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

Art. ID	MY-BCR-2-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		3,12 ± 0,042	g/100g		
	MgO	[1309-48-4]	3,599 ± 0,044	g/100g		
	Al2O3		13,48 ± 0,12	g/100g		
	SiO2		54 ± 0,2	g/100g		
	P2O5		0,3593 ± 0,0095	g/100g		
	K2O		1,774 ± 0,019	g/100g		
	CaO		7,114 ± 0,075	g/100g		
	TiO2		2,265 ± 0,024	g/100g		
	MnO		0,1966 ± 0,003	g/100g		
	Fe2O3(T)		13,77 ± 0,19	g/100g		
	Lithium (Li)	[7439-93-2]	9,13 ± 0,22	µg/g		
	Beryllium (Be)	[7440-41-7]	2,17 ± 0,1	µg/g		
	Scandium (Sc)	[7440-20-2]	33,53 ± 0,4	µg/g		
	Vanadium (V)	[7440-62-2]	417,6 ± 4,5	µg/g		
	Chromium (Cr)	[7440-47-3]	15,85 ± 0,38	µg/g		
	Cobalt (Co)	[7440-48-4]	37,33 ± 0,37	µg/g		
	Nickel (Ni)	[7440-02-0]	12,57 ± 0,3	µg/g		
	Copper (Cu)	[7440-50-8]	19,66 ± 0,72	µg/g		
	Zinc (Zn)	[7440-66-6]	129,5 ± 1,8	µg/g		
	Gallium (Ga)	[7440-55-3]	22,07 ± 0,19	µg/g		
	Rubidium (Rb)	[7440-17-7]	46,02 ± 0,56	µg/g		
	Strontium (Sr)	[7440-24-6]	337,4 ± 6,7	µg/g		
	Yttrium (Y)	[7440-65-5]	36,07 ± 0,37	µg/g		

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	Zirconium (Zr)	[7440-67-7]	186,5 ± 1,5	µg/g
	Niobium (Nb)	[7440-03-1]	12,44 ± 0,2	µg/g
	Molybdenum (Mo)	[7439-98-7]	250,6 ± 6,7	µg/g
	Cadmium (Cd)	[7440-43-9]	0,69 ± 0,29	µg/g
	Tin (Sn)	[7440-31-5]	2,28 ± 0,13	µg/g
	Antimony (Sb)	[7440-36-0]	0,302 ± 0,029	µg/g
	Caesium (Cs)	[7440-46-2]	1,16 ± 0,023	µg/g
	Barium (Ba)	[7440-39-3]	683,9 ± 4,7	µg/g
	Cerium (Ce)	[7440-45-1]	53,12 ± 0,33	µg/g
	Praseodymium (Pr)	[7440-10-0]	6,827 ± 0,044	µg/g
	Neodymium (Nd)	[7440-00-8]	28,26 ± 0,37	µg/g
	Samarium (Sm)	[7440-19-9]	6,547 ± 0,047	µg/g
	Europium (Eu)	[7440-53-1]	1,989 ± 0,024	µg/g
	Gadolinium (Gd)	[7440-54-2]	6,811 ± 0,078	µg/g
	Terbium (Tb)	[7440-27-9]	1,077 ± 0,026	µg/g
	Dysprosium (Dy)	[7429-91-6]	6,424 ± 0,055	µg/g
	Erbium (Er)	[7440-52-0]	3,67 ± 0,038	µg/g
	Thulium (Tm)	[7440-30-4]	0,5341 ± 0,006	µg/g
	Ytterbium (Yb)	[7440-64-4]	3,392 ± 0,036	µg/g
	Lutetium (Lu)	[7439-94-3]	0,5049 ± 0,0078	µg/g
	Hafnium (Hf)	[7440-58-6]	4,972 ± 0,034	µg/g
	Tantalum (Ta)	[7440-25-7]	0,785 ± 0,018	µg/g
	Tungsten (W)	[7440-33-7]	0,465 ± 0,05	µg/g
	Thallium (Tl)	[7440-28-0]	0,267 ± 0,018	µg/g
	Lead (Pb)	[7439-92-1]	10,59 ± 0,17	µg/g
	Bismuth (Bi)	[7440-69-9]	0,05 ± 0,015	µg/g
	Thorium (Th)	[7440-29-1]	5,828 ± 0,05	µg/g
	Uranium (U)	[7440-61-1]	1,683 ± 0,017	µg/g