

OUR IN HOUSE TESTING



Electronic Weighing Balance (0.2g & 0 - 200g)



Digital Tensile Testing Machines (50 -100,000 Kgf)



Oven with timer and Temp. Control (1°C - 300°C)



Chemical Analysis for Fibre Identification



Thickness Gauge (0 - 10 mm & LC 0.01 mm)



Conditioning Chamber with thermostat Range (0-110°C)



Digital Yarn Tension meter



Twist Tester Motorized (0-99999 counts)



Crock Meter



Counting/Pick Glass (0.5 - 1.0 inch)

In House Laboratory Equipments & Testing Facilities at VIRAJ

Equipment Detail	Equipment Capacity	Purpose	Testing as per Specification No.
Testing Equipments used for Narrow Fabrics / Braided Cords / Ropes / Twines			
Electronic Weighing Balance	(0.2g & 0 - 200g)	To check Weight/Mtr & GSM of fabrics	IS 1964 : 2001
Electronic Weighing Balance	6 kgs(0.5 gms)	To check Weight of heavy materials	IS 1964 : 2001
Chemical Balance	-	To Weigh the laboratory Chemicals	IS 1964 : 2001
Beslay Balance	-	To find out Linear Density of cotton yarn	IS 1315 : 1977
Measuring Scale	1.0 - 300 mm & 1000 mm	To measure length and dimentions	IS 1954 : 1990
Counting/Pick Glass	NA	To measure threads/unit length	IS 1963 : 1981
Thermometer	(-)10° C. UpTo 10° C.)	To measure temprature	
Digital Tensile Testing Machine	Capacity 50 Kgf	To measure the Tensile/Breaking strength of yarn	IS 1969 : 1985
Digital Tensile Testing Machine	Capacity 500 Kgf	To measure the tensile strength of cords & Twines	IS 1969 : 1985
Digital Tensile Testing Machine	Capacity 10,000 Kgf	To measure tensile of Webbing, Tapes, Rope, etc.	IS 1969 : 1985/ EN-12195:2:2000
Oven with timer and Temp. Control	1° C - 300° C	To measure the moisture regain , drying etc.	
P.H. Meter (Electronic/Digital)	0.1 pH & 0 - 14 pH	To find out Acidic & Alkaline nature	IS:1390
Thickness Gauge	0 - 10 mm & LC 0.01 mm	To measure Thickness of Webbing/Tapes/ Fabrics	IS:7702-1975
Vernier Calipers /Rope Gauge	0.02mm, & 0-150 mm	To measure Dimensions & Gauge/Dia of Ropes/Cords	IS:7071-1989(Pt.-03)
Crock Meter	0 - 99999	For color fastness To Rubbing	IS :766-1988
Persperometer		For color fastness To Perspiration ,To Water & For Bleaching	IS :971-1983
Launderometer		For color fastness To Washing & Dry-cleaning	IS :764 & 4802-1988
Flammability Tester	0.1 Sec & 0-999.9 Sec	For Flame Retardency on Webbings/Tapes & Fabrics	IS: 15061-2002
Conditioning Chamber with thermostat	Range 0-110° C	For conditioning the samples before testing	IS 6359-1971
Digital Yarn Tension meter		To measure the yarn tension on warping & weaving process	
Tecometer		To measure the RPM of M/C	
Twist Tester moTorised	0-99999 counts	To find out the T.P.I/T.P.M & Ply/Fold of Yarns , threads & Twines	IS:832-1985
Shoxlet Apparatus	NA	1. For finding the % of Proofing Content 2.For finding the % of Copper Content 3. For finding the % of Ash Content 4. For finding the % of Scouring (MADI) Loss 5.For finding the % of water soluble matter	IS:6803,ANX.D IS:1383-1993
laboratory Chemicals	NA	For Nature of fiber identification & material Analysis	IS :667:1981
Color Matching Cabinet	NA	To check Assessment of shade & Tone on different light effects	
Grey Scale	NA	Assessment of Rating (Washing & Staining)	ISO 105 A02:1993
Stop Watch	NA	To count minutes & Sec. For holding any test	

Equipment / Apratus Detail	Equipment Capacity	Purpose	For Testing as per Specification No.
Equipments For Wider Fabrics			
Bundasmann Appratus		To measure Water repellency (BWR Test) of fabrics	IS:6803:1972
Pressure Head	NA	To measure Water repellency of fabrics	IS:2422,ANX.2
Cone Testing	NA	To measure Water repellency	IS :7941:1976
Launderometer		For color fastness To Washing & Drycleaning	IS :764 & 4802-1988
Shrinkage tub	NA	To measure Dimentional change/Stability of fabric	IS:2977-1989
Spray Tester	NA	For Water Replency test on fabrics	ISO:4920:1981
De-Matia Flexing		To check crackness of pu coated fabric	IS:3400-Pt.01 & 07
Pilling Tester		To check Pilling strength of pile fabric	IS:10921-1994
Furness		To find out the Ash Content	IS:6803:1972
Equipments For Fall Protection Items			
Digital Salt Spray	0 - 250 °C	Assessment of Corrasion on metal components	ISO:9227:2006
Torso Dummy of approx. 100 Kgs.	NA	To be Used as dead weight in Dynamic testings of Harness & Lanyards	EN:364:1992
Weight For dynamic load 100 Kgs.	NA	To be Used as dead weight in Dynamic testings of Harness & Lanyards	
Dynamic Load Apparatus	01-2000 Kgf	For Dynamic testing of Harness, lanyard & Energy absorber	
Coat Measure(Anodizing Tester)	0 - 2000 Micron	To measure the thickness of coating/plating on metal components	ISO:2128 & 7599
Digital Horizontal Tensile Testing M/C		To measure Static testing of Harness, lanyard &	EN 364 : 2002
	0.1 Sec & 0-999.9 Sec	To measure tensile of Metals fittings & Slings, Lashing	IS 15041 : 2001
Equipments For Helmets			
Digital Electrical Insulation Tester	0-2000 V AC	To measure the Di-Electrical Resistance of Helmet	IS 2925 : 1984
Water Absorption tester		To measure the Water Absorvancy of Helmet	IS 2925 : 1984
Tensile Strength of chin strap with 'S' hook	Range 100x50 mm	To measure chin strap tensile	IS 2925 : 1985
Heat resistance Tester(Oven)	0-300 °C & LC -1 °C	To measure the Heat resistance of Helmet	IS 2925 : 1985
Performance Test conditions (Force Transmitted)		1. For standardization of Helmet sample use 40% Formaldehyde To 9 part of water at temp. 25 °C For 10min. 2. Conditioned At 50+-5 °C For 4hrs.in Oven 3. Conditioned At -10+-2 °C For 4hrs.in refrigerator 4. Conditioned under flowing water For 4hrs. @ 1ltr./min. (least count- 0.01ltr. & 0.1sec.)	IS 2925 : 1984
Performance Test conditions (Force Transmitted)	Range 40 kN	To measure the Shock Absorption resistance of Helmet trough dropping of 3.0 kg. mass wooden Sticker from the Fall Height of 1.5mtr.	IS 2925 : 1984
Penetration Resistance Tester	Range 5 kN	To measure the Penetration resistance of Helmet trough dropping the 500gm. mass & 0.42mm conical steel point Plum Bob from the Fall Height of 3.0mtr.	IS 2925 : 1984