



SRI CHANDRASEKHARENDR SARASWATHI VISWA MAHA VIDYALAYA
(University U/S 3 of UGC Act 1956) Accredited with "A" Grade by NAAC
Department of Mechanical Engineering
CENTRE FOR COMPOSITE SCIENCE & TRIBOLOGY

REQUISITION FORM

Name :
Category : Student/Faculty/Research Scholar/Industry
Department :
University/Institution/Organization:
Email id :
Mobile Number :
Type of Analysis :
Number of samples :
Details of samples :
Payment Mode : DD / Cash
Total Amount: :DD No:..... Date:.....
Name of the Bank:.....

(Demand Draft is drawn in favour of "The Registrar, SCSVMV")

Signature of the Guide / Head

Signature of the User

Note:

1. Stir casting – Rs.1500 / Sample
2. Compression moulding – Rs.1800 / Sample
3. Inverted Metallurgical Microscope – Rs.500 / Sample (4 Images)
4. USB Microscope – Rs 500 / Sample (4 Images)

For further details please contact: **Dr. A. Arunpremnath**, Associate Professor
Phone: **9994346132**, Mail id: **arun_premnath@kanchiuniv.ac.in**
Web: www.kanchiuniv.ac.in



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CENTRE FOR COMPOSITE SCIENCE

The Composite Laboratory aims to serve as a spot for advanced research in the area of Materials Engineering. The centre provides facilities for synthesis, fabrication and testing of conventional materials, alloys, composites materials and Nano-Materials for researchers and industries.

STIR CASTING

The equipment is used for Aluminium & Magnesium research purposes in which the user can melt the metal, preheat the Nano / Micro particles, drop it to the melt and stir it at high speed. Once the mixing is complete, just by a button press the composite/melt is poured into the die / mould of desired shape. A special provision for inert gas supply is available for the furnace to control unwanted atmospheric reaction.



Make: Capital Lab Tech

Specifications

Capacity of the furnace: 1 kg
Temp range : 500°C To 1000°C
Temperature control : Digital Temperature controller cum Indicator
Variable Stirrer Speed arrangement with Digital Indicator – 100 to 500 RPM
Cylindrical Die Inner Size : 32mm x 100mm Length
Additional feature : inert gas supply to avoid unwanted atmospheric reaction.
Charges: 1500 per sample

FEATURES:

Stir Casting is a liquid state method of composite materials fabrication, in which a dispersed phase (ceramic particles, short fibers) is mixed with a molten matrix metal by means of mechanical stirring. Stir Casting is the simplest and the most cost effective method of liquid state fabrication

- **Consultancy Charge: ₹ 1500 / Sample**

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COMPRESSION MOULDING

Compression Moulding is a closed-mould composite manufacturing process that uses matched metal moulds with the application of external pressure. In the compression moulding process, an engineered composite layup is placed in the open mould cavity, the mould is closed, and consolidating force is applied. The pressure remains on the mould throughout the cure cycle, which usually occurs in an oven. The combination of heat and pressure produces a composite part with low void content and high fiber volume fraction—a near net shape finished component. Compression moulding often yields composite parts that have the optimal mechanical properties possible from the particular combination of constituent materials



Make: Sridevi Hydraulics

Specifications

Temperature range: 10°C to 500°C

Pressure: 10 to 1000 bar

Die type : rectangular

Die size : 200 mm x 400mm x 15 mm

Operated by : PLC

Charges: 1800 per sample

FEATURES:

Compression molding is a common process used for both thermoplastic and thermoset stock shape materials. Compression molding is accomplished by placing the plastic material (can be a granular or pelletized form) in a mold cavity to be formed by heat and pressure.

- **Consultancy Charge: ₹ 1800 / Sample**

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INVERTED METALLURGICAL MICROSCOPE

Inverted metallurgical microscopes are suitable for metallography, precision engineering, engineering institutes and industries. The microscope is suitable for samples even polished from only one side



Make: Metavis

Specifications

Objective: 4X to 40X

Eye piece: WF 10X / 18mm

Reduction lens : 0.6x

Stage size : 180mm x 165mm

Charges : 3 Image without sample preparation
per specimen Charge : Rs. 500

FEATURES:

It can be used in industrial as well as scientific research & Teaching applications. Inverted design of IM 310L enables it to be used for samples polished from only one side thus eliminating the necessity of preparing moulds.

- **Consultancy Charge: ₹ Rs.500 / Sample (4 Images)**



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USB MICROSCOPE CAMERA WITH POLARIZER

The AM4115ZT Dino-Lite Edge delivers higher image quality with a state-of-the-art lens design, providing matchless image quality with stunning sharpness, less aberration, and less vignetting throughout the whole magnification range



Make: Dino-Lite Edge
Model: AM4115ZT
Specifications
Magnification Range 10x - 220x
Resolution 1280 × 1024 pixels
Megapixels 1.3 MP
Dimensions 10.5cm (L) x 3.2cm (D)
(4.13" x 1.26")
Weight 100g (3.7 oz)
Charges : 3 Image without sample preparation
per specimen Charge : Rs. 500

FEATURES:

The freely adjustable polarizer helps to reveal more detail or to enhance the contrast on the surface by reducing or eliminating the reflections. This model also includes the adaptable cap design, which is a detachable and interchangeable front cap design used in the Dino-Lite Edge series aimed at satisfying various applications. Different caps have been developed for better adaptability for more applications. Simply removing the cap would yield more working distance which brings added convenience in the higher magnification range, or have better accessibility to the full range of magnification.

- **Consultancy Charge: ₹ Rs.500 / Sample (4 Images)**

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