bbe
moldaenke

- Innovative Spectrofluorometers with integrated measurement of:
  - Unbound phycocyanin
  - Differentiation of algal classes

- bbe is an expert in the field of fluorometry for over 25 years

bbe Chlorophyll Fluorometers

Algae class differentiation and early warning system by measurement of unbound phycocyanin

bbe Moldaenke GmbH
Preetzer Chaussee 177
24222 Schwentinental
bbe@bbe-moldaenke.de
Tel.: +49 (0) 341 38040-0
Fax: +49 (0) 341 38040-10
www.bbe-moldaenke.de

PhycoLabAnalyser

Introducing our amazing early warning system for detecting cyanobacteria and unbound phycocyanin!

The PhycoLA is an amazing tool that can simultaneously determine chlorophyll concentrations, transmission, and photosynthetic activity of microalgae in a 25 ml glass cuvette! Not only that, it can also accurately measure the amount of unbound phycocyanin (free PC), which indicates the release of blue-green algae contents such as toxins, flavors, and odorous substances.

The PhycoLabAnalyser is the ultimate device for measuring photosynthetic activity in various algal classes! With its direct measurement capabilities, there's no need for sample preparation through filtration or solvent. By using fluorescence signals f0, f, and fm, the device calculates photosynthetic activity using the Genty parameter method. Plus, it even applies a correction for yellow substances (CDOM) to accurately calculate the total chlorophyll content. The device is virtually maintenance-free and easy to operate, saving both time and money!

Specifications

DESCRIPTION	VALUE
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], photosynthetic activity (Genty) transmission
Measuring range	0 – 500 µg chl-a/l, 0 – 50 µg free PC/l
Resolution	0.01 µg chl-a/l
Transmission	0 - 100 %
Turbidity	0 - 200 FTU
Weight	4.5 kg (without computer)
Dimensions (H x W x D)	152 x 340 x 295 mm
Protection class	IP 54
Voltage	230 V / 50 Hz; 110 V / 60 Hz
Power consumption	10 W
Sample temperature	0 to 40 °C
Sample volume	25 ml (cuvette)
Interface	RS232
Software	bbe++ software
Options	Genty, SDI-12 with bbe converter, 12 V adapter

*patented

FEATURES

- Quick, simple chlorophyll measurement with algal class differentiation
- Indicator for cyanotoxins as well as flavours and odorous substances by phycocyanin measurements
- Turbidity compensation up to 200 FTU
- Maintenance-free
- Easy to use
- Direct measurement without preparation
- Laptop included
- Integrated stirrer
- Splash-water proof
- PC operation with bbe software
- Simple data export
- Rugged transport case

APPLICATIONS

- Monitoring and assessment of water quality
- Reservoir monitoring
- Process tracking in waterworks
- Environmental and hygiene monitoring
- Chemical assessment
- Toxicity tests
- Analysis of contaminated sites
- Limnological work
- Research and teaching
- Oceanography
- Laboratory tests

PhycoProbe

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

The bbe PhycoProbe* is an absolutely amazing instrument for analyzing chlorophyll-a in microalgae and cyanobacteria in real-time. It generates individual profiles for different classes of algae during measurement, allowing for the determination of algal content. This analysis can be performed without the need for a laboratory, providing a comprehensive assessment of algae abundance and distribution in various water bodies, including different depths.

The PhycoProbe is an amazing tool that measures the amount of unbound phycocyanin (free PC). This means that it can detect the release of blue-green algae constituents such as toxins, flavours and odours. Interference from humic substances is compensated for by the integrated yellow substance 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 – 500 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 and USB
Maximum depth	0 – 100 m (standard), 0 – 200 m (extended range), 0 – 1000 m (PhycoProbe „Metal Shell“)
Options	Temperature measurements, Measuring cables: 3 – 100 m, Hydro-Wiper unit, Bluetooth-Set

*patented

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
- Monitoring of bathing and drinking water for blue-green algae
- Environmental monitoring
- Cooling and production water control
- Limnological work
- Research and teaching
- Oceanography