



NT3100sc UV Nitrate Sensor



Comparison: Nitrate sensors' features

Proven nitrate measurements made more accessible

NT3100 Features	Compared with Other Technologies	Nitratax Plus Replacement
Accurate UV Absorption Technology Backed by a legacy of UV absorbance technology expertise for nitrogen measurements, Hach's online sensors are equipped to meet your unique application needs	Hach offers UV, Colorimetric, and ISE technologies giving customers the power to choose. • UV absorption operates without any reagents or need for regular calibration. • UV has a lower total cost of ownership than ISE or Colorimetric methods. • NT3100 is competitively priced with Hach's advanced technology and quality.	The NT3100 delivers enhanced customer value over the Nitratax Plus by leveraging a modernised design that reduces costs associated with outdated technology and components. This innovative approach not only offers superior value but also incorporates higher quality components, ensuring an elevated customer experience.
Choice of Three Path Lengths Meet unique application monitoring needs whether measuring in municipal sewage treatment plants, surface water, untreated water or treated drinking water – three different path lengths are available to fit your measurement ranges and turbidity compensation needs.	The size of the pathlength on a UV absorption probe determines the usable range of measurement and the ability to compensate for solids correctly. Industry experts recognise only two pathlengths can reduce the flexibility for choosing installation locations. The NT3100 solves this issue.	The NT3100 maintains the same pathlengths that customers appreciated with the Nitratax Plus, ensuring a seamless transition with the benefits of improved technology and quality.
Accuracy and Lower Detection Limits Improved accuracy and a lower limit of detection at 0.02 mg/L* to optimise your plant's performance. Be prepared with lower discharge limits to support regulatory compliance now and in the future. (*Based on NT3100sc 5mm model)	Time is too valuable to spend searching for specifications. Hach is proud to share our accuracy and Lower Limit of Detection (LOD) on our websites and in manuals so customers can be confident they are choosing a solution to meet their needs.	NT3100 improves upon the Nitratax Plus limit of detection and accuracy with a 5x improvement.

NT3100 Features	Compared with Other Technologies	Nitratax Plus Replacement
Reduced Maintenance Hach's® proven wiper technology keeps your system clean. Our enhanced technology allows for extended service life of parts and reduces maintenance with simplified, tool-free, wiper replacement.	Hach uses our proven wiper technology for debris removal. No need to purchase additional equipment such as air blast systems needed with ultrasonic cleaning methods in difficult installations.	The NT3100 surpasses the Nitratax Plus with its innovative tool-free wiper design, streamlining maintenance and significantly reducing the time operators spend on upkeep.
Designed for Service NT3100 is designed for field service with a rebuildable design. Periodic replacement of internal seals and desiccants ensures the probe will keep your process running without costly repairs.	Designs that require probes to be repaired only after shipping to a service facility is downtime for operations. Hach believes that the ability to rebuild probes in the field provides the best blend of reliability and serviceability.	The NT3100 extends the legacy of the Nitratax Plus by providing comprehensive service solutions that cater to your needs through both onsite support and remote Hach service centers, ensuring uninterrupted performance and convenience.
Advanced Diagnostics Prognosys® is Hach's advanced predictive diagnostic system that uses internal smart sensors to proactively alert you of potential measurement issues. Equipped with additional internal sensors, advanced Prognosys provides more accurate results and insights.	Prognosys® alerts you to measurement anomalies before a fault occurs. Combine Prognosys with Claros and you can receive measurement and diagnostic data remotely without a PLC or SCADA. Traditional technologies are limited to PLC notifications after an event has occurred.	The NT3100 builds upon the Prognosys® capabilities of the Nitratax Plus, introducing new sensor designs that enhance temperature and humidity monitoring. It also improves detection diagnostics for optical and wiper blockages and broadens alert features, notifying users proactively of maintenance needs before they become critical. This ensures more efficient operation and reliability.



Technical Specifications

	NT3100sc UV Nitrate Sensor
Measuring principle	Reagent-free UV absorption
Path length	1, 2, and 5 mm
Measuring range^{1,2}	1 mm path: 0.1 to 90.0 mg/L NO ₃ -N 2 mm path: 0.05 to 50.0 mg/L NO ₃ -N 5 mm path: 0.02 to 25.0 mg/L NO ₃ -N
Lower Limit of Detection (LOD)	1 mm path: 0.1 mg/L NO ₃ -N 2 mm path: 0.05 mg/L NO ₃ -N 5 mm path: 0.02 mg/L NO ₃ -N
Accuracy²	1 mm path: ± 5% of reading ± 0.1 mg/L NO ₃ -N 2 mm path: ± 4% of reading ± 0.1 mg/L NO ₃ -N from 0.05 - 22 mg/L, ± 5% of reading ± 0.1 mg/L NO ₃ -N from 22 - 50 mg/L 5 mm path: ± 3% of reading ± 0.1 mg/L NO ₃ -N from 0.02 - 13 mg/L, ± 5% of reading ± 0.1 mg/L NO ₃ -N from 13 - 25 mg/L
Resolution	0.01 to 9.99, 10.0 to 99.9 (or 100 mg/L)
Sludge compensation	Yes
Measurement interval	15, 30 seconds, 1, 5, 10, 30 minutes
Response time (T100)	1 minute
Available with bypass	Yes
Service intervals³	2 x per year

Wearing parts consumption ³	
Wiper blade	1 every 6 months
Wiper motor	1 every 7 years
Wiper axis with seals	1 every 2 years
Seals housing	1 every 2 years
Measuring window	2 every 5 years
Filter set	1 every 5 years
Light	1 every 10 years (flashlamp)
O-ring flow unit	Every 12 months

¹ Not expressed for mixed NO_x concentration. Measure with NO₃-N for NT3100sc standard solutions.

² Measured in lab conditions.

³ Under standard operating conditions and with default settings.