

Item Sr. No	Test	Test Fee per sample (Rs)	Minimum Sample Size	Remarks
1	TESTS ON FIBRE			
1	Ginning percentage by Laboratory Model Gin	350	1 kg	seed cotton
2	Ginning percentage by Commercial Gin	500	20 kg	seed cotton
3	Percentage of Moisture (IS 199)	400	250 g	airtight packing
4	Percentage of Waste in Lint			For bulk testing of HVI and trash % discount will be offered
	a) Trash Content % (IS 4871)	600	300 g	
	b) Trash Content % (CIRCOT SP-4)	400	150 g	
5	HVI Test (HVI / ICC Mode) & Colour Grade(ASTM D 5867)	250	250 g	
	Span Length (IS 233(Part 4))	200	250 g	
	Strength of Fibres (IS 3675)			
	Micronaire Value (IS 3674)			
6	Baer Sorter with diagram (BS4044)	1000	300 g	
7	Fibre Fineness by Micronaire (BS 3181)	100	100 g	
8	Single Fibre Strength and elongation by	3000	300 g	100 readings
	INSTRON (ASTM D3822)			
9	Fibre Maturity by NaOH method (IS 236)	450	100 g	
10	AFIS Test Length, Maturity & Neps (ASTM D 5866)	500	100 g	At GTC Nagpur & QEU Coimbatore
	Length Module	200	100 g	"
	Maturity Module	200	100 g	"
	Neps Module	200	100 g	"
	Trash Module	150	100 g	At QEU Coimbatore
11	Qualitative Identification of Fibres (IS 667)	350	100 g	
12	HVI & Microspinning (CIRCOT Method)	4000	500 g	
13	Full Spinning on carded cotton (1 count)	6000	5.5 kg	
	Full Spinning on carded cotton (2 counts)	8000	8 kg	
	Additional Count	3000	10 kg	
2	TESTS ON YARN			
14	Yarn count (IS 1315)	450	1 km	
15	Lea Test (IS 1671)	550	1 km	
16	Single Thread Strength and elongation by Instron (IS1670)	1500	1 km	
17	Single Thread Strength by automatic single yarn tester (IS 1670)	1000	1 km	
18	Twist in Single Yarn (IS 832 Part 2 / ISO 17202)	450	500 m	
19	Twist in Double Yarn (Doubling Twist)	450	500 m	
20	Twist in Cords and Cables	400	500 m	
21	Yarn Evenness U% with Imperfections by	1500	6 Packages	
	Uster UT-4 (ASTM D 1425)			
22	Yarn Hairiness by Zweigle Hairiness Tester	1000	20 km	
	(hairs of 1,2,3,4,6,8,10,12, 15, 18,21,and 25 mm ; Cumulative & Differential mode)			
23	Qualitative Identification of Fibres in Yarns (IS 667)	350	100 g	
24	Quantitative analysis of Fibres in Yarns (IS 3416) Upto two components	700		
	Each component over two	300		
3	Tests on Woven / Knitted Fabric			
25	Type of Weave (CIRCOT Method)Single layer fabric	400	2 m / full	
26	Type of Weave (CIRCOT Method) Double layer fabric	600	piece	

