide/ Division Head). Certified that the user is a student / employee of your organization.

**Name and Designation**

**#Signature of Guide/ Head**

Faculty-in-charge  
LN<sub>2</sub> plant NIT-T  
(Signature)

Head  
Department of Physics  
(Signature)

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**For internal use: File No.:**

Operator:  
Comments:

\*Please bring the liquid nitrogen container of relevant capacity  
#Not required for the industrial users



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**VSM – Sample Characterization requisition form**

Name of the applicant :  
Designation : Student: PhD/ M.Sc/ M.Tech  
Affiliation :  
E-mail :  
Mobile :

**Sample details:**

1	2	3	4	5	6	7
S.No.	Sample composition	Solid/semi-solid /liquid	Sample code	Remarks if any	Weight of the sample in mg	Maxfield

*In all the publications of research work with the VSM data provided, I shall acknowledge the facility\*\*.*

**Place & Date**

**Signature of the applicant**

Certification and undertaking by financially responsible person (HoD/ Principal/ Guide/ Division Head). Certified that the user is a student / employee of your organization.

**Name and Designation**

**#Signature of Guide/ Head with date**

Faculty-in-charge VSM  
(Signature)

Head Department of Physics  
(Signature)

---

**NOTE:** Please provide a new CD for collecting your data. Memory stick not accepted due to VIRUS problems.

*\*\*Acknowledgement model: "The authors acknowledge the DST, Government of India for the VSM facility under the FIST programme sanctioned to the Department of Physics, NIT, Tiruchirappalli". Kindly send the publication reference (Journal name/volume number/names of the authors/date of issue of the publiion etc).\* - Not required for Industrial users*

---

*OPERATOR's Name& Signature:*



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**TG/DTA – Sample Characterization requisition form**

Name of the applicant :  
Designation : Student: PhD/ M.Sc/ M.Tech  
Affiliation :  
E-mail :  
Mobile :

**Sample details:**

1	2	3	4	5	6	7
S.No.	Sample composition	Inorganic and unreactive Yes/No	Sample code	Remarks if any	Weight of the sample in mg	Type of gas required and flow rate

*In all the publications of research work with the TG/DTA data provided, I shall acknowledge the facility\*\*.*

**Place & Date**

**Signature of the applicant**

Certification and undertaking by financially responsible person (HoD/ Principal/ Guide/ Division Head). Certified that the user is a student / employee of your organization.

**Name and Designation**

**#Signature of Guide/ Head with date**

Faculty-in-charge /TG/DTA  
(Signature)

Head Department of Physics  
(Signature)

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**NOTE:** Please provide a new CD for collecting your data. Memory stick not accepted due to VIRUS problems.

*\*\*Acknowledgement model: “The authors acknowledge the DST, Government of India for the VSM facility under the FIST programme sanctioned to the Department of Physics, NIT, Tiruchirappalli”. Kindly send the publication reference (Journal name/volume number/names of the authors/date of issue of the publication etc).\** - Not required for Industrial users

---

*OPERATOR's Name& Signature:*



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Hall Measurement System - Requisition form**

Date: \_\_\_\_\_

1.	Name of the Faculty / Student	:
2.	Name & Address of the Institute / Department	:
3.	Film Thickness*	:
4.	Ohmic contact deposited	: Yes/No**
4.	Composition and Toxicity	:
5.	Number of Samples (Five samples at a time)	:
6.	Details of Payment	: Amount Rs. .... DD No. / Transaction No. ....
7.	Contact e-mail Id	:
8.	Contact Phone Number	:

In all the publications of research work with the Hall Measurement System data provided,  
I shall acknowledge the facility

**Signature (Student)**

Certified that the user is a student / employee of our organization. Also certify that the samples are prepared for his research purpose only.

**Name and Signature of Research Guide**

Faculty in-charge

(Dr. M.C. Santhosh Kumar)

\* Exact film thickness should be provided to get proper result.

\*\*Users should deposit appropriate ohmic contacts on four corners of the 10 mm x10 mm or smaller samples, conductive silver paste may not give accurate results.

**NOTE:** Please provide a new CD for collecting your data. Flash memory stick is not accepted



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Spectrofluorometer - Requisition form**

Date: \_\_\_\_\_

1.	<b>Name of the Faculty / Student</b>	:	
2.	<b>Name &amp; Address of the Institute / Department</b>	:	
3.	<b>Excitation wavelength(s)</b>	:	
4.	<b>Scan Range (200 – 850 nm)</b>	:	
5.	<b>Nature of the samples (Powder, Thin film, liquid)</b>	:	
6.	<b>Composition and Toxicity</b>	:	
7.	<b>Number of Sample</b>	:	
8.	<b>Details of Payment</b>	:	Amount Rs. .... DD No. / Transaction No. ....
9.	<b>Contact e-mail Id</b>	:	
10.	<b>Contact Phone Number</b>	:	

In all the publications of research work with the PL data provided, I shall acknowledge the facility

**Signature (Student)**

Certified that the user is a student / employee of our organization. Also certify that the samples are prepared for his research purpose only.

**Name and Signature of Research Guide**

**Faculty in-charge for  
Spectrofluorometer (Dr.  
M.C. Santhosh Kumar)**

**NOTE:** Please provide a new CD for collecting your data. Flash memory stick is not acceptable.



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Uv-vis-NIR Spectrometer - Requisition form**

Date: \_\_\_\_\_

1.	Name of the Faculty / Student	:	
2.	Name & Address of the Institute / Department	:	
3.	Scan Range required (190- 3200 nm)	:	
4.	Measurement requirement		Transmittance/ Reflectance /Absorbance/DRS
5.	Nature of Samples (Powder, Thin film, liquid.)	:	
6.	Composition and Toxicity		
7.	Number of Sample	:	
8.	Details of Payment	:	Amount Rs. .... DD No. / Transaction No. ....
9.	Contact e-mail Id	:	
10.	Contact Phone Number	:	

In all the publications of research work with the Uv-vis-NIR data provided, I shall acknowledge the facility

**Signature (Student)**

Certified that the user is a student / employee of our organization. Also certify that the samples are prepared for his research purpose only.

**Name and Signature of Research Guide**

**Faculty in-charge of Uv-vis-NIR  
spectrometer (Dr. M.C.SanthoshKumar)**

**NOTE:** Please provide a new CD for collecting  
your data. Flash memory stick is not acceptable





**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Raman spectrum requisition form (Only three samples at a time)**

Name of the applicant :  
Designation : Student: PhD/ M.Sc/ M.Tech  
Affiliation :  
E-mail :  
Mobile :  
No of Samples :  
Sample code :  
Sample Nature and composition:  
Spectrum Range :

*In all the publications of research work with the Raman spectrum provided, I shall acknowledge the facility*

**Place & Date**

**Signature of the applicant**

Certified that the user is a student/faculty of our institute. Also certified that the samples are prepared for his/her research purpose.

