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AlgaeGuard

Distinction of green algae classes in a flow-through chamber - simple, quick and reliable

- Continuous, cost-effective measurement of chlorophyll-a
- Direct measurement without preparation

AlgaeGuard

Distinction of green algae, blue-green algae (cyanobacteria), diatoms and cryptophytes in a flow-through chamber - simple, quick and reliable

The AlgaeGuard continuously measures the chlorophyll fluorescence of microalgae in real-time and shows the current result on the integrated display. In contrast to time-consuming sample preparations and counting, the fluorometric assay provides rapid determination of the chlorophyll content in its natural environment.

The AlgaeGuard is adapted to HPLC-pigment analysis. The bbe software for algae class determination identifies the distribution of algae classes relating to the total
'chlorophyll-a' content, i.e. of green algae, blue-green algae (cyanobacteria), cryptophyceae and brown algae (diatoms, dinoflagellates).

The system can be adapted to new (customised) algae classes added to the measuring system. The measurement of yellow substances (CDOM) accounts for an additional source of fluorescence, thus an automated correction improves chlorophyll determination especially at low concentrations. Normspectra with individual fingerprints for each class provide for an optimised evaluation of the results.

The measurement

Pressing START on the touchscreen enacts the illumination program of the sample inside the chamber.

The fluorescence signals are collected by a sensitive photomultiplier and used to calculate the algae classes. Pulsed light from the spectrofluorometer excites the algae pigments.

An automatic cleaning device periodically cleans the sensor cell and removes particles or biofilms. This guarantees the prevention of interference that causes attenuation of fluorescence or changes in the optical properties of the measuring cell and thus extends the maintenance-free period.

APPLICATIONS

- power plants
- drinking water monitoring stations
- limnological work
- research and education
- lake and river analysis

Upper: Sensor and Pump

Lower: Electric Connections

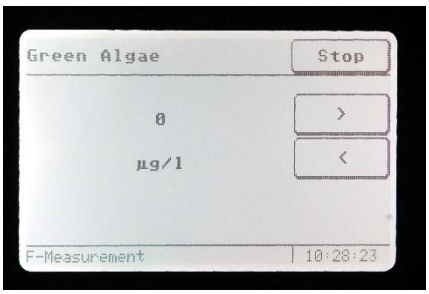
AlgaeGuard

Operation

Although the AlgaeGuard is a stand-alone instrument, it can also be operated via an external PC with the software supplied. This can also be used to change the parameters and settings. For data export, the instrument can be equipped with an RS232 interface or analogue outputs for connection to an external datalogger

Specifications

DESCRIPTION	VALUE
Measurands	concentration of green algae [µg chl-a/cm²], concentration of cyanobacteria [µg chl-a/l] concentration of cryptophyceae [µg chl-a/cm²], concentration of diatoms [µg chl-a/cm²], transmission (at 5 wavelengths) yellow substances correction
	0 – 500 µg chl-a/l
Resolution	0.05 µg chl-a/l
Weight	16 kg
Size (H x Ø)	420 x 520 x 200 mm
Power supply	110/230 V – 50/60 Hz
Power input	30 W
Protection class	IP 54
Sample volume	30 ml
Temperature	Sample: 0 to 35 °C Environment: 0 to 40 °C
Data capacity	2,000 data sets
Interface	RS232
Maintenance	> 7 days
Options	up to 16 x 4-20 mA (analog) / digital output



Display of the AlgaeGuard

FEATURES

- 'plug and play'
- algae class determination
- yellow substances detection
- transmission measurement
- integrated cleaning device
- touchpad display
- PC operation with AOA software
- 4 integrated relays
- RS232 interface
- optional 4-20 mA outputs
- optional modem

Do you have any questions? Please contact us!

Your local representative

bbe moldaenke
biological · biophysical · engineering

bbe Moldaenke GmbH
Preetzer Chaussee 177
24222 Schwentinental
Germany

Tel.: +49 (0) 431 - 380 40-0
Fax: +49 (0) 431 - 380 40-10
E-Mail: bbe@bbe-moldaenke.de