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Limestone Nano-Pellet, pressed pellet diameter 13 mm (Standard for solid-state microanalysis)

Art. ID	MY-ECRM-752-1-NP-LA-ICP-MS-LIBS-13MM
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 incomming 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		55,4 ± 0,2	g/100g (%)		
	Lithium (Li)	[7439-93-2]	0,981 ± 0,108	µg/g		
	Boron (B)	[7440-42-8]	1,55 ± 0,205	µg/g		
	Sodium (Na)	[7440-23-5]	49,7 ± 7,4	µg/g		
	Magnesium (Mg)	[7439-95-4]	1030 ± 34,1	µg/g		
	Aluminium (Al)	[7429-90-5]	627 ± 19,2	µg/g		
	Silicon (Si)	[7440-21-3]	9719 ± 542	µg/g		
	Titanium (Ti)	[7440-32-6]	52,4 ± 6,62	µg/g		
	Vanadium (V)	[7440-62-2]	2,76 ± 0,315	µg/g		
	Chromium (Cr)	[7440-47-3]	6,8 ± 0,704	µg/g		
	Manganese (Mn)	[7439-96-5]	85,5 ± 8,02	µg/g		
	Iron (Fe)	[7439-89-6]	289 ± 8,16	µg/g		
	Copper (Cu)	[7440-50-8]	1,32 ± 0,246	µg/g		
	Zinc (Zn)	[7440-66-6]	4,39 ± 0,47	µg/g		
	Gallium (Ga)	[7440-55-3]	0,196 ± 0,02	µg/g		
	Rubidium (Rb)	[7440-17-7]	0,44 ± 0,003	µg/g		
	Strontium (Sr)	[7440-24-6]	154 ± 10,6	µg/g		
	Yttrium (Y)	[7440-65-5]	1,97 ± 0,106	µg/g		
	Molybdenum (Mo)	[7439-98-7]	0,08 ± 0,003	µg/g		
	Cadmium (Cd)	[7440-43-9]	0,647 ± 0,028	µg/g		
	Caesium (Cs)	[7440-46-2]	0,117 ± 0,002	µg/g		
	Barium (Ba)	[7440-39-3]	54,7 ± 1,28	µg/g		
	Lanthanum (La)	[7439-91-0]	1,38 ± 0,009	µg/g		

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	Cerium (Ce)	[7440-45-1]	1,32 ± 0,014	µg/g
	Praseodymium (Pr)	[7440-10-0]	0,286 ± 0,003	µg/g
	Neodymium (Nd)	[7440-00-8]	1,21 ± 0,018	µg/g
	Samarium (Sm)	[7440-19-9]	0,251 ± 0,001	µg/g
	Europium (Eu)	[7440-53-1]	0,141 ± 0,005	µg/g
	Gadolinium (Gd)	[7440-54-2]	0,298 ± 0,001	µg/g
	Terbium (Tb)	[7440-27-9]	0,043 ± 0,001	µg/g
	Dysprosium (Dy)	[7429-91-6]	0,267 ± 0,004	µg/g
	Holmium (Ho)	[7440-60-0]	0,059 ± 0,001	µg/g
	Erbium (Er)	[7440-52-0]	0,165 ± 0,012	µg/g
	Thulium (Tm)	[7440-30-4]	0,021 ± 0,001	µg/g
	Ytterbium (Yb)	[7440-64-4]	0,122 ± 0,001	µg/g
	Lutetium (Lu)	[7439-94-3]	0,019 ± 0,001	µg/g
	Hafnium (Hf)	[7440-58-6]	0,048 ± 0,002	µg/g
	Thallium (Tl)	[7440-28-0]	0,023 ± 0,002	µg/g
	Lead (Pb)	[7439-92-1]	1,51 ± 0,024	µg/g
	Thorium (Th)	[7440-29-1]	0,036 ± 0,001	µg/g
	Uranium (U)	[7440-61-1]	0,487 ± 0,006	µg/g