**Name and Designation**

**#Signature of Guide/ Head with date**

Faculty-in-charge, Micro Raman Spectrometer-  
NITT

Head Department of Physics  
(Signature)

Dr. B. Karthikeyan, Dept. of Physics, NITT  
(Signature)

**NOTE:**

1. Please provide a new CD for collecting your data. Memory stick is not accepted due to VIRUS problems.
2. Samples should have been already confirmed through X-ray diffraction characterization, attach the XRD pattern and Samples should be in dry condition.
3. *Acknowledgment Format: "The authors acknowledge the MHRD, Government of India for the Raman spectrometer facility under the plan fund sanctioned to the Department of Physics, NIT, Tiruchirappalli"*
4. Kindly send the publication reference (Journal name/volume/issue number, pages number/names of the authors/date of issue of the publication etc) to Email: bkarthik@nitt.edu.

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(For internal use)

*Reference No & Date:*

**OPERATOR:**

*Name & Signature:*



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**MR– Sample Characterization requisition form**

The **Magneto Resistance (MR) facility** available in the Advanced Materials lab of Physics Department, NIT-T is extended with the following **terms and conditions**.

1. Charges for MR: Amount in rupees (Excluding of tax)

	<b>Internal Samples</b>	<b>Academic Institutions</b>	<b>R&amp;D Labs</b>	<b>Industries</b>	<b>Small Scale Industries</b>	<b>Others</b>
<b>Magneto resistance analysis</b>	<b>1000</b>	<b>2000</b>	<b>4000</b>	<b>4000</b>	<b>4000</b>	<b>4000</b>

2. The thickness of film or pellet must be in the range of 50 $\mu$ m to 1mm. Maximum magnetic field that can be applied is 0.75T, range of measurable resistance is 10 ohm to 100 G ohm

3. The amount should be paid through Demand Draft in favour of “**The Director NIT Trichy**”

4. The Hard copy of the requisition form along with Demand Draft and Sample should be sent by post to **Dr. J. Hemalatha, Professor, Department of Physics, National Institute of Technology, Tiruchirappalli-15, Tamilnadu.**

5. Results will be sent to the E-mail address mentioned in application form within 15 days of receipt of payment, based on the number of samples in the queue.

6. The amount paid will not be refunded on any circumstances

7. If the results are published then kindly send the publication reference (Journal name/volume/issue number, pages number/names of the authors/date of issue of the publication etc) to **Email: [afmnittphy@gmail.com](mailto:afmnittphy@gmail.com)**

8. For queries regarding MR analysis, contact the concerned person through phone 0431-2503608 or

0431-2503621 or by writing to the following Email: [afmnittphy@gmail.com](mailto:afmnittphy@gmail.com)



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**MR– Sample Characterization requisition form**

Name of the applicant : \_\_\_\_\_

Designation : Student: Ph.D./M.Sc./M.Tech/M.Phil

Affiliation :

Email : Phone number:

Magnetic Sample Type (**must fill**): Sample Code:

(example: Ferro/antiferro/ferri/dia/para)

Sample Nature (**must fill**): No.of samples:

(example: Conducting/Non-Conducting/Corrosive/Non-Corrosive)

Max. Magnetic field :

**Payment Details** :

**DD. NO.** ..... , **Date** ..... , **Amount** ..... , **Bank.** .....

***Declaration:***

In all the publications of research work with the MR data provided, I shall acknowledge the facility.  
Acknowledge model: **“The authors acknowledge the, Department of Science and Technology (DST), Government of India for the financial support under the SERB project (SR/FTP/PS-114/2010) sanctioned to Dr. J. Hemalatha, Department of Physics, NIT, Tiruchirappalli”**

**Place & Date**

**Signature of the applicant**

Certified that the user is a student/faculty of our institute. Also certified that the samples are prepared for his/her research purpose.

**Name and Designation**

**#Signature of Guide/ Head with date**

Faculty-in-charge, MR set up-NIT-T  
(Signature)

Head Department of Physics  
(Signature)

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**FOR INTERNAL USE**

**Reference No & Date:**

**Operator:**

**Comments:**

Faculty-in-charge, MR-NIT-T



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Nd:YAG Laser for Materials Processing**

The **Nd:YAG Laser facility** available in the SIF lab - Physics Department, NIT-T is extended to the institutions other than NIT-Trichy with the following **terms and conditions**.

**1. Charges for availing Nd:YAG Laser facility (Including service tax 14.5%)**

<b>Equipment</b>	<b>Educational Institutions</b>	<b>R&amp;D Lab</b>	<b>Industries</b>
Nd:YAG Laser for Materials Processing	573	5725	11450

- 2. Samples should be in dry condition.** The size of metal sample may be size 10 cm × 10 cm.
- The amount should be paid through Demand Draft in favour of “**The Director NIT Trichy**”
- The Hard copy of the requisition form along with Demand Draft and Sample should be submitted

to **Dr. D.Sastikumar, Professor of Physics, National Institute of Technology, Tiruchirappalli-620 015, Tamil nadu.**

- The amount paid will not be refunded on any circumstances
- If the results are published, then kindly send the publication details (Journal name/volume/issue number, pages number/names of the authors/date of issue of the publication etc) to [sasti@nitt.edu](mailto:sasti@nitt.edu)
- Contacts: Phone:0431-2503604 or [sasti@nitt.edu](mailto:sasti@nitt.edu)



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Nd:YAG Laser for Materials Processing**

**Requisition form - Other Institutions**

Name of the applicant :  
Designation : Student: Ph.D./M.Sc./M.Tech/M.Phil  
Affiliation :

Email : Phone number:

Sample Nature :

**Payment Details** :

**DD.NO.** ..... , **Date** ..... , **Amount** ..... , **Bank.** .....

***Declaration:***

*I shall acknowledge the Laser Facility in the publication as “The authors acknowledge the MHRD, Government of India for the Laser Facility under the plan fund sanctioned to the Department of Physics, NIT, Tiruchirappalli”*

**Place & Date**

**Signature of the applicant**

Certified that the user is a student/faculty of our institute. Also certified that the samples are prepared for his/her research purpose.

