

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

Art. ID MY-AGV-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 incoming 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
	TiO ₂		1,051 ± 0,023	g/100g		
	MnO		0,1004 ± 0,0026	g/100g		
	Lithium (Li)	[7439-93-2]	10,8 ± 0,21	µg/g		
	Beryllium (Be)	[7440-41-7]	2,209 ± 0,066	µg/g		
	Scandium (Sc)	[7440-20-2]	13,11 ± 0,31	µg/g		
	Vanadium (V)	[7440-62-2]	118,5 ± 1,2	µg/g		
	Chromium (Cr)	[7440-47-3]	16,22 ± 0,72	µg/g		
	Cobalt (Co)	[7440-48-4]	15,46 ± 0,5	µg/g		
	Nickel (Ni)	[7440-02-0]	18,87 ± 0,41	µg/g		
	Copper (Cu)	[7440-50-8]	51,51 ± 0,65	µg/g		
	Zinc (Zn)	[7440-66-6]	86,7 ± 1,2	µg/g		
	Gallium (Ga)	[7440-55-3]	20,42 ± 0,17	µg/g		
	Rubidium (Rb)	[7440-17-7]	67,79 ± 0,66	µg/g		
	Strontium (Sr)	[7440-24-6]	659,5 ± 5,7	µg/g		
	Yttrium (Y)	[7440-65-5]	19,14 ± 0,84	µg/g		
	Zirconium (Zr)	[7440-67-7]	232 ± 2,3	µg/g		
	Niobium (Nb)	[7440-03-1]	14,12 ± 0,22	µg/g		
	Molybdenum (Mo)	[7439-98-7]	2 ± 0,11	µg/g		
	Cadmium (Cd)	[7440-43-9]	0,184 ± 0,069	µg/g		
	Tin (Sn)	[7440-31-5]	1,83 ± 0,25	µg/g		
	Antimony (Sb)	[7440-36-0]	0,458 ± 0,061	µg/g		
	Caesium (Cs)	[7440-46-2]	1,173 ± 0,018	µg/g		
	Barium (Ba)	[7440-39-3]	1134 ± 8	µg/g		

Lanthanum (La)	[7439-91-0]	38,21 ± 0,38	µg/g
Cerium (Ce)	[7440-45-1]	69,43 ± 0,57	µg/g
Praseodymium (Pr)	[7440-10-0]	8,165 ± 0,084	µg/g
Neodymium (Nd)	[7440-00-8]	30,49 ± 0,47	µg/g
Samarium (Sm)	[7440-19-9]	5,509 ± 0,078	µg/g
Europium (Eu)	[7440-53-1]	1,553 ± 0,015	µg/g
Gadolinium (Gd)	[7440-54-2]	4,678 ± 0,064	µg/g
Terbium (Tb)	[7440-27-9]	0,651 ± 0,0073	µg/g
Dysprosium (Dy)	[7429-91-6]	3,549 ± 0,031	µg/g
Holmium (Ho)	[7440-60-0]	0,6818 ± 0,0081	µg/g
Erbium (Er)	[7440-52-0]	1,825 ± 0,013	µg/g
Thulium (Tm)	[7440-30-4]	0,2623 ± 0,0035	µg/g
Ytterbium (Yb)	[7440-64-4]	1,653 ± 0,013	µg/g
Lutetium (Lu)	[7439-94-3]	0,2507 ± 0,0033	µg/g
Hafnium (Hf)	[7440-58-6]	5,137 ± 0,057	µg/g
Tantalum (Ta)	[7440-25-7]	0,865 ± 0,019	µg/g
Tungsten (W)	[7440-33-7]	0,553 ± 0,094	µg/g
Thallium (Tl)	[7440-28-0]	0,275 ± 0,01	µg/g
Lead (Pb)	[7439-92-1]	13,14 ± 0,15	µg/g
Bismuth (Bi)	[7440-69-9]	0,052 ± 0,0079	µg/g
Thorium (Th)	[7440-29-1]	6,174 ± 0,063	µg/g
Uranium (U)	[7440-61-1]	1,885 ± 0,015	µg/g