27	Type of Knit(CIRCOT Method) Single layer fabric	400		
28	Type of Knit(CIRCOT Method) Double layer fabric	600		
29	Length of Fabric (IS 1954)	250		
30	Width of Fabric (IS 1954)	250		
31	Thickness of Fabric (IS 7702 / ISO 5084)	250		
32	Weight per square or linear metre of Fabric (IS 1964/ ASTM-D 3776)	450		
33	Ends & Picks / wales & Courses (IS 1963)	350		
34	Count of Warp,Weft Yarn & Ply (IS 3442)	500		
35	Fabric Tensile Strength and Elongation (IS 1969 /ISO 13934)	1000		
36	Water Permeability (Cone Test)	300		
37	Dimensional change on soaking in water (IS 2977)	450		
38	Pilling Test (IS 10971 part 1/ISO 12945-1)	500		
39	Tearing Strength (IS 6489 part 1/ ISO13937-1)	1000		
40	Crease Recovery (IS 4681)	550		
41	Bursting Strength (IS 1966 part 2)	350		
42	Drape Test (IS 8357)	500		
43	Fabric Handle by KES-FB System		1 m / full piece	
	a) Full Test (Tensile, Shear,Bending, Compression and Surface properties)			
	Woven Fabrics	7000		
	Knitted Fabrics	8000		
	b) Individual Module Testing		50cm	
	Woven Fabrics	2000		
Knitted Fabrics	3000			
44	Thermal transport properties of fabric using Thermolabo II (KES-FB7)			
	a) q-max (Warm/ Cool feeling)	2500	1 m / full piece	
	b) Thermal Conductivity by constant heat flow method	2500		
	c) Thermal Insulation by guarded hot plate method	2500		
45	Resistance to air flow through fabric using	800	1 m / full piece	
	KES-FB-API Tester			
46	Water Vapour Transport Rate through fabric		1 m / full piece	
	By Dish Method WVTR	2000		
47	Vertical Wicking Test for fabric	1000	1 m / full piece	
48	Absorbency Test for fabric		1 m / full piece	
	a) Sinking Time (IS 2369)	500		
	b) Drop Test for absorbency of textiles (IS 2349)	500		
49	Water Repellency - Spray Tester (IS 390)	350	1 m / full piece	
50	Moisture Management Properties of textile	3000	1 m / full piece	
	fabrics (AATCC 195-2009)			
4	Test for Mask			
51	Synthetic Blood penetration resistance Test	1500	5 mask/0.5m fabric	
52	Particle Filtration Efficiency Test	1500	5 mask/0.5m fabric	
53	Air resistance (KES-FB-API Tester)	800	5 mask/0.5m fabric	
54	Contact angle (by Goniometer)	2000	5 mask/0.5m fabric	
5	Chemical & Physico - Chemical Tests			
55	Honey Dew : Qualitative Test (Fibre)	400	50 g	

	(ICGR 11-126)			
56	Honey Dew :Quantitative Test (Fibre)	800	50 g	
	(CIRCOT Method)			
57	Desizing or Definishing (IS 199)	500	50 g	
58	Percentage of Size/Finish (IS 199)	750	50 g	
59	Scouring Loss % (IS 1383)	600	50 g	
60	Fluidity test (IS 244)	2000	50 g	
61	Alkali Solubility Number	400	100 g	
62	Ash Content (IS 199)	650	100 g	
63	Water soluble matter (IS 3456)	500	100 g	
64	pH Determination (IS 1390)	400	50 g	
65	Oil Content of Fibre, Yarn and Fabric	850	100 g	
66	Fluorescence Test for Optical Whiteners	250	100 g	
67	Acidity / alkalinity	400	50 g	
68	Wax content	850	100 g	
69	Qualitative Identification of Fibres in fabric (IS 667)	350	0.5 m	
70	Quantitative Blend analysis of Fabric (IS 3416)	700	50 g	
	Upto 2 components additional component over two	300		
71	Quantitative Blend Analysis of Fabric-Warp & Weft separately	1400	0.5 m	
72	Nature of Dye (Vat or Reactive) (IS 4472 part -I)	900	100 g	
73	Colour Fastness to washing (IS/ISO 105 C 10)		0.5 m	
	Test 1-3	450		
	Test - 4	650		
	Test - 5	1300		
74	Colour Fastness to Dry Cleaning AATCC:132-1988 & IS/ISO:105-DO1	1100	0.5 m	
75	Colour Fastness to Light (IS/ISO 105 B02 / AATCC 16.3)			BWS-(Blue Wool Standard)
	upto BWS (4) / 20 AFU			
	1 sample / 2 samples each / 3 or more samples each	3500/1800/1100	0.5 m	
	upto BWS (5)			
	1 sample / 2 samples each / 3 or more samples each	4800/2500/1800	0.5 m	
	upto BWS (6)			
	1 sample / 2 samples each / 3 or more samples each	8000/4500/2800	0.5 m	
76	Colour Fastness to Perspiration (IS/ISO 105 E 04)	650	0.5 m	
77	Colour Fastness to Rubbing (IS/ISO 105 X 12)	450	0.5 m	
78	Colour Fastness to Bleaching (IS/ISO 105 N 02)	550	0.5 m	
79	Colour Fastness to hot pressing (IS/ISO 105 X11)	800	0.5 m	
80	Colour Fastness to dry heat (IS/ISO 105 P 01)	650	0.5 m	
81	CF to Water (IS /ISO 105 E01)	400	0.5 m	
82	CF to Acid & Alkalis (AATCC TM 6)	1500	0.5 m	
83	Ultra-Violet Protection Factor (UPF) (AATCC - 183)	900	0.5 m	
84	Proofing content (IS 6803)	1200	100 g	
85	Limiting Oxygen Index (IS 13501 / ASTM D 2863)	1700	0.5 m	
86	K/S value/Colour parameters (L*,a*,b*,C,H)/ whiteness index by Xrite	600	0.5 m	
87	Solvent Extractable matter	850	50 g	
88	Oil Repellency (AATCC TM 118)	1500	0.5 m	

