PICARRO G5310 N_2O + CO + H_2O CRDS Analyzer

Mid-IR cavity ring-down analyzer for measuring atmospheric trace gases

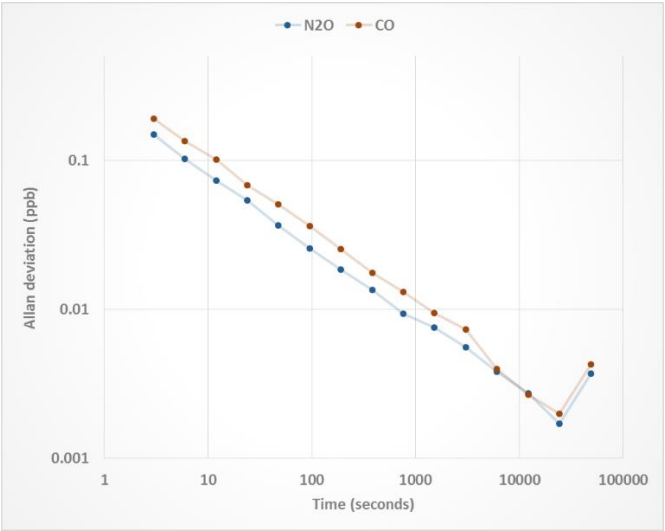
- Simultaneously measures N_2O and CO gas concentrations
- Also reports H_2O concentration
- Time-based laser measurement
- Small cavity (48 mL) for fast sample turnover rate
- Operates in the mid-infrared with a 5 km effective path length

Technology Advantage Note: Picarro's mid-infrared Cavity Ring-Down Spectroscopy (CRDS) technology is capable of measuring N_2O and CO down to 100 parts-per-trillion (ppt) sensitivity at 10 seconds, and water vapor down to parts-per-million (ppm) sensitivity with negligible drift for months of continuous high quality data collection. The G5310 builds on the success of our G2401, the analyzer of choice for long-term measurements of background CH_4 and CO_2.

Designed to Meet Stringent Measurement Requirements: The G5310 has been designed to deliver measurements at levels of precision and reproducibility required by the most demanding measurement network customers, such as the World Meteorological Organization and the Integrated Carbon Observation System.

Picarro's Patented CRDS Technology: The heart of the Picarro analyzer is a sophisticated time-based measurement that uses a mid-infrared laser to quantify spectral features of gas phase molecules in an optical cavity. Picarro's patented CRDS technology enables an effective measurement path length of up to 5 kilometers in a compact cavity, which results in exceptional precision and sensitivity with a small footprint.

Portable and built for field deployment: The rack-mountable, small and easy to transport Picarro G5310 can be running within an hour, and can operate for months without user interaction. In order to ensure measurement fidelity over long periods of time, even in the harshest environments, Picarro's meticulously designed optical cavities incorporate precise temperature and pressure control, delivering best in class drift performance:



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Performance Specifications		
Specification	**N_2O**	**CO**
Precision (1σ: 5 sec / 5 min)	<0.2 / <0.04 ppb (from 1-500 ppb N_2O) 0.15 % of reading >500 ppb N_2O	<0.2 / <0.04 ppb (from 1-400 ppb CO) 0.1 % of reading >400 ppb CO
Drift (24 hrs)	<0.1 ppb	<0.1 ppb
Measurement Range	1-1,500 ppb	1-1,500 ppb
Operating Range	1-10 ppm	1-10 ppm
Measurement Interval	<5 sec	<5 sec

System Specifications	
Measurement Technique	Cavity Ring-Down Spectroscopy
Measurement Cell Temperature Control	+/- 0.005 °C
Measurement Cell Pressure Control	+/- 0.0002 atm
Sample Temperature	-10 to 45 °C
Sample Pressure	300 to 1000 Torr (40 to 133 kPa)
Sample Flow Rate	100 sccm
Sample Humidity	< 99% R.H. non-condensing @ 40 °C, no drying required
Ambient Temperature Range	15 to 35 °C (operating) -10 to 50 °C (storage)
Ambient Humidity	< 99% R.H. non-condensing
Outputs	RS-232, Ethernet, USB
Fittings	¼" Swagelok®
Dimensions (two box system)	17" w x 20" d x 12" h (43 x 51 x 32 cm)
Weight	95 lbs (43 kg)
Power Consumption	300W at power up and 210W at steady state

Note on deployability. The G5310 is designed for use in static installations only. Not for use in mobile platforms.

Note on power source. Please contact Picarro should you plan to operate the G5310 with a DC power source.