**Name and Designation**

**#Signature of Guide/ Head with date**

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**FOR INTERNAL USE**

***Reference No & Date:***

**Operator:**

**Comments:**

Faculty-in-charge, MR-NIT-T

Faculty-in-charge, Laser Facility - NITT  
(Signature)

Head Department of Physics  
(Signature)



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**INFRARED THERMOGRAPHY CAMERA**

The **Infrared Thermography Camera** facility available in the SIF lab - Physics Department, NIT-T is extended to the institutions other than NIT-Trichy with the following **terms and conditions**

1. **Charges for availing Infrared Thermography Camera facility** (Including service tax 14.5%)

<b>Equipment</b>	<b>Educational Institutions</b>	<b>R&amp;D Lab</b>	<b>Industries</b>
INFRARED THERMOGRAPHY CAMERA	573	5725	11450

2. The sizes of the sample may be of size 10 cm ×10 cm.
3. The amount should be paid through Demand Draft in favour of “**The Director NIT Trichy**”
4. The Hard copy of the requisition form along with Demand Draft and Sample should be submitted to **Dr. D.Sastikumar, Professor of Physics, National Institute of Technology, Tiruchirappalli-620 015, Tamil nadu.**
5. The amount paid will not be refunded on any circumstances
6. If the results are published, then kindly send the publication details (Journal name/volume/issue number, pages number/names of the authors/date of issue of the publication etc) to [sasti@nitt.edu](mailto:sasti@nitt.edu)
7. Contacts: Phone: 0431-2503604 or [sasti@nitt.edu](mailto:sasti@nitt.edu)



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**INFRARED THERMOGRAPHY CAMERA**

Name of the applicant :  
Designation : Student: Ph.D./M.Sc./M.Tech/M.Phil  
Affiliation :  
Email : Phone number:  
  
Sample Nature (**must fill**): No. of samples:

**Payment Details :**

**EE. NO.** ....., **Date** ....., **Amount** ....., **Bank.** .....

***Declaration:***

I shall acknowledge the Infrared Thermography Camera in the publication as “The authors acknowledge the MHRD, Government of India for the Infrared Thermography Camera under the plan fund sanctioned to the Department of Physics, NIT, Tiruchirappalli”

**Place & Date**

**Signature of the applicant**

Certified that the user is a student/faculty of our institute. Also certified that the samples are prepared for his/her research purpose.

**Name and Designation**

**#Signature of Guide/ Head with date**

---

**FOR INTERNAL USE**

**Reference No & Date:**

**Operator:**

**Comments:**

Faculty-in-charge, Laser Facility - NITT  
(Signature)

Head Department of Physics  
(Signature)



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Requisition form for Transmission electron microscope usage**

Name of the applicant :  
Designation : Student: Ph.D/M.Sc/M.Tech/  
Affiliation :  
E-mail: Mobile:

**Sample details**

Sample type : Solid/Powder/thin film Sample code :  
Sample composition :  
Sample nature : Magnetic/non-magnetic/Organic/Organic-coated

*In all the publications of research work with the TEM data provided, I shall acknowledge the facility.*

**Place & Date**

**Signature of the applicant**

Certified that the user is a student/faculty of our institute. Also certified that the samples are prepared for his/her research purpose.

**Name and Designation**

**#Signature of Guide/ Head with date**

**Faculty in-charge**

Dr. R.Justin Joseyphus

Dr.A.Chandra Bose

**NOTE:** Please provide a new CD for collecting your data. Memory stick not accepted due to VIRUS problems. Kindly send the publication reference (Journal name/volume number/names of the authors/date of issue of the publication etc).

**Usage Charge Payment Details**

Deposit Amount:  
Details of Slip:  
Signature of Depositor:

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**FOR INTERNAL USE**

*Reference No & Date:*

Operator:

Comments:



**Instructions:**

- I Slot will be given as per queue.
- II Please bring the basic analysis details of the sample like XRD, SEM etc..
- III Users have to prepare their samples themselves.
- IV Users should pay the charges in advance before the characterization is carried out through bank challan only (DD/cheques not accepted).
- V User has to submit the sample, requisition form, challan and inform the SSsample details in person.
- VI. Refund will not be available if there is a delay.
- VII. Analysis charges per sample

Users	Amount*
Academic	Rs.5,000/ per sample
Non-Academic	Rs.10,000/ per sample

\* Sample preparation extra

- VIII. For clarifications contact Dr A.Chandra Bose/Dr. R. Justin Joseyphus, Department of Physics.



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**AFM-Sample Characterization requisition form for other Institutions**  
**(Maximum of 5 Samples per form)**

Name of the applicant :

Designation : Student:  
Ph.D/M.Sc/M.Tech/M.Phil

Affiliation :

E-mail: Mobile:

**Sample details**

Sample type(Must Fill) : Sample code :

(Example:  $\text{BiFe}_2\text{O}_3$ ) :

Sample nature :

(Example: Conducting/Non-Conducting/Magnetic/Non-Magnetic/Corrosive/Non-Corrosive)

AFM Mode : Contact / Non-contact

Payment Details :

DD.No....., Date ..... Amount..... Bank.....

**Declaration:**

In all the publications of research work with the AFM data provided, I shall acknowledge the facility  
Acknowledge model: "The authors acknowledge the MHRD, Government of India for the AFM facility  
under the plan fund sanctioned to the Department of Physics, NIT, Tiruchirappalli:

**Place & Date**

**Signature of the applicant**

**Certification and undertaking by Financially Responsible person (HoD/Principi/ Guide/Division Head). Certified that the user is a student / employee of our organization.**

**Name and Designation**

**#Signature of Guide/ Head with date**

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**FOR INTERNAL USE**

*Reference No & Date:*

Operator:

Comments:

Faculty-in-charge, AFM-NITT

HEAD, DEPT. OF PHYSICS



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**REQUISITION FOR CV MEASUREMENTS**

Name :

Designation :

Department :

Institution :

Email ID & Phone :

Request for : CV/GCD/EIS/any other type

Sample Nature:

Number of Samples :

Details of Samples :

Frequency Range: [Hz] :

Type of Measurement: Three electrode/two electrode

Type of Electrolyte:

Type of Substrate:

Signature of the Candidate

Signature of the Supervisor/Head of the

Date:

Department/ Head of the Institution

Date:

**Instructions:**

1. Charges for Internal and external samples are charged based on type of Institute/industry/etc. Service tax is also applicable Please see the website.
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of  
“The Director, NIT, Trichy” payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.

**For Office use:**

Sample received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**REQUISITION FOR IMPEDANCE MEASUREMENTS**

Name :

Designation :

Department :

Institution :

Email ID & Phone :

Request for :

Sample Nature:

Number of Samples :

Details of Samples :

Frequency Range: [Hz] :

Type of Measurement: RT/High TEMP

Temperature range:

Signature of the Candidate

Signature of the Supervisor/Head of the  
Department/ Head of the Institution

Date:

Date:

**Instructions:**

1. Charges for Internal and External samples are charged based on type of Institute/industry/etc. Service tax is also applicable. Please see the website.
2. Charges for the testing should be sent through an advance Demand Draft drawn in favor of  
“The Director, NIT, Trichy” payable at Trichy.
3. Users are requested to submit the Filled in form, DD, samples and a new CD for Analytical reports to the faculty-in-charge.
4. Users are requested to submit sufficient quantity of samples.

**For Office use:**

Sample received on:

Payment details:

Time allotted for analysis:

Remarks if any:

Signature of Faculty-In-charge



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Multiferroic tester– Sample Characterization requisition form**

Name of the applicant :  
Designation : Student: Ph.D./M.Sc./M.Tech/M.Phil  
Affiliation :  
**E-mail:** : **Mobile:**

**Sample details**

Number of samples :  
Sample type : Pellets / Thin films **Sample code** :  
Sample composition :  
(example  $\text{BiFeO}_3$ )  
Sample nature :

In all the publications of research work with the data provided, I shall acknowledge the facility.

