

# Instruments installed in Centre of Excellence (CoE) -Protech

Centre of Excellence (CoE) – protech has full fledged testing infrastructure for testing of technical textiles, particularly protective, be it related to heat & flame, chemical or physical characteristics. Names of the equipment, procured from the grant received from MoT, Gol under CoE – Protech project for testing of protective textiles, are given below.

S. No.	Name of Equipment
	<b>Related to heat &amp; flame characteristics of protective textiles</b>
1.	Radiant Heat Tester
2.	Heat Transmission Tester
3.	Molten Metal splash tester
4.	Automatic flammability tester for vertically oriented samples
5.	Vertical flammability tester
6.	Horizontal flammability tester
7.	Inclined flammability tester
8.	Toxicity tester
9.	Automatic Limited Oxygen Index tester
10.	Retro reflectance & Spectrophotometer tester
	<b>Related to chemical characteristics of protective textiles</b>
11.	Hydrostatic Head Tester
12.	Water Cooled Xenotest Equipment
13.	Fogging Tester
14.	High Visibility Clothing Testing Equipment
15.	Gravimetric Absorption Test System (GATS)
16.	Electronic Crockmeter
17.	Rotary Crock Meter
18.	Moisture Management Tester
19.	Gas/Vapour Permeameter
20.	Washing and Dry Cleaning Cylinder
21.	Liquid Barrier Test System
22.	Bundesmann Water Repellency Tester
23.	Moisture Analyzer

24.	Moisture Balance
25.	Spray Tester
	<b>Related to physical characteristics of protective textiles</b>
26.	Thermolabo – Thermal Property Measuring Instrument
27.	D.S.C. & T.G.A. Equipment
28.	Sweating Guarded Hot Plate
29.	Dynamic Fatigue Tester
30.	Dynamic Impact Tester
31.	Thermal Conductivity Apparatus
32.	Low Stress Property Kawabata KES Auto System
33.	Snagging Tester
34.	Hirox Advanced 3 D Video Microscope
35.	Crease Flex Tester
36.	Digital Microscope Systems
37.	Ball Burst Tester
38.	Seam Fatigue Tester
39.	Endurance Tester for Hook & Loop Fastener
40.	Universal Tensile Machine (UTM)
41.	Brush Pilling Tester
42.	Abrasion Resistance Tester
43.	Specimen Holder & Spindle Disc Assembly for Protective Clothing as per EN 531
44.	Uster Tensorapid -4
45.	Uster Tester 5
46.	Temperature Chamber for Ball Burst Tester
47.	Zipper Tester
48.	Humidity (RH 0-95%) and Temperature Control (Temperature Range - 40°C to 50°C) Chamber

(For detailed information on above instruments and related standards/specifications of testing, please contact at [mail@nitratextile.org](mailto:mail@nitratextile.org))