ChemScan UV-Series Analyzers

**Features:**
- Can be configured for monitoring single or multiple samples and parameters
- Real-time Spectrographic chemical analysis using advanced pattern recognition techniques
- Easily interfaced to SCADA systems (4-20mA, MODBUS or Ethernet)
- Extensive internal data logging
- Self monitored diagnostics and alarms
- Internal manifold with inlets for auto zeroing, auto cleaning and calibration samples

**Potable Water Monitoring:**
- Chloramination Monitoring
- Water Blending
- Organics Detection
- Nitrification Avoidance

**Wastewater Nutrient Monitoring**
- Nitrification Analysis
- De-Nitrification Control
- Chem or Bio Phosphorous Removal
- Nutrient Deficiency Analysis
- SBR End Point Detection
- Alkalinity Monitoring

ChemScan on-line analyzers provide operators and control systems with timely process chemistry measurements. These data are used to control and optimize the process; resulting in increased plant capability, reduced energy and chemical usage along with monitoring the process for compliance.

<table>
<thead>
<tr>
<th>Model</th>
<th>Application</th>
<th>Parameters</th>
<th>Max Sample Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>UV-2150</td>
<td>Nutrients or Inorganics</td>
<td>Analysis of one parameter</td>
<td>4*</td>
</tr>
<tr>
<td>UV-3150</td>
<td>Nutrients or Inorganics</td>
<td>Analysis of one parameter</td>
<td>8**</td>
</tr>
<tr>
<td>UV-4100</td>
<td>Nutrients or Inorganics</td>
<td>Analysis of multiple parameters (up to 4)</td>
<td>2</td>
</tr>
<tr>
<td>UV-6101</td>
<td>Nutrients or Inorganics</td>
<td>Analysis of multiple parameters (up to 8)</td>
<td>8**</td>
</tr>
<tr>
<td>UV-2150/S</td>
<td>Water Chloramination</td>
<td>Analysis of up to four parameters free and total ammonia, true monochloramine and total chlorine</td>
<td></td>
</tr>
<tr>
<td>UV-2150/N</td>
<td>Wastewater Nutrients</td>
<td>Analysis of ammonia and nitrate</td>
<td>8**</td>
</tr>
<tr>
<td>UV-2150/NoP</td>
<td>Wastewater Nutrients</td>
<td>Analysis of nitrite and ortho phosphate</td>
<td>2</td>
</tr>
<tr>
<td>UV-2150/NHoP</td>
<td>Wastewater Nutrients</td>
<td>Analysis of ammonia and ortho phosphate</td>
<td>8**</td>
</tr>
<tr>
<td>UV-2150/DC</td>
<td>Wastewater Dechlor</td>
<td>Analysis of up to two parameters such as total chlorine residual and dechlorination agent residual</td>
<td>2</td>
</tr>
</tbody>
</table>

* Only 2 with filters, **Only 4 with filters

Monitor process, reduce energy and chemical costs, meet limits.
Accurate, Reliable AND Affordable Single Parameter Analysis

**Capabilities:**
- Continuous, Real Time Analysis of Constant Flow Sample Stream
- Isolated Analog Output

**Features:**
- Long Life LED Light Source
- Low Maintenance
- Large I.D. Flow Paths
- Simple Field Adjustable Calibration
- Direct Diode Detection
- Sealed Electronics Enclosure
- Auto Cleaning and Zeroing
- No Lamp Replacement or Alignment Required

No Filtration Required
- When TSS < 150 mg/L
- After Secondary Clarifier

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The Fond du Lac Wisconsin Regional Wastewater Treatment Facility has saved thousands in chemical costs.

The Fond du Lac facility, with an average flow of 9.8 MGD, treats all of the city’s wastewater along with that of neighboring communities. For the last three years, the facility has used a ChemScan mini oP to monitor the chemical feed pump that doses Aluminum Sulfate for Phosphate removal. Jeremy Cramer, Operations Manager for the plant, reports “Alum cost savings of approximately $100,000 per year have been realized.” In the last 6 months, the unit has been tied directly to the chemical feed pump via their SCADA system. The system ramps the chemical dosing up and down as needed. “We are on pace to save approximately $50,00 more per year.” This results in a total savings estimated at $150,000 per year.

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**ChemScan mini Accessories**

The Sample Extraction Accessory provides a pressurized sample to the ChemScan mini analyzer where NTU is less than 60 and TSS is less than 150 mg/L

**ChemScan Cartridge Filter Wand**
No cleaning air, water or chemicals required. Compatible with the ChemScan mini Analyzer

**ChemScan mini Outdoor Enclosure.**
A turnkey solution for mounting the ChemScan and related items.

**Submersible Pump**
- 1.3” Max. Dia. Solids
- Weight: 20 - 30 lbs
- Power: 1/4 - 3/4 HP, 120 VAC 60 Hz
- Power Cable: 20 feet

**Deck Mounted Self Priming Pump**
- 1/3 - 1/2 HP
- Weight: 40 lbs
- Mounting: Base

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www.ChemScan.com
**ChemScan Alkalinity Analyzer**

**Reliable Alkalinity Analysis in Wastewater**

The ChemScan Alkalinity Analyzer provides consistent, reliable chemical analysis for process control and optimization in multiple stream process monitoring and/or difficult or dirty samples.

The ChemScan Alkalinity Analyzer is easy to operate and maintain with minimal training and provides continuous real-time online analysis enabling chemical composition measurement of liquid processes.