89	Soil release efficiency	750	0.5 m		
90	Barium activity number (IS 1689)	1200	0.5 m		
91	Alcohol Water Repellency (AATCC TM 193)	1100	0.5 m		
92	Chlorite test IND/TC/2562(D)	700	0.5 m		
93	Hydro Test IND/TC/2562(C)	700	0.5 m		
94	Levelling Test IND/TC/2562(B)	1000	0.5 m		
6	Microbiological Tests				
95	Anti Fungal Activity				
	AATCC 30 - Test II	1700	1 m		
	AATCC 30 - Test III	1700	1 m		
96	Antibacterial activity				
	ASTM E-2149 per culture	2000	10 g		
	AATCC 147 (Qualitative)	1100	0.5 m		
	AATCC 100 (Quantitative)	2400	0.5 m		
97	Total Bacterial and Fungal Count	900	50g /500 ml		
98	Agar diffusion Test	600	10 g		
	For antibacterial & Anti fungal activity per culture				
99	Lyophilization				
	Lyophilization Upto 250 ml of Liquid	2800		only aqueous samples are accepted	
	Every additional 250 ml				
	Total Solid Content of Liquid Upto 10%	2300			
	Total Solid Content of Liquid 11% to 20 %	1700			
	Total Solid Content of Liquid 21% and above	1100			
	if solid content found less than stated , charges payable on observed solid content.				
7	Tests on CottonSeed				
100	Oil content	850	250 g		
101	Hull and Kernel Percentage modified AOCS	700			
102	Protein content	850			Acid Delinting Rs 500 extra
103	Free Gossypol Content	1400			
104	Total Gossypol Content	1400			
105	Crude Fibre content	1600			
106	Linters %	600			
8	Tests on Cotton Linters and fibre material				
107	Alpha-Cellulose Content (with purification)/Hemi cellulose	2200	250 g		
108	Purification of Linters	1500			
	(Cleaning, Kiering & Bleaching)				
109	Cellulose yield	1400			
110	Ash content (IS 199)	650			
111	Acid Insoluble Ash	800			
112	Ether Soluble Matter	850			
113	Iron content in Ash	1100			
114	Lignin Content %	3300			
115	Fluidity	2000			
116	Viscosity /Degree of polymerisation - Raw linters	3000			
117	Viscosity /Degree of polymerisation- Bleached	2200			
9	Test on Absorbent Cotton (Indian Pharmacopoeia)				
118	Description	200	250g		
119	Identification	400			
120	Acidity / Alkalinity	400			

121	Absorbency	450		
122	Foreign Fibres	200		
123	Fluorescence	250		
124	Colouring Matter	300		
125	Ether Soluble Matter	850		
126	Water Soluble Matter	650		
127	Water Holding Capacity	450		
128	Neps	500		
129	Sulphated Ash	850		
130	Loss on Drying	500		
131	Surface Active Substances	500		
132	Complete testing as per IP	5000	250g	
10	Pulp Testing			
133	Fibre Length (Tappi - T233)	1000	250 g	
134	Freeness CSF (Tappi - T227)	1000		
135	Freeness Degree SR (Tappi - T227)	1000		
136	Consistency (Tappi - T240)	500		
137	Kappa Number (Tappi - T 236)	2200		
11	Paper Testing (IS-1060)			
138	GSM	300	12 paper full size	
139	Thickness	300		
140	Bulk	300		
141	Size Measurement	200		
142	Brightness %	500		
143	Opacity %	500		
144	Smoothness	500		
145	Porosity	500		
146	Cobb %	400		
147	Bursting Strength	500		
148	Tearing Strength	500		
149	Tensile Strength	600		
150	Breaking Length	600		
151	Gloss %	500		
152	Stiffness	500		
153	Water Absorbency	400		
154	Double fold	500		
155	Feathering	400		
156	pH	400		
157	Ash	650		
12	Board Testing (IS 3087)			
158	Density	500		
159	Moisture %	500		
160	Water Absorption	600		
161	Swelling in Water	600		
162	Modulus of Rupture	2000		
163	Adhesion Test /Internal bond strength	2000		
164	Screw/Nail withdrawal	2000		
165	Tensile Strength	1000		
13	Water Analysis (IS 3025)			
166	COD Analysis	800	500 ml	
167	BOD Analysis	1200	500 ml	

