PhycoProbe

Depth-profile with quick analysis of chlorophyll and unbound phycocyanin concentrations as well as algae classes

The bbe PhycoProbe* is a highly sensitive measuring instrument for the *in vivo* analysis of chlorophyll-a in real microalgae and blue-green algae (cyanobacteria). Individual profiles for the different algal classes are created during the measurement. The algal content is determined by evaluating the chlorophyll fluorescence in real time. Without the necessity of using a laboratory, it is possible to completely analyse the occurrence and distribution of algae in different water bodies, if necessary at different depths.

Additionally, the PhycoProbe measures the amount of unbound phycocyanin (free PC) which reflects the release of blue-green algae contents like toxins as well as flavours and odorous substances. Interference from e.g. humic substances is compensated using the integrated yellow substances measurement.

Specifications

DESCRIPTION	VALUES
Measurands	Total chlorophyll [µg chl-a/l], green algae [µg chl-a/l], blue-green algae [µg chl-a/l], diatoms [µg chl-a/l], Cryptophyceae [µg chl-a/l], yellow substances correction, unbound phycocyanin [µg /l], water temperature - optional, depth
Measuring range	0 – 200 µg chl-a/l
Resolution	0.01 µg chl-a/l, 0.01 µg free PC/l
Turbidity	0 - 200 FTU
Weight	7.5 kg
Dimensions (H x Ø)	550 x 140 mm
Protection class	IP 68
Voltage	12 V
Battery capacity	3900 mAh
Water temperature	-2 to 40 °C
Operating time	continually approx. 7 hrs; interval approx. 27 days
Interface	RS485 und USB
Maximum depth	0 – 100 m (standard), 0 – 300 m (extended range), 0 – 1000 m (PhycoProbe „Metall Shell“)
Options	Temperature measurements, Measuring cables: 2 – 100 m, Hydro-Wiper unit, Bluetooth-Set

FEATURES

- Quick, simple chlorophyll measurement with algal class differentiation
- Indicator for cyanotoxins as well as flavours and odorous substances by phycocyanin measurements
- Yellow substances measurement and compensation of disturbances via UV-LED excitation
- Up to 4 measurements per second
- PC software for data analysis
- Reduces the number of microscopic laboratory analyses
- Internal rechargeable batteries for independent measurement
- Internal data logger

APPLICATIONS

- Reservoir monitoring
- Process tracking in waterworks
- Drinking water monitoring for blue-green algae
- Monitoring of bathing water for blue-green algae
- Environmental monitoring
- Cooling and production water control
- Limnological work
- Research and teaching
- Oceanography

*patented