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
- New graphic user interface with many new features

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>2</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 Chlor/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

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 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 $50,000 more per year.” This results in a total savings estimated at $150,000 per year.

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

TSS - Total Suspended Solids
NTU - Nephelometric Turbidity Units

ChemScan Cartridge Filter Wand
No cleaning air, water or chemicals required. Filter is disposable; replace monthly in less than 5 minutes.

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

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

The ChemScan Titrator/ISE 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

**Parameters:**

- Acids
- Acidity/Alkali
- Alkalinity
- Caustic & Carbonate
- Chlorate
- Chloride
- Chlorite
- Cyanide
- Fluoride
- Hardness
- Hydrogen Peroxide
- Perchlorate
- Sulfate
- Sulfide

**Support Services**

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

- Commissioning
- Supplies
- Training
- Parts
- Service

**Contact Information**

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

Or visit our website:

ChemScan.com

Copyright © 2019 ChemScan, Inc.
Specifications

**General (Common to all minis)**
- **Accuracy:** 2% of value or 2x detection limit (whichever is greater)
- **Environment:** 5 - 50 degrees C
- **Power:** 100 - 240 VAC, 50 W
- **Enclosure:** NEMA 4X
- **Safety Approval:** CSA-US
- **Relay Contacts:** 1 SPDT Concentration, 1 SPDT Programmable
- **Serial Interface:** Serial, RS-232, Modbus RTU
- **Analog Output:** Isolated 4-20 mA
- **Sample:** 0.5 - 1 Liter/analysis, pressure to 10 psi (UV-254 Continuous)

<table>
<thead>
<tr>
<th>Minis</th>
<th>Range (as PO4):</th>
<th>Range (as PO4-P):</th>
<th>Cycle Interval:</th>
<th>Maintenance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChemScan mini oP</td>
<td>0.1 - 9.0 mg/L (Method 1005), 0.3 - 18.0 mg/L (Method 1006)</td>
<td>0.03 - 3.0 mg/L (Method 1003), 0.1 - 6.0 mg/L (Method 1004)</td>
<td>5 minutes to 9999 minutes (field programmable)</td>
<td>Reagent replacement every 3 months, pump kit yearly*</td>
</tr>
<tr>
<td>ChemScan mini oP XR</td>
<td>0.1 - 2.0 mg/L (Method 1069)</td>
<td>0.3 - 6.0 mg/L (Method 1070)</td>
<td>5 minutes to 9999 minutes (field programmable)</td>
<td>Reagent replacement every 3 months, pump kit yearly*</td>
</tr>
</tbody>
</table>

**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*

**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 Mono**
- 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 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 Silica**
- 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 UV254**
- Range: 0.1 - 100% T
- Cycle Interval: Continuous
- Sample: 2 - 10 psi continuous flow
- Maintenance: Replace zero/clean solution

**ChemScan mini Cu**
- 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)
- 4 min. (1027) 5 min. (1065) 4 min. (1056) to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly*

**ChemScan mini LoP**
- Range (as PO4): 0.02 - 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 LoAm**
- Range (as N): 0.01 - 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 Fe**
- Range: 0.01 - 5.0 mg/L (Method 1039)
- 0.02 - 20.0 mg/L (Method 1037)
- Cycle Interval: 8 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every 3 months, pump kit yearly*

**ChemScan mini LowChlor**
- Range (as CL2): 0.01 - 2.00 mg/L (Method 1081)
- Cycle Interval: 4 minutes to 9999 minutes (field programmable)
- Maintenance: Reagent replacement every month, pump kit yearly*

**ChemScan mini LowCrVI**
- Range: 0.02 - 8.0 mg/L (Method 1040)
- Cycle Interval: 12 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 6 months, 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 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
- Ratio – Calculated using Total Ammonia and Monochloramine
- Cycle Interval: 18 minutes to 9999 minutes with 9 minute updates
- Maintenance: Reagent replacement every month, pump kit yearly*

