

# Pi<sup>π</sup> UV254Sense(Waste)

## Online UV254 Absorption and Transmission

The UV254Sense UV254 analyser is the first in the world to be designed in modular form so that it can be integrated with other sensors such as pH, turbidity, and dissolved oxygen to provide all the tools needed for either a stand alone UV254 analyser, or part of an effluent discharge monitoring system.

The UV254 analysers can be correlated and used as a surrogate measurement for TOC, BOD or COD, or in UV Transmission mode, can be used to control UV disinfection processes.



*"This modular adaptation of the Realtech UV254 monitor is a big step forward for this technology."* **Ron Hallett, Canada**

- **Tough - field proven**
- **Stable and reliable - excellent process control**
- **Surrogate for TOC, BOD or COD**
- **Suitable for all waters (seawater option)**
- **UVT for UV disinfection control**
- **UVA for water monitoring**

The UV254Sense (Waste) is available with different controllers giving you the same great performance with different communication, display, and control options. With the Pi range of UV254 monitors, you get everything that you need - and nothing that you don't, without sacrificing the quality of measurement. With multiple path length sample cells included and with a seawater option, the UV254Sense (Waste) is suitable for all waste waters.

### CRONOS<sup>®</sup> UV254Sense



- High Quality - Lowest Cost
- Multilingual
- High resolution grayscale display
- 9 buttons for easy navigation
- Graphing and datalogging
- Enclosure; wall, panel, pipe or pole mounting. IP65/Nema 4x.
- Options:
  - **Modbus RS485/LAN**
  - **Profibus DPV 1**
  - **Up to 2 sensors**
  - **PID/flow proportional controls**
  - **Remote sensors**
  - **Colour display**
  - **Downloadable data logs**

### CRIUS<sup>®</sup> 4.0 UV254Sense



- High Quality - Lowest Cost
- Multilingual
- High resolution colour display
- Intuitive user interface
- Downloadable data logs
- Customisable home pages
- All CRONOS<sup>®</sup> options plus:
  - **Up to 4 sensors**
  - **Remote access via LAN**
  - **Remote access via 3G/4G**
  - **Expandable to 16 sensors**

**For more information please see the individual brochures for CRONOS<sup>®</sup> and CRIUS<sup>®</sup> 4.0**

### Sensor Options

- **Automatic Cleaning**



- **Seawater Option**
- **Multi Unit Option**



- **Dual Stream**



**Stream 1 Stream 2**

## Principle of Operation

The UV254Sense (Waste) provides online continuous organics monitoring utilising a 254nm ultraviolet light source. The amount of light absorbed provides an ongoing indication of natural organic matter (NOM) in a flowing sample, and serves as a continuous surrogate measurement for organic carbon (TOC), and other measurements such as chemical oxygen demand (COD).

Pi's UV254Sense (Waste) uses the most innovative technology on the market to avoid the common issues associated with using light absorption for waste water analysis.

The unique technology within the UV254Sense (Waste) removes the UV lamp fluctuation, dirt and fouling issues associated with many optical instruments, whilst also avoiding the added complexity, maintenance and expense seen in other instruments attempting to overcome the same issues.

The UV254Sense (Waste) comes with built in turbidity compensation to ensure accurate, stable and reliable measurements. Thanks to the multiple light path lengths available (2, 4, 10mm), the UV254Sense (Waste) is suitable for almost any waste stream and is capable of measuring a range of 0-6.5 UVA.

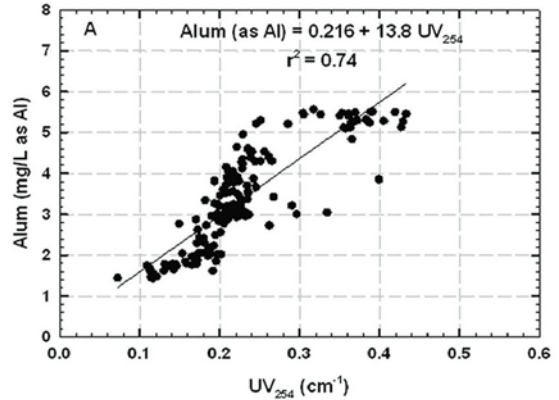
The modular design and wide UVA range makes the UV254Sense (Waste), the most adaptable system available worldwide. Couple the UV254Sense (Waste) with any of Pi's controllers and you get a system capable of automatic self cleaning, automatic calibration/zeroing and a wealth of process control and communications options.

## Applications

When using the transmission mode (UVT) the UV254Sense can be used to optimise the light level in UV disinfection equipment providing confidence in your disinfection whilst

minimising power levels.

When in absorbance mode (UVA), the instrument can be used to monitor the presence of organic matter (NOM). This can be used as a surrogate measurement for COD, BOD or TOC, to give continuous indication and evidence of effluent quality and ensure that all effluent control requirements are met on any waste stream.



The UV254Sense (Waste) can be combined with any other sensor like pH, temperature, suspended solids, dissolved oxygen etc., to give a complete waste stream monitoring system at a fraction of the price of a true 'online' COD/TOC analyser.

## Standard Features

- Online continuous operation
- 254nm wavelength UV light source
- Display either UV transmittance or UV absorbance values
- Automatic turbidity, fouling and lamp fluctuation compensation

## Optional Features

- **Automatic chemical cleaning system**
- **Dual sample feed capability**
- **Seawater version**

## Specification\*

<b>Range:</b>	0-100% UVT, 0-5 UVA
<b>Accuracy:</b>	±0.5% FS
<b>Repeatability:</b>	±0.1% UVT
<b>Resolution:</b>	0.1% UVT, 0.001 UVA
<b>Path Length:</b>	2, 4, 10mm
<b>Sampling Time:</b>	10 seconds
<b>Flow Rate:</b>	300-1000mL/min
<b>Cleaning:</b>	Unique fouling compensation, quick and easy in-situ cleaning technology Automatic cleaning (optional)
<b>Self Diagnostics:</b>	Continuous detection of leaks, lamp output, humidity, temperature and electrical fault
<b>Humidity Control:</b>	Humidity sensor with large plug-in regenerating desiccant system
<b>Wavelength:</b>	253.7nm
<b>Light Source:</b>	Low pressure mercury UV lamp
<b>Lamp Life:</b>	2 years (warranted)
<b>Dimensions:</b>	17"H x 14"W x 8"D
<b>Enclosure:</b>	IP65 (Nema 4X) wall mountable
<b>Fluid Connections:</b>	¼" push-fit inlet/outlet
<b>Electrical:</b>	90-250VAC
<b>Operating Temp:</b>	0° to 45°C (32° to 113°F)
<b>Storage Temp:</b>	-20° to 60°C (-4° to 140°F)
<b>Warranty:</b>	2 year limited warranty
<b>Optional Accessories:</b>	Automatic chemical cleaning Open channel/non-pressurised pump system

*\*All subject to change without notice*