

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

Art. ID MY-PM-S-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
	CaO		12,6 ± 0,32	g/100g		
	Fe ₂ O ₃ (T)		10,12 ± 0,08	g/100g		
	Scandium (Sc)	[7440-20-2]	34 ± 1,5	µg/g		
	Vanadium (V)	[7440-62-2]	186,4 ± 7,6	µg/g		
	Chromium (Cr)	[7440-47-3]	319 ± 9,4	µg/g		
	Cobalt (Co)	[7440-48-4]	49 ± 2	µg/g		
	Nickel (Ni)	[7440-02-0]	117,8 ± 3,5	µg/g		
	Zinc (Zn)	[7440-66-6]	60 ± 4,2	µg/g		
	Rubidium (Rb)	[7440-17-7]	0,978 ± 0,057	µg/g		
	Strontium (Sr)	[7440-24-6]	279,2 ± 6,2	µg/g		
	Yttrium (Y)	[7440-65-5]	11,31 ± 0,35	µg/g		
	Zirconium (Zr)	[7440-67-7]	38,2 ± 1,7	µg/g		
	Niobium (Nb)	[7440-03-1]	2,44 ± 0,23	µg/g		
	Caesium (Cs)	[7440-46-2]	0,372 ± 0,047	µg/g		
	Barium (Ba)	[7440-39-3]	148,1 ± 4	µg/g		
	Lanthanum (La)	[7439-91-0]	2,683 ± 0,092	µg/g		
	Cerium (Ce)	[7440-45-1]	6,87 ± 0,25	µg/g		
	Praseodymium (Pr)	[7440-10-0]	1,069 ± 0,045	µg/g		
	Neodymium (Nd)	[7440-00-8]	5,52 ± 0,21	µg/g		
	Samarium (Sm)	[7440-19-9]	1,784 ± 0,058	µg/g		
	Europium (Eu)	[7440-53-1]	1,069 ± 0,04	µg/g		
	Gadolinium (Gd)	[7440-54-2]	2,04 ± 0,083	µg/g		
	Terbium (Tb)	[7440-27-9]	0,338 ± 0,015	µg/g		

Dysprosium (Dy)	[7429-91-6]	2,095 ± 0,045	µg/g
Holmium (Ho)	[7440-60-0]	0,428 ± 0,013	µg/g
Erbium (Er)	[7440-52-0]	1,14 ± 0,036	µg/g
Ytterbium (Yb)	[7440-64-4]	0,997 ± 0,022	µg/g
Lutetium (Lu)	[7439-94-3]	0,151 ± 0,005	µg/g