RADOM™
INSTRUMENTS

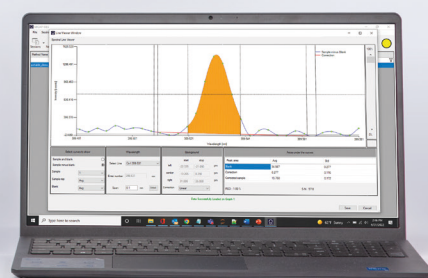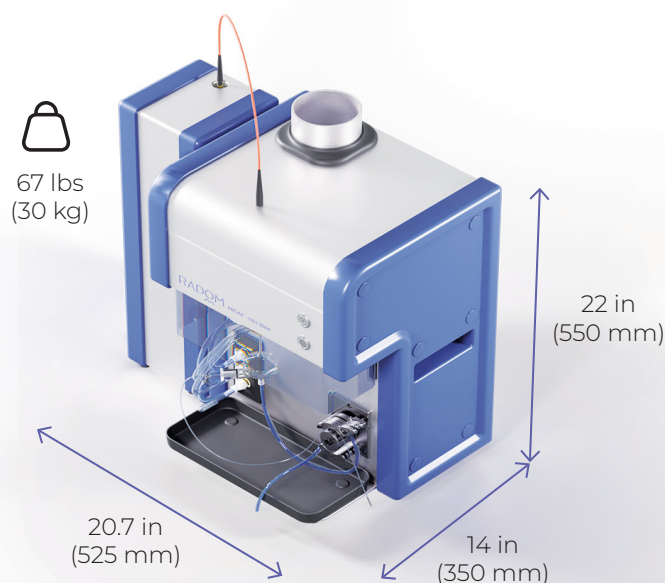# PRODUCT SPECIFICATION

67 lbs
(30 kg)

22 in
(550 mm)

20.7 in
(525 mm)

14 in
(350 mm)

MICAP™-OES 1000

MICAP-OES 1000:

MICAP-OES 1000 is a light-weight modular design with independent plasma source and echelle based spectrometer with fiber optic connection.

Air cooled Microwave plasma source of 1000 W reliably generated and sustained with patented Cerwave™ technology and runs on nitrogen.

No water chiller required

Standard torch dimensions (20 mm) with 1.5 mm injector (2.5 mm injector option) designed around the fixed position torch holder assembly

Variable speed four-channel peristaltic pump and concentric 1mL/min nebulizer are standard sample introduction assembly (SIA) components

Vertical torch position with axial viewing and automated, uniform plasma tail removal

Echelle Spectrometer simultaneously measures the entire wavelength range with every solution injection

Gas flows:

- Mass flow controlled coolant, auxillary and nebulizer gas for reliable and stable sample measurement

- Typical plasma gas flow is 14L/min

- Nitrogen gas can be sourced from liquid dewar, compressed gas cylinder or nitrogen generator

Size:

- (WxHxD)
  20.7 in (525 mm) x 22 in (550 mm)* x 14 in (350 mm)

  * Height excludes the fiber optic

Weight:

- Total weight of MICAP is 67 lbs (30 kg)

Power requirements:

- Mains power: 208V to 240V/10A

- No water cooling required

- Exhaust:
  4 inch (10 cm) exhaust with flow rate between 100 cfm – 200 cfm (1.5 - 2.0 m/s)

Camera

Detector:	sCMOS
Array diagnol:	31 mm
Resolution:	2048 x 2048
Cooling:	Peltier cooled to -10 °C

- Pixel size: 11 μm x 11 μm
- Frame rate: 24 fps

Optical emission spectrometer

Aperture:	f/10
Wavelength range:	194 nm – 625 nm + 766 nm
Simultaneous:	full wavelength range
Slit Width:	30 um slit
Resolution:	5 pm - 30 pm, 7 pm at 200 nm

Operating environment:
- Temperature: 20 - 25 °C (68 - 77 °F)
- Relative Humidity: 20-60 %.

Laptop: Dell Latitude with i5core and 1TB HDD memory + RIS™ (Radom Intuitive Software) preinstalled

The multitasking RIS software is designed to offer the maximum amount of flexibility combined with ease of set up and routine operation. This unique software design enables the advanced user to develop an optimum method, but still allows the new user or beginner to run routine methods.

Additional features include:

- Easy-to-use Windows-based graphical user interface
- Ease of spectral interference identification
- The ability to display, store and recall spectra for every sample analyzed data display and reprocessing, without the need to rerun samples (original data is unchanged)
- Comprehensive data storage using an industry-standard database
- High resolution graphics
- RIS houses an extensive wavelength directory customized for nitrogen based plasma

- Automated plasma shutdown and warm-up
- Internal standard capability
- The ability to use stored calibration curves to permit semiquantitative analysis with qualitative speed
- Automated robust wavelength accuracy algorithm to ensure wavelength stability for extended sample runs
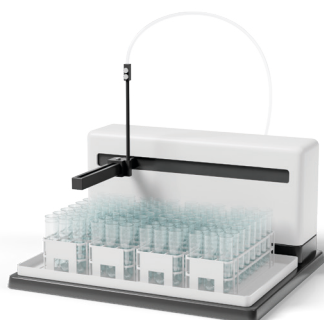- Real-time status updates of instrument process

Sample glassware starter kit:

- 1 Quartz torch - Standard 20 mm torch with 1.5 mm or optional 2.5 mm injector
- 1 single-pass cyclonic spraychamber
- 1 concentric glass 1mL/min nebulizer
- 1 ball joint socket clip connection

Autosampler

Cetac ASX-560

Sample Rack Positions: 4

Dimensions:

- Height 24 in (61 cm)
- Width 22.8 in (58 cm)
- Depth 22 in (56 cm)
- Weight 26 lbs (11.8 kg)

Power requirements:

- 100-240 VAC, 47-63 Hz, 1.9 A

ESI 2DXe/2DXCi

Sample Rack Positions: 2

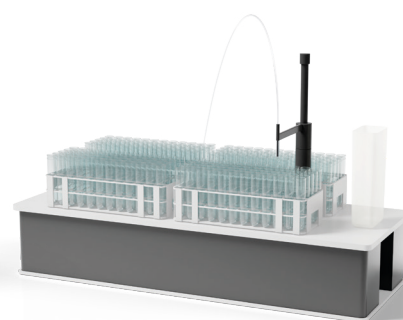Dimensions:

- Height 18 in (46 cm)
- Width 21 in (54 cm)
- Depth 11.5 in (29.5 cm)
- Weight 18 lbs (8.2 kg)

Power requirements:

- 100-240 VAC, 50-60 Hz, 2.8 A

ESI 4DXe/4DXCi

Sample Rack Positions: 4

Dimensions:

- Height 18 in (46 cm)
- Width 30.3 in (77 cm)
- Depth 11.5 in (29.5 cm)
- Weight 33 lbs (15 kg)

Power requirements:

- 100-240 VAC, 50-60 Hz, 2.8 A

Onsite applications training

This service is a customized service provided at the facility of the purchaser. The service can include, but is not limited to system applications training, method development, application assistance, method transfer from previous instrumentation, productivity improvements, sample introduction optimizations, and implementation of new methodology. All travel costs are included.

Scan the code to access our website for additional information and our resources

Warranty

Standard two year warranty, extended warranty available