

# Plating & Metal Finishing Analyzers

## L400 & L500 Series

Introducing Liquid Analysis Systems' Next Generation of Online Chemical Analyzers. Providing real-time, true titrametric and other analyses of components in plating and metal finishing process lines such as:

Analyte Examples			
Cations		Anions	Other
Cu <sup>2+</sup>	Pb <sup>2+</sup>	Cl <sup>-</sup>	pH
Ni <sup>2+</sup>	Sn <sup>2+</sup>	SO <sub>4</sub> <sup>2-</sup>	Acidity
Na <sup>+</sup>	Fe <sup>2+</sup>	NO <sub>3</sub> <sup>-</sup>	Alkalinity
Zn <sup>2+</sup>	K <sup>+</sup>	PO <sub>4</sub> <sup>3-</sup>	H <sub>2</sub> O <sub>2</sub>
Al <sup>3+</sup>	Ag <sup>+</sup>	CN <sup>-</sup>	PAA
Cr <sup>6+</sup>	B <sup>3+</sup>	F <sup>-</sup>	Hypophos.
Cr <sup>3+</sup>		SO <sub>3</sub> <sup>2-</sup>	Thio

For use in:

### Semi-Conductor Mfg.

» SC1/SC2, HF/NH<sub>4</sub>F, HNA, Ni/ Fe, H<sub>2</sub>SO<sub>4</sub>/H<sub>2</sub>O<sub>2</sub>, KOH

### Circuit Board Mfg

» Cu, Ag/CN, NaOH, KOH, Ni/Sn

### Anodizing Industry

» H<sub>2</sub>SO<sub>4</sub>, HF, NF, H<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>, NaOH, KOH, H<sub>2</sub>PO<sub>4</sub>

### General Plating

» Cr, Ni, Ag, Sn, Au, Cu...

### Metal Finishing

» CN/Ag, Fe, HF/N, Cr...

### Effluent monitoring

» Cu, Fe, Ni, Pb, Sn, B, CN...

Built to withstand the harshest environments, **L400 & L 500 Series Analyzers** continue 30 years experience of providing online control to critical applications in the Aerospace, Automotive, Utility, Electronics, Semi-Conductor, Food & Agriculture and Metal Finishing Industries.



#### Standard Features:

- Sampling: Filter free for particles < 6mm, auto back-flushing sample lines  
Draws sample from up to 200 ft. distance
- Reporting: Analog and relay (4-20 mA & Alarm Relays),
- Control: Digital communications (Serial, Ethernet, and Modem)
- Software: Configurable, recipe driven analyses, Windows PC interface
- Probes: Pt electrodes have no maintenance, calibration and drift are eliminated
- End point: Differential potentiometric detection eliminates calibration

#### Application Specific Features (Optional):

- » Single or Multi parameter analysis
- » Single or multi-source sampling up to 15 points
- » Grab sample port
- » Replenishment control for metering pumps
- » Sensor options: pH, ORP, ISE, temperature & turbidity

#### L400 & L500 Series Applications:

The L400 and L500 series analyzers combine to form complete solutions for monitoring, closed-loop control, and chemical process automation. These include automated sampling systems, replicated analyses, verified replenishments, auto calibration, remote analyzer start/stop, customized controls and I/O, local and remote reports, graphical and tabular history, process range and analyzer diagnostic alarms. Analyses and I/O are pre-programmed to meet customer-specific requirements, but are configurable for long-term flexibility.



