

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

Art. ID MY-DTS-2b-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
	MgO	[1309-48-4]	49,4 ± 1,8	g/100g		
	Al ₂ O ₃		0,45 ± 0,06	g/100g		
	SiO ₂		39,4 ± 0,8	g/100g		
	CaO		0,12 ± 0,01	g/100g		
	Fe ₂ O ₃ (T)		7,76 ± 0,21	g/100g		
	Magnesium (Mg)	[7439-95-4]	298000 ± 11000	µg/g		
	Aluminium (Al)	[7429-90-5]	2400 ± 300	µg/g		
	Silicon (Si)	[7440-21-3]	184000 ± 4000	µg/g		
	Calcium (Ca)	[7440-70-2]	900 ± 100	µg/g		
	Vanadium (V)	[7440-62-2]	22 ± 8	µg/g		
	Chromium (Cr)	[7440-47-3]	15500 ± 1100	µg/g		
	Manganese (Mn)	[7439-96-5]	830 ± 40	µg/g		
	Fe(total)		54300 ± 1500	µg/g		
	Cobalt (Co)	[7440-48-4]	120 ± 10	µg/g		
	Nickel (Ni)	[7440-02-0]	3780 ± 220	µg/g		
	Zinc (Zn)	[7440-66-6]	45 ± 5	µg/g		