

# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK



1994

Accredited to  
ISO/IEC 17025:2017

### Glass Technology Services Ltd

Issue No: 056 Issue date: 25 May 2021

9 Churchill Way  
Chapelton  
Sheffield  
S35 2PY

Contact: Heather Marsh  
Tel: +44 (0)114 290 1801  
Fax: +44 (0)114 290 1851  
E-Mail: h.marsh@britglass.co.uk  
Website: www.glass-ts.com

Testing performed by the Organisation at the locations specified below

#### Locations covered by the organisation and their relevant activities

##### Laboratory locations:

Location details		Activity	Location code
<b>Address</b> Glass Technology Services Ltd 9 Churchill Way Chapelton Sheffield S35 2PY	<b>Local contact</b> Heather Marsh  Tel: +44 (0)114 290 1801 Fax: +44 (0)114 290 1851 Email: h.marsh@britglass.co.uk Website: www.glass-ts.com	Glass and Glass Products Analysis  Environmental Sampling/ Testing	A

##### Site activities performed away from the locations listed above:

Location details		Activity	Location code
<b>Address</b> Customers sites requiring Stack Emissions Testing	<b>Local contact</b> Heather Marsh  Tel: +44 (0)114 290 1801 Fax: +44 (0)114 290 1851	Stack Emissions Testing	B



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DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
GLASS and GLASS PRODUCTS	<u>Chemical Tests</u>		
	Lead and Cadmium Leaching	Documented In-House Method QP16 using atomic absorption spectrometry and ICP-OES techniques based on ISO 7086-1:2019 ISO 7086-2:2000 BS 6748:1986 + A1:2011 BS EN 1388-2:1996 ASTM C927-80(2019) AOAC - 973.32 (2004)	A
	Elemental/oxide analysis	Documented In-House Method QP08 using XRF techniques	A
	Loss on drying and Loss on Ignition	Documented In-House Method QP10	A
	Hydrolytic resistance of glass containers for pharmaceutical use	Documented In-House Method QP15 based on USP42 – NF37 Section 660 European Pharmacopoeia Ph.Eur. Ed.9.8 method 3.2.1 (2010) British Pharmacopoeia BP BP-Vol V - Appendix XIX B (2013)	A
	Identification and comparative analysis	Documented In-House Method QP07 using SEM Techniques	A



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
GLASS and GLASS PRODUCTS (cont'd)	<u>Chemical Tests</u> (cont'd)		
GLASS MAKING MINERALS (eg sand, limestone, dolomite, cullet, feldspar, blast furnace slag, nepheline syenite, synthetic diopside, alumina and aluminosilicate refractories)	Sodium Oxide (Na <sub>2</sub> O) Magnesium Oxide (MgO) Aluminium Oxide (Al <sub>2</sub> O <sub>3</sub> ) Silica (SiO <sub>2</sub> ) Phosphorus Pentoxide (P <sub>2</sub> O <sub>5</sub> ) Potassium Oxide (K <sub>2</sub> O) Calcium Oxide (CaO) Titanium Dioxide (TiO <sub>2</sub> ) Manganese Oxide (MnO) Chromium (III) Oxide (Cr <sub>2</sub> O <sub>3</sub> ) Strontium Oxide (SrO) Iron (III) Oxide (Fe <sub>2</sub> O <sub>3</sub> ) Barium Oxide (BaO)	Documented In-House Method QP09 using X-ray fluorescence techniques (XRF)	A
GLASSWARE PRODUCTS including STOPPERS and CAPS	<u>Dimensional Tests</u>		
	Length 0 to 300 mm with an expanded measurement uncertainty of 0.014 mm	Documented In-House Method QP32 using optical profile methods	A
	Angle 0 to 360 ° with an expanded measurement uncertainty of 0.071 °	Documented In-House Method QP32 using non contact measurement.	
	Length (to ± 0.01 mm) Diameter (to ± 0.051 mm) (Range 1 to 150 mm)	Documented In-House Method QP02	A
	Volumetric capacity	Documented In-House Method QP48 based on TEC6 (1994)	A
	Verticality	Documented In-House Method QP49 based on BS EN 29008:1994	A
	Hall effect thickness gauge	Documented In-House Method QP02 - Appendix 1E based on Instruction Manual, Sections 910 - 198E and 213A	A