**Place & Date**

**Signature of the applicant**

Certification and undertaking by Financially Responsible person (HOD / Principal / Guide / Division Head). Certified that the user is a student / employee of our organization.

**Name and Designation**

**Signature of Guide/ Head with date**

Faculty-in-charge, MR set up-NIT-T  
(Signature)

Head Department of Physics  
(Signature)

**NOTE:** Please provide a new CD for collecting your data.

*\*Acknowledge model: "The authors acknowledge the MHRD, Government of India for the Multiferroic tester facility under the plan fund sanctioned to the Department of Physics, NIT, Tiruchirappalli" Kindly send the publication reference (Journal name/volume number/names of the authors/date of issue of the publication etc).*

**FOR INTERNAL USE**

**Reference No & Date:**

**Operator:**

**Comments:**

Faculty-in-charge, MR-NIT-T



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Instructions for Micro Raman Spectrometer users**

The **Raman Spectrometer** facility available in the SIF lab of Physics Department, NIT-T is extended to students of NITT, other institutions, R&D labs and industries with the following **terms and conditions**.

**1. Charges for Raman spectrum measurement** (Including service tax 14.5%)

<b>NITT users</b>	<b>Other Academic Inst.</b>	<b>R &amp; D Labs</b>	<b>Industries</b>
<b>Rs. 572 per sample</b>	<b>Rs. 1145 per sample</b>	<b>Rs. 2290 per sample</b>	<b>Rs. 3435 per sample</b>

- 2. Samples should be in dry condition.**
- 3. Samples should have been already confirmed with X-Ray diffraction characterization.**
- 4. The amount should be paid through Demand Draft in favour of “The Director NIT Trichy”**
- 5. The Hard copy of the requisition form along with Demand Draft and Sample should be sent/ submitted to faculty in-charge**

**Dr. B. Karthikeyan, Associate Professor, Department of Physics,  
National Institute of Technology, Tiruchirappalli-15, Tamil Nadu.**

- 5. Results will be sent to the E-mail address mentioned in application form within 2-3 weeks of receipt of payment, based on the number of samples in the queue.**
- 6. The amount paid will not be refunded on any circumstances**
- 7. If the results are published, then kindly send the publication reference (Journal name/volume/issue number, pages number/names of the authors/date of issue of the publication etc) to **Email: bkarthik@nitt.edu****
- 8. For queries regarding Raman spectrum analysis, contact the concerned person through phone 0431-2503612 or by writing to the following email: bkarthik@nitt.edu**



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Raman Spectrum requisition form (Maximum of 3 samples per form)**

Name of the applicant :  
Designation : Student: Ph.D./M.Sc./M.Tech/M.Phil  
Affiliation :  
Email : Phone number:  
Sample code :  
Sample composition :  
Sample Nature  
(toxic/non-toxic) :  
Spectrum Range :  
Payment Details :

DD.NO. ...., Date ....., Amount ....., Bank. ....

***Declaration:***

*In all the publications of research work with the Raman spectrum provided, I shall acknowledge the facility. Acknowledge model: "The authors acknowledge the MHRD, Government of India for the Raman spectrometer facility under the plan fund sanctioned to the Department of Physics, NIT, Tiruchirappalli"*

**Place & Date**

**Signature of the applicant**

Certified that the user is a student/faculty of our institute. Also certified that the samples are prepared for his/her research purpose.

**Name and Designation**

**Signature of Guide/ Head with date**

---

**FOR INTERNAL USE**

***Reference No & Date:***

**Operator:**

**Comments:**

Faculty-in-charge, MR-NIT-T

**Dr. B. Karthikeyan, Dept. of Physics**

Faculty-in-charge, Micro Raman spectrometer-  
NITT

**Head Department of Physics**



**Instructions for Time resolved fluorescence spectrometer users**

The **Time resolved fluorescence spectrometer** facility available in the SIF lab of Physics Department, NIT-T is extended to students of NITT, other institutions, R&D labs and industries with the following **terms and conditions**.

**1. Charges for Time resolved fluorescence spectrum measurement** (Including service tax 14.5%)

<b>NITT users</b>	<b>Other Academic Inst.</b>	<b>R &amp; D Labs</b>	<b>Industries</b>
<b>Rs. 1717 per sample</b>	<b>Rs. 1718 per sample</b>	<b>Rs. 2290 per sample</b>	<b>Rs. 3435 per sample</b>

**6. Only liquid samples (minimum of 4 ml) with high fluorescence quantum yield can be measured.**

**7. Samples should have been already characterized with steady state fluorescence spectroscopy and quantum yield should have been calculated.**

8. Estimated life time should be in the order between nanoseconds and picoseconds.

9. The amount should be paid through Demand Draft in favour of **“The Director NIT Trichy”**

10. The Hard copy of the requisition form along with Demand Draft and Sample should be sent/ submitted to faculty in-charge

**Dr. B. Karthikeyan, Associate Professor, Department of Physics,  
National Institute of Technology, Tiruchirappalli-15, Tamil Nadu.**

9. Results will be sent to the E-mail address mentioned in application form within 2-3 weeks of receipt of payment, based on the number of samples in the queue.

10. The amount paid will not be refunded on any circumstances

11. If the results are published, then kindly send the publication reference (Journal name/volume/issue number, pages number/names of the authors/date of issue of the publication etc) to **Email: bkarthik@nitt.edu**

12. For queries regarding Time resolved fluorescence spectrum analysis, contact the concerned person through phone 0431-2503612 or by writing to the following email: bkarthik@nitt.edu





**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Time resolved fluorescence Spectrum requisition form**

(Maximum of 2 samples per form)

Name of the applicant :  
Designation : Student: Ph.D./M.Sc./M.Tech/M.Phil  
Affiliation :  
Email : Phone number:  
Sample code :  
Sample composition :  
Sample Nature :  
(toxic/non-toxic)  
Excitation wavelength: Emission Wavelength: Quantum yield:

**Payment Details :**

**DD.NO. ...., Date ....., Amount ....., Bank. ....**

***Declaration:***

*In all the publications of research work with the Time resolved fluorescence spectrum provided, I shall acknowledge the facility. Acknowledge model: "The authors acknowledge the MHRD, Government of India for the Time resolved fluorescence spectrometer facility under the plan fund sanctioned to the Department of Physics, NIT, Tiruchirappalli"*

**Place & Date**

**Signature of the applicant**

Certified that the user is a student/faculty of our institute. Also certified that the samples are prepared for his/her research purpose.