**Liquid Analysis Systems**

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# Waste Water & Enviro Analyzers

## L400 & L500 Series

Introducing Liquid Analysis Systems' next generation of Online Chemical Analyzers, providing real-time, true titrametric analysis of chemical contaminants such as:

Analyte Examples			
Cations	Anions	Other	
Cu <sup>2+</sup>	Pb <sup>2+</sup>	Cl <sup>-</sup>	pH
Ni <sup>2+</sup>	Sn <sup>2+</sup>	SO <sub>4</sub> <sup>2-</sup>	Acidity
Na <sup>+</sup>	Fe <sup>2+</sup>	NO <sub>3</sub> <sup>-</sup>	Alkalinity
Zn <sup>2+</sup>	K <sup>+</sup>	PO <sub>4</sub> <sup>3-</sup>	H <sub>2</sub> O <sub>2</sub>
Al <sup>3+</sup>	Ag <sup>+</sup>	CN <sup>-</sup>	PAA
Cr <sup>6+</sup>	B <sup>3+</sup>	F <sup>-</sup>	Hypophos.
Cr <sup>3+</sup>		SO <sub>3</sub> <sup>2-</sup>	Thio

For use in:

### Industrial Waste Steams

» Heavy metals, phosphates, pH

### Flue Gas Neutralization

» Amine, NaOH, KOH, sulphite scrubbing

### Municipal Waste Treatment

» Chlorination, de-chlorination & sulfites

### Pulp & Paper

» Bleaching, chlorine substitutes

### Drinking Water

» Nitrates, heavy metals

### Metal Recovery Monitoring

» Resin bed monitoring.



Built to withstand the harshest environments, the **L400 & L500 Series Analyzers** continue 30 years experience in providing monitoring and control of effluent and process water. Liquid Analysis Systems' L400 & L500 series chemical analyzers perform dependable titrametric analyses, providing accurate concentrations of difficult to monitor chemical contaminants.

#### Standard Features:

- Sampling: Filter free for particles < 6mm, auto back-flushing sample lines  
Draws sample from up to 200 ft. distance
- Reporting: Analog and relay (4-20 mA & Alarm Relays),
- Control: Digital communications (Serial, Ethernet, and Modem)
- Software: Configurable, recipe driven analyses, Windows PC interface
- Probes: Pt electrodes have no maintenance, calibration and drift are eliminated
- End point: Differential potentiometric detection eliminates calibration

#### Application Specific Features (Optional):

- » Single or Multi parameter analysis
- » Single or multi-source sampling up to 15 points
- » Grab sample port
- » Replenishment control for metering pumps
- » Sensor options: pH, ORP, ISE, temperature & turbidity

#### L400 & L500 Series Applications:

The L400 and L500 series analyzers combine to form complete solutions for monitoring, closed-loop control, and chemical process automation. These include automated sampling systems, replicated analyses, verified replenishments, auto calibration, remote analyzer start/stop, customized controls and I/O, local and remote reports, graphical and tabular history, process range and analyzer diagnostic alarms. Analyses and I/O are pre-programmed to meet customer-specific requirements, but are configurable for long-term flexibility.



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# Chemical Process Analyzers

## L400 & L500 Series

Introducing Liquid Analysis Systems' next generation of Online Chemical Analyzers, providing real-time, true titrametric analysis of chemical contaminants such as:

Analyte Examples			
Cations		Anions	Other
Cu <sup>2+</sup>	Pb <sup>2+</sup>	Cl <sup>-</sup>	pH
Ni <sup>2+</sup>	Sn <sup>2+</sup>	SO <sub>4</sub> <sup>2-</sup>	Acidity
Na <sup>+</sup>	Fe <sup>2+</sup>	NO <sub>3</sub> <sup>-</sup>	Alkalinity
Zn <sup>2+</sup>	K <sup>+</sup>	PO <sub>4</sub> <sup>3-</sup>	H <sub>2</sub> O <sub>2</sub>
Al <sup>3+</sup>	Ag <sup>+</sup>	CN <sup>-</sup>	PAA
Cr <sup>6+</sup>	B <sup>3+</sup>	F <sup>-</sup>	Hypophos.
Cr <sup>3+</sup>		SO <sub>3</sub> <sup>2-</sup>	Thio

For use in:

### Basic Chemical Mfg

» NaOH, KOH, Phosphates, Acids ...

### Fertilizer Mfg.

» Potash, Nitrates,

### Chemical Treatment

» Wood Preservation,

### Chemical Extraction

» Precious Metal Recovery, Refining

### Chemical Conversion of Metals

» Etching, Coloring, Hardening

### Textile & Leather

» Bleaching, Dyeing & Flame Retardation.