168	Conductivity	300	500 ml	
169	TDS	300	500 ml	
170	pH	350	500 ml	
171	Salinity	300	500 ml	
172	Analysis of Heavy Metals by AAS per metal	450		
14	Tests on Activated Carbon			
173	BET Surface area analysis	4000 for one sample	5 g	
		3000 each for more than one sample		
174	Methylene Blue number of activated carbon [IS 877]	400	5 g	
175	Iodine Number of activated carbon [ASTM D4607-94]	1500	5 g	
176	Compressive Strength [ASTM C 695]	3000	5 g	
15	Special Tests			
177	ICP-MS			
	Aqueous sample not requiring any preparation	2000 (up to 23 elements)*	25ml	* Ag, Al, B, Ba, Bi, Ca, Cd, Co, Cu, Cr, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Sr, Ti, Zn 400 per extra element Mo, Ti, Hg, Se, Sb, I, As, Pt)
	Sample requiring microwave digestion	3500 (up to 23 elements)*	1 g	
178	Raman spectroscopy for solid and liquid samples using 1065 nm laser	1500	5 gm/ml	
179	TGA scan from 30°C to 950 °C @ heating rate of 20°C /min	4000	1 g	
180	TOC Analysis for liquid samples (T C/ NPOC Method)			
	ppm level	1000	100 ml	
	ppb level	1200	100 ml	
181	TOC Analysis for Solid Sample (TC and IC method)ppm level	1200	5 g	
182	Total Nitrogen Analysis for Liquid samples using TOC Analyser	1500	100 ml	
183	COD analysis using thermal reactor	800	100 ml	
184	FTIR KBr /Diamond ATR	1800		
185	UV absorbance/transmission scan	400	100 ml/ 5g	
186	Analysis of Sodium/ Potassium content of water by Flame Photometer (per element)	300	500 ml	Rs. 500/- extra for digestion if required
187	Elemental Analysis by AAS (per element)	450	100 ml/ 5g	Rs 500 extra for digestion
188	Scanning Electron Microscope			
	Surface morphology	2500	1 g	Maximum 4 micrographs
	Cross section	3000		

189	AFM Imaging	5000		
190	Light micrograph / Photomicrograph (10x, 40x and 100x magnifications)	1000		Rs 500 extra for Sample Preparation/Staining
191	Particle Size Characterization			
	a) Nano Particle Size Analysis by DLS (0.6 nm to 6 micron)	2000	10 ml for aqueous suspension	Sample in stable suspension only
	b) Nano Particle Size Analysis by DLS (0.6 nm to 6 micron) and Zeta potential	3000		
	c) Particle Size Analysis by Micron size analyser -LASER Diffraction method (20 nm to 2000 microns)	1500	10g for powder	powder sample should be free flowing and free from aggregates.
	d) Particle Size Analysis by Micron size analyser -LASER Diffraction method (20 nm to 2000 microns) and dynamic image analysis	2000	10 ml for aqueous suspension	suspension sample should be in aqueous and free from aggregates. Refractive index of the particles need to be provided
192	Electrical Resistance of Textile Materials, Thin films etc. by Electrometer (6517A)	2000	0.5 m	
193	Surface Tension by pendant drop method using goniometer	2000		
194	Contact angle by goniometer	2000		
195	Surface energy of the material			
	a) one Liquid method	2000		
	b) two Liquid method	3000		
196	Friction coefficient (Yarn/fibre/ fabric to Yarn/fibre/fabric , Yarn/fibre/ fabric to metal)	2000	1 m	
197	Weathering/xenon arc exposure Test as per ASTM/ISO /SEA J Method			
Additional Information				
1. Minimum charge per test report ₹ 500/-				
2. Rates are exclusive of GST etc.				
3. 30 % discount for commercial testing to student & ICAR Institute				
4. Total charges to be rounded to the nearest Rupee.				
5. Payment to be made through E Transfer/Cheque/DD favouring DIRECTOR, CIRCOT payable at Mumbai.				
6. For further Details contact Incharge, Test House				
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