

## FACILITIES OF THE DEPARTMENT

### Advanced textile production lab



### Flammability Tester (Vertical)



It is used to check the fabric that has been given flame retardant finish. The fabric will be subjected to the vertical flame directions and the results can be used for further inference

### Miniature Carding Machine



The prototype helps in cleaning the raw fibers into a carded lap suitable for the next step in yarn formation

**Lab Model Thermal  
Bonding Machine**



The thermoplastic fibers can be combined into a textile using the thermal bonding machine

**Microprocessor Lab  
model Nonwoven  
Needle Punching  
Machine**



The process of compacting short staple fibers using needles and punching the created lap for further non-woven application can be done using this instrument

**Freeze dryer**



It is used for lowering the temperature (to freezing stage) of the solution through dehydration thereby lowering the pressure suitable for further processing

### **Nano Spray Dyer**



Nano spray is used for giving finish to the fabric after converting the source solution into nano particles

### **Vaccum plasma chamber**



Plasma gas is used in the chamber and the respective textile finish can be given using the gases present in the chamber

### **Nano UV-VIS Spectrophotometer**



This enables in identification of color of the liquid based on which dyeing composition, effluent analysis and shade sorting can be done.

### **PG advance sewing lab**



The lab is equipped with domestic and industrial power machine along with CAD assisted advance embroidery machine and plotter for printing the paper patterns

### **Advanced Textile Production Lab for Spinning, Weaving, Knitting and Non-Woven Production**

- Mini bast fiber extraction machine
- Cleaner Card with Cross Lapper
- Delivery frame
- Roller
- Draw Frame
- Single Needle Ring Spinning
- Warping Machine
- Knitting Machine
- Thermal Bonding Machine
- Weaving Machine
- Sanitary Napkin Maker

### **Facilities for Testing – Fiber, Yarn and Fabric**

- Flammability Tester
- Air permeability tester
- Thermal Conductivity Tester
- Colour-matching cabinet
- Shrinkage tester
- Crease recovery tester

- Stiffness tester
- Perspiration tester
- Grey scale- color change
- Grayscale- staining Spray rating tester
- Thickness Gauge
- Course length tester
- Fabric extension meter
- Spray rating tester
- Electronic balance
- Digital flammability tester
- Digital Balance
- GSM cutter
- Hand twist tester
- Hot air oven
- Ballistic tester
- Tearing strength tester Microscope, Centrifuge
- Electronic balance
- Moisture analyser
- Seam slippage tester
- Triple beam balance

### **Facilities in Sewing Lab (UG & PG)**

- Memory Craft 450E – Advanced Embroidery Sewing Machine
- Plotter
- Revo- elastic sewing m/c with motor
- Brother high speed lock stitch m/c
- Juki high speed lock stitch m/c
- Merit sewing machine
- Usha domestic sewing machine
- Siruba Single needle lock stitch machine

- Ranew ziz zag embroidery sewing machine
- Industrial sewing machine -2 nos

### **Facilities for Wet Processing**

- Nano Spray Dyer
- Spectrophotometer with colorlab + color matching software
- Ultrasonic atomizer
- Freeze dryer
- Trinocular polarized microscope
- Refrigerated centrifuge
- Padding mangle
- BOD Incubator
- Horizontal laminar air flow
- Bacteriological Incubator
- Digital spectrophotometer
- Distillation apparatus
- Turbidity meter
- Binocular Microscope