

# DEPARTMENT OF NANOMATERIALS AND CERAMIC ENGINEERING (NCE), BUET, DHAKA

## APPROVED RATES FOR TESTING OF MATERIALS AND SERVICES

S.N.	Name of Tests	Test Rate
<b>Cement and Cement Clinker</b>		
1	Insoluble Residue	6,325.00
2	Loss on Ignition	6,325.00
*3	Compositional Analysis Using XRF: Aluminium Oxide (Al <sub>2</sub> O <sub>3</sub> ), Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> ), Silicon Dioxide (SiO <sub>2</sub> ), Sulfur Trioxide (SO <sub>3</sub> ), Magnesium Oxide (MgO), Sodium Oxide (Na <sub>2</sub> O), Potassium Oxide(K <sub>2</sub> O), Calcium Oxide (CaO), Titanium dioxide (TiO <sub>2</sub> ) Chloride Content (Cl) etc., Total Alkali Content (Na <sub>2</sub> O <sub>equiv.</sub> ) and Lime Saturation Factor (LSF) <b>*Prerequisite:</b> Loss on Ignition (BDT 6,325)	25,300.00
4	Compound Compositional Analysis using XRD (including compositional analysis of S.N. 3): Tricalcium Silicate (C <sub>3</sub> S), Dicalcium Silicate (C <sub>2</sub> S), Tricalcium Aluminate (C <sub>3</sub> A), Tetracalcium Alumino-ferrite (C <sub>4</sub> AF), Free Lime (CaO)	37,950.00
5	<b>Package</b> (All the above four tests)	63,250.00
<b>Soil and Sand</b>		
6	Composition analysis	25,300.00
7	Moisture Content/ loss on drying	3,795.00
8	Compound Compositional Analysis using XRD (including compositional analysis of S.N. 3)	75,900.00
9	Clay/Mud/Mica Content	12,000.00
10	Sieve Analysis	10,000.00
11	pH Test of Gypsum/Clay	8,000.00
<b>Thermal and Thermogravimetric Analysis</b>		
12	DSC/TGA	25,000.00
13	Glass Transition (T <sub>g</sub> )	25,000.00
14	Specific heat measurement	50,000.00
15	Thermal expansion coefficient (by Dilatometer)	25,000.00
<b>Microstructure, Topography, Elemental Analysis and Elemental Mapping</b>		
16	SEM	25,300.00
17	EDX	25,300.00
18	SEM+EDX	37,950.00
19	EDX mapping	25,300.00
20	Sample preparation by mechanical polishing	5,000.00
21	Sample preparation by Cross Section Polisher (CP)	10,000.00
22	Comment	11,500.00
<b>Bricks</b>		
23	Chemical Composition Analysis	25,300.00
24	Initial Rate of Absorption	12,650.00
25	Water absorption	3,100.00
26	Compressive Strength	8,240.00
27	Dimension	2,200.00
<b>Catalyst</b>		
28	Compositional Analysis Using XRF	75,900.00
<b>Commode and Basin</b>		
29	Flush Flow Rate	20,000.00

S.N.	Name of Tests	Test Rate
<b>Ceramic Tiles/ Ceramic Raw Materials/ Sanitary Ware</b>		
30	Dimension	2,500.00
31	Straightness of sides	1,897.00
32	Rectangularity	1,897.00
33	Surface Flatness (centre curvature)	1,897.00
34	Flexural Strength/Modulus of rupture	3,500.00
35	Breaking Load	3,500.00
36	Compressive Strength	8,240.00
37	Water absorption	3,500.00
38	Pin abrasion test	2,530.00
39	Impact test	2,530.00
40	Glossiness measurement	2,530.00
41	Chemical composition analysis	25,300.00
42	Thermal shock measurement	10,120.00
43	Chemical resistance (qualitative)	12,650.00
44	Resistance to stains	12,650.00
45	Chemical Composition Analysis of Tiles/ Ceramic Raw Materials	25,300.00
46	Surface Hardness (Moh's Scale/Vickers)	8,100.00
<b>Glass and Glass Raw Materials</b>		
47	Surface Flatness (Roller Wave)	10,120.00
48	Surface Stress	20,000.00
49	Edge Stress	20,000.00
50	Through Thickness Stress Distribution (Internal Stress)	10,120.00
51	Air/tin side identification of glass	10,000.00
52	Flexural Strength/Modulus of rupture	25,000.00
53	Impact test	9,500.00
54	Fracture Pattern Test for Tempered Glass	15,000.00
55	Chemical Composition Analysis of Glass/Raw Materials Using XRF	25,300.00
56	% Transmittance and % Absorbance	12,650.00
57	% Reflectance and % Absorbance	12,650.00
58	Refractive index at 380 to 780 nm Air/ glass; Glass/ air	12,650.00
59	Hardness (Moh's Scale/Vickers)	8,100.00
60	Comment for Tempered or Non-tempered	6,325.00
<b>Granite Stone</b>		
61	Surface Abrasion	2,530.00
62	Flexural Strength/Modulus of rupture	5,800.00
63	Water Absorption	6,200.00
64	Compressive Strength	8,240.00
65	Hardness	10,000.00
66	Density	4,750.00
67	Chemical composition analysis	25,300.00

Notes: i) All test procedures comply with ASTM and EN standards.  
ii) VAT (15%) included with the total test fees.

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