



UV Spectroscopic Analyzers

• Nitrate	Range: Various from 0-30 mg/L, 0-100 mg/L, 0-250 mg/L Method: Continuous measurement, differential N-O absorption versus reference wavelength
• COD 254 nm	Range: Various from 0-200 mg/L to 0-20,000 mg/L Method: Continuous measurement, differential 254 nm absorption versus reference wavelength
• BOD 254 nm	Range: Various from 0-200 mg/L to 0-20,000 mg/L Method: Continuous measurement, differential 254 nm absorption versus reference wavelength
• TOC 254 nm	Range: Various from 0-200 mg/L to 0-20,000 mg/L Method: Continuous measurement, differential 254 nm absorption versus reference wavelength



Description

The CA-6 UV Analyzers are a family of on-line sampling analyzers that use UV absorption to perform an analysis. The analyzers are configured to perform analysis over a wide range of values for each parameter measured.

The CA-6 UV Analyzers are easy to start up and use, simply connect the sample, waste and cleaning solution/reagent lines and then power up the Factory Calibrated analyzer. Wall mounting hardware is standard but an optional benchtop stand with reagent holder is also available. Accessing information or customizing an analysis routine are easily accomplished with the simple, user friendly menu structure and touch screen interface.

The analysis are based on the measurement of UV absorption in the sample. The absorbance of the solution or gas is measured through a Quartz Flow Cell at a specific wavelength using a long life Xenon light source and photodetectors. The absorbance is related to the sample concentration according to 'Beer-Lambert Law'.

$Concentration = (Absorption\ coefficient) \log(light\ in/light\ out)$

CA6 UV Nitrate Analyzer

The measurement principle is based on the strong absorption of UV light by the chromophore N-O according to the Beer-Lambert law. An automatic

internal linearization compensates for the inherent nonlinearity of the Beer-Lambert law for high concentrations. The measurement is the weighted sum of the nitrite and nitrate concentrations, but in most applications the nitrite concentration is negligible.

Turbidity, organic matter, suspended solids or dirt on the flow cell is automatically compensated for by a differential measurement with a second detector at a reference wavelength. Chlorates and chlorites at high concentration are the only inorganic causes of interference, but these are usually not encountered with drinking water or urban wastewater.

CA6 UV - COD 254 nm - BOD 254 nm - TOC 254 nm Correlation

The measuring principle is based on the UV light absorption by unsaturated organic molecules at 254 nm wavelength, according to the Beer-Lambert law. There is a close correlation between the absorbance at 254 nm and COD, BOD, or TOC as determined by the permanganate and dichromate methods in river water, potable water and municipal wastewater. The measurement time is very fast, less than 10 seconds and it requires no reagents or calibration solutions. Turbidity or suspended solids are automatically compensated for by a second detector at a reference wavelength.

CA-6 UV Analyzers

Product Specifications

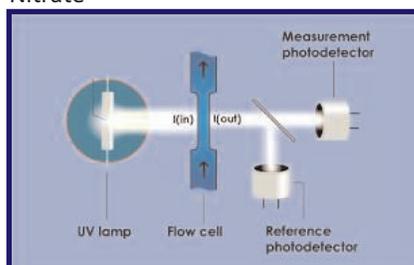
Measurement	COD - BOD - TOC 254 nm Any two of the above (X)	Nitrate
Part Number	CA6-4X-A-1-0-0	CA6-30-A-1-0-0
Range	0-200 mg/l 0-800 mg/l 0-2000 mg/l 0-5000 mg/l 0-20,000 mg/l	0-30 mg/l 0-100 mg/l 0-250 mg/l
Accuracy	10%	5%
Repeatability	0.15%	0.3%
Zero Drift	5%	5%
Full Range Drift	10%	10%
Measurement time	10 seconds	10 seconds
Reagents	None	None
Filtration	Not needed	
Auto cleaning	Yes, Integrated in design	
Sample Temperature	0° - 80° C, sample can not be frozen	
Ambient temperature	0° - 50° C	
Alarm relays	4 Alarm relays, Normally Open, 5 A at 250 VAC for resistive loads.	
Analog Output	Single 4-20 mA output, 12 bit resolution, 500 Ω maximum load (option 2nd channel)	
Communication	RS232, download data to Excel file, (optional RS485 MODBUS module)	
Data Logging	Integrated, download via RS232	
Power Supply	110-130 VAC or 220-240 VAC /30VA / 50-60Hz), 12-15 VDC / 4A	
Dimensions	15" x 24" x 8.25" (380L x 600H x 210D mm)	
Weight	37.5 lbs (17 kg)	



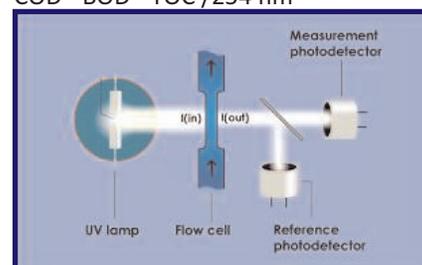
Specifications subject to change without notice.

Represented by:

Nitrate



COD - BOD - TOC /254 nm



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