Accreditation No: LAB 037

Awarded to

Glass & Ceramics Research Centre (GCRC), Pakistan Council of Scientific & Industrial Research (PCSIR) Labs. Complex. Lahore 54600, Pakistan.

The scope of accreditation is in accordance with the standard specifications outlined in the following page(s) of this document. The accredited scope shall be visible and legible in areas such as customer service, sample-receiving section etc and shall not mislead its users.

The accreditation was first time granted on **24-08-2006** by Pakistan National Accreditation Council.

The laboratory complies with the requirements of **ISO/IEC 17025:2017.**

The accreditation requires regular surveillance, and is valid until **16-06-2025.**

The decision of accreditation made by Pakistan National Accreditation Council implies that the organization has been found to fulfill the requirements for accreditation within the scope.

The organization however, itself is responsible for the results of performed measurements/tests.

PAKISTAN NATIONAL ACCREDITATION COUNCIL

13-12-2022
Date

SD
Director General

Testing Laboratory.

Accreditation scope of Glass & Ceramics Research Centre (GCRC), Pakistan Council of Scientific & Industrial Research (PCSIR) Laboratories Complex, Lahore 54600, Pakistan.

Permanent laboratory premises X

Materials/ Products tested	**Testing field (e.g. environmental testing or mechanical testing)**	**Types of test/ Properties measured**	**Reference to standardized method (e.g. ISO 14577-1:2003)/ Internal method reference**
Ceramics Testing Laboratory			
1. Cement			
Cement	Physiochemical Testing	**Moisture Content**	ASTM C114-18
		Loss on ignition (LOI)	
		Acid Insoluble Residue (IR)	
		Silica (SiO_2), Dry	
		Alumina (Al_2O_3), Dry	
		Iron oxide (Fe_2O_3)	
		Calcia (CaO), Dry	
		Magnesia (MgO), Dry	
		Soda (Na_2O)	
		Potash (K_2O)	
		Sulphur trioxide (SO_3), Dry	
	Phases	Lime Saturation Factor (LSF)	PS 232-5.1.1 ASTM C 150-20
		Tricalcium Silicate (C3S)	
		Dicalcium Silicate (C2S)	
		Tricalcium Aluminate (C3A)	
		Tetracalcium Aluminoferrite (C4AF)	
	2. Limestone		
Limestone	Chemical Testing	**Free Moisture**	
		Loss on ignition (LOI)	
		Silica (SiO_2), Dry	ASTM C 25-19
		Alumina (Al_2O_3), Dry	
		Iron oxide (Fe_2O_3)	
		Calcia (CaO), Dry	
		Magnesia (MgO) , Dry	

13-12-2022
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Sd
Director

		Soda (Na_2O)	
		Potash (K_2O)	
		Carbon dioxide (CO_2)	
		Calcium Carbonate ($CaCO_3$)	
		Magnesium Carbonate ($MgCO_3$)	
		Total Sulfur (S)	
		Total Carbon (C)	
		Combined (R_2O_3)	
3. Sanitary ware Testing Laboratory			
White bodies (Porous/Vitreous)	Physical Testing	Dimensions	GS SASO 1024-2 BS 31-2 BS EN 14688-6
		Dangerous Substance	BS-EN 14688-4.9 ASTM C738-6
		Water Absorption	GS-SASA 1024-2 BS 3402-6, ASTM C 97-7,10
		Crazing	GS-SASO 1024-3 BS 3402-7, ASTM C 424-5
		Resistance to Attack Test	GS-SASO 1024-4,5,6,7
		Thickness	GS SASO 1024-9
		Marking	GS-SASO 1024-9
		Free Moisture	ASTM C323-7.1
White Ware Clay	Chemical Testing	Loss on ignition (LOI)	ASTM C323-8.1
		Silica (SiO_2), Dry	ASTM C 323-9.1
		Combined (R_2O_3), Dry	ASTM C 323-10.1
		Iron Oxide (Fe_2O_3)	ASTM C 323-11.1&2
		Alumina (Al_2O_3), Dry	ASTM C 323-13.1
		Calcium Oxide, (CaO), Dry	ASTM C 323-14.1
		Magnesium Oxide, (MgO), Dry	ASTM C 323-15.1
		Carbon, (C) Dry	ASTM C323-14.1&15.1
		Calcium Carbonate, ($CaCO_3$)	ASTM C 323-14.1
		Magnesium Carbonate, ($MgCO_3$)	ASTM C 323-15.1
		Carbon Dioxide, (CO_2)	ASTM C 323-14.1 &15.1

13-12-2022
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Sd
Director