

Cement and related materials

Certified reference materials and sample preparation



Excellence through measurement

LGC Standards provides the widest range of reference materials from a single supplier. We work closely with the leading manufacturers to provide laboratories worldwide with improved access to reference materials, covering an increasingly large range of parameters. Our network of offices combined with our technical expertise allows LGC Standards to provide sound advice with fast delivery and deal with complex import and export regulations.

Cement, concrete and clinker can be found all around us and are important building blocks of our society. Reference standards are used at all stages in the production process, and more than 300 materials are available from LGC Standards.

Raw materials

Raw materials used in the cement manufacturing process include limestone, sand, shale, clay and slags. The quality control of these materials is essential to the finished product.

The resulting clinker, gypsum and process additions are all varied to create the desired performance of the final cement product. A number of parameters need to be monitored and we offer Certified Reference Materials to aid the analysis of parameters such as:

- Fineness
- Heat of Hydration
- Particle size
- Chemical analysis
- Strength
- Moisture content

To address growing concerns over environmental impact and rising fuel costs, cement plants are turning from fossil fuels to waste fuel and biofuel alternatives. LGC Standards offers the NJV range, including Energy Peat, Energy Forest, Energy Grass and Wood Fuel, to fulfill the demand for comparative measurements.

Clinker and Cement

The chemical analysis of hydraulic cement is standardized in ASTM method C114 – 11a where the use of NIST reference materials series SRM 1880 - 1889 is mentioned. These NIST (National Institute of Standards & Technology) materials are all available from your local LGC Standards office.

We also offer a set of NIST reference materials designed to evaluate methods of phase abundance analysis of major phases in cement clinkers; alite, belite, aluminite, ferrite, periclase and alkali sulfates. The three Standard Reference Materials® (SRM 2686a, SRM 2687, SRM 2688) have been selected to differ widely in phase abundance, crystal size and distribution of crystals.



New!

One of the most popular cement reference materials (BCS-CRM372/1) has recently sold out and we are now able to offer this new CRM as a suitable alternative.

FLX CRM100								
L.O.I.	Al ₂ O ₃	CaO	Cl	Cr ₂ O ₃	Fe ₂ O ₃	K ₂ O	MgO	
2.37	5.54	64.51	(0.09)	0.009	2.62	0.82	1.47	
Mn ₂ O ₃	Na ₂ O	P ₂ O ₅	S	SO ₃	SiO ₂	SrO	TiO ₂	ZnO
0.066	0.23	0.166	(0.06)	2.97	20.89	0.286	0.283	0.051

Physical characteristics

In addition to chemical analysis reference materials LGC Standards offer cement materials with a range of physical characteristics such as:

- Blaine
- Cement Fineness
- Compressive strength
- Phase abundance

Sample preparation

LGC Standards offers a full range of equipment and consumables for your sample preparation needs.

Autofluxer^{classic}

This well-known and established autofluxer now includes new features:

- Continuously moving crucible
- Start-counter
- Cooling delay

The **Autofluxer^{classic}** is still the easy- to-operate fusion machine, with a small footprint and very low gas consumption. Using an Oxygen-enriched flame it will easily work at high temperature.

We offer all necessary Platinum-ware, suitable for the Autofluxer range and compatible to the Schoeps system. On request, moulds and crucibles are available in DPH quality for longer use of the Platinum-ware.

All borates are available as pure Borates or in a variety of different mixtures – please ask for further details or for your custom mix.

Presses and consumables

Our presses are available in manual and electro-hydraulic versions.

We recommend using the pressing dies and sample cups from Chemplex Industries, Inc. which you can order at your local LGC Standards office.

For further information, or if you require substances or materials not currently listed please contact one of our local sales offices.

Brazil

Tel: +55 12 3302 5880
Email: bz@lgcstandards.com

Hungary

Tel: +36 (06) 26 314 891
Email: hu@lgcstandards.com

Russia

Tel: +7 (812)935 1180
Email: ru@lgcstandards.com

Bulgaria

Tel: +359 (0)2 971 4955
Email: bg@lgcstandards.com

India

Tel: +91 (0)80 6701 2000
Email: in@lgcpromochem.com

Spain

Tel: +34 (0)93 308 4181
Email: es@lgcstandards.com

China

Tel: +86 10 58208373
Email: infochina@lgcstandards.com

Ireland

Tel: +44 (0)28 7930 0078
Email: ire@lgcstandards.com

Sweden

Tel: +46 (0)33 20 90 60
Email: se@lgcstandards.com

Czech Republic

Tel: +420 543 529 205
Email: cz@lgcstandards.com

Italy

Tel: +39 02 2412 6830
Email: it@lgcstandards.com

Turkey

Tel: +90 216 360 0870
Email: tur@lgcstandards.com

Finland

Tel: +358 (0)2 233 9355
Email: fi@lgcstandards.com

Netherlands

Tel: +31 (0)643 775 422
Email: nl@lgcstandards.com

UAE

Tel: +971 555 570 664
Email: uae@lgcstandards.com

France

Tel: +33 (0)3 88 04 82 82
Email: fr@lgcstandards.com

Poland

Tel: +48 (0)22 751 31 40
Email: pl@lgcstandards.com

United Kingdom

Tel: +44 (0)20 8943 8480
Email: uksales@lgcstandards.com

Germany

Tel: +49 (0)281 9887 0
Email: de@lgcstandards.com

Romania

Tel: +40 364 116890
Email: ro@lgcstandards.com

USA

Tel: +44 (0)20 8943 8480
Email: lgcusa@lgcstandards.com

www.lgcstandards.com/contact