Built to withstand the harshest environments, the **L400 & L500 Series Analyzers** continue 30 years experience in providing monitoring and control of a variety of chemical processes. Liquid Analysis Systems' L400 & L500 series chemical analyzers perform dependable titrametric analyses, providing online control to chemical processes in the Chemical Mfg., Fertilizer Mfg., Timber, Textile, Mining, and Building Industries.

#### Standard Features:

- Sampling: Filter free for particles < 6mm, auto back-flushing sample lines  
Draws sample from up to 200 ft. distance
- Reporting: Analog and relay (4-20 mA & Alarm Relays),
- Control: Digital communications (Serial, Ethernet, and Modem)
- Software: Configurable, recipe driven analyses, Windows PC interface
- Probes: Pt electrodes have no maintenance, calibration and drift are eliminated
- End point: Differential potentiometric detection eliminates calibration

#### Application Specific Features (Optional):

- » Single or Multi parameter analysis
- » Single or multi-source sampling up to 15 points
- » Grab sample port
- » Replenishment control for metering pumps
- » Sensor options: pH, ORP, ISE, temperature & turbidity

#### L400 & L500 Series Applications:

The L400 and L500 series analyzers combine to form complete solutions for monitoring, closed-loop control, and chemical process automation. These include automated sampling systems, replicated analyses, verified replenishments, auto calibration, remote analyzer start/stop, customized controls and I/O, local and remote reports, graphical and tabular history, process range and analyzer diagnostic alarms. Analyses and I/O are pre-programmed to meet customer-specific requirements, but are configurable for long-term flexibility.



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# Sanitizing Agent Analyzer

## L450 Cl/H2O2/PAA

Introducing Liquid Analysis Systems' next generation of Online Chemical Analyzers, providing real-time, true titrametric analysis of chemical contaminants such as:

$\text{Cl}_2$  – **Chlorine**

$\text{H}_2\text{O}_2$  – **Hydrogen Peroxide**

$\text{C}_2\text{H}_4\text{O}_3$  – **Peracetic Acid**

For use in:

**Clean in Place Processing**

» Dairy and cheese making

**Aseptic Cleaning**

» Beverage bottles and raw vegetables

**Chlorination & De-chlorination**

» Municipal waste treatment

**Bleaching**

» Pulp and paper

**Feed stock Monitoring**

» Chemical industries

**Effluent Monitoring**

» Industrial and utility waste streams.



Built to withstand the harshest environments, the **L450 Cl/H2O2/PAA** continues 30 years experience of providing online control to critical applications. Liquid Analysis Systems' L450 series chemical analyzers perform dependable online wet chemical titrametric analyses using **pH, ORP, ISE, turbidometric** and other sensors.

**Standard Features:**

- Sampling: Filter free for particles < 6mm, auto back-flushing sample lines  
Draws sample from up to 200 ft. distance
- Reporting: Analog and relay (4-20 mA & Alarm Relays),
- Control: Digital communications (Serial, Ethernet, and Modem)
- Software: Configurable, recipe driven analyses, Windows PC interface
- Probes: Pt electrodes have no maintenance, calibration and drift are eliminated
- End point: Differential potentiometric detection eliminates calibration

**Application Specific Features (Optional):**

- » Single or Multi parameter analysis
- » Single or multi-source sampling up to 15 points
- » Grab sample port
- » Replenishment control for metering pumps
- » Sensor options: pH, ORP, ISE, temperature & turbidity

**Sanitizing Agent Analyzer:**

The L450 model's features are optimized for extreme reliability, ease of use, and minimum operating costs. The L450 Cl/H2O2/PAA analyzer accurately measures the concentration of Chlorine, Hydrogen Peroxide, and Peracetic Acid or any other sanitizing agent to accurately control their use. Whether to insure proper efficacy of pathogens, save chemical costs, improve process quality, or improve data collection, the L450 Sanitizing Agent Analyzer will provide an invaluable tool in your process line.



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