



L450 Chloride Analyzer

Liquid Analysis Systems' L450 series chemical analyzers perform dependable 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 use, and minimum operating cost.



L450 Series Features

- Auto sample retrieval and preparation
- Result range and trend check
- Output options for recording, alarming, dosing, and/or replenishing
- Auto check of titrant, sample, and electrodes

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 and multi-parameter analysis
- Standard precision titrant dose pumps within $\pm 2\%$ accuracy
- Grab sample port
- Replenishment and dosing systems
- RS 485/Ethernet networking/E mail messaging

L450 Chloride Analyzer

The online L450 Chloride analyzer measures chloride in water by means of a selective and accurate titration with silver or mercuric nitrate. With the differential endpoint detection method, the internal Pt electrode does not require calibration or replacement, and electrode depletion and drift common with other methods is eliminated. No colorimetric dyes or indicators are required. For dependable process control, each analysis is automatically replicated and/or trend checked prior to posting, alarming, or replenishing. Sampling can be drawn from pressurized sample stream or pumped from overflow sampler. For sample with particulate, a sample strainer with automatic backflush is offered.



Analyzer Model	
L450Chloride	Base model with standard precision (20 μ l) titrant dose pumps, one sample/waste pump, single stream inlet, 4-20 mA output.
Options	
DI	Digital input for remote enable of analyses or dosing
DO	Digital output relay with settable trip point or other control function
GS1	Auto grab sample with sipper tube inlet.
HP	High precision version, \leq 1% accuracy
MSx	Multi-stream sampling, x = number of streams.
RRx	Replenishment control (<u>R</u> elay or <u>P</u> neumatic output options)
SK__	Spares kit (<u>B</u> asic or <u>E</u> xtended version)
SS	Sample inlet strainer with auto backflush. For particulate > 40 μ m.
SP	Sample pump. For unpressurized samples.

Specifications	
Method	Differential titration with silver nitrate and Pt electrode. Mercuric nitrate titrant option for ranges under 2.5 ppm. pH buffering is available for strongly alkaline sample.
Ranges	Configurable over \leq 50:1 range, e.g., 20 to 1000 ppm Cl
Repeatability	Settable: 2% of range, typical at 2 replicates. Setting drives number of replicates.
Interferences	Cyanide, bromide, iodide, orthophosphate
Cycle time	2 to 10 minutes per stream, dependant upon span and repeatability settings
Equipment stability	Better than 1% /yr, excluding titrant stability.
Reagent consumption	\sim 200 μ l/test, dependant on process value and range
Power required	100 to 240 VAC, 50 to 60 Hz
Sample streams	Standard: 1 Optional: up to 4
Sample conditions	5 to 25 psig, 15 to 60 $^{\circ}$ C
Sample connection	$\frac{1}{4}$ " NPT
Drain	$\frac{1}{2}$ " NPT. Drain must be vented or unpressurized.
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. Maintenance alarm relay. Optional: process alarm relay with settable trip point, Ethernet, and/or serial per user requirement

Specifications subject to change.