

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

Art. ID MY-MUH-1-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
	Na ₂ O		0,104 ± 0,01	g/100g		
	MgO	[1309-48-4]	38,25 ± 0,16	g/100g		
	Al ₂ O ₃		1,334 ± 0,019	g/100g		
	SiO ₂		40,38 ± 0,17	g/100g		
	P ₂ O ₅		0,0075 ± 0,0022	g/100g		
	K ₂ O		0,012 ± 0,003	g/100g		
	CaO		1,213 ± 0,01	g/100g		
	TiO ₂		0,0344 ± 0,0026	g/100g		
	MnO		0,1179 ± 0,0014	g/100g		
	Fe ₂ O ₃ (T)		8,59 ± 0,05	g/100g		
	Scandium (Sc)	[7440-20-2]	9 ± 0,4	µg/g		
	Cobalt (Co)	[7440-48-4]	106,7 ± 2,5	µg/g		
	Nickel (Ni)	[7440-02-0]	2104 ± 26	µg/g		
	Copper (Cu)	[7440-50-8]	19,1 ± 1,2	µg/g		
	Zinc (Zn)	[7440-66-6]	44,5 ± 1,8	µg/g		
	Gallium (Ga)	[7440-55-3]	1,38 ± 0,09	µg/g		
	Rubidium (Rb)	[7440-17-7]	0,27 ± 0,04	µg/g		
	Strontium (Sr)	[7440-24-6]	8,5 ± 0,4	µg/g		
	Yttrium (Y)	[7440-65-5]	0,97 ± 0,08	µg/g		
	Caesium (Cs)	[7440-46-2]	0,099 ± 0,003	µg/g		
	Barium (Ba)	[7440-39-3]	4,98 ± 0,29	µg/g		
	Praseodymium (Pr)	[7440-10-0]	0,0351 ± 0,0019	µg/g		
	Neodymium (Nd)	[7440-00-8]	0,177 ± 0,007	µg/g		

Samarium (Sm)	[7440-19-9]	0,0677 ± 0,0026	µg/g
Europium (Eu)	[7440-53-1]	0,0262 ± 0,001	µg/g
Terbium (Tb)	[7440-27-9]	0,0212 ± 0,0007	µg/g
Dysprosium (Dy)	[7429-91-6]	0,153 ± 0,007	µg/g
Holmium (Ho)	[7440-60-0]	0,0357 ± 0,0015	µg/g
Erbium (Er)	[7440-52-0]	0,1082 ± 0,0022	µg/g
Thulium (Tm)	[7440-30-4]	0,017 ± 0,0007	µg/g
Ytterbium (Yb)	[7440-64-4]	0,118 ± 0,005	µg/g
Lutetium (Lu)	[7439-94-3]	0,0191 ± 0,0013	µg/g
Hafnium (Hf)	[7440-58-6]	0,044 ± 0,013	µg/g
Thorium (Th)	[7440-29-1]	0,018 ± 0,004	µg/g