

The logo for RADOM features the word "RADOM" in a clean, white, sans-serif font. Below the letter "O" is a stylized white wave symbol consisting of three curved lines. The background is a dark blue gradient with purple wavy lines on the left and a field of small, glowing blue and purple particles on the right.

RADOM

*MICAP-OES 1000 Value Analysis*

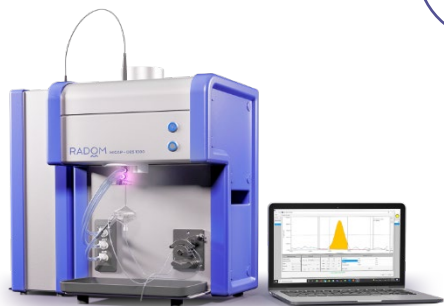
MAY 2023

The background features a dark blue gradient with numerous small, glowing blue particles scattered throughout. On the left side, there are several thick, wavy purple lines that curve across the frame. In the lower right quadrant, there is a cluster of thin, light blue lines that form a grid-like pattern, with small white dots at the intersections.

*MICAP-OES vs. FLAME ATOMIC ABSORPTION*



# FASTER AND SIMPLER ANALYSIS



Safer - eliminates the need for combustible gases and potential for flashback.



No optimization of fuel/oxidant ratios, burner height or rotation which can be subjective to individual users.



Simultaneous elemental measurements in less than 3 minutes/sample (3 replicates).



Full wavelength spectrum analysis and simultaneous measurement.



Library of interference minimization, result confirmation and expansion of elemental fingerprint information.



Less sample preparation, less chemistry, and less consumables required.

