

LightDeck MINI

Applications

- Drinking Water
- Aquaculture
- Recreational Water



Manufactured by LightDeck Diagnostics, distributed by Hach®

Simple, reliable testing for algal toxins

Harmful algal blooms in freshwater systems are becoming increasingly common and present critical threats to drinking water systems, aquaculture, and recreational waters. The precise measurement of algal toxins is essential for the effective management of water resources and compliance with regulatory advisories. LightDeck® makes it easy for users to accurately measure algal toxins and protect public health as well as environmental integrity.

Innovative technology

The LightDeck MINI is an automated, fluorescence-based multiplexed microarray analysis system that harnesses the power of laser waveguides to produce lab-quality results anywhere. The system utilizes proprietary technology to capture images of the fluorescence associated with toxins captured in the waveguide. The LightDeck software, running on the user's external host computer, analyzes images of the array taken by the system and displays quantitative, speciated algal toxin test results to the user.

Simplified workflow

The LightDeck Mini system works with a single-use, disposable cartridge which contains a printed microarray designed to test a sample for algal toxins. First, a user introduces a small sample volume (100 µL) into a microtube containing reagents. Next the user aspirates and dispenses until the sample is mixed with the reagents, and adds the combination to the cartridge. The user then places the cartridge in the system, and LightDeck MINI does the rest. The sample flows into a fluidic channel over the printed microarray, the instrument analyzes the sample, and quantitative results are presented to the user on their computer screen.

Rapid detection

The LightDeck MINI generates precise, quantitative algal toxin measurements in about 10 minutes—a fraction of the time required by other testing methods. Such rapid detection of algal toxins enables users to take action in minutes rather than days when making decisions about water resource management.

Multiplex testing

The LightDeck MINI utilizes the world's first duplex microcystin (MC) / cylindrospermopsin (CYN) assay cartridge to measure two common algal toxins within one test. Quantitative results for both MC and CYN concentrations are reported in micrograms (µg) per liter.

Technical Data*

Measurement Method	Fluorescence-based microarray
Display Viewing Area	0.16" x 0.79" (4 mm x 20 mm)
Laser Class	Class 1
Analysis time	10 minutes
Software available	LightDeck Software
System requirements	Computer with Windows 7 or higher and USB 2.0 or higher interface
What's included?	LightDeck MINI Instrument USB 2.0 A to B cable Power supply and cord for use in the United States of America USB Flash Drive containing LightDeck-T Installer Fixed volume micropipette, 100 µL 30 pipet tips, 5 - 200 µL capacity User Manual

Dimensions	H x W x D: 6.5" x 6.5" x 8" (16 cm x 16 cm x 20 cm)
Weight	1.1 kg (2.5 lbs)
Power	Input to power supply 100-240 V, 50-60 Hz, 180-220 VA Output from power supply 12 V, 2.5 A DC
Operating Conditions	10 - 32 °C (50 - 90 °F) 10 - 85% relative humidity 70 - 106 kPa ambient pressure
Storage Conditions	0 - 45 °C (32 - 113 °F) 10 - 85% relative humidity 70 - 106 kPa ambient pressure
Use Life	> 10,000 Tests
Calibration	Factory calibrated with no further calibration or verification needed

*Subject to change without notice.

Order Information

Instrument

2165600 LightDeck MINI Algal Toxin Testing System

Accessories and Consumables

2165700 Algal Toxin Test Kits, MC 0.5-5 µg/L, CYN 0.7-3 µg/L, Box of 25 Cartridges

The single use and disposable Cartridges are designed to measure microcystins (MC), nodularins (NODR), and cylindrospermopsins (CYN). Each Cartridge is supplied with a microtube containing dried reagents within the same foil pouch. The Cartridges are measured in the LightDeck MINI Algal Toxin Testing System and quantitative results in the assay range are reported.

2946006 Fixed Volume Micropipette, 100 µL

2948700 Pipet tips, 5 - 200 µL capacity, 1000/pk

2113400 Goggles, ultraviolet

2163103 Glass bottle with cap for water samples



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