On-site Analyzer



An on-site analysis lab delivering fast results in less than 20 minutes.

Description

Mobil™, in collaboration with AMETEK Spectro Scientific, promotes a new solution designed for the quick insights into your asset health: the On-site Analyzer – MiniLab 153. This portable oil analysis lab enables on-site diagnostics of used lubricants, delivering insights in less than 20 minutes - without sending samples off-site.

The Spectro Scientific MiniLab 153 evaluates critical parameters such as wear metals, viscosity, oxidation, and contamination, helping identify potential issues before they escalate.

Application

We work with you to:

- Deploy a semi-autonomous oil lab at your site or maintenance hub
- Rapidly analyze and diagnose oil condition for mobile and fixed equipment
- Help improve equipment uptime through faster, data-based decisions
- Detect wear, contamination, and degradation early

Potential benefits

	Faster response compared to off-site labs to help meet critical maintenance needs
	Reliable oil condition insights in less than 20 minutes
	Reduced unplanned downtime
	Extended asset life
	Potential to lower O&M costs
	Safer operations through reduced manual sampling

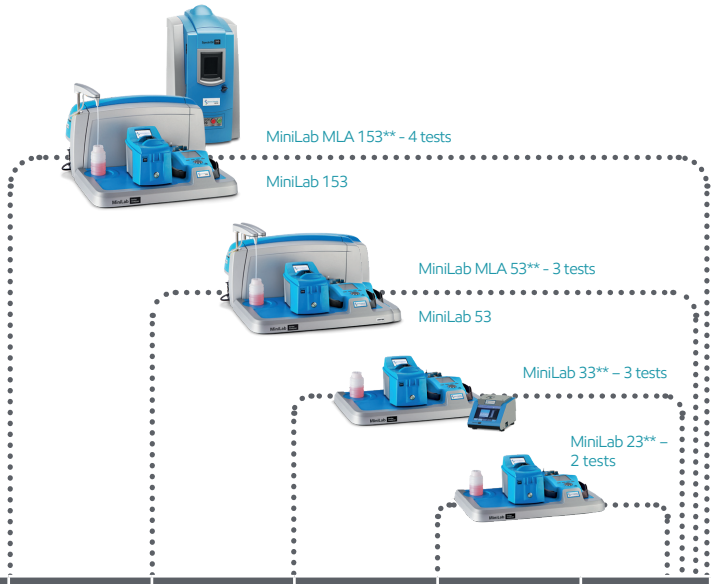
MiniLab 153 - provides a comprehensive oil analysis report with elemental analysis, complete wear particle analysis, solid and water contamination, fluid chemistry and viscosity. It is ideal for remote mines power plants and manufacturing plants with many assets.

MiniLab 53 - provides a Trivector report with comprehensive wear particle analysis, solid and water contamination, fluid chemistry and viscosity.

MiniLab 33 - provides a basic Trivector report with total ferrous wear, fluid chemistry, water in oil and viscosity.

MiniLab 23 - provides basic oil condition information including viscosity, chemistry and water in oil.





	PARAMETER	ELEMENTAL ASTM METHOD D6595	PARTICLE COUNT AND FERROUS ASTM METHOD D7596	FERROUS ASTM METHOD D8120	VISCOSITY ASTM METHOD D8092	CHEMICAL ASTM METHOD D7889
Contamination	Particle count and ISO codes		✔			
	Non-metallic particle count, distribution and images		✔			
	Sodium and Silicon	✔				
	Total Water					✔
Chemistry & Viscosity	Viscosity				✔	
	Total Acid Number (TAN)					✔
	Oxidation					✔
	Fluid Integrity					✔
	Total Base Number (TBN), Oxidation, Nitration, and Sulfation for engine oils					✔
	Magnesium, Calcium, Barium, Zinc, Molybdenum, and Phosphorus	✔				
Wear	Wear particle images and counts		✔			
	Total Ferrous content, ppm		✔	✔		
	Large Ferrous content, ppm		✔			
	Copper, Silver, Chromium, Titanium, Aluminum, Nickel, Iron, Manganese, Lead, Tin, Cadmium, and Vanadium	✔				

**MiniLab MLA 153 and 53 is only available in selected countries and sectors.

Common opportunity areas

- Remote sites with long turnaround times for off-site oil testing
- Operations facing critical equipment downtime and high OpEx
- Sites requiring frequent sample testing to support preventative maintenance programs
- Maintenance teams needing fast insights without external lab dependency

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