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GLASS PRODUCTS (cont'd)	<u>Dimensional Tests</u> (cont'd)		
	<u>Physical Tests</u>		
	Thermal shock	Documented In-House Method QP33 based on BS EN 1183:1997 ASTM C149-14 BS EN ISO 7459 (2004)	A
	Strain characteristics	Documented In-House Method QP17 based on ASTM C148-17 using a fluorescent intensity >1300 lux	A
	Glass failure analysis	Documented In-House Method QP18	A
	Fragment analysis of glass	Documented In-House Method QP21	A
	Determination of absorption and transmittance values	Documented In-House Method QP72 using spectrophotometric techniques in the range 180 – 3000nm	A
Sodium Carbonate	Total alkalinity	BS 6070-1:1981(2017) ISO 740:1976	A
	<u>Mechanical Tests</u>		
	Resistance to Vertical Load (Compression)	BS EN ISO 8113:2004 Documented In-House Method QP39	A
	Impact testing of glass	Documented In-House Method QP19	A
	Pressure testing of glass	Documented In-House Method QP20 based on ASTM C147-86(2015)	A



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GLASS and GLASS PRODUCTS	<u>Physical Tests</u>		
GLASS/NON POROUS MATERIAL	Density	Documented In-House Method QP66 based on ASTM C693-93(2019)	A
Road marking materials: glass beads and premix glass beads	Granulometry	BS EN 1423:2012 Section 4.1.3 Annex C (Except clause C.8) BS EN 1424:1998 Section 4.1 Except imperfection - gas inclusion (refer to BS EN 1423 clause C.8)	A



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
ATMOSPHERIC POLLUTANTS AND EFFLUENTS - STACK GAS SAMPLES	<u>Physical Testing</u>	National, European, International standards and Documented In-House work instructions	
Filter papers and rinse solutions	Weighing of Particulate Matter	Documented In-House Method QP40 BS ISO 9096:2003	A
ATMOSPHERIC POLLUTANTS AND EFFLUENTS - STACK GAS SAMPLES	<u>Physical Testing</u>	National, European, International and Environment Agency specified standards including MIDs and Documented In-House work instructions to meet the requirements of the Environment Agency (MCERTS) Performance Standard for laboratories carrying out testing of samples from stack emissions monitoring	
Filter papers and rinse solutions	Weighing of Particulate Matter	Documented In-House Method QP40 BS EN 13284-1:2017	A
Testing of Stack emissions to Atmosphere	<u>Sampling with subsequent analysis by an ISO/IEC 17025 Accredited Laboratory</u>	National, European, International and Environment Agency specified standards including MIDs and Documented In-House work instructions to meet the requirements of the Environment Agency (MCERTS) Performance Standard and BS EN 15259:2007	
	Total Particulate Matter	Documented In-House Method QP40 BS EN 13284-1:2017	B
	Hydrogen Chloride	Documented In-House Method QP43 BS EN 1911:2010	B
	Hydrogen Fluoride	Documented In-House Method QP44 BS ISO 15713:2006	B



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Testing of Stack emissions to Atmosphere (cont'd)	<u>Sampling with subsequent analysis by an ISO/IEC 17025 Accredited Laboratory</u>	National, European, International and Environment Agency specified standards including MIDs and Documented In-House work instructions to meet the requirements of the Environment Agency (MCERTS) Performance Standard and BS EN 15259:2007	
	Sulphur dioxide	Documented In-House Method QP53 BS EN 14791:2017	B
	Metals (excluding mercury)	Documented In-House Method QP50 BS EN 14385:2004	B
	<u>Sampling and On-Line analysis</u>		
	Pressure, Temperature and Velocity (point velocity method) for: <ul style="list-style-type: none"> <li>Periodic Compliance Monitoring</li> </ul>	BS EN ISO 16911-1:2013 & EA MID 16911-1 (Procedure QP71) - using differential pressure device (pitot tube) method Procedure to meet requirements of PD CEN TR 17078:2017 Measurement Objective 1	B
	Water Vapour	BS EN 14790:2017 Documented In-House Method QP52	B
	Oxygen*	Documented In-House Method QP55 BS EN 14789:2005 Validated Electrochemical cell or Paramagnetic analyser	B
Carbon Monoxide*	Documented In-House Method QP62 BS EN 15058:2017 NDIR Analyser	B	



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Testing of Stack emissions to Atmosphere (cont'd)	<u>Sampling and On-Line Analysis (cont'd)</u>	National, European, International and Environment Agency specified standards including MIDs and Documented In-House work instructions to meet the requirements of the Environment Agency (MCERTS) Performance Standard and BS EN 15259:2007	
	Total Gaseous Organic Carbon* (TOC/VOC) (0-1000mg/m <sup>3</sup> )	Documented In-House Method QP63 BS EN 12619:2013 FID analyser	B
	Oxides of Nitrogen (Nitrogen Oxide only)*	Documented In-House Method QP54 BS EN 14792:2017 Validated NDIR Analyser	B
END			

\* - The scale range of the analyser used for this test must be that detailed on its current MCERTS certificate or a range validated by the organisation to meet MCERTS requirements.