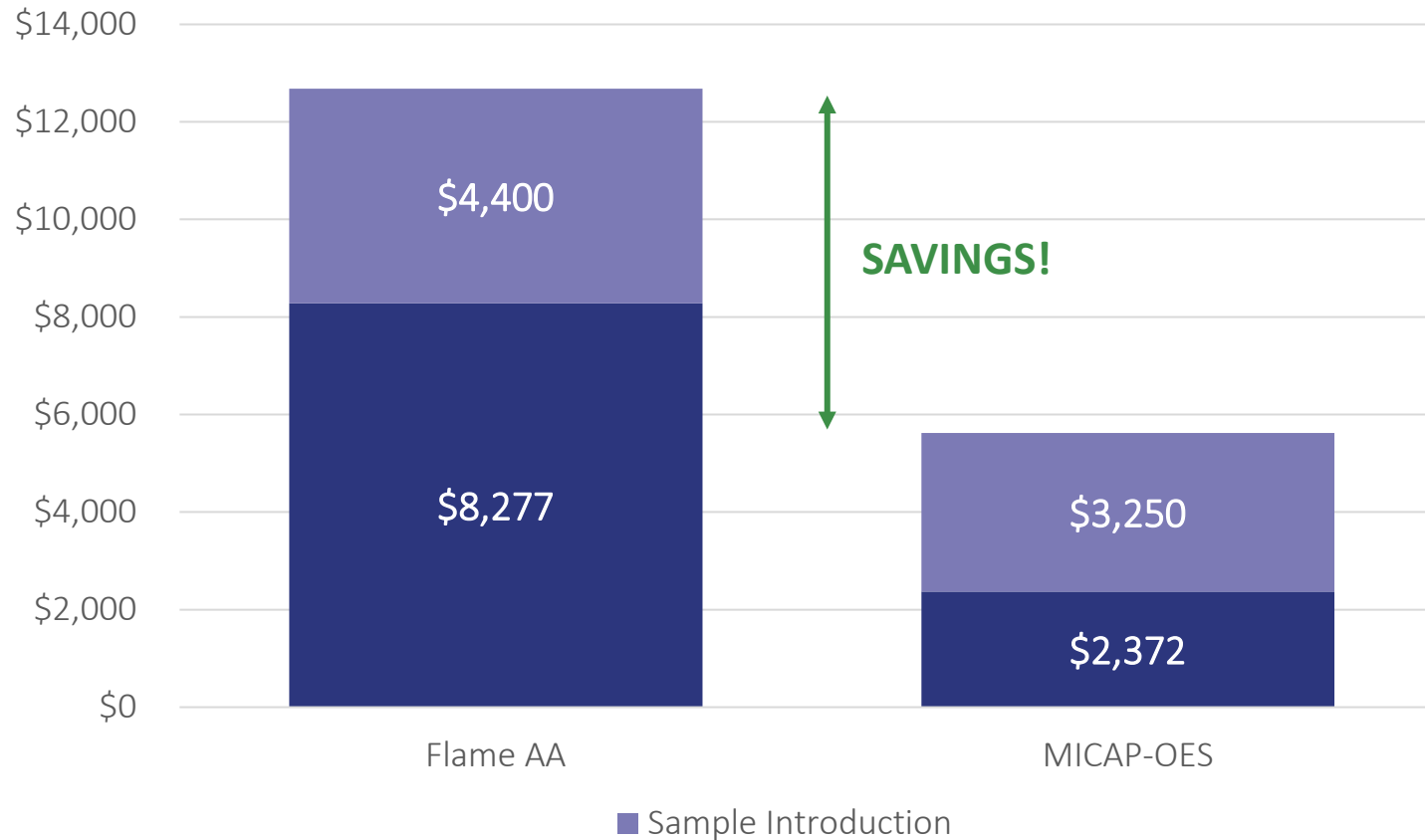
# SHORTER ANALYSIS TIME

Analysis time Considerations	Flame AA	MICAP-OES
Number of elements	6.0	6.0
Number of Solutions	35.0	35.0
Time per sample analysis for 3 replicates	40 sec	2.3 minutes
Burner/Fuel/Lamp optimization and warmup time	30 min	20 min
Sample preparation time	20 min	20 min
Preparation Time (6 elements)	2 hr	-
Instrument Setup/warmup time (6 elements)	3 hr	-
Analysis time (6 elements)	<u>2.5 hr</u>	<u>2.0 hr</u>
<b>Total</b>	<b>7.5 hr</b>	<b>2.0 hr</b>

*MICAP-OES 1000 is 3x faster than Flame AA!*

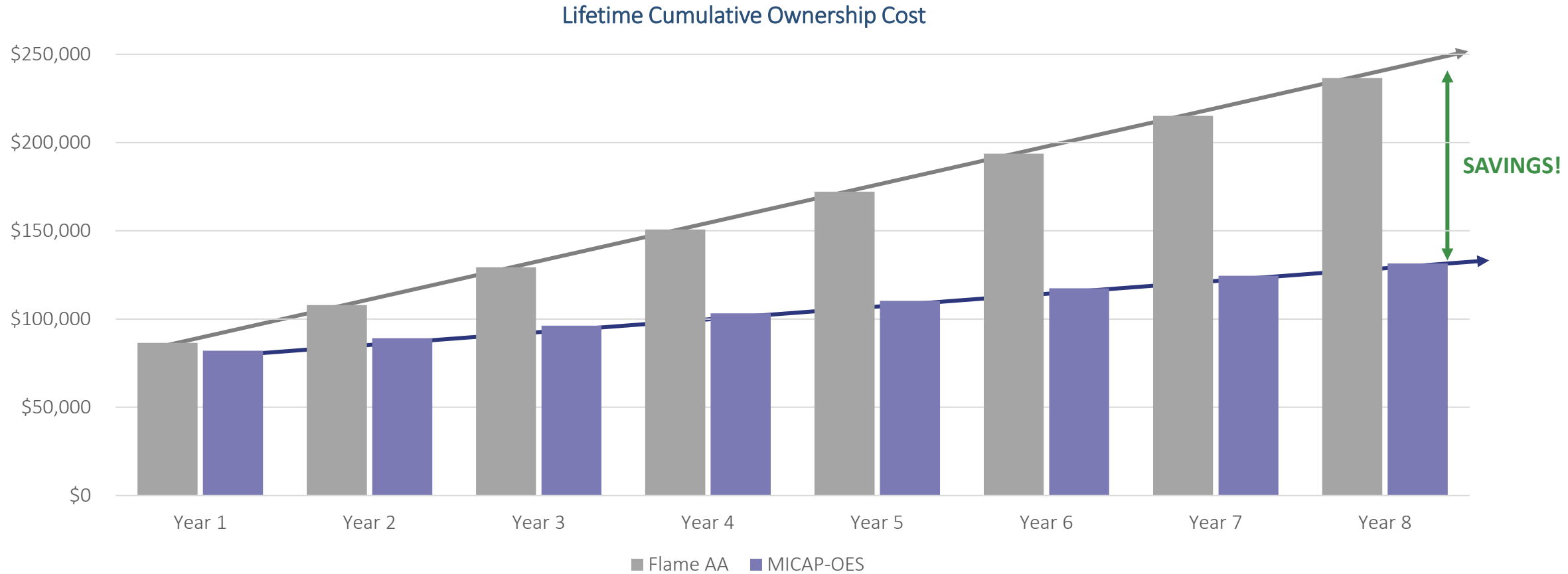
# LOWER CONSUMABLE EXPENSE

Annual Consumable Cost Comparison



*MICAP-OES 1000 saves \$7,931 per year on consumables!*

# LOWER TOTAL COST OF OWNERSHIP



*Total lifetime cost of ownership savings of \$105,040 over traditional Flame AA!*