**Name and Designation**

**Signature of Guide/ Head with date**

---

**FOR INTERNAL USE**

**Reference No & Date:**

**Operator:**

**Comments:**

**Faculty-in-charge, MR-NIT-T**

**Faculty-in-charge, Time resolved  
spectrometer-NITT (Dr. B. Karthikeyan, Dept.  
of Physics) NITT**

**Head Department of Physics**



**Instructions for Second Harmonic Generation (SHG) measurement requesters**

The **SHG** measurements facility available in the Nanophotonics laboratory, Dept. of physics, NIT- is extended to students of NITT, other institutions, R&D labs and industries with the following **terms and conditions**.

**1. Charges for SHG measurement (Including service tax 14.5%)**

<b>NITT Users</b>	<b>Other Academic Inst.</b>	<b>R &amp; D Labs</b>	<b>Industries</b>
<b>Rs. 2290 per sample</b>	<b>Rs. 3435 per sample</b>	<b>Rs. 5725 per sample</b>	<b>Rs. 5725 per sample</b>

- 2. Solid crystal samples can be measured.**
- 3. The amount should be paid through Demand Draft in favour of “The Director NIT Trichy”**
- 4. The Hard copy of the requisition form along with Demand Draft and Sample should be sent/ submitted to faculty in-charge**

**Dr. B. Karthikeyan, Associate Professor, Department of Physics,  
National Institute of Technology, Tiruchirappalli-15, Tamil Nadu.**

- 5. Results will be sent to the E-mail address mentioned in application form within 2-3 weeks of receipt of payment, based on the number of samples in the queue.**
- 6. The amount paid will not be refunded on any circumstances**
- 7. If the results are published, then kindly send the publication reference (Journal name/volume/issue number, pages number/names of the authors/date of issue of the publication etc) to Email: [bkarthik@nitt.edu](mailto:bkarthik@nitt.edu)**
- 8. For queries regarding SHG measurements, contact the concerned person through phone 0431-2503612 or by writing to the following email:  
[bkarthik@nitt.edu](mailto:bkarthik@nitt.edu)**



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Second Harmonic Generation measurement requisition form**

(Maximum of 2 samples per form)

Name of the applicant :  
Designation : Student: Ph.D./M.Sc./M.Tech/M.Phil  
Affiliation :  
Email : Phone number:  
Sample code :  
Sample composition :  
Sample Nature :  
(toxic/non-toxic) :  
**Payment Details** :  
DD.NO. ...., Date ....., Amount ....., Bank .....

***Declaration:***

*In all the publications of research work with the SHG data provided, I shall acknowledge the facility.  
Acknowledge model: "The authors acknowledge Dr. B. Karthikeyan, Nanophotonics laboratory,  
Department of Physics, NIT, Tiruchirappalli for extending the SHG measurement facility"*

**Place & Date**

**Signature of the applicant**

Certified that the user is a student/faculty of our institute. Also certified that the samples are prepared for his/her research purpose.

**Name and Designation**

**Signature of Guide/ Head with date**

---

**FOR INTERNAL USE**

*Reference No & Date:*

Operator:

Comments:

Faculty-in-charge, MR-NIT-T

**Faculty-in-charge, SHG measurement**  
**(Dr. B. Karthikeyan, Dept. of Physics, NITT)**

**Head Department of Physics**



**Fluorescence spectrum measurement requesters**

The Fluorescence spectrometer facility available in the Nanophotonics laboratory, Dept. of physics, NITT is extended to students of NITT, other institutions, R&D labs and industries with the following **terms and conditions.**

**1. Charges for Fluorescence spectrum measurement (Including service tax 14.5%)**

<b>NITT Users</b>	<b>Other Academic Inst.</b>	<b>R &amp; D Labs</b>	<b>Industries</b>
<b>Rs. 572 per sample</b>	<b>Rs. 1145 per sample</b>	<b>Rs. 1145 per sample</b>	<b>Rs. 1145 per sample</b>

**2. Only liquid samples can be measured.**

3. The amount should be paid through Demand Draft in favour of **“The Director NIT Trichy”**

4. The Hard copy of the requisition form along with Demand Draft and Sample should be sent/ submitted to faculty in-charge

**Dr. B. Karthikeyan, Associate Professor, Department of Physics,  
National Institute of Technology, Tiruchirappalli-15, Tamil Nadu.**

5. Results will be sent to the E-mail address mentioned in application form within 2-3 weeks of receipt of payment, based on the number of samples in the queue.

6. The amount paid will not be refunded on any circumstances

7. If the results are published, then kindly send the publication reference (Journal name/volume/issue number, pages number/names of the authors/date of issue of the publication etc) to **Email: bkarthik@nitt.edu**

8. For queries regarding SHG measurements, contact the concerned person through phone 0431-2503612 or by writing to the following email:  
bkarthik@nitt.edu



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Fluorescence spectrum measurement requisition form**

(Maximum of 2 samples per form)

Name of the applicant :  
Designation : Student: Ph.D./M.Sc./M.Tech/M.Phil  
Affiliation :  
Email : Phone number:  
Sample code :  
Sample composition :  
Sample Nature :  
(toxic/non-toxic)  
Excitation wavelength: Emission spectrum range:

**Payment Details :**

**DD.NO. ...., Date ....., Amount ....., Bank. ....**

***Declaration:***

*In all the publications of research work with the Fluorescence spectrum data provided, I shall acknowledge the facility. Acknowledge model: "The authors acknowledge Dr. B. Karthikeyan, Nanophotonics laboratory, Department of Physics, NIT, Tiruchirappalli for extending the fluorescence measurement facility"*

**Place & Date**

**Signature of the applicant**

Certified that the user is a student/faculty of our institute. Also certified that the samples are prepared for his/her research purpose.

**Name and Designation**

**Signature of Guide/ Head with date**

---

**FOR INTERNAL USE**

***Reference No & Date:***

**Operator:**

**Comments:**

**Faculty-in-charge, MR-NIT-T**

**Faculty-in-charge, Fluorescence measurement**  
**(Dr. B. Karthikeyan, Dept. of Physics, NITT)**

**Head Department of Physics**



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**I-V/Dielectric/Diode Laser Studies - Requisition form**

Date: \_\_\_\_\_

1. Name of the Faculty / Student :
2. Name & Address of the Institute / :  
Department
3. Sample Details (Crystal/Thin film) &:  
parameters (I & V/frequency-range)
4. Number of Samples :  
(Max. of 3 Samples)
5. Sample composition :  
(example H<sub>2</sub>O, C<sub>2</sub>H<sub>5</sub>OH)
6. Contact e-mail id :
7. Contact Phone Number :

In all the publications of research work with the data provided, I shall acknowledge the facility.

**Signature of Student/user with date**

Certified that the user is a student/employee of \_\_\_\_\_ organization.

Also, certify that the samples are prepared for his/her research purpose.

