

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

Art. ID	MY-Mica-Mg-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		0,12 ± 0,05	g/100g		
	MgO	[1309-48-4]	20,4 ± 0,38	g/100g		
	Al ₂ O ₃		15,2 ± 0,23	g/100g		
	SiO ₂		38,3 ± 0,19	g/100g		
	K ₂ O		10 ± 0,16	g/100g		
	CaO		0,08 ± 0,02	g/100g		
	TiO ₂		1,63 ± 0,05	g/100g		
	MnO		0,26 ± 0,03	g/100g		
	Fe ₂ O ₃ (T)		9,46 ± 0,18	g/100g		
	Lithium (Li)	[7439-93-2]	110 ± 25	µg/g		
	Fluorine (F)	[7782-41-4]	28500 ± 800	µg/g		
	Vanadium (V)	[7440-62-2]	90 ± 15	µg/g		
	Chromium (Cr)	[7440-47-3]	100 ± 5	µg/g		
	Cobalt (Co)	[7440-48-4]	24 ± 2	µg/g		
	Nickel (Ni)	[7440-02-0]	110 ± 7	µg/g		
	Copper (Cu)	[7440-50-8]	4 ± 1	µg/g		
	Zinc (Zn)	[7440-66-6]	290 ± 13	µg/g		
	Gallium (Ga)	[7440-55-3]	21 ± 4	µg/g		
	Rubidium (Rb)	[7440-17-7]	1300 ± 40	µg/g		
	Strontium (Sr)	[7440-24-6]	27 ± 3	µg/g		
	Zirconium (Zr)	[7440-67-7]	16 ± 2	µg/g		
	Niobium (Nb)	[7440-03-1]	116 ± 5	µg/g		
	Tin (Sn)	[7440-31-5]	5 ± 0,5	µg/g		

Caesium (Cs)	[7440-46-2]	55 ± 5	µg/g
Barium (Ba)	[7440-39-3]	4000 ± 250	µg/g
Tantalum (Ta)	[7440-25-7]	4,4 ± 0,4	µg/g
Tungsten (W)	[7440-33-7]	0,6 ± 0,2	µg/g
Lead (Pb)	[7439-92-1]	9 ± 3	µg/g