# TESTIMONIALS

- *“MICAP-OES is a logical replacement to the many AA systems, existing MP-AES systems and even many ICP-OES systems in harsh mining environments.” – Major Gold Mining Company User, US*
- *“Cerawave™ improves plasma robustness ... improves detection capabilities.” – Alicante University, Spain*
- *“I can see the MICAP-OES system used on oil platforms.” – Danish Offshore Technology Centre*
- *“Laser ablation on the front of this OES instrument is likely a good solution for mine solid sampling in the field.” – University of Gothenburg, Sweden*

# RADOM

**(877) 977-2366**

**[inquiries@radomcorp.com](mailto:inquiries@radomcorp.com)**



The background features a dark blue gradient with numerous small, glowing blue particles scattered across it. On the left side, there are several thick, wavy purple lines that curve towards the center. In the lower right quadrant, there is a cluster of thin, light purple lines that also curve, with small white dots at their ends, resembling a stylized constellation or a network diagram.

# *APPENDIX*

# LOWEST CARBON FOOTPRINT



## Annual CO<sub>2</sub>e Emissions Savings Compared to Argon-Based Instruments

kWh Saved	221,580
Metric Tons of CO <sub>2</sub> e Saved*	157

### Equivalent to:



Homes' annual electricity use 31



Gasoline-powered passenger vehicles 35



Total gallons of gasoline consumed 17,760



Total smartphones charged 19,101,528

*MICAP-OES 1000 saves 157 Metric Tons of CO<sub>2</sub>e per year.  
It has the lowest carbon footprint of any OES instrument in the market!*

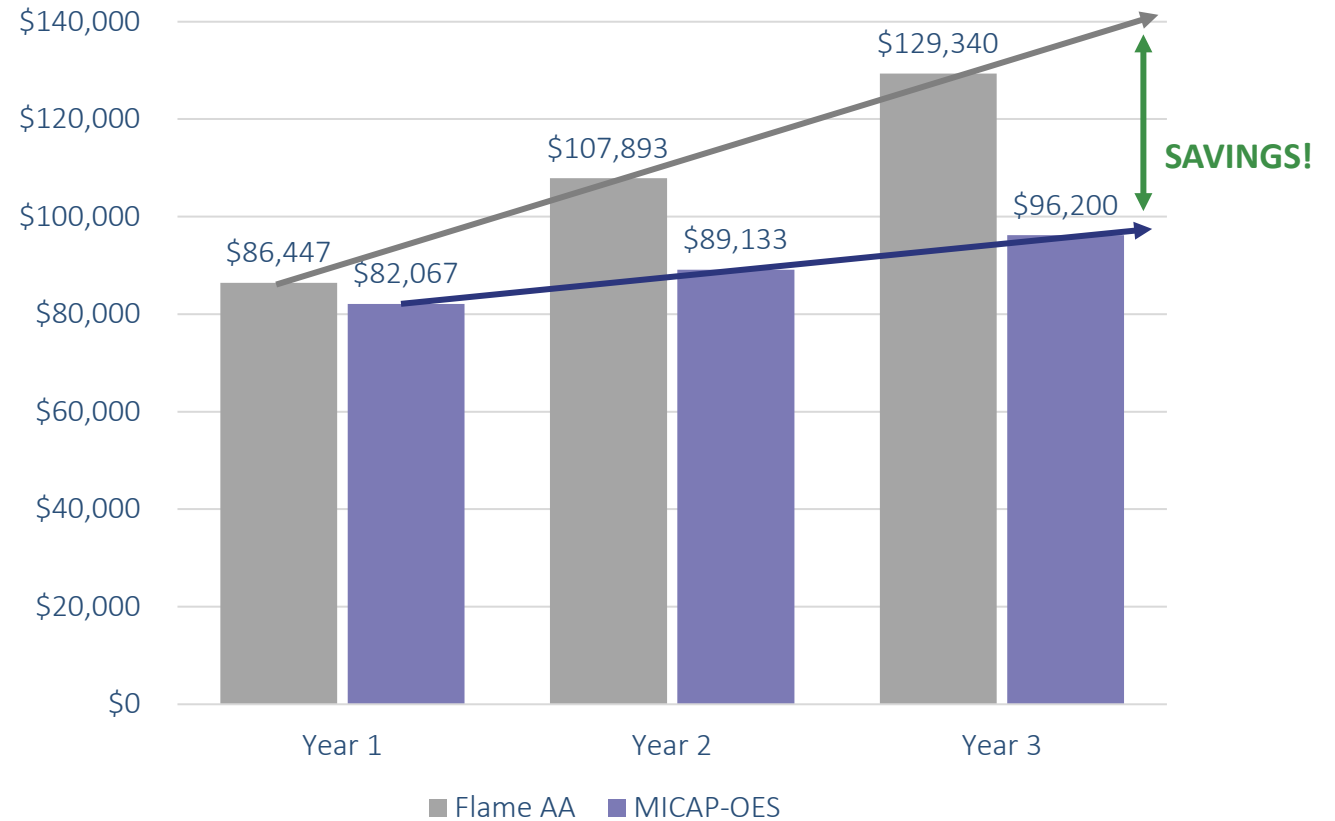
\*Source: EPA.GOV (<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.)