**Signature of Guide with name and date**

**Dr. S. Manivannan**

(Faculty-in-charge)

Reference No. & Date:

**COMMENTS:**

**Name and Signature of Operator**

**NOTE:** Please bring a new CD. Pen drives will not be accepted.



**Department of Physics**  
**National Institute of Technology, Tiruchirappalli-620015**

**Low Temperature Photoluminescence (LTPL)- Requisition form**

Date: \_\_\_\_\_

1.	Name of the Faculty / Student				
2.	Name & Address of the Institute / Department				
3.	Sample Details (Thin film/ metal with 1cm x1cm dimension)				
4.	No of samples with sample code				
5.	Tariff per sample including GST (Tick Appropriate column)	Internal		RTPL: Rs.1770/-	
				LTPL: Rs. 2360/-	
		External	R & D labs and other Institute	RTPL: Rs.2360/-	LTPL: Rs.3540/-
			Industries	RTPL: Rs.3540/-	LTPL: Rs.4720/-
6.	Demand Draft Details in the name (favour of) of “The Director, NIT, Trichy”.	Amount			
		Demand Draft No.			
		Date of payment			
		Name of the Bank			
7.	Contact phone number				
8.	Contact e-mail id				

In all the publications of research work, I shall acknowledge the facility. I certify that the user is a student/employee of our organization and also that the samples are prepared for his/her research purpose only.

Signature (Student)

Signature of the Supervisor with seal

Signature of Head of the Department (Physics, NIT-T)

Faculty-in-charge of the LTPL, NIT-T



**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Ultrasonic Nano fluid Preparation – Requisition Form**

1.	Name of the applicant	
2.	Designation	
3.	Student (B.Tech/M.Tech/PhD)	
4.	Name of the Supervisor	
5.	Affiliation	
6.	No. of Samples	
7.	Description of Sample	
8.	Details of DD	DD Number : Amount:                      Date :
9.	E-mail	
10.	Mobile number	
11.	Address for Communication	

**Signature of Applicant**

**Signature of Supervisor**

**Faculty in – Charge of the Equipment**

(Dr. S. Suresh, Associate Professor, Dept. of Mechanical Engineering)

**Note:**

1. Charges applicable (Rs.500 for external user & Rs.300 for Internal per liter) per sample.
2. Sample will be delivered only after payment of the fee.
3. All payments should be sent in the form of DD in favor of “The Director, NIT Tiruchirappalli” payable at “NIT Tiruchirappalli” (SBI Branch Code: 01617).





**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Contact Angle Measurement – Requisition Form**

1.	Name of the applicant	
2.	Designation	
3.	Student (B.Tech/M.Tech/PhD)	
4.	Name of the Supervisor	
5.	Affiliation	
6.	No. of Samples	
7.	Description of Sample	( <b>Note:</b> Sample should be flat or should be given on a flat base)
8.	Details of DD	DD Number : Amount:                      Date :
9.	E-mail	
10.	Mobile number	
11.	Address for Communication	

**Signature of Applicant**

**Signature of Supervisor**

**Faculty in – Charge of the Equipment**

(Dr. S. Suresh, Associate Professor, Dept. of Mechanical Engineering)

**Note:**

1. Charges applicable (Rs.250 for external user & Rs.150 for Internal) per sample.
2. Measurement data will be delivered only after payment of the fee.
3. All payments should be sent in the form of DD in favor of “The Director, NIT Tiruchirappalli” payable at “NIT Tiruchirappalli” (SBI Branch Code: 01617).



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**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Laser Flash Apparatus – Requisition Form**

1.	Name of the applicant	
2.	Designation	
3.	Student (B.Tech/M.Tech/PhD)	
4.	Name of the Supervisor	
5.	Affiliation	
6.	No. of Samples	
7.	Description of Sample	( <b>Note:</b> Sample should be solid 25.4 mm Diameter, 2-3 mm Thickness)
8.	Details of DD	DD Number : Amount:                      Date :
9.	E-mail	
10.	Mobile number	
11.	Address for Communication	

**Signature of Applicant**

**Signature of Supervisor**

**Faculty in – Charge of the Equipment**

(Dr. S. Suresh, Associate Professor, Dept. of Mechanical Engineering)

**Note:**

1. Charges applicable (Rs.1700 for external user & Rs.1500 for Internal) per sample.
2. Measurement data will be delivered only after payment of the fee.
3. All payments should be sent in the form of DD in favor of “The Director, NIT Tiruchirappalli” payable at “NIT Tiruchirappalli” (SBI Branch Code: 01617).



**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Liquid Thermal conductivity – Requisition Form**

1.	Name of the applicant	
2.	Designation	
3.	Student (B.Tech/M.Tech/PhD)	
4.	Name of the Supervisor	
5.	Affiliation	
6.	No. of Samples	
7.	Description of Sample	(Note: Liquid Minimum 50ml in centrifuge tube )
8.	Details of DD	DD Number : Amount:                      Date :
9.	E-mail	
10.	Mobile number	
11.	Address for Communication	

**Signature of Applicant**

**Signature of Supervisor**

**Faculty in – Charge of the Equipment**

(Dr. S. Suresh, Associate Professor, Dept. of Mechanical Engineering)

**Note:**

1. Charges applicable (Rs.500 for external user & Rs.250 for Internal) per sample.
2. Measurement data will be delivered only after payment of the fee.
3. All payments should be sent in the form of DD in favor of “The Director, NIT Tiruchirappalli” payable at “NIT Tiruchirappalli” (SBI Branch Code: 01617).



**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Materials Joining and Mechanical Testing**

**Requisition form for Tensile / Bend / Flexural / Compression / Wire-cut EDM / Welding Trials /  
Hardness / Spark EDM / Plasma Cutting / Laser cutting**

Name : Date:

Designation :

Department :

Name of University/Institution/Industry :

Email ID & Contact Number :

Type of Test :

Number of Samples : (Returnable/Non  
Returnable)

Details of samples (Metals/Composites/Plastic) :

Total Amount :

Payment Mode : DD/Cash/Online transfer (NEFT/QKT)

If DD, Name of the Bank/ DD number & Date :

**Signature of the Guide/Head**

**Signature of the User**

**Note: Please provide drawings for specimen preparation, if available.**

**FOR OFFICE USE**

Name of the Operator:

Date Completed:

Signature of the Operator:

Forwarded by:



**Industrial Safety Laboratory**  
**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Requisition form for Noise level measurement**

Date: .....

1. Name:
2. Designation:
3. Email Address:
4. Phone :
5. Department (in case of NITT)/ Address (Outside NITT):

**Sample and Measurement details**

6. Type of industrial process/Noise to be monitored:
7. Purpose of sampling:
8. No: of samplings required:

SI No	Location of measurement (Equipment name/ Area name)	No of samples

**Signature**

<b>Student/Initiator</b>	<b>Guide (for NITT student)</b>	<b>Head of Department</b>



**Industrial Safety Laboratory**  
**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Requisition form for Impact sensitivity**

Date: .....