**DRINKING WATER SUITE**

<table>
<thead>
<tr>
<th>Minis</th>
<th>Range (as N):</th>
<th>Cycle Interval:</th>
<th>Maintenance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChemScan mini Ammonia</td>
<td>0.03 - 25.0 mg/L (Method 1079)</td>
<td>15 minutes to 9999 minutes (field programmable)</td>
<td>Reagent replacement every 3 months, pump kit yearly*</td>
</tr>
<tr>
<td>ChemScan mini LoP</td>
<td>0.02 - 3.0 mg/L (Method 1071)</td>
<td>8 minutes to 9999 minutes (field programmable)</td>
<td>Reagent replacement every 3 months, pump kit yearly*</td>
</tr>
<tr>
<td>ChemScan mini LowAm</td>
<td>0.01 - 10.0 mg/L (Method 1066)</td>
<td>15 minutes to 9999 minutes (field programmable)</td>
<td>Reagent replacement every 3 months, pump kit yearly*</td>
</tr>
</tbody>
</table>

**WASTEWATER DISINFECTION SUITE**

<table>
<thead>
<tr>
<th>Minis</th>
<th>Range:</th>
<th>Cycle Interval:</th>
<th>Maintenance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChemScan mini Sulfite</td>
<td>0.01 - 4.0 mg/L (Method 1068)</td>
<td>5 minutes to 9999 minutes (field programmable)</td>
<td>Reagent replacement every month, pump kit yearly*</td>
</tr>
<tr>
<td>ChemScan mini Silica</td>
<td>0.05 - 15.0 mg/L (Method 1058)</td>
<td>7 minutes to 9999 minutes (field programmable)</td>
<td>Reagent replacement every 6 months, pump kit yearly*</td>
</tr>
<tr>
<td>ChemScan mini UV254</td>
<td>0.1 - 100% T</td>
<td>Continuous</td>
<td>Replace zero/clean solution</td>
</tr>
<tr>
<td>ChemScan mini Cu</td>
<td>0.02 - 6.0 mg/L (Method 1065)</td>
<td>4 min. (1027) 5 min. (1065) 4 min. (1056) to 9999 minutes (field programmable)</td>
<td>Reagent replacement every 3 months, pump kit yearly*</td>
</tr>
</tbody>
</table>

**CHLORAMINATION SUITE**

<table>
<thead>
<tr>
<th>Minis</th>
<th>Range (as N):</th>
<th>Cycle Interval:</th>
<th>Maintenance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChemScan mini Ammonia</td>
<td>0.03 - 25.0 mg/L (Method 1079)</td>
<td>15 minutes to 9999 minutes (field programmable)</td>
<td>Reagent replacement every 3 months, pump kit yearly*</td>
</tr>
<tr>
<td>ChemScan mini LoP</td>
<td>0.02 - 3.0 mg/L (Method 1071)</td>
<td>8 minutes to 9999 minutes (field programmable)</td>
<td>Reagent replacement every 3 months, pump kit yearly*</td>
</tr>
<tr>
<td>ChemScan mini LowAm</td>
<td>0.01 - 10.0 mg/L (Method 1066)</td>
<td>15 minutes to 9999 minutes (field programmable)</td>
<td>Reagent replacement every 3 months, pump kit yearly*</td>
</tr>
</tbody>
</table>

**CHLORAMINATION ANALYZER**

<table>
<thead>
<tr>
<th>Minis</th>
<th>Range:</th>
<th>Cycle Interval:</th>
<th>Maintenance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChemScan mini ChlorAm</td>
<td>Free Ammonia 0.025 – 2.00 mg/L</td>
<td>Reagent replacement every month, pump kit yearly*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Ammonia 0.02 – 3.00 mg/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monochloramine 0.02 – 5.00 mg/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ratio – Calculated using Total Ammonia and Monochloramine</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18 minutes to 9999 minutes with 9 minute updates</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reagent replacement every month, pump kit yearly*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>