

# HOUSING AND BUILDING RESEARCH INSTITUTE

## Chemical Testing Research Laboratory

Vat: 15%

### A. Cement Analysis:

Sl. no	Description	Unit	Rate (TK)	Time Required
01.	Sample preparation	Per Sample	1000/-	15 days
02.	Determination of Oxides of ion like Silicon, Aluminium, Iron, Calcium, Sodium, Sulfur, Magnesium, Manganese, chloride, sulphate etc.	Per ion	1000/-	
03.	Alkalis as Na <sub>2</sub> O, K <sub>2</sub> O	Per Sample	3000/-	
04.	Total alkali	Per Sample	3000/-	
05.	C <sub>3</sub> S	Per Sample	2000/-	
06.	C <sub>2</sub> S	Per Sample	2000/-	
07.	C <sub>3</sub> A	Per Sample	2000/-	
08.	C <sub>4</sub> AF	Per Sample	2000/-	
09.	LSF	Per Sample	2000/-	
10.	Free Lime	Per Sample	2000/-	
11.	L.O.I	Per Sample	2000/-	
12.	Iron Modulus (IM)	Per Sample	2000/-	
13.	Silica Modulus (SM)	Per Sample	2000/-	
14.	Hydraulic Modulus (HM)	Per Sample	2000/-	
15.	Insoluble Residue	Per Sample	2000/-	
16.	Clinker Content	Per Sample	5000/-	
17.	Fly ash Content	Per Sample	2000/-	
18.	Gypsum Content	Per Sample	2000/-	
19.	Lime stone	Per Sample	2000/-	

### B. Aggregate:

01.	Sample preparation	Per Sample	1000/-	7 days
02.	Determination of Oxides of ion like Silicon, Aluminium, Iron, Calcium, Sodium, Sulfur, Magnesium, Manganese, chloride, Sulphate etc.	Per ion	1000/-	
03.	MICA	Per Sample	8000/-	
04.	Alkali Reactivity	Per Sample	5,200/-	

### C. Lime:

01.	Sample preparation	Per Sample	1000/-	7 days
02.	Determination of Oxides of ion like Silicon, Aluminium, Iron, Calcium, etc.	Per ion	1000/-	

### D. Brick/Sand Refractory Brick:

01.	Sample preparation	Per Sample	1000/-	7 days
02.	Determination of Water Soluble Salt.	Per Sample	2000/-	
03.	Moisture Content	Per Sample	1000/-	
04.	Loss on Ignition	Per Sample	2000/-	
05.	Determination of Oxides of ion like Silicon, Aluminum, Iron, Calcium, Sodium, Sulfur, Magnesium, Manganese, chloride, sulphate etc.	Per ion	1000/-	

### E. Mortar & Concrete:

01	Sample preparation	Per Sample	1000/-	3 days
02.	Cement Mortar ( Ingredients ratio)	Per Sample	2000/-	
03.	Lime Mortar ( Ingredients ratio)	Per Sample	2000/-	
04.	Cement Concrete ( Ingredients ratio)	Per Sample	2000/-	

### F. Water:

01.	Sample preparation	Per Sample	1000/-	
02.	pH Value	Per Sample	1000/-	
03.	Total Suspended Matter	Per Sample	2000/-	

04.	<b>Total Dissolved Matter</b>	Per Sample	2000/-	7 days
05.	<b>Determination of Oxides of ion like Silicon, Aluminium, Iron, Calcium, Sodium, Sulfur, Magnesium, Manganese, chloride, sulphate etc.</b>	Per ion	1000/-	
06.	<b>Alkalinity</b>	Per Sample	2000/-	
07.	<b>Total Hardness</b>	Per Sample	3000/-	

### **G. Paint/Paint Materials:**

01.	<b>Sample preparation</b>	Per Sample	1000/-	15 days
02.	<b>Volatile Matter</b>	Per Sample	2000/-	
03.	<b>Weight per 10 Liters</b>	Per Sample	2000/-	
04.	<b>Spreading Capacity</b>	Per Sample	2000/-	
05.	<b>Resistance to Heat</b>	Per Sample	2000/-	
06.	<b>Resistance to Water</b>	Per Sample	2000/	
07.	<b>Resistance to Petrol (100 Octane)</b>	Per Sample	2000/	
08.	<b>Residue on Sieve</b>	Per Sample	2000/	
09.	<b>Resistance to Dry Rubbing</b>	Per Sample	2000/	
10.	<b>Recoating Properties</b>	Per Sample	2000/	
11.	<b>Wash Ability</b>	Per Sample	2000/	

### **H. Soil/Clay:**

01.	<b>Sample preparation (Sodium carbonate fusion for Al, Fe, Ca, Ma, Mn, P, Si)</b>	Per Sample	2000/-	7 days
02.	<b>pH Value</b>	Per Sample	1000/-	
03.	<b>Determination of Oxides of ion like Silicon, Aluminium, Iron, Calcium, Sodium, Sulfur, Magnesium, Manganese, chloride, sulphate etc.</b>	Per ion	1000/-	
04.	<b>Moisture Content</b>	Per Sample	1,050/-	
05.	<b>Suitability for Brick</b>	Per Sample	5,000/-	
06.	<b>Loss of ignition</b>	Per Sample	3200/-	
07.	<b>Organic Matter (qualitative).</b>	Per Sample	3700/-	

### **I. Bitumen & Bituminous Materials**

01.	<b>Sample preparation</b>	Per Sample	1000/-	15 days
02.	<b>Bitumen / Asphalt Content</b>	Per Sample	13000/-	
03.	<b>Water Content</b>	Per Sample	6800/-	
04.	<b>Specific Gravity</b>	Per Sample	3000/-	
05.	<b>Ash Content/Inorganic matter</b>	Per Sample	5700/-	
06.	<b>Solubility in Organic Solvent (CCl<sub>4</sub>)</b>	Per Sample	3000/-	
07.	<b>Penetration test</b>	Per Sample	3000/-	
08.	<b>Residue by Evaporation</b>	Per Sample	2000/-	
09.	<b>pH Value</b>	Per Sample	2000/-	
10.	<b>Settlement test</b>	Per Sample	2000/-	
11.	<b>Cement Mixing</b>	Per Sample	2000/-	
12.	<b>Coating Ability and Water Resistance</b>	Per Sample	2000/-	
13.	<b>Freezing point</b>	Per Sample	2000/-	
14.	<b>Storage Stability</b>	Per Sample	2000/-	