1. Name:
2. Designation:
3. Email Address:
4. Phone :
5. Department (in case of NITT)/ Address (Outside NITT):

**Sample details**

6. Purpose of sampling:
7. No of samplings required:

Sample No	Chemical compound details	Special instruction

**Signature**

<b>Student/Initiator</b>	<b>Guide (for NITT student)</b>	<b>Head of Department</b>



**Industrial Safety Laboratory**  
**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Requisition form for Friction sensitivity**

**Date:**

- 1. Name:**
- 2. Designation:**
- 3. Email Address:**
- 4. Phone :**
- 5. Department (in case of NITT)/ Address (Outside NITT):**

**Sample details**

- 6. Purpose of sampling:**
- 7. No of samplings required:**

Sample No	Chemical compound details	Special instruction

**Signature**

<b>Student/Initiator</b>	<b>Guide (for NITT student)</b>	<b>Head of Department</b>



**Requisition form for Particulate measurement**

Date: .....

1. Name:
2. Designation:
3. Email Address:
4. Phone :
5. Department (in case of NITT)/ Address (Outside NITT):

**Sample and Measurement details**

6. Type of industrial process/ emissions to be monitored:
7. Purpose of sampling:
8. No: of samplings required (Breathing zone concentration of total emission/  
Particulate matter analysis):

Sl No	Sampling time required	BZC	Particulate matter analysis

**Signature**

<b>Student/Initiator</b>	<b>Guide (for NITT student)</b>	<b>Head of Department</b>





**Industrial Safety Laboratory**  
**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Metrology Lab : Pressure gauge calibration request form**

Date: .....

REQUEST NO: \_\_\_\_\_ (For office use)

<b>REQUESTED BY :</b>
CUSTOMER'S NAME : _____
TELEPHONE : _____
REMARKS : _____

<b>EQUIPMENT DETAILS :</b>	
MANUFACTURER: _____	QUANTITY: _____
SERIAL NO. : _____	MODEL: _____
ACCURACY REQUIREMENT: _____	CAPACITY: _____
DATE OF LAST CALIBRATION: _____	READABILITY.: _____
PREVIOUS CALIBRATION REQ. NO.: _____	REQUIRED DATE OF CALIBRATION : _____
CALIBRATION METHOD: _____	PAYMENT DETAILS: _____ _____
CUSTOMER'S SIGNATURE: _____	DATE: _____

<b>FOR OFFICIAL USE ONLY :</b>		
REQUEST ACCEPTED BY: _____	SIGNATURE: _____	DATE: _____
ITEM INSPECTED & ACCEPTED BY : _____		
SIGNATURE: _____ DATE: _____		
EXPECTED DATE OF CALIBRATION: _____		
EXPECTED DATE OF COMPLETION: _____		
TEST I.D.: _____	LAB. I.D.: _____	



**Industrial Safety Laboratory**  
**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Fuels Laboratory - Requisition Form for Consultancy Work**

Date:

**User Information**

Name :  
Designation :  
Organization / College Name :  
Address :

Contact Number :  
Email Id :

**Testing Details**

Test Required :  
Type of sample :  
Sample(s) code :  
Sample Specifications :  
Number of samples to be tested :  
Category : Industry / Research scholar / Students

**Please Note:**

1. It is mandatory that a prior confirmation is obtained from the Lab In-Charge for the feasibility. Kindly make sure that the requested date is a working day.
2. Certification and undertaking by financially responsible person (HOD / Principal / Guide / Managing Director): I agree to pay the charges for this analysis and certified that the user is a student / employee of our organization.

**Payment Mode:**

Analysis report will be delivered only after payment of the fee. All payments should be sent in the form of DD in favor of **The Director, NIT Trichy** payable at NIT Tiruchirappalli (**SBI Branch Code: 01617**).

Signature with date & seal

(HOD / Principal / Guide / Managing Director)

\*\*\*\*\***For Office Use**\*\*\*\*\*

Date of receipt of Sample :  
Scheduled date of sample analysis :  
Researcher in-charge for sample analysis :  
DD Number: Date:

Signature of Lab-In charge



**Industrial Safety Laboratory**  
**Department of Mechanical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Thermal Engineering Laboratory - Requisition Form for Consultancy Work**

Date:

**User Information**

Name :  
Designation :  
Organization / College Name :  
Address :

Contact Number :  
Email Id :

**Testing Details**

Test Required :  
Type of sample :  
Sample(s) code :  
Sample Specifications :  
Number of samples to be tested :  
Category : Industry / Research scholar / Students

**Please Note:**

3. It is mandatory that a prior confirmation is obtained from the Lab In-Charge for the feasibility. Kindly make sure that the requested date is a working day.
4. Certification and undertaking by financially responsible person (HOD / Principal / Guide / Managing Director): I agree to pay the charges for this analysis and certified that the user is a student / employee of our organization.

**Payment Mode:**

Analysis report will be delivered only after payment of the fee. All payments should be sent in the form of DD in favor of **The Director, NIT Trichy** payable at NIT Tiruchirappalli (**SBI Branch Code: 01617**).

Signature with date & seal

(HOD / Principal / Guide / Managing Director)

\*\*\*\*\***For Office Use**\*\*\*\*\*

Date of receipt of Sample :  
Scheduled date of sample analysis :  
Researcher in-charge for sample analysis :  
DD Number: Date:

Signature of Lab-In charge



**Requisition form Consultancy/Testing/calibration/others**

Date:

1. Name :
2. Name of the Department & Organization :
3. Mobile Number and E-mail :
4. Name of the Test/Experiment:
5. No. of samples / test required:
6. Description about work :
7. Demand Draft Details:
8. Service required :                      Consultancy/Testing/calibration/others
9. Details of Service:

**Signature of applicant**

**Signature of In-charge**

**Signature of HoD**



**Department of Electronics and Communication Engineering  
National Institute of Technology, Tiruchirappalli-620015**

**Requisition form Consultancy/Testing/calibration/others**

Date:

1. Name :
2. Name of the Department & Organization :
3. Mobile Number and E-mail :
4. Name of the Test/Experiment:
5. No. of samples / test required:
6. Description about work :
7. Demand Draft Details:
8. Service required :                      Consultancy/Testing/calibration/others
9. Details of Service:

**Signature of applicant**

**Signature of In-charge**

**Signature of HoD**



**Department of Chemical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Requisition form Consultancy/Testing/calibration/others**

Date:

1. Name :
2. Name of the Department & Organization :
3. Mobile Number and E-mail :
4. Name of the Test/Experiment:
5. No. of samples / test required:
6. Description about work :
7. Demand Draft Details:
8. Service required :
9. Details of Service:

**Signature of applicant**

**Signature of In-charge**

**Signature of HoD**



**Department of Electrical and Electronics Engineering  
National Institute of Technology, Tiruchirappalli-620015**

**Requisition form Consultancy/Testing/calibration/others**

Date:

1. Name :
2. Name of the Department & Organization :
3. Mobile Number and E-mail :
4. Name of the Test/Experiment:
5. No. of samples / test required:
6. Description about work :
7. Demand Draft Details:
8. Service required :
9. Details of Service:

**Signature of applicant**

**Signature of In-charge**

**Signature of HoD**



**Department of Chemical Engineering**  
**National Institute of Technology, Tiruchirappalli-620015**

**Requisition form for GCMS Analysis (for  
NIT users only)**

Date:

