MAIN EDITION

BRITISH CERAMIC RESEARCH LTD.
and
BUREAU OF ANALYSED SAMPLES LTD.

BRITISH CHEMICAL STANDARD - REFERENCE MATERIAL

ANALYSIS REPORT
BCS-RM No. 202a
PLASTER (GYPSUM)

The material for this BCS-RM was prepared jointly by Lucideon (formerly British Ceramic Research Ltd.), Penkhull, Stoke-on-Trent, U.K. and Bureau of Analysed Samples Ltd.

ANALYSIS

mass content in % on dried (40±2°C) sample (BS4551:1980)

	SiO_2	Al_2O_3	TiO_2	Fe_2O_3	CaO	MgO
Mean	**1.38**	**0.33**	**0.03**	**0.10**	**37.4**	**0.39**
SD	0.06	0.02	0.02	0.01	0.2	0.01

	Na_2O	K_2O	P_2O_5	SrO	SO_3	LOI
Mean	**<0.03**	**0.10**	**<0.01**	**0.33**	**53**	**7.0**
SD	…	0.01	…	0.02	1	0.1

SD: standard deviation of all individual determinations obtain by both laboratories

BCS-RM 202a has been carefully analysed by both Bureau of Analysed Samples Ltd and British Ceramic Research Ltd., using the methods detailed overleaf, however, in order to distinguish it from the British Chemical Standard Certified Reference Materials (BCS-CRMs) which are normally analysed by at least five laboratories, BCS-RM 202a is classified as Reference Material (RM) and **NOT** a Certified Reference Material (CRM). The International Organisation for Standardisation (ISO) Guide 30 defines these as follows:-

Reference Material: Material, sufficiently homogeneous and stable with respect to one or more specified properties, which has been established to be fit for its intended use in a measurement process.

Certified Reference Material: Reference Material characterised by a metrologically valid procedure for one or more specific properties, accompanied by a Certificate that provides the value of the specified property, its associated uncertainty, and a statement of metrological traceability.

Date of this edition: July 2018.

(The current edition is available at www.basrid.co.uk)

BCS-RM No. 202a PLASTER (GYPSUM)

METHODS USED

ELEMENT	METHODS
Silica	Gravimetric, residual silica photometric (BS4550: Part 2: 1970) X-Ray Fluorescence
Alumina	Flame Atomic Absorption Spectrometry X-Ray Fluorescence
Titania	Photometric with diantipyrylmethane X-Ray Fluorescence
Iron Oxide	Flame Atomic Absorption Spectrometry X-Ray Fluorescence
Calcium Oxide	Titrimetric with 1,2-Di(2-aminoethoxy)ethane-NNN'N'-tetra-acetic acid X-Ray Fluorescence
Magnesium Oxide	Flame Atomic Absorption Spectrometry X-Ray Fluorescence
Sodium Oxide	Flame Atomic Absorption Spectrometry X-Ray Fluorescence
Potassium Oxide	Flame Atomic Absorption Spectrometry X-Ray Fluorescence
Phosphorus Pentoxide	Photometric as molybdenum blue X-Ray Fluorescence
Strontium Oxide	Flame Atomic Absorption Spectrometry X-Ray Fluorescence
Sulphur Trioxide	Gravimetric as barium sulphate (BS4550: Part 2: 1970) X-Ray Fluorescence
Loss on Ignition	Loss at 1025 ± 25ºC

DESCRIPTION OF SAMPLE

This sample is sold in the form of finely divided material passing through a nominal 250 micron aperture and packed into bottles of 100g.

INTENDED USE

BCS-RM 202a is intended for uses such as the verification of the accuracy and repeatability of analytical methods, such as those used by the participating laboratories and for training purposes.

STABILITY

BCS-RM 202a will remain stable provided that the bottle remains sealed and is stored in a dry atmosphere. When the bottle has been opened the lid should be secured immediately after use.

Further information and advice on this or other Reference Materials produced by Bureau of Analysed Samples Ltd may be obtained from the address below.

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For BUREAU OF ANALYSED SAMPLES LTD

R.P. MEERES,
Managing Director

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