



## PO<sub>4</sub><sup>3-</sup> On-line Water analyzer L800



### ■ Application

- . Drinking water
- . Surface water (rivers, lakes...)
- . Industrial waste water
- . Municipality waste water

### ■ Benefits

#### High Selectivity

- . No cross interference with sludge
- . Low limit of detection

#### High Reliability

- . No corrosion due to dew point
- . Several streams can be monitored in same time

#### Simplicity

- . Collect of data easily
- . Short-time operation
- . Integrated sampling pump
- . Integrated automatic cleaning system.

#### Robustness

- . Can be install outside in corrosive or explosive area
- . No spare parts needed to be change

### ■ Features

#### Measurement

- . High resolution and sensitivity optical sensor
- . Powerful mathematical treatment FTLS

#### Sampling

- . Multiplexing system in option
- . Heated or cooling system in option

#### Communication and interface

- . On board memory for storage data (16 GB)
- . Intuitive friendly interface on TFT color touch screen (glass to glass)

#### Enclosure

- . IP65 Stainless Steel enclosure
- . ATEX in option

#### Maintenance

- . 10 year lifetime UV lamp
- . Once a year calibration

# Application

## The secret to be the best

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There's no one analyzer can measure all parameters in the world, because no one method is always useful for every parameter. The secret to be the best is to find best measure principles convenient to each component.



Hemera team understand, the most important thing to find the solution is know about the problems of customers, and to work on site.

The advantage of Hemera is the responsible with customers, the spirit to face on challenge, and the support of best French laboratories. We care each small problem that customers meet, and we are looking for the best solutions.

## The advantage to measure $\text{PO}_4^{3-}$

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The phosphate found in natural waters mainly exists as the orthophosphate species,  $\text{PO}_4^{3-}$ . These polyphosphate species may be hydrolysed to produce the orthophosphate, however, the species which dominates will depend on the pH prevailing in the particular environment.

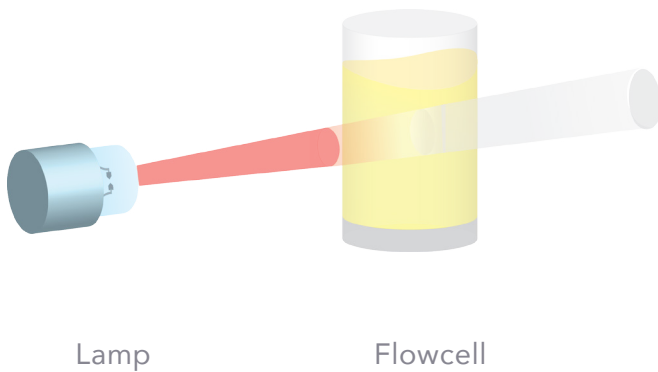


For  $\text{PO}_4^{3-}$ , we use the Colorimetric method to measure. It's the best way to get an efficient solution and best results.

Phosphate will readily react with reagent: ammonium molybdate vanadate ( $\text{H}_{12}\text{MoN}_3\text{O}_7\text{V}$ ) in the presence of suitable reducing agents to form a blue coloured complex, the intensity of which is directly proportional to the concentration of phosphate in the solution.

You can find easily in your country for the reagent.

# Basic methods



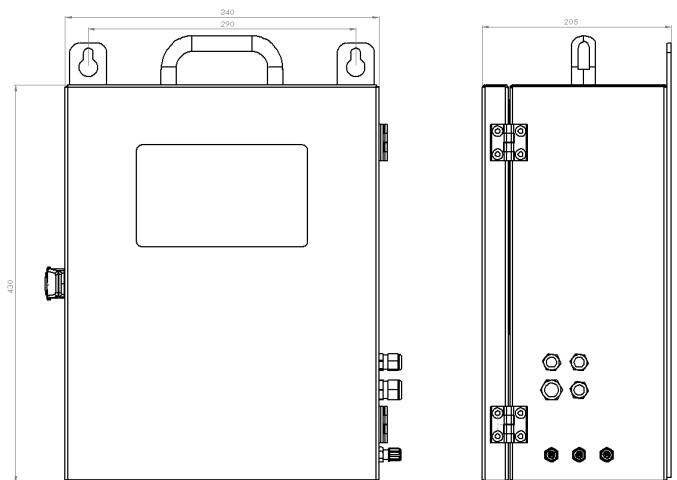
## Colorimetric

Colorimetric can efficiently measure the concentration of  $\text{PO}_4^{3-}$ .

A colorimetric process analyzer for measurement and dosing control of disinfectants such as free chlorine, monochloramine and total residual chlorine are combined chlorine.

## $\text{PO}_4^{3-}$

Phosphates  $\text{PO}_4^{3-}$  are formed from this element. Phosphates exist in three forms: orthophosphate, metaphosphate (or polyphosphate) and organically bound phosphate each compound contains phosphorous in a different chemical arrangement. These forms of phosphate occur in living and decaying plant and animal remains, as free ions or weakly chemically bounded in aqueous systems, chemically bonded to sediments and soils, or as mineralized compounds in soil, rocks, and sediments..



*The size of our analyzer*

L800 is a dedicated on-line analyzer for determining true  $\text{PO}_4^{3-}$  values in water matrices, in compliance with standard methods. The analytical mainframe sets new standards in traditional  $\text{PO}_4^{3-}$  analysis methods, while compliance with international standard methods is assured. L800 uses Colorimetric technology, provides selective, accurate and real-time measurement of  $\text{PO}_4^{3-}$ .

# Technical Specification

## Sensor

Parameter	PO <sub>4</sub> <sup>3-</sup>
Range	0 ... 50 mg/L
Accuracy	< ±2 % F.S.
Repeatability	± 1 mg/L
Detection limit	< 1 mg/L
Response time	< 10 sec

## Sample Condition

Flow	0 ... 2 L/min
Pressure	< 2 bars
Temperature	0 to 50°C
Volume	< 100 ml
Wetted parts	Quartz or Sapphire / FPM / Stainless steel / PEEK

## Controller

Display	8.5" TFT colour screen 16/9 (LED backlight)
Resolution	800 x 480 pixels
Touch screen	Glass to glass
Memory	16 GB SD card
Data transfer	USB Type A
Operating temperature	5 ...50 °C
Operating humidity	< 90 % RH

## Communication output

Analog	4-20 mA isolated (Active or Passive) / 500 Ω max.
Relay	Programmable limit or fault alarms / 5A (NO) 3A (NC) @ 277 VAC
Digital	RS485 / Modbus (Slave or Master)

## Power supply

Voltage	100 ... 240 VAC (50 - 60 Hz) or 24 VDC
Consumption	< 20 W (60 W max.)

## Enclosure

Type	Wall mouted
Material	SS 316L
Dimensions	430 x 340 x 200 mm (H x W x D)
Weight	< 14 kg
Protection class	IP65
Area classification	Safe Area/ ATEX Zone 1 or 2 in option

## Certification

EMC	ICE 61326
Safety	ICE 61010-1

## Service

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- Following the project even after the installation
- 2 years warranty
- Local distributors help for the technical service

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