**User Information**

Name of the NITT Student:

E-Mail:

B.Tech/M.Tech/MSC/MS/PhD:

Phone No:

Name of the Faculty/Student's guide:

E-mail:

Department:

**Sample and Measurement Details**

Sample state and type:

Purpose of GCMS Analysis:

No of samples:

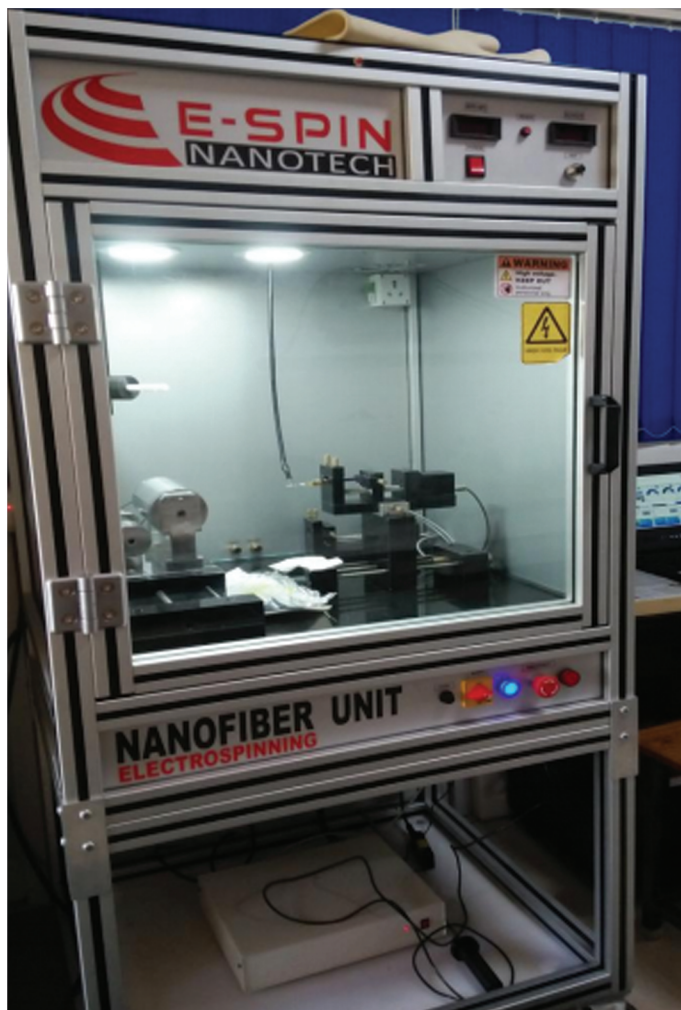
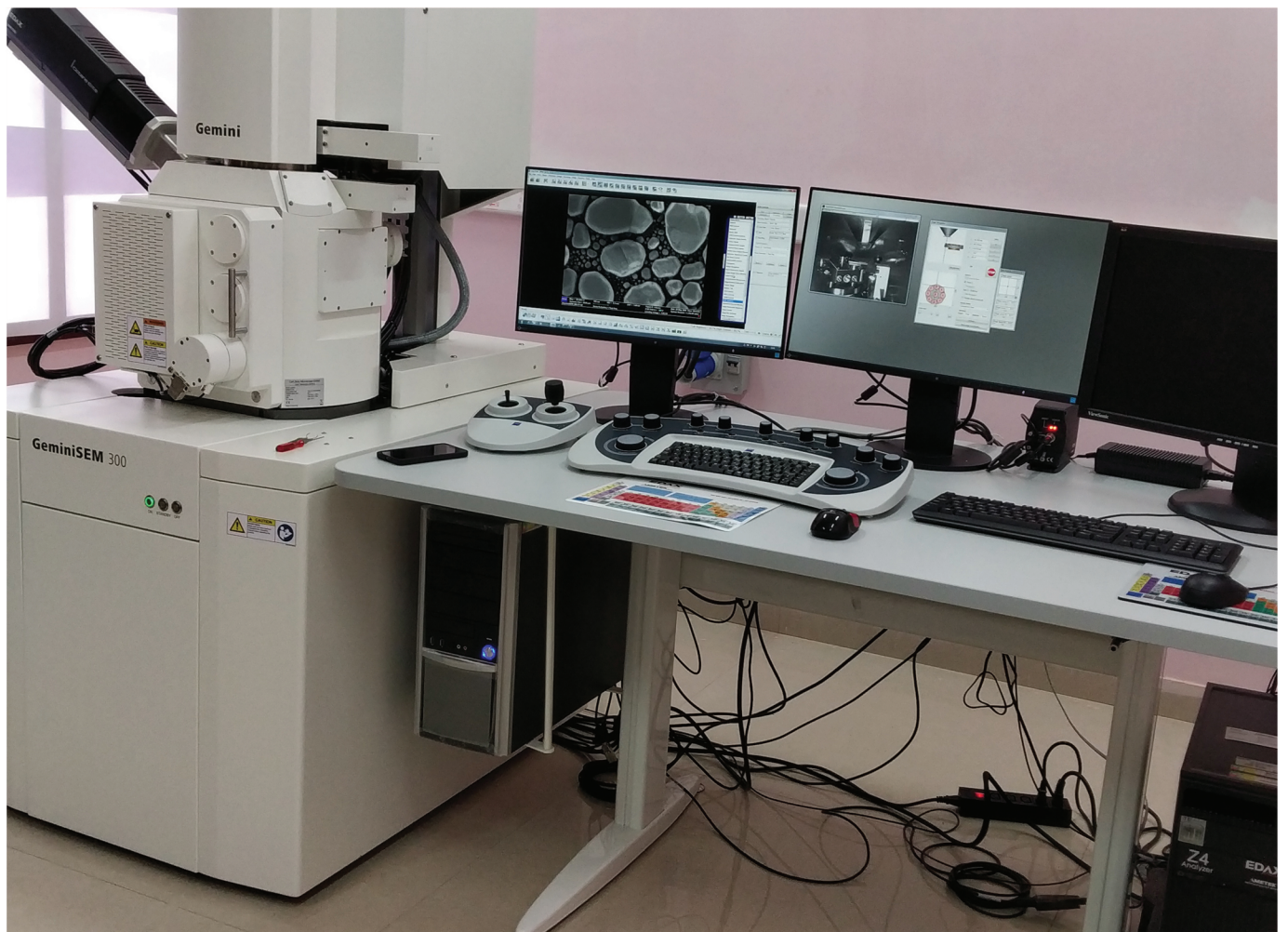
Sample details

Sl. No	Sample code	Chemical name and formula	Any other details
1.			
2.			

Certified that the samples submitted for GCMS belong to the NITT user mentioned above and the measurements can be performed with the charge of Rs 900 per sample

<b>Student</b>	<b>Students Guide/Faculty</b>	<b>Head of the Department</b>









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