



JAMAL MOHAMED COLLEGE (AUTONOMOUS)

Accredited (3rd Cycle) with 'A' Grade by NAAC

DST- FIST Funded

(Affiliated to Bharathidasan University)

TIRUCHIRAPPALLI – 620 020

JAMAL INSTRUMENTATION CENTRE (JAMIC)

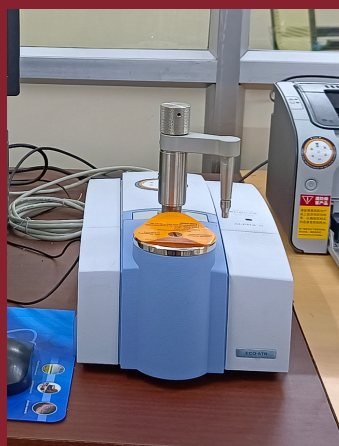
ABOUT JAMAL MOHAMED COLLEGE :

Jamal Mohamed College, was founded in 1951. As an autonomous institution, affiliated to the Bharathidasan University, Tiruchirappalli, the college is administered by the Society of Jamal Mohamed College and established in a sprawling land area of 87 acres. The college is accredited (3rd Cycle) with 'A' grade by NAAC. The college has been identified as the "College with Potential for Excellence" by the UGC.

JAMIC :

The Department of Science & Technology, Government of India has sanctioned a sum of Rs.110 lakh (Rupees One crore and Ten lakh only) to Jamal Mohamed College (Autonomous) in 2019 at Level 'O', under FIST(Fund for Improvement of Science) programme.

Jamal Instrumentation Centre (JAMIC) was established under FIST programme to uplift the quality of research with basic and applied field of sciences carried out by the students, scholars and faculty members of this college and nearby institutions to reap the benefits of science at an affordable cost too.



FT-IR Spectrometer (Model ALPHA II, Bruker Germany)



- The FTIR spectrometer ALPHA II combines outstanding quality with a small footprint and sets a benchmark in terms of user convenience. With the integrated panel PC and the touch-based operation, FTIR spectroscopy has never been easier.
- The ALPHA II features a new way to operate an FTIR spectrometer. With the integrated panel PC and the dedicated OPUS-TOUCH user interface it takes only three touches for measurement, evaluation and report generation.
- The ALPHA II represents the enhanced follow-up model of the very successful ALPHA spectrometer.
- The ALPHA II includes a durable diode laser operated with patented technology to achieve a very high wave number accuracy.
- The well-proven RockSolid™ interferometer accomplishes consistent high-quality results with outstanding stability.
- Multiple sampling accessories for transmission, attenuated total reflection (ATR), external and diffuse reflection are available to fulfill the requirements for many different analytical questions.

Bruker MultiRAM Stand Alone FT Raman Spectrometer

- Automatic Accessory Recognition (AAR) and Automatic Component Recognition (ACR)
- *Collection Optics* - High-throughput 180° collection lens standard.
- *Sources* - Primary laser excitation in the near infrared region of 1064nm with maximum power of 0.5W or 1.0W and divergence angle of 2mrad and White light source for Raman background correction.
- *Detectors*:
InGAs (3600 – 70 cm⁻¹) and Ge (3500 – 70 cm⁻¹)
- Stokes shift down to 50cm⁻¹ and Spectral Resolution of 0.8 cm⁻¹
- Wave number Accuracy 0.1 cm⁻¹.



BINARY HPLC Model : Breeze QS - Waters(USA)



- This system adopts high pressure gradient style with dual pump. It includes two infusion pumps and UV-visible detector which are used for on-line testing. It is also used for laboratory's small scale preparation, the preparative process enlargement research and purifying the polypeptide and so on.
- It can solve semi-preparative and other small scale products purification, the loading volumes can be achieved to grams to meet with laboratory's needs and research. Flexible system configuration which is used for 10-50 mm pre packed column and axial compression column.
- This system includes two high pressure preparative pumps. It can realize the high pressure gradient operation and can also equip with one unit of preparative sampling pump to satisfy with large volume in demand. All GLP can accumulate the number of stroke of plunger piston.
- This system adopts high pressure gradient style with dual pump and can use manual programming through large screen display.
- It can also write programme through working station which can change gradient procedure at any time to achieve the ideal gradient elution effect.
- It is not only suitable for common products testing but also the liquid phase chromatography analysis.

Atomic Absorption Spectrometer Model : ICE FIOS 1



- The Thermo Scientific™ ICE FIOS AAS incorporates a unique ten lamp carousel that enables the measurement of a wide range of elements, expanding your AAS analysis.
- The flame atomizer combined with the dual beam optical system enables the analysis of elements in the concentration range of sub ppm to %.
- Easy-access ten lamp carousel with the capability to read coded lamps High light transmission for high precision and accuracy.
- Automatic fuel flow and burner position optimisation to ease method development
- Software controlled burner with horizontal, vertical and angular movement to optimise performance
- Comprehensive cookbook tool for users to help in method development
- Flexibility and reduced warm-up time for lamps increasing productivity.

Service Charge Details (Per Sample)

Analytical Equipment

FT-IR Spectrometer (Model ALPHA II, Bruker-Germany)

Multi RAM Bruker FT Raman Spectrometer

Atomic Absorption Spectrometer Model: ICE FIOS 1

Binary HPLC

Beneficiaries of host Institute

Rs. 80/- + GST

Rs. 300/- + GST

Rs. 100/- + GST

Rs. 1000/- + GST

Academia

Rs. 100/- + GST

Rs. 400/- + GST

Rs. 200/- + GST

Rs. 1500/- + GST

Industries

Rs. 150/- + GST

Rs. 500/- + GST

Rs. 200/- + GST

Rs. 2000/- + GST

CONTACT DETAILS

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Instrument in-charges

FT-IR Spectrometer

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FT Raman Spectrometer

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Binary HPLC

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Atomic Absorption Spectrometer

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