PICARRO

The World's Leading Instruments for Carbon, Water and Nitrogen Cycle Measurements

OVERVIEW

Picarro's ultra-precise analyzers are empowering scientists, governments, non-profits and for-profit enterprises to measure key components of the global carbon, water and nitrogen cycles - the molecules that form the building blocks of all living organisms and most physical matter on Earth. We are transforming how, when and where world-class scientific measurements are made, and enabling anyone to make them. Picarro instrumentation can give you better insights - in a high-precision, stable and easy-to-use system.

APPLICATIONS SERVED

- Agriculture & Soil Science
- Air Quality
- Atmospheric Science
- Carbon Sequestration
- Ecology
- Emissions Quantification
- Food & Beverage
- Geochemistry
- GHG Monitoring Networks
- Hydrology
- Ocean Science
- Paleoclimatology
- Pharmaceutical

OUR TECHNOLOGY

Picarro's products are based on our patented cavity ring-down spectroscopy (CRDS) technology, which provides concentration and/or isotopic ratio measurements of gases at parts-per-billion precision. Cavity ring-down spectroscopy uses principles of optical spectroscopy to quantify the concentration (and sometimes isotopes) of molecules in the gas phase. Unlike traditional optical spectroscopy that determines concentration using the absolute absorbance of the sample, with CRDS the concentration is determined from the rate of decay of the optical signal.

PRODUCTS SOLD

GREENHOUSE GAS AND TRACE GAS ANALYZERS

Greenhouse Gas Analyzers (concentration only)

- G2301 CO_2, CH_4, H_2O
- G2401 CO_2, CO, CH_4, H_2O
- G2401-*m* CO_2, CO, CH_4, H_2O (flight)
- G2508 N_2O, CH_4, CO_2, NH_3, H_2O
- G2509 N_2O, CH_4, CO_2, NH_3, H_2O
- PI5310 N_2O, CO, H_2O

Peripherals for GHG Analyzers

- A0311 16-port Manifold, multiple inlet system
- A0701/A0702 Recirculation Pump for closed system measurement

Trace Gas Analyzers (concentration only)

- G2204 Hydrogen Sulfide (H_2S) and CH_4
- G2307 Formaldehyde (CH_2O), CH_4 and H_2O
- PI2103 Ammonia (NH_3)
- PI2124 Hydrogen Peroxide (H_2O_2)

Peripherals for Trace Gas Analyzers

- A0311 16-port Manifold, multiple inlet system
- A0311-*s* 16-port Manifold SilcoNert Version, multiple inlet system

ISOTOPE ANALYZERS

Carbon Isotope Analyzers

- G2131-*i* $\delta^{13}C$ in CO_2
- G2201-*i* $\delta^{13}C$ in CO_2 and CH_4

Peripherals for Carbon Isotope Analyzers

- A0311 16-port Manifold, multiple inlet system
- A0701/A0702 Recirculation Pump for closed system measurement
- A0201 Combustion Module (CM) for bulk samples
- A0344 Sage gas autosampler for automated sample analysis

Water Isotope Analyzers

- L2130-*i* $\delta^{18}O$, $\delta^{2}H$ in H_2O
- L2140-*i* $\delta^{18}O$, $\delta^{17}O$, $\delta^{2}H$ and ^{17}O-excess in H_2O

Peripherals for Water Isotope Analyzers

- A0211/A0340 High-Precision Vaporizer and Autosampler for high-precision isotope analysis of liquid water samples
- A0214 Mirco-Combustion Module (MCM) for removal of organics from liquids

Nitrogen Isotope Analyzers

- PI5131-*i* $\delta^{15}N$, $\delta^{15}N^{\alpha}$, $\delta^{15}N^{\beta}$ and $\delta^{18}O$ in N_2O concentrations

Note: Contact Picarro for information on other, third-party, front-end compatibility!

PICARRO

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