

MODERNWATER

EnviroGard®

Microcystins Plate

Envirogard® is a rapid laboratory enzyme immunoassay method for the analysis of water. It uses a plate technology to detect the analyte of concern.

Test result type

- Quantitative data

Samples per kit

- 96 well test kit (tests up to 88 samples*)

Assay range

- 0.1 ppb to 1.6 ppb
- Extended range available

Sampling time

- Sample-to-data in approximately 120 minutes

* Using three standards

- Rapid lab testing method for the detection of microcystins and nodularins in drinking and environmental water samples
- Conforms to ISO standards for environmental immunoassays such as ISO 15089
- Quantitative data results with excellent analytical precision
- Test up to 88 samples* at once for increased cost efficiency
- Results available in approximately 120 minutes
- Microtiter plate immunoassay
- Ideal for source water monitoring



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Specificity

The proprietary antibody used in this assay detects microcystins and nodularins. The cross-reactivity of the Microcystins EnviroGard® Plate Kit for various microcystin variants is shown below at 50% B/B₀.

MICROCYSTIN VARIANTS (PPB)	
Compound	50% B/B ₀
Microcystin - LR	0.31
Microcystin - RR	0.32
Microcystin - YR	0.38
Microcystin - LA	4.00*
NODLN	0.47

* MDL is 1.5 ppb

Basic Test Procedure

- Prepare standards
- Add 100 uL of sample or standard
- Incubate for 30 minutes
- Add 100 uL enzyme conjugate
- Incubate for 30 minutes
- Decant and wash five times
- Add 100 uL colour solution
- Incubate for 30 minutes
- Stop the reaction and read colour at 450nm



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Test kit components

- Antibody coated microtiter plate strips, enzyme conjugate, colour development and stop reagent for analysis of 96 wells
- One vial each of 0.1, 0.2, 0.4, 0.56, 0.8 and 1.6 ppb microcystin-LR surrogate (non-toxic) calibrators
- Test kit instructions
- Optional 1.5 ppb check standard

Storage & precautions

- Shelf life is typically one year from date of manufacture, with specific kit expiration date information provided on product packaging
- Reagents must be stored at 39° to 46°F (4° to 8°C) when not in use
- Store at ambient temperature 64° to 81°F (18° to 27°C) is acceptable for day of use for up to eight hours
- Kits must be brought to 64° to 81°F (18° to 27°C) before use
- Do not expose colour solution to direct sunlight

Required test materials

Part

- Microcystins EnviroGard® plate 7540000

Required test equipment

- 10 cc syringes
- 0.45 micron non-sterile filter units
- Pipette to deliver 100 mL
- Distilled or DI water for rinsing wells
- Microtiter plate reader or strip reader
- Timer
- Parafilm or tape
- Marker pen

Other recommended materials

- Orbital shaker
- Multi-channel pipette
- Repeater pipette
- Calculator
- Microtiter plate washer
- Solid extraction devices