



Hach's new NT3100sc UV Nitrate and NT3200sc UV Nitrate and Nitrite Sensors

The Power of Two: Nitrate and Nitrite in One

The new NT3 Series Sensors from Hach® bring greater accuracy, simplified maintenance, and dual parameter capability for nitrate and nitrite to your monitoring toolbox. Backed by a legacy of reagent-free UV absorbance technology expertise, Hach's NT3100sc UV Nitrate and NT3200sc UV Nitrate and Nitrite Sensors are equipped to meet your unique application needs. Whether measuring nitrate and nitrite in municipal wastewater treatment plants, surface water, untreated water or treated drinking water, you'll have the choice of three different path lengths to fit your measurement ranges and turbidity compensation needs.

The NT3 Series gives you peace of mind with improved accuracy and a lower limit of detection at 0.02 mg/L*. Additionally, Hach's proven wiper technology keeps your system clean and our enhanced one-step, tool-free, wiper replacement reduces maintenance time and improves your experience. These advancements help you optimize your plant performance and ensure regulatory compliance now and into the future.

The NT3 Series Sensors are equipped with Advanced Prognosys®, Hach's predictive diagnostic system that uses internal smart sensors to proactively alert you of potential measurement issues so you have confidence in your process health and avoid unplanned downtime.

At Hach we understand your facilities' problems are unique, and we have developed service plans that can help give you peace of mind about maintaining and supporting your NT3 Series Sensors.

*Based on NT3100sc 5 mm model

Get to know Hach's full portfolio to measure Nitrate and Nitrite with reagent-free UV absorption technology sensors to meet your unique application needs.

Technical Specifications	Nitratax clear sc	NT3100sc	NT3200sc
Parameter	Nitrate	Nitrate	Nitrate, Nitrite
Path Length	5 mm	1, 2, and 5 mm	1, 2, and 5 mm
Measuring Range^{1,2}	5 mm: 0.5 to 20.0 mg/L NO ₃ -N	5 mm: 0.02 - 25 mg/L NO ₃ -N	5 mm: 0.07 - 17 mg/L NO ₃ -N 0.06 - 23 mg/L NO ₂ -N
		2 mm: 0.05 - 50 mg/L NO ₃ -N	2 mm: 0.15 - 34 mg/L NO ₃ -N 0.15 - 61 mg/L NO ₂ -N
		1 mm: 0.10 - 90 mg/L NO ₃ -N	1 mm: 0.30 - 70 mg/L NO ₃ -N 0.40 - 92 mg/L NO ₂ -N
Accuracy²	5 mm: ± 5% of reading ± 0.5 mg/L NO ₃ -N	1 mm: ± 5% of reading ± 0.1 mg/L NO ₃ -N	1 mm: ± 4% of reading ± 0.6 mg/L NO ₃ -N ± 4% of reading ± 0.6 mg/L NO ₂ -N
Sludge Compensation	-	Yes	
Measurement Interval	5 minutes	15, 30 seconds, 1, 5, 10, 30 minutes	

¹Not expressed for mixed NO_x concentration. Measured with NO₃-N for Nitratax Clear and NT3100sc and NO₃-N/NO₂-N for NT3200sc standard solutions.

²Measured in lab conditions.

Applications

NT3100sc: General recommendation. Each application needs to be assessed for NO_x concentrations and turbidity.

Model: NT3100sc UV Nitrate Sensor			
Path length	1 mm	2 mm	5 mm
Wastewater Application			
Influent monitoring	✓	✓	
Process monitoring - Nitrification/Denitrification	✓	✓	
Process monitoring - Nitrification/Denitrification with sludge concentration > 5,000 mgSS/L	✓		
Effluent		✓	✓
Drinking Water Application			
Raw drinking water		✓	✓
Finished water/Distribution			✓

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NT3200sc: When both nitrate and nitrite are present, the accuracy of NO₂-N and maximum NO_x-N concentrations are reduced. The max NO₃-N value can vary depending on the UV absorbance of the matrix. Examples of parameters impacting absorbance: solids, organics, humic acids, and salts (e.g., fluoride). This table is used to help choose the best path length for your conditions. Contact your local Sales Representative to discuss your specific application.

Model: NT3200sc UV Nitrate and Nitrite Sensor			
Path length	1 mm	2 mm	5 mm
Wastewater Application (Units in NO ₃ -N)			
Process monitoring - Nitrification/Denitrification	• (Max 30 mg/L NO ₃ -N)	✓ (Max 5 to 10 mg/L NO ₃ -N)	
Process monitoring - Nitrification/Denitrification with sludge concentration > 5,000 mgSS/L	• (Max 25 to 30 mg/L NO ₃ -N)	✓ with filtration (Max 5 to 10 mg/L NO ₃ -N)	
Process monitoring - Anammox/Nitritation mainstream	X (Max 10 to 30 mg/L NO ₃ -N)		
Effluent	• (Max 30 to 70 mg/L NO ₃ -N)	✓ ¹ (Max 20 mg/L NO ₃ -N)	✓ (Max 5 mg/L NO ₃ -N)
Drinking Water Application (Units in NO ₃)			
Finished water/Distribution	• (Max 200 to 300 mg/L NO ₃)	✓ ² (Max 65 to 88 mg/L NO ₃)	✓ ³ (Max 22 mg/L NO ₃)

1 Limited accuracy for nitrite with NO₃-N values > 10 mg/L.

2 Limited accuracy for nitrite with NO₃ values > 80 mg/L.

3 Only in low (~0 mAbs/mm) UV absorbance matrix.

• Limited accuracy for nitrite

X Suitable application

Nitratax clear sc: General recommendation. Each application needs to be assessed for NO_x concentrations and turbidity.

Model: Nitratax clear sc			
Path length	1 mm	2 mm	5 mm
Drinking Water Application			
Raw drinking water			✓
Finished water/Distribution			✓



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