

	<b>ACCREDITATION DOCUMENT</b>	<b>F-06/02</b> <b>Issue Date: 18/08/2020</b> <b>Rev. No: 09</b> <b>LAB 037</b>
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## 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**

25-04-2024  
Date

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Director General

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### 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

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
<b>Ceramics Testing Laboratory</b>			
<b>1. Cement</b>			
Cement	Physiochemical Testing	<b>Moisture Content</b>	ASTM C114-18
		Loss on ignition (LOI)	
		Acid Insoluble Residue (IR)	
		Silica (SiO <sub>2</sub> ), Dry	
		Alumina (Al <sub>2</sub> O <sub>3</sub> ), Dry	
		Iron oxide (Fe <sub>2</sub> O <sub>3</sub> )	
		Calcia (CaO), Dry	
		Magnesia (MgO), Dry	
		Soda (Na <sub>2</sub> O)	
		Potash (K <sub>2</sub> O)	
	Phases	Lime Saturation Factor (LSF)	PS 232-5.1.1:1983 ASTM C 150-22
		Tricalcium Silicate (C3S)	
		Dicalcium Silicate (C2S)	
		Tricalcium Aluminate (C3A)	
		Tetracalcium Aluminoferrite (C4AF)	
<b>2. Limestone</b>			
		Free Moisture	
		Loss on ignition (LOI)	
		Silica (SiO <sub>2</sub> ), Dry	
		Alumina (Al <sub>2</sub> O <sub>3</sub> ), Dry	ASTM C 25-19
		Iron oxide (Fe <sub>2</sub> O <sub>3</sub> )	

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Limestone	Chemical Testing	Calcia (CaO), Dry	
		Magnesia (MgO) , Dry	
		Soda (Na <sub>2</sub> O)	
		Potash (K <sub>2</sub> O)	
		Carbon dioxide (CO <sub>2</sub> )	
		Calcium Carbonate (CaCO <sub>3</sub> )	
		Magnesium Carbonate (MgCO <sub>3</sub> )	
		Total Sulfur (S)	
		Total Carbon (C)	
		Combined (R <sub>2</sub> O <sub>3</sub> )	

**3. Sanitary ware Testing Laboratory**

White bodies (Porous/Vitreous)	Physical Testing	Dimensions	GS SASO 1024-2:1998 BS 31-2:1999 BS EN 14688-6:2006
		Dangerous Substance	BS-EN 14688-4.9:2006 ASTM C 738 6-16
		Water Absorption	GS-SASO 1024-2:1998 BS 3402-6:1969 ASTM C 97 7,10-15
		Crazing	GS-SASO 1024-3:1998 BS 3402-7:1969 ASTM C 424 5-16
		Resistance to Attack Test	GS-SASO 1024 4,5,6,7:1998
		Thickness	GS SASO 1024-9:1998
		Marking	GS-SASO 1024-9:1998
		Free Moisture	ASTM C 323 7.1-16
		Loss on ignition (LOI)	ASTM C 323 8.1-16
		Silica (SiO <sub>2</sub> ), Dry	ASTM C 323 9.1-16
		Combined (R <sub>2</sub> O <sub>3</sub> ), Dry	ASTM C 323 10.1-16
		Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	ASTM C 323 11.1&2-16
		Alumina (Al <sub>2</sub> O <sub>3</sub> ), Dry	ASTM C 323 13.1-16
		Calcium Oxide, (CaO), Dry	ASTM C 323 14.1-16

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White Ware Clay	Chemical Testing	Magnesium Oxide, (MgO), Dry	ASTM C 323 15.1-16
		Carbon, (C) Dry	ASTM C323 14.1 & 15.1 -16
		Calcium Carbonate, (CaCO <sub>3</sub> )	ASTM C 323 14.1-16
		Magnesium Carbonate, (MgCO <sub>3</sub> )	ASTM C 323 15.1-16
		Carbon Dioxide, (CO <sub>2</sub> )	ASTM C 323 14.1 & 15.1 -16

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