

# L450 OH

## Online Alkalinity Analyzer

Liquid Analysis Systems' L450 series chemical analyzers perform online wet chemical titrametric analyses of most aqueous chemical species using pH, ORP, ISE, turbidimetric and other sensors. The L450 features are optimized for extreme reliability, ease of operation, and minimum operating cost.

### L450 Series Features

- Auto sample retrieval and preparation
- Auto-check of titrant, sample, and electrodes
- Result range and trend check

Through its display and keypad, users can view process status and history, and modify analysis intervals and other configuration parameters. This series offers a variety of hardware options for stream selection, sample preparation, and sample/reagent delivery.



### Series Options

- Multi-stream selection and multi-parameter analysis
- Grab sample port
- Auto sample filter back flush
- Replenishment systems
- RS-485/Ethernet networking/E-mail messaging

### L450 OH – Online Alkalinity Analyzer

The L450 online analyzer measures alkalinity in water, wastewater, or process streams by means of a robust, non-drift differential potentiometric titration with acid. Free and total alkalinity are determined by multiple-endpoint titrations. The titration electrode does not require refilling or even routine replacement. The method does not require calibration, and typically requires only one reagent. With the exception of a stir bar, no wearing parts such as peristaltic pump tubes and no drift-prone devices such as gel-filled electrodes are used. Because of this, annual maintenance is minimized. In addition, sampling and replenishment systems are available to satisfy a range of process requirements.



Base Model	
L450-OH	Base model with one pH titration cell, standard precision titrant dose pump, one sample/waste pump, single stream inlet, 4-20 mA output.

Options	
CLx	Additional current loop output(s), 4-20 mA, isolated
DI	Digital input for remote enable of analyses or dosing
DO	Digital output relay with settable trip point or other control function
EB	Ethernet server for remote monitoring via web browser
G1	Auto grab sample with sipper tube inlet.
MSx	Multi-stream sampling, x = number of streams.
R__x	Replenishment control ( <u>R</u> elay or <u>P</u> neumatic output options)
SK__	Spares kit (basic or extended version)
SS	Sample inlet strainer with auto backflush.

Specifications	
Method	Potentiometric pH titration with sulfuric acid. Differential endpoint with first breakpoint as free and second as total alkalinity.
Ranges	Configurable over 50:1 range, e.g., 20 to 1000 ppm
Repeatability	Standard method: 2% of range
Cycle time	4 to 7 minutes
Equipment stability	Drift < 1% / year
Reagent consumption	50 to 500 µl/test, dependant on process value and range
Power required	100/240 VAC 50/60 Hz
Sample streams	Standard:1 Optional: up to 5
Sample conditions	Standard: 5 to 25 psig, < 25 µm particulate, 10 to 60 °C Other: consult factory
Sample connection	¼ " NPT-F
Water (for option SS or high range samples)	100K ohm resistivity, minimum 20 to 60 psi, ¼" tube or NPT-F connection
Air supply (for option SS)	Compressed, oil-free, ¼" tube or NPT-F connection
Waste	½" tube connection to drain
Leak	¾" tube connection to drain
Enclosure	20" H x 18" W x 10" D, wall mount, NEMA 4X/IP66
Display	3" x 2.2", LCD with backlight
Outputs	Standard: 4-20 mA process value, maintenance alarm relay. Optional: alarm relay with settable trip point, Ethernet, and/or serial network per user requirements.

Specifications subject to change