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

Art. ID	MY-AC-E-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		6,54 ± 0,04	g/100g		
	MgO	[1309-48-4]	0,03 ± 0,01	g/100g		
	Al2O3		14,7 ± 0,05	g/100g		
	SiO2		70,35 ± 0,07	g/100g		
	P2O5		0,014 ± 0,004	g/100g		
	K2O		4,49 ± 0,02	g/100g		
	CaO		0,34 ± 0,02	g/100g		
	TiO2		0,11 ± 0,02	g/100g		
	MnO		0,058 ± 0,002	g/100g		
	Fe2O3(T)		2,53 ± 0,02	g/100g		
	Lithium (Li)	[7439-93-2]	93 ± 5	µg/g		
	Beryllium (Be)	[7440-41-7]	12 ± 1,1	µg/g		
	Boron (B)	[7440-42-8]	21 ± 2,6	µg/g		
	Fluorine (F)	[7782-41-4]	2100 ± 200	µg/g		
	Scandium (Sc)	[7440-20-2]	0,11 ± 0,05	µg/g		
	Vanadium (V)	[7440-62-2]	3 ± 1	µg/g		
	Chromium (Cr)	[7440-47-3]	3,4 ± 1,2	µg/g		
	Cobalt (Co)	[7440-48-4]	0,2 ± 0,1	µg/g		
	Nickel (Ni)	[7440-02-0]	1,5 ± 0,5	µg/g		
	Copper (Cu)	[7440-50-8]	4 ± 0,9	µg/g		
	Zinc (Zn)	[7440-66-6]	224 ± 6	µg/g		
	Gallium (Ga)	[7440-55-3]	39 ± 3,7	µg/g		
	Arsenic (As)	[7440-38-2]	2,3 ± 1	µg/g		

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	Rubidium (Rb)	[7440-17-7]	152 ± 2,1	µg/g
	Strontium (Sr)	[7440-24-6]	3 ± 0,8	µg/g
	Yttrium (Y)	[7440-65-5]	184 ± 5	µg/g
	Zirconium (Zr)	[7440-67-7]	780 ± 20	µg/g
	Niobium (Nb)	[7440-03-1]	110 ± 5	µg/g
	Molybdenum (Mo)	[7439-98-7]	0,9 ± 0,9	µg/g
	Silver (Ag)	[7440-22-4]	0,1 ± 0,04	µg/g
	Cadmium (Cd)	[7440-43-9]	0,6 ± 0,3	µg/g
	Tin (Sn)	[7440-31-5]	13 ± 4	µg/g
	Antimony (Sb)	[7440-36-0]	0,4 ± 0,08	µg/g
	Caesium (Cs)	[7440-46-2]	3 ± 0,54	µg/g
	Barium (Ba)	[7440-39-3]	55 ± 5	µg/g
	Lanthanum (La)	[7439-91-0]	59 ± 2	µg/g
	Cerium (Ce)	[7440-45-1]	154 ± 4,7	µg/g
	Praseodymium (Pr)	[7440-10-0]	22,2 ± 2,6	µg/g
	Neodymium (Nd)	[7440-00-8]	92 ± 6	µg/g
	Samarium (Sm)	[7440-19-9]	24,2 ± 0,8	µg/g
	Europium (Eu)	[7440-53-1]	2 ± 0,09	µg/g
	Gadolinium (Gd)	[7440-54-2]	26 ± 1,5	µg/g
	Terbium (Tb)	[7440-27-9]	4,8 ± 0,2	µg/g
	Dysprosium (Dy)	[7429-91-6]	29 ± 1,5	µg/g
	Holmium (Ho)	[7440-60-0]	6,5 ± 0,5	µg/g
	Erbium (Er)	[7440-52-0]	17,7 ± 1,2	µg/g
	Thulium (Tm)	[7440-30-4]	2,6 ± 0,24	µg/g
	Ytterbium (Yb)	[7440-64-4]	17,4 ± 0,5	µg/g
	Lutetium (Lu)	[7439-94-3]	2,45 ± 0,11	µg/g
	Hafnium (Hf)	[7440-58-6]	27,9 ± 1,4	µg/g
	Tantalum (Ta)	[7440-25-7]	6,4 ± 0,3	µg/g
	Tungsten (W)	[7440-33-7]	1,5 ± 0,4	µg/g
	Lead (Pb)	[7439-92-1]	39 ± 3	µg/g
	Thorium (Th)	[7440-29-1]	18,5 ± 0,7	µg/g
	Uranium (U)	[7440-61-1]	4,6 ± 0,46	µg/g