



ocean optics product points

MH-5000 Elemental Analyzer

Faster, convenient and more accurate

The MH-5000 Elemental Analyzer is an optical emission spectrometer (OES) that uses liquid electrode plasma (LEP) for analysis of trace metals in applications such as metals manufacturing, industrial waste treatment and environmental monitoring. Unlike inductively coupled plasma optical emission spectrometers (ICP-OES), the MH-5000 does not require a nebulizer, high gas flow rate and cylinder or high power – criteria that make most ICP systems too costly and unsuitable for on-site, real-time use.

The MH-5000 works by applying an electronic current to a solution, which is heated and evaporated. The liquid electrodes generate plasma; impurities in the solution are sputtered into the plasma and emit specific spectra. A spectrometer measures the emission.



For more information, contact an Ocean Optics Applications Scientist at Info@oceanoptics.com or visit the Micro Emission Ltd. website at www.micro-emission.com.

Micro Emission was founded in 2006 as part of a venture with the Japanese Advanced Institute of Science and Technology.

Specifications

Dimensions:	205 mm (L) x 115 mm (W) x 113 mm (H)
Weight:	1400 g including battery
Target elements:	Various elements such as ICP-AES
Concurrent measurement:	6 elements on display
Minimum sample volume:	30 µl
Coefficient of variance:	10% - 20%
Disposable component:	Plasma emission cell (Lepicube) Solid-phase extraction (optional)
Time for measurement:	30 seconds typical
Detection limit:	0.1 ppm—100 ppm
Memory:	100 times (main memory)
Software:	Spectrum data Raw data Calibration software (analytical curve)





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Chemical Symbol	Name	Atomic Number	Solvent	Measurement range						
				0.1 ppm	1 ppm	10 ppm	100 ppm	1000 ppm	1 %	
Ag	Silver	47	0.1M HNO ₃	←						
Au	Gold	79	0.1M HCl				←	-----		
Bi	Bismuth	83	0.1M HNO ₃				←	-----		
Ca	Calcium	20	0.1M HNO ₃			←		-----		
Cd	Cadmium	48	0.1M HNO ₃		←					
Co	Cobalt	27	0.1M HNO ₃				←	-----		
Cr	Chromium	24	0.1M HNO ₃				←	-----		
Cs	Caesium	55	0.1M HNO ₃				←	-----		
Cu	Copper	29	0.1M HNO ₃				←	-----		
Fe	Iron	26	0.1M HNO ₃				←	-----		
Ga	Gallium	31	0.1M HNO ₃			←		-----		
Hg	Mercury	80	0.1M HNO ₃			←		-----		
In	Indium	49	0.1M HNO ₃		←			-----		
K	Potassium	19	0.1M HNO ₃		←					
Li	Lithium	3	0.1M HNO ₃	←						
Mg	Magnesium	12	0.1M HNO ₃		←			-----		
Mn	Manganese	25	0.1M HNO ₃				←	-----		
Na	Sodium	11	0.1M HNO ₃	←						
Ni	Nickel	28	0.1M HNO ₃				←	-----		
Pb	Lead	82	0.1M HNO ₃		←					
Pd	Palladium	46	0.1M HNO ₃				←	-----		
Rb	Rubidium	37	0.1M HNO ₃			←				
Sr	Strontium	38	0.1M HNO ₃				←	-----		
Tl	Thallium	81	0.1M HNO ₃	←						
Zn	Zinc	30	0.1M HNO ₃			←		-----		

