

MGA-1000

Zeeman Graphite Furnace Atomic Absorption Spectrometer



MGA-1000 is a graphite furnace atomic absorption spectrometer based on Zeeman High Frequency Polarization Modulation (ZHFPM) technique. It is intended for determination of a wide range of elements in various types of samples (water, soil, foodstuffs, fodders, pharmaceuticals, etc.). The instrument provides high selectivity and sensitivity of the analysis.

FEATURES AND ADVANTAGES

- ✓ Simultaneous measurement of total and background absorptions
- ✓ Quasi-double beam optics eliminating drifts and enabling direct operation with no warm-up needed
- ✓ Compact and effective cooling system
- ✓ Smart 47-position autosampler
- ✓ Cold Vapor/Hydride generator available
- ✓ Stabilized temperature platform furnace (STPF) concept implemented
- ✓ Bright Electrodeless Discharge Lamps (EDL) providing low detection limits and direct As and Se determination at levels from 1 ppb without hydride generation technique
- ✓ Routine analysis of Na, K, Mg, and Ca
- ✓ «Eltherm» software compliant with 21 CFR part 11
- ✓ IQ/OQ protocols
- ✓ Noiseless operation

ANALYTES

Limits of detection (LOD) for model samples

■ <0.1 ppb
 ■ 0.1–1 ppb
 ■ >1 ppb

1 H																2 He	
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
55 Cs	56 Ba	57–71 La-Lu	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn

APPLICATIONS

- ✓ Environmental monitoring
- ✓ Water treatment
- ✓ Food and beverages
- ✓ Agriculture
- ✓ Pharmaceuticals and life science
- ✓ Medicine and biochemistry
- ✓ Forensics and clinical research
- ✓ Petrochemistry and refineries
- ✓ Process control and material analysis
- ✓ Science and research

The lists of standards (ISO, ASTM, EN, EPA, AOAC, etc.) applicable to MGA-1000 spectrometer are available at lumexinstruments.com



LOW COST ANALYSIS

- ✓ Standard graphite tubes (28 mm) of both Massman and L'vov types are available
- ✓ The standard centrifuge-type tubes are used with autosampler
- ✓ Prolonged tube lifetime
- ✓ Low argon consumption

SPECIFICATIONS

Wavelength range	185–900 nm
Maximal temperature of the furnace atomizer	3000 °C
Furnace heating rate	up to 4500 K/sec
Spectral lamps	- Hollow Cathode Lamps - Electrodeless Discharge Lamps
Argon flow rate (high purity argon)	<2 l/min
Typical tube lifetime	up to 800 analysis cycles
Autosampler capacity	47 samples
Power supply	Three-phase 220/380VAC, 50/60 Hz or 120/208 VAC, 50/60 Hz
Power consumption	0.1 kW in standby 6 kW in atomization mode
Dimensions (L×W×H), weight	800×310×475 mm, 50 kg

WARRANTY

MGA-1000 AA spectrometer is covered by a full 1-year warranty.

SERVICE

Installation and commissioning of Lumex instruments' AA spectrometers can be carried out at a customer site by our service engineers or by certified distributor.



Find your local Lumex Instruments distributor

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