

DEPARTMENT OF NANOMATERIALS AND CERAMIC ENGINEERING (NCE), BUET, DHAKA
APPROVED RATES FOR TESTING MATERIALS AND SERVICES

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S.N.	Name of Tests	Test Rate
General Test		
1	Compositional Analysis Using XRF	26,820.00
2	Compound Compositional Analysis using XRD	40,230.00
3	Microstructure Analysis Using SEM	26,820.00
4	EDX Mapping SEM	26,820.00
5	Microstructure Analysis & Elemental Mapping	40,230.00
6	Particle Size & Shape Using SEM	26,820.00
7	Linear Thermal Expansion Coefficient Using Dilatometer	26,500.00
8	% Transmittance / Absorbance Using UV-VIS-NIR	13,410.00
9	Hardness Testing (Moh's/Vickers/Knoop)	10,600.00
Cement and Cement Clinker		
10	Insoluble Residue	6,705.00
12	Loss on Ignition	6,705.00
*13	Compositional Analysis Using XRF: Aluminium Oxide (Al ₂ O ₃), Ferric Oxide (Fe ₂ O ₃), Silicon Dioxide (SiO ₂), Sulfur Trioxide (SO ₃), Magnesium Oxide (MgO), Sodium Oxide (Na ₂ O), Potassium Oxide (K ₂ O), Calcium Oxide (CaO), Titanium dioxide (TiO ₂) Chloride Content (Cl ⁻) etc., Total Alkali Content (Na ₂ O _{equiv.}) and Lime Saturation Factor (LSF) *Prerequisite: Loss on Ignition (BDT 6,705)	26,820.00
14	Compound Compositional Analysis using XRD (including compositional analysis of S.N. 3): Tricalcium Silicate (C ₃ S), Dicalcium Silicate (C ₂ S), Tricalcium Aluminate (C ₃ A), Tetracalcium Alumino-ferrite (C ₄ AF), Free Lime (CaO)	40,230.00
15	Package (All the above four tests)	67,045.00
Clay/Soil/Sand		
16	Composition analysis Using XRF	26,820.00
17	Moisture Content/ loss on drying	4,025.00
18	Compound Compositional Analysis using XRD (including compositional analysis of S.N. 3)	80,455.00
19	Clay/Mud/Mica Content	12,720.00
20	Sieve Analysis	10,600.00
21	pH Test of Gypsum/Clay	8,480.00
Pavement/Paver tiles		
22	Compressive Strength	8,735.00
23	Flexural Strength	3,710.00
24	Water absorption	3,710.00
25	Dimension	2,650.00
Bricks		
26	Chemical Composition Analysis Using XRF	26,820.00
27	Initial Rate of Absorption	13,409.00
28	Water absorption	3,710.00
29	Compressive Strength	4,030.00
30	Dimension	2,650.00
Stone (Marble, Granite, Others)		
31	Surface Abrasion	2,685.00
32	Flexural Strength	6,150.00
33	Modulus of rupture	6,150.00
34	Water Absorption	6,575.00
35	Compressive Strength	8,735.00
36	Hardness	10,600.00
37	Density/Unit Weight/Specific Gravity	5,035.00
38	Chemical Composition Analysis Using XRF	26,820.00
39	Coarse Aggregate Analysis by XRD	40,230.00
Commode and Basin		
40	Flush Flow Rate	21,200.00
Catalyst		
41	Compositional Analysis Using XRF	80,455.00

S.N.	Name of Tests	Test Rate
Ceramic Tiles/Ceramic Raw Materials/Sanitary Ware		
42	Dimension	2,650.00
43	Straightness of sides	2,015.00
44	Rectangularity	2,015.00
45	Surface Flatness (centre curvature)	2,015.00
46	Surface Quality	2,015.00
47	Flexural Strength/Modulus of rupture	3,710.00
48	Breaking Load	3,710.00
49	Compressive Strength	8,735.00
50	Water absorption	3,710.00
51	Pin abrasion test	2,685.00
52	Surface Abrasion	2,685.00
53	Impact test	2,685.00
54	Glossiness measurement	2,685.00
55	Chemical Composition Analysis of Raw Materials Using XRF	26,820.00
56	Chemical Composition Analysis of Ceramic Tiles Using XRF	26,820.00
57	Chemical Composition Analysis of Glaze Using XRF	26,820.00
58	Thermal shock measurement	10,730.00
59	Chemical resistance (qualitative)	13,410.00
60	Resistance to stains	13,410.00
61	Chemical Composition Analysis of Tiles/ Ceramic Raw Materials	26,820.00
62	Surface Hardness (Moh's Scale/Vickers)	8,590.00
Glass and Glass Raw Materials		
63	Surface Flatness (Roller Wave)	10,727.00
64	Surface Stress	21,200.00
65	Edge Stress	21,200.00
66	Through Thickness Stress Distribution (Internal Stress)	10,730.00
67	Air/tin side identification of glass	10,600.00
68	Flexural Strength/Modulus of rupture	26,500.00
69	Impact test	10,070.00
70	Fracture Pattern Test for Tempered Glass	15,900.00
71	Chemical Composition Analysis of Glass/Raw Materials Using XRF	26,820.00
72	% Transmittance and % Absorbance	13,410.00
73	% Reflectance and % Absorbance	13,410.00
74	Refractive index at 380 to 780 nm Air/ glass; Glass/ air	13,410.00
75	Hardness (Moh's Scale/Vickers/Knoop)	8,590.00
76	Comment for Tempered or Non-tempered	6,890.00
77	Edge requirements: Shell-chip, V-chip	10,730.00
78	Curvature % measurement	21,455.00
79	Squareness measurement	3,290.00
80	Density Measurement/ Specific Gravity	5,035.00
81	Softening Point (in °C)	33,920.00
82	Coefficient of Linear Expansion	26,500.00
83	Solar Heat Gain coefficient	34,410.00
84	Solar Energy Spectrum (%Transmittance and %Absorbance)	13,410.00
85	U-Value	34,410.00
86	UV Protection	13,410.00
87	Glass Transition Temperature (T _g)	26,500.00
88	Specific Heat	53,000.00
89	Dimensional Measurement	3,290.00
90	Glass Sheet thickness tolerance measurement	3,290.00
91	XRD	40,230.00