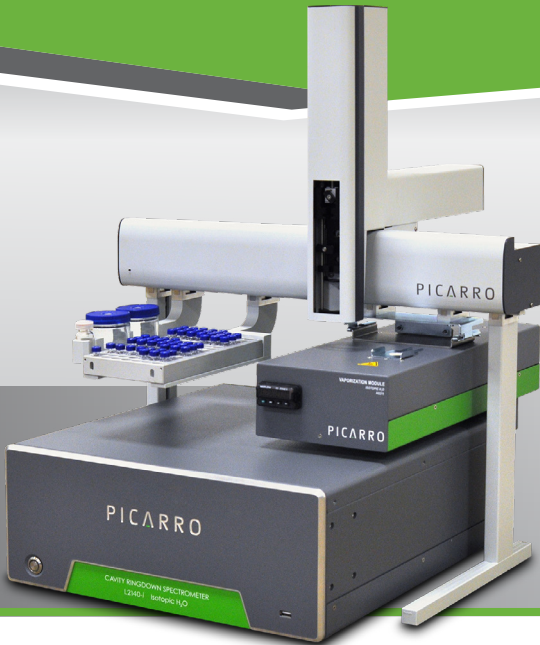


Isotopic Water Analyzers Faster Measurement Modes

PICARRO



- **Standard Mode** – High Precision, Standard Throughput, 27 Samples Per Day
- **Express Mode*** – High Throughput, High Precision, 50 Samples Per Day
- **Survey Mode*** – Very High Throughput, 900 Injections Per Day

The Picarro L2130-*i* and L2140-*i* isotopic water analyzers provide the high-quality measurements of water stable isotopes that are critical for demanding applications such as paleoclimatology, hydrology, and oceanography. Our sophisticated time-based measurement uses a laser to quantify spectral features of gas phase molecules in an optical cavity. Picarro's unique design enables an effective measurement path length of up to 20 kilometers in a compact cavity, which delivers exceptional precision and sensitivity in a small footprint. As a result, $\delta^{18}\text{O}$ and δD are measured with the highest precision and reproducibility.

The L2130-*i* and L2140-*i* has three measurement modes. The Standard mode processes 27 samples per

day. The Express mode delivers faster high-precision measurements for up to 50 samples per day. The Survey mode makes super-fast approximations of isotopic values for very large sample batches—up to 900 injections per day. This enables more efficient sorting and rearranging of sample clusters to reduce memory effects, and thereby accelerates the measurement process and increases the accuracy of the results. Combining the Express and Survey modes will further increase throughput by reducing the time it takes to measure 100 samples by up to 68 hours.

* Only applicable for $\delta^{18}\text{O}$ and δD mode

Preliminary Comparison of Measurement Modes

Mode	Injection Volume [μL]	Injection Time [min]	Samples/Day	$\delta^{18}\text{O}$ Precision [‰]	δD Precision [‰]
Current specifications	1.8	54	27	0.025	0.1
Standard mode	1.8	54	27	0.01	0.05
Express mode	1.8	28	50	0.01	0.05
Survey mode	2.5	1.6	900 injections	0.05	0.11

See the datasheet for more details on the [L2130-*i*](#) and [L2140-*i*](#).

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