# LOWER TOTAL COST OF OWNERSHIP

## Annual Ownership Cost

	Flame AA	MICAP-OES
Year 1	\$86,447	\$82,067
Year 2	\$21,447	\$7,067
Year 3	\$21,477	\$7,067
<b>Total Cost</b>	<b>\$129,340</b>	<b>\$96,200</b>
<i>Cost Savings</i>	<i>NA</i>	<i>\$33,140</i>

## Cumulative Ownership Cost



**3-year total cost of ownership savings of \$33,140 over traditional Flame AA!**

# MICAP-OES vs. FLAME AA COST OF OWNERSHIP COMPARISON

Flame AA (1)	Year 1	Year 2	Year 3	3-Year Total
Spectrometer and Computer	\$65,000			\$65,000
Gases(2)	\$12,856	\$12,856	\$12,856	\$38,567
Autosampler	<i>No Autosampler Required</i>			\$0
Service Contract(3)	\$3,000	\$3,000	\$3,000	\$9,000
Hollow Cathode Lamp Bulb	\$3,300	\$3,300	\$3,300	\$9,900
<b>Energy Costs</b>				
Spectrometer & Computer	\$2,290.8	\$2,290.8	\$2,290.8	\$6,872
<b>Total Cost</b>	<b>\$86,447</b>	<b>\$21,447</b>	<b>\$21,447</b>	<b>\$129,340</b>
<b>Cumulative Cost</b>	<b>\$86,447</b>	<b>\$107,893</b>	<b>\$129,340</b>	<b>\$129,340</b>

MICAP-OES	Year 1	Year 2	Year 3	3-Year Total
Spectrometer and Computer	\$65,000			\$65,000
Nitrogen Dewar(2)	\$3,200	\$3,200	\$3,200	\$9,600
Autosampler	\$10,000			\$10,000
Service Contract(4)	\$3,000	\$3,000	\$3,000	\$9,000
Hollow Cathode Lamp Bulb	<i>No Bulbs Required</i>			\$0
<b>Energy Costs</b>				
Spectrometer & Computer	\$866.5	\$866.5	\$866.5	\$2,600
<b>Total Cost</b>	<b>\$82,067</b>	<b>\$7,067</b>	<b>\$7,067</b>	<b>\$96,200</b>
<b>Cumulative Cost</b>	<b>\$82,067</b>	<b>\$89,133</b>	<b>\$96,200</b>	<b>\$96,200</b>

(1) Assuming 6 lamp configuration

(2) Assuming 12hrs/day, 5 days/week and 50 weeks/year

(3) Standard 1-year warranty

(4) RADOM 3-year warranty



# MICAP-OES vs. FLAME AA CONSUMABLE COST COMPARISON

Component	Flame AA	Component	MICAP-OES
<b>Gases</b>		<b>Gases</b>	
Acetylene	\$4,845	Nitrogen (Dewar)	2340
Nitrous Oxide	\$1,840	Air (Compressed)	\$32
Air (Compressed or bottled*)	\$1,560	<b>Total Gases</b>	<b>\$2,372</b>
Filters	\$32		
<b>Total Gases</b>	<b>\$8,277</b>		
<b>Sample Introduction</b>		<b>Sample Introduction</b>	
Hollow Cathode Lamp Element Specific	\$550	Torch	
Elements	8	Spray chamber	\$3,250
<b>Total Sample Introduction</b>	<b>\$4,400</b>	Nebulizer	
		<b>Total Sample Introduction</b>	<b>\$3,250</b>
<b>Reagents</b>		<b>Reagents</b>	
Nitric Acid	\$1,200	Nitric Acid	\$1,200
Water Purification System Filter cost	\$524	Water Purification System Filter cost	\$524
Hydrochloric acid	\$800	Hydrochloric acid	\$800
Standards	\$300	Standards	\$300
Ionization and releasing agents	\$876	<b>Total Reagents</b>	<b>\$2,824</b>
<b>Total Reagents</b>	<b>\$3,700</b>		
		<b>Total</b>	<b>\$8,446</b>
<b>Total</b>	<b>\$16,377</b>	<b>SAVINGS</b>	<b>\$7,931</b>