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Los Gatos Research Gas Analyzers: Latest Products and Capabilities

New Microportable Greenhouse Gas Analyzer (M-GGA-918)

The M-GGA-918 represents the latest version of ABB LGR's widely acclaimed Microportable Greenhouse Gas Analyzer. Featuring new functionalities and enhanced precision, this compact, light and high performance analyzer includes an internal battery and enables quick measurements of CH₄, CO₂ and H₂O concentrations, even in the most remote locations. The M-GGA-918 is ideally suited for field studies, compliance monitoring and soil flux applications.

New Ultraportable and Portable Analyzers

Ultraportable Isotopic Water Analyzers (U-LWIA-915 / U-WVIA-915)

ABB LGR makes isotopic water analysis in the field possible thanks to its series of ultraportable isotopic analyzers in TSA-approved crushproof enclosures. They offer the ultimate combination of portability, analytical precision and speed.

§ Ultraportable Liquid Water Isotopic Analyzer: the U-LWIA-915 combined with a new 4-kg portable auto-injector provides field measurements of $\delta^2\text{H}$ and $\delta^{18}\text{O}$ of water in liquid at the unmatched speed of 720 injections per day, yielding 90 unknowns and 30 reference samples per day.

§ Ultraportable Water Vapor Isotopic Analyzer: the U-WVIA-915 is designed for fast (2 Hz) and reliable determination of $\delta^2\text{H}$ and $\delta^{18}\text{O}$ of water contained in liquids, vapor, fog and clouds, over a wide range of water-vapor mole fractions. The instrument is rugged and easy to transport it can be implemented in various locations and environments.

Ultraportable Analyzers for H₂S, NH₃, HF, HCl, HCN, C₂H₂, CO, CO₂ and other gases

We extended the range of applications covered by our ultraportable analyzers, including several combinations of gases like hydrogen sulfide, ammonia, hydrogen fluoride, hydrochloric acid, hydrogen cyanide, acetylene, carbon monoxide, carbon dioxide and water vapor.

With performances closely matching its rackmount counterpart, the ABB LGR Ultraportable package has proven to be the best choice for site surveys and spot checks on live processes, storage tanks or sales specifications.

Portable N₂O/CH₄ and N₂O/CO Analyzers

ABB LGR N₂O Portable Analyzers (N₂O/CO and N₂O/CH₄) measure the concentration of N₂O in the mid-infrared wavelength range, thus ensuring unsurpassed sensitivity, measurement accuracy, speed and no cross-sensitivity.

New Post-Analysis Software for Liquid Water Isotopic Analyzers

ABB LGR's LWIA Post-Analysis Software is a tool designed to provide a powerful, yet simple method of post-processing the data acquired with any ABB LGR Liquid Water Isotope Analyzer. The software calculates adjustments to the measured values of $\delta^2\text{H}$, $\delta^{18}\text{O}$, D-excess, and, if available, $\delta^{17}\text{O}$ and ^{17}O -excess. The Post-Analysis Software includes the acclaimed Spectral Contamination Identifier module and supports the "LIMS for Lasers" format. The power of the unique combination of ABB LGR isotopic analyzers sensitivity and performance with the innovative features of the Post-Analysis software was demonstrated in a recent objective intercomparison study "WICO" conducted by the Isotope Hydrology Laboratory of the International Atomic Energy Agency (IAEA). In that international blind study, the ABB LGR package for isotopic water analysis was demonstrated to perform with extremely high accuracy and precision for measurement of $\delta^2\text{H}$ and $\delta^{18}\text{O}$ from natural, enriched, depleted, and salinized waters. The equipment also proved its robustness against sample memory effects and thanks to the Spectral Contaminant Identifier (SCI) module of the new software, contaminated water samples could be flagged and measured accurately and precisely compared with traditional IRMS.

ABB Ability™ Mobile Gas Leak Detection System

The ABB Ability™ Mobile Gas Leak Detection System records and maps natural gas leaks while driving, as an alternative to legacy leak detection methods that do not meet today's demands for fast, accurate and transparent data. The package consists of ABB LGR's Methane/Ethane Analyzer, a GPS, a sonic anemometer and proprietary leak detection software that presents real-time geospatial maps of multiple gas concentrations in real time.

New Capabilities for Automated Headspace (Gas) Injection

No longer do customers have to manually inject gas samples into their gas or isotopic analyzers. ABB LGR analyzers can now work with CTC Analytics PAL Headspace Injection systems for automatic gas injection from 2mL, 10mL or 20mL vials. With the CTC Analytics PAL Headspace gas injector and ABB LGR's new operational software, researchers can now pre-load up to 60 vials into the sampling tray and the software will automatically inject samples into the analyzer at predetermined volumes and repetition rates for simplified isotopic ratio or gas concentration measurements.

New and Improved Software for Trace Gas Analyzers

ABB LGR analyzers have improved operational software that provides enhanced graphical user interface, detailed system health diagnostics and improved reliability for fast-flow operation and 10 Hz data rates. The new software is available on some models now and will be propagating to the entire product line in 2018.

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