- Fully automatic mode for routine monitoring of process streams
- Integrated, field proven, filtration system
- Modbus RS 232, Modbus RS 485, Modbus TCP/IP communications for downloading calibrations, analysis and setup data (to printer or computer)
- Digital input control for remote control operation of analysis and calibration
- Rugged design for long life under harsh operating conditions
- Internal sample fast loop and rapid reaction electrodes provide fast analyzer response for efficient process control
- Easy to operate with menu-driven selections
- Modular design provides quick access and easy maintenance throughout

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**Support Services**

From installation to replacement parts, Chemscan, Inc. provides responsive service by qualified personnel.

- Commissioning
- Supplies
- Training
- Parts
- Service

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**Contact Information**

Chemscan, Inc.
2325 Parklawn Drive, Suite I
Waukesha, WI  53186
Phone 262-717-9500

Or visit our website:

[ChemScan.com](http://ChemScan.com)
### Chloramination Suite

**ChemScan mini oP**
- Range (as PO4): 0.1 - 9.0 mg/L (Method 1005), 0.3 - 18.0 mg/L (Method 1006)
- Range (as PO4-P): 0.03 - 3.0 mg/L (Method 1003), 0.1 - 6.0 mg/L (Method 1004)
- Cycle Interval: 5 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini oP XR**
- Range (as P): 0.1 - 20.0 mg/L (Method 1069)
- Range (as PO4): 0.3 - 60.0 mg/L (Method 1070)
- Cycle Interval: 5 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

<table>
<thead>
<tr>
<th>MINI</th>
<th>RANGE (AS PO₄)</th>
<th>METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>oP</td>
<td>0.1 - 9.0 mg/L</td>
<td>1005</td>
</tr>
<tr>
<td></td>
<td>0.3 - 18.0 mg/L</td>
<td>1006</td>
</tr>
<tr>
<td></td>
<td>0.03 - 3.0 mg/L</td>
<td>1003</td>
</tr>
<tr>
<td></td>
<td>0.1 - 6.0 mg/L</td>
<td>1004</td>
</tr>
</tbody>
</table>

### Drinking Water Suite

**ChemScan mini Mn**
- Range: 0.02 - 8.0 mg/L (Method 1063, 1064)
- Cycle Interval: 15 min. (1064) 10 min. (1063) to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini Fe**
- Range: 0.01 - 5.0 mg/L (Method 1039)
- Cycle Interval: 8 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

### Wastewater Disinfection Suite

**ChemScan mini Sulfite**
- Range: 0.01 - 4.0 mg/L (Method 1068)
- Cycle Interval: 5 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini UV254**
- Range (as N): 0.1 - 100%T
- Cycle Interval: Continuous
- Sample: 2 - 10 psi continuous flow
- Maintenance: Replace zero/clean solution

### Chloramination Analyzer

**ChemScan mini ChlorAm**
- Range: Free Ammonia 0.025 – 2.00 mg/L
  Total Ammonia 0.02 – 3.00 mg/L
  Monochloramine 0.02 – 5.00 mg/L
- Cycle Interval: 18 minutes to 9999 minutes with 9 minute updates
- Maintenance: Reagent replacement every month, pump kit yearly

**ChemScan mini Peracetic Acid (PAA)**
- Range: 0.015 - 5.0 mg/L (Method 1073)
- Cycle Interval: 5 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 4 weeks, pump kit yearly

**ChemScan mini LowChlor**
- Range (as CL2): 0.005 - 2.00 mg/L (Method 1030)
- Cycle Interval: 5 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every month, pump kit yearly

**ChemScan mini LowCrVI**
- Range: 0.05 - 6.0 mg/L (Method 1057)
- Cycle Interval: 8 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini Ni**
- Range: 0.05 - 6.0 mg/L (Method 1057)
- Cycle Interval: 8 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini LowAm**
- Range (as N): 0.05 - 10.0 mg/L (Method 1035)
- Cycle Interval: 10 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini FreeAm**
- Range (as N): 0.01 - 2.00 mg/L (Method 1036)
- Cycle Interval: 18 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every month, pump kit yearly

**ChemScan mini LoP**
- Range (as PO4): 0.01 - 3.0 mg/L (Method 1071)
- Range (as PO4-P): 0.003 - 1.00 mg/L (Method 1034)
- Cycle Interval: 8 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini LoChlor**
- Range (as CL2): 0.005 - 2.00 mg/L (Method 1030)
- Cycle Interval: 5 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every month, pump kit yearly

**ChemScan mini LoCrVI**
- Range: 1 -1000 μg/L (Method 1041)
- Cycle Interval: 12 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini LoAm**
- Range (as N): 0.05 - 10.0 mg/L (Method 1066)
- Cycle Interval: 15 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini Mn**
- Range: 0.02 - 8.0 mg/L (Method 1063, 1064)
- Cycle Interval: 15 min. (1064) 10 min. (1063) to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini LowFe**
- Range: 0.01 - 5.0 mg/L (Method 1039)
- Cycle Interval: 8 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

**ChemScan mini LoSilica**
- Range: 0.05 - 15.0 mg/L (Method 1058)
- Cycle Interval: 7 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 6 months, pump kit yearly

**ChemScan mini LoSilica**
- Range: 0.05 - 15.0 mg/L (Method 1058)
- Cycle Interval: 7 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 6 months, pump kit yearly

**ChemScan mini LoUV254**
- Range (as N): 0.1 - 100%T
- Cycle Interval: Continuous
- Sample: 2 - 10 psi continuous flow
- Maintenance: Replace zero/clean solution

**ChemScan mini LoCu**
- Range: 0.02 - 6.0 mg/L (Method 1065) 0.001 - 2.00 mg/L (Method 1056) 0.05 - 6.0 mg/L (Method 1027)
- Cycle Interval: 4 min. (1027) 5 min. (1065) 4 min. (1056) to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly

* = Based on default cycle time