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Bauxite Nano-Pellet, pressed pellet diameter 20 mm (Standard for solid-state microanalysis)

Art. ID	MY-BX-N-NP-LA-ICP-MS-LIBS-20MM
Unit	each (pressed pellet)
Deliverydetails	No Dangerous Good /not restricted

Description

Pellet for LA-ICP-MS and LIBS application /// The principle behind LA-ICP-MS (Laser Ablation - Inductively Coupled Plasma - Mass Spectrometry) involves a laser beam removing (ablating) material from a sample and analysing its chemical composition in a mass spectrometer /// LIBS (Laser-Induced Breakdown Spectroscopy) uses a laser beam to interact with the sample. Due to the extreme heat of the laser (10,000 K and more) a plasma is formed. A plasma is a cloud of ions (charged atoms) and electrons (negatively charged particles). When this plasma collapses it emits light. Light is a mixture of different wavelengths. This light is then transferred through a fiberoptic cable to a spectrometer, which can precisely split the light into its respective wavelengths. The working principle of the LIBS-spectrometer is similar to a prism as it disperses the incomming light. Each element has several characteristic wavelengths. A detector is able to attribute an intensity to each of them.

Text/Information	Analyte/Parameter	CAS number	Concentration/Value	Unit	Method	Source
	Na2O		0,04 ± 0,02	g/100g		
	MgO	[1309-48-4]	0,11 ± 0,03	g/100g		
	Al2O3		54,21 ± 0,4	g/100g		
	SiO2		7,4 ± 0,15	g/100g		
	P2O5		0,13 ± 0,03	g/100g		
	K2O		0,05 ± 0,01	g/100g		
	CaO		0,17 ± 0,05	g/100g		
	TiO2		2,37 ± 0,09	g/100g		
	MnO		0,05 ± 0,009	g/100g		
	Fe2O3(T)		23,17 ± 0,28	g/100g		
	Lithium (Li)	[7439-93-2]	39 ± 9	µg/g		
	Beryllium (Be)	[7440-41-7]	5,5 ± 0,6	µg/g		
	Scandium (Sc)	[7440-20-2]	60 ± 7	µg/g		
	Vanadium (V)	[7440-62-2]	350 ± 44	µg/g		
	Chromium (Cr)	[7440-47-3]	280 ± 31	µg/g		
	Cobalt (Co)	[7440-48-4]	30 ± 7	µg/g		
	Nickel (Ni)	[7440-02-0]	180 ± 16	µg/g		
	Copper (Cu)	[7440-50-8]	18 ± 2	µg/g		
	Zinc (Zn)	[7440-66-6]	80 ± 15	µg/g		
	Gallium (Ga)	[7440-55-3]	67 ± 14	µg/g		
	Arsenic (As)	[7440-38-2]	115 ± 6	µg/g		
	Rubidium (Rb)	[7440-17-7]	3,6 ± 0,6	µg/g		
	Strontium (Sr)	[7440-24-6]	110 ± 9	µg/g		

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	Yttrium (Y)	[7440-65-5]	114 ± 14	µg/g
	Zirconium (Zr)	[7440-67-7]	550 ± 44	µg/g
	Niobium (Nb)	[7440-03-1]	52 ± 4	µg/g
	Molybdenum (Mo)	[7439-98-7]	8,3 ± 0,7	µg/g
	Tin (Sn)	[7440-31-5]	13,4 ± 1,1	µg/g
	Barium (Ba)	[7440-39-3]	30 ± 9	µg/g
	Lanthanum (La)	[7439-91-0]	355 ± 18	µg/g
	Cerium (Ce)	[7440-45-1]	520 ± 23	µg/g
	Neodymium (Nd)	[7440-00-8]	163 ± 7	µg/g
	Samarium (Sm)	[7440-19-9]	22 ± 1,3	µg/g
	Europium (Eu)	[7440-53-1]	4,4 ± 0,3	µg/g
	Gadolinium (Gd)	[7440-54-2]	20 ± 1,6	µg/g
	Terbium (Tb)	[7440-27-9]	3 ± 0,3	µg/g
	Ytterbium (Yb)	[7440-64-4]	11,6 ± 1,5	µg/g
	Lutetium (Lu)	[7439-94-3]	1,8 ± 0,18	µg/g
	Hafnium (Hf)	[7440-58-6]	15,2 ± 1,1	µg/g
	Tantalum (Ta)	[7440-25-7]	4,6 ± 0,4	µg/g
	Lead (Pb)	[7439-92-1]	135 ± 13	µg/g
	Thorium (Th)	[7440-29-1]	50 ± 6	µg/g
	Uranium (U)	[7440-61-1]	8,8 ± 1,5	µg/g