

EXPERTS IN ANALYSIS

