

CARLA

Cellular Activity RNA-based eLisA

*Highly-sensitive detection of active
microorganisms in environmental water*



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CARLA for, Cellular Activity RNA-based eLisA is an assay designed for the detection of cyanobacteria and microalgae in environmental water in less than 3 hours.

One set of CARLA reagents consists of sequence-specific hybridization probes for one target cyanobacteria or microalgae ribosomal RNA (rRNA), together with chemicals needed to generate a proportional colorimetric signal readable by spectrophotometry. It comes in a 96-well microplate format and includes standards of synthetic RNA for calibration.



●●● Patented ELISA-type kit with key-benefits

SPECIFIC
SENSITIVE
RAPID
CONVENIENT
EASY

- > pair of nucleotide probes specifically binding one target rRNA
- > measures as little as 1pM RNA Eq.U. (i.a.w. 50-100 cell/ml)
- > analyses up to 43 duplicate samples in <2.5 hours
- > adaptable and scalable to multiple assays
- > no need of advanced expertise in molecular biology methods

●●● Assay Type

Sandwich RNA/DNA hybridization ELISA
Capture: RNA extracted from water
Signal: TMB / HRP colorimetric reaction
Wavelength: 450 nm
Up to 43 duplicate samples in <2.5 hours

●●● Application

Qualitative detection (presence/absence)
Quantitative detection (activity level)
Cyanobacteria
Marine microalgae

●●● Product details

Shipping	Room temperature
Long-term storage	+2-8°C (for 6 months)
Product notes	Patented technology. French Patents No. FR 3 085 965 A1 and FR 3 094 989 A1. Worldwide Patents WO 2020/058291 A1 and WO 2020/208235 A1.
Regulatory status	RUO – Research Use Only
Required equipment	Absorbance microplate reader, RNA-free laboratory

●●● Catalog numbers

CYANOBACTERIA	
Microcystis	#CA-CY-01-00
Planktothrix	#CA-CY-02-00
Anabaena / Dolichospermum / Aphanizomenon	#CA-CY-03-00
Cylindrospermopsis	#CA-CY-04-00

MICROALGAE	
Alexandrium	#CA-MA-01-00
Dinophysis	#CA-MA-02-00
Pseudo-nitzschia	#CA-MA-03-00

●●● Price

650 € / kit

excl. tax + shipping fees

Official discount:

-50% = 325 € / kit ∴ For first purchase (limited offer “1 time, 1 team”)

-20% = 520 € / kit ∴ With purchase of min. 4 kits

Scientific background

Bloom-forming toxigenic cyanobacteria and microalgae represent a growing threat in freshwater and marine ecosystems with severe impacts on wildlife and human public health. Drinking water suppliers, aquaculture professionals, managers of recreative areas face important economic losses due to these recurrent but unpredictable microbial proliferations.

Conventional regulatory monitoring relies on field observations, microscopy counting and toxin measurements, all approaches having limitations regarding significance thresholds and cost/time of analysis.

Recent innovations in molecular engineering provide rapid and highly-sensitive detection methods that lighten surveillance programs and reduce uncertainties. In this category, the CARLA technology is unique for the measurement of rRNA, a proxy of cell activity, thus revealing cyanobacteria or microalgae populations in growth and the potential release of toxins in water.