



PRODUCT  
DATASHEET '24

# ADVANCE ANALYTIK

REVOLUTIONIZING ONLINE MONITORING SOLUTIONS



## OPTICS 1000 - PHOSPHATE

PHOSPHATE LOW RANGE ( $\text{PO}_4^{3-}$ )  
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# Viz Series

PHOSPHATE LR ( $\text{PO}_4^{3-}$ )

## Method - Colorimetric

After adding the sample into the measurement cell, some reagents are added in order to adjust the solution to the desired conditions (pH, valence's elements, etc.). Then, a blank is done to correct any temperature or turbidity disturbance. Subsequently, a last reagent is added, and it reacts with solution developing a color, which is measured using a correct wavelength. Thanks to the photometer used, the result achieves a great accuracy



## Principle of measurement

Ammonium molybdate and potassium antimonyl tartrate react in acid medium with orthophosphate to form a heteropoly acid-phosphomolybdic acid-that is reduced to intensely colored molybdenum blue by ascorbic acid.

## Advantages of the method

The blue color developed is so intense and it provides a high accuracy and repeatability. The method allows to measure really low values of concentrations (lower than 50 ppb).



## Interferences

Arsenates concentrations as low as 0.1 mg As/L interfere with the phosphate determination. Cr (VI) and NO<sub>2</sub><sup>-</sup> interfere to give results about 3% low at concentrations of 1 mg/L and 10 to 15% low at 10 mg/L. Sulfide (Na<sub>2</sub>S) and silicate do not interfere at concentrations of 1.0 and 10 mg/L.

## Specifications

<b>RANGE</b>	From 0 to 200 ppb / 500 ppb / 1000 ppb. Higher concentrations using high range method.
<b>ACCURACY</b>	±2%
<b>FULL SCALE REPEATABILITY</b>	±2%
<b>RESOLUTION</b>	0,1 ppb
<b>LOW LIMIT DETECTION</b>	1ppb
<b>ANALYSIS TIME</b>	around 12 minutes
<b>CALIBRATION</b>	two point
<b>LED WAVELENGTH</b>	810 nm

## Reagents consumption

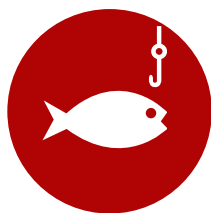
- Reagent 1: 0.5 ml / analysis - 0.5L / month
- Reagent 2: 0.5 ml / analysis - 0.5L / month

Monthly consumption calculated assuming 1 analysis per hour





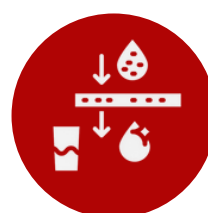
# Applications



**Fish farming**



**Food and Beverage**



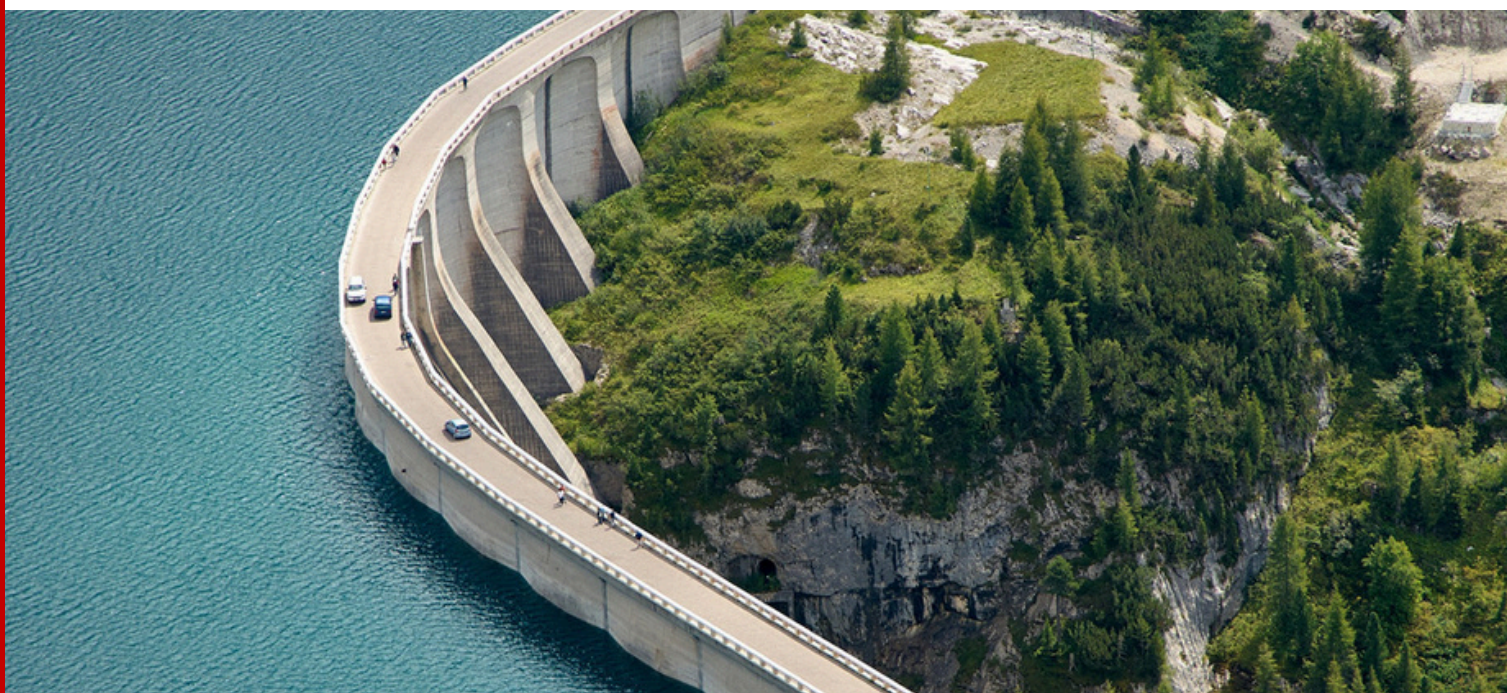
**Desalination Plants**



**Chemical Processing  
Plants**



**Textile and Dyeing  
Industries**



## Note -

*This data sheet serves as general information about the Optics 1000 - Phosphate (LR) . For specific technical details, installation guidelines, and troubleshooting assistance, please refer to the official user manual provided with the product.*

*For inquiries and detailed technical information, please contact [sales@advanceanalytik.com](mailto:sales@advanceanalytik.com).*



# LET'S CONNECT !

Let's work together to find a solution that works for you



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