

**PRODUCT DATASHEET**

# NitriTox™

## ONLINE TOXICITY ANALYZER

Online toximeter for protecting and monitoring wastewater treatment plants



**Highly Sensitive**

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**Fast and Precise**

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**Reliable**

- Tests using a permanently self regenerating culture of highly sensitive biomass
- Highly sensitive to a variety of pollutants
- Designed for industrial wastewater treatment plants

# NitriTox – Online Toximeter for protecting the biology of wastewater treatment plants

Our toxicity analyzer, NitriTox™, continually monitors water treatment plants for pollutants. Potential toxins in water are determined through the reaction of highly sensitive bacteria. The measurements follow at intervals of less than 5 minutes. Thus allowing enough time to introduce countermeasures after the occurrence of pollution.

NitriTox contains a bacteria culture which constantly and independently produces biomass. This means that there is always enough bacteria for each new measurement. As every water sample is tested with a fresh amount of bacteria, the risk of the fermenter being contaminated is removed.

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## Applications

Nitrification is the phase of biological wastewater treatment in which bacteria oxidize ammonium to nitrate. Toxic loads affect the bacteria and thus the treatment process. The NitriTox is used to protect these vital bacteria.

- Water influent
  - Industrial wastewater
  - Wastewater treatment plants
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## Benefits

Capable of rapid toxicity monitoring, which is important for the protection of biological wastewater treatment processes without the need for the use of test organisms.

- Low cost of ownership
  - No purchase of test organisms necessary
  - Early warning system
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## Features

As every water sample is tested with a fresh amount of bacteria, any toxic event can be monitored from start to finish, without interference to the test organisms through the appearance of a toxicity.

- Continuous monitoring of toxicity
  - Measurement range: 0 – 100% toxicity
  - Fast response time: as little as 5 – 10 minutes (depending on application)
  - Self-regenerating culture of nitrifying bacteria
  - High sensitivity
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## Our Global Water Analysis Solutions Deliver

- Improved reliability
- Low cost of ownership
- Meet compliance requirements
- Backed by global service and support

Process Insights is committed to solving our customers' most complex analytical and process challenges.

# TECHNICAL DATA

## NitriTox

Measurement Technique and Sample Preparation	
Measurement Method	Determination of toxicity through the measurement of oxygen conversion
Measurement Compliance	According to DIN EN ISO 9509:2006
Measurement Ranges	0-100 % Toxicity
Sensitivity	0% Toxicity
Oxidation Principle	Determination of inhibition of respiration with nitrifying bacteria
Accuracy	10-15% Toxicity
Repeatability	10-15% Toxicity
Cycle Time	12-15 Min
Response Time	5 Min (application dependent)
Bacteria Culture	Nitrifiers
Particle Size	Soft particles max. 2mm
Temperature and Humidity	
Permissible Sample Temperature	5 - 25 °C / 41°F - 77°F
Ambient Temperature recommended	10 - 25 °C / 50°F - 77°F
Ambient Air Humidity	Max. 80% (non condensing)
Dimensions and Weight	
Housings	Steel, coated with powder paint, IP54 (further on request)
Dimensions	W 630 x H 1265 x D 580 mm – W 49.8" x H 24.8" x D 22.8"
Weight	70 kg / 154.3 lbs approx.
Electric and Hydraulic Specifications	
Inflow and Outflow	Tube 6 mm ID and 8 mm ID
Power Supply	230 /115 V~, 50 / 60 Hz, 100 VA
Analogue Output	0/4 - 20 mA
Serial Interface	RS 232, combined alarms, Life-Zero, USB
Safety	10 A internal, 16 A external
Options	Remote control via TCP/IP protocol, Sample taking system FlowSampler, Air Treatment
Equipment Devices and Data Output	
High resolution and back-lit TFT touch screen graphic display, 10.4"	
Self explanatory software and service checklist; Autostart funktion	
Standard data interfaces, e. g. office PC	

## GAIN REAL-TIME INSIGHT INTO YOUR PROCESS

Process Insights delivers premium analytical sensors, analyzers, instrumentation, software and solutions that are mission-critical to keep your operations, personnel, and the environment safe. Our commitment to customer satisfaction is evident through our diverse range of products, programs, and services, designed to accommodate various budgets and application needs.

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For a complete range of products, applications, systems, and service options, please contact us at: [info@process-insights.com](mailto:info@process-insights.com)

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