Product Information Sheet
Ore Calibration Pack
IMS-439

Introduction

This Ore Calibration Pack has been prepared for the purposes of method development and calibration of Lithium borate fusion X-ray fluorescence analysis, and single and multi-point Thermal Gravimetric Analysis (Loss on Ignition). 17 different pulverised iron ores and bauxites from Independent Mineral Standards catalogue were packaged in 10g sachets and bundled.

The calibration pack also provides laboratories with an introductory quantity of CRMs that may be suitable for an ongoing quality control program as part of routine analytical analysis for ores of these types.

Details of each of the materials' certified values and uncertainties should be obtained directly from the original certificates. Summary values are provided in the following tables.

Instructions for use and storage

Each CRM is packaged in uniquely identified 10g aluminised sachets, and heat sealed. The sachets should be stored in a cool dry location. These reference materials have been dried prior to manufacture, but due to their hygroscopic nature will require further oven drying prior to analysis. It is recommended open sachets are stored in a desiccator.

Preparer and Supplier

This combined calibration pack was prepared by:

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Version History

Batch #	Document Version	Date	Modification
IMS-439	R0	11/7/24	Original Document

Pulverised Iron Ores

CRM#	Description	ISO17034	Fe	SiO2	Al2O3	TiO2	Mn	CaO	P	S	MgO	K2O	Na2O	LOI371	LOI425	LOI650	LOI1000
		-	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	TGA	TGA	TGA	TGA
			%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
PBS-30	Pulverised goethite-hematite, high Mn	N	41.13	7.02	4.57	0.231	12.77	0.070	0.038	0.033	0.089	0.382	0.093	6.74	7.16	9.47	10.80
PBS-73	Pulverised goethite-hematite, oxide spiked	N	56.06	6.77	3.19	0.111	0.138	0.129	0.076	0.038	0.090	0.027	0.096	6.85	7.07	7.94	8.36
PBS-203	Pulverised iron ore, High Mn	Y	60.67	2.20	1.62	0.101	4.290	0.067	0.041	0.017	0.096	0.215	0.056	1.36	1.50	2.29	2.93
PBS-204	Pulverised iron ore	Y	65.75	1.14	0.98	0.060	0.019	0.010	0.124	0.014	0.040	0.003	0.010	3.00	3.09	3.30	3.46
PBS-263	Pulverised iron ore, High Phos	Y	57.92	3.68	2.40	0.057	0.510	0.038	0.256	0.016	0.147	0.040	0.066	-	8.13	8.93	9.15
PBS-310	Pulverised sediment, High Cl	Y	22.98	30.24	14.20	0.830	1.73	2.84	0.040	0.027	2.64	0.981	1.70	-	3.44	10.04	10.93
RRM_Fe-103	Pulverised iron ore	N	57.06	5.83	2.73	0.116	0.861	0.087	0.048	0.036	0.086	0.041	0.031	6.89	7.14	7.70	8.01
RRM_Fe-107	Pulverised iron ore	N	49.21	22.11	2.03	0.104	0.081	0.049	0.057	0.043	0.077	0.026	0.016	4.63	4.80	5.22	5.25
RRM_Fe-109	Pulverised iron ore	N	56.36	8.55	2.28	0.094	0.735	0.075	0.051	0.034	0.105	0.040	0.025	5.88	6.09	6.65	6.95
RRM_Fe-117	Pulverised iron ore	N	41.81	16.17	11.22	1.058	0.443	0.150	0.028	0.063	0.274	0.040	0.031	7.38	8.21	9.65	10.16
RRM_Fe-118	Pulverised iron ore	N	60.71	4.66	4.40	0.581	0.055	0.028	0.049	0.021	0.057	0.009	0.053	2.20	2.37	2.78	3.01
RRM_Fe-119	Pulverised iron ore	N	59.83	6.22	2.62	0.219	0.023	0.015	0.077	0.021	0.042	0.011	0.021	3.94	4.10	4.54	4.76
PBS-59	Pulverised Magnetite	N	32.82	46.45	0.56	0.028	0.064	1.230	0.069	0.006	2.160	0.429	0.644	-	-	-	1.34
PBS-71	Pulverised Magnetite	N	30.70	47.22	1.46	0.073	0.118	0.496	0.103	0.131	2.230	0.660	0.153	-	-	-	3.26

Pulverised Bauxite

CRM#	Description	ISO17034	Al2O3	SiO2	Fe2O3	TiO2	MnO	CaO	P2O5	SO3	MgO	K2O	Na2O	Cr2O3	V2O5	ZrO2	Ga2O3	NiO	Zn	LOI1000
			Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	Fusion XRF	TGA
			%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
PBS-62	Pulverised bauxite	Y	40.39	9.59	27.44	3.77	0.020	0.038	0.051	0.074	0.066	0.039	0.034	0.068	0.118	0.099	0.024	0.010	0.001	18.33
PBS-74	Pulverised bauxite	Y	42.53	18.41	19.73	1.86	0.010	0.016	0.043	0.034	0.050	0.019	0.025	0.041	0.064	0.072	0.013	0.009	0.001	17.20
PBS-75	Pulverised bauxite	Y	46.76	15.9	19.15	2.53	0.042	0.022	0.070	0.061	0.070	0.024	0.027	0.045	0.060	0.122	0.027	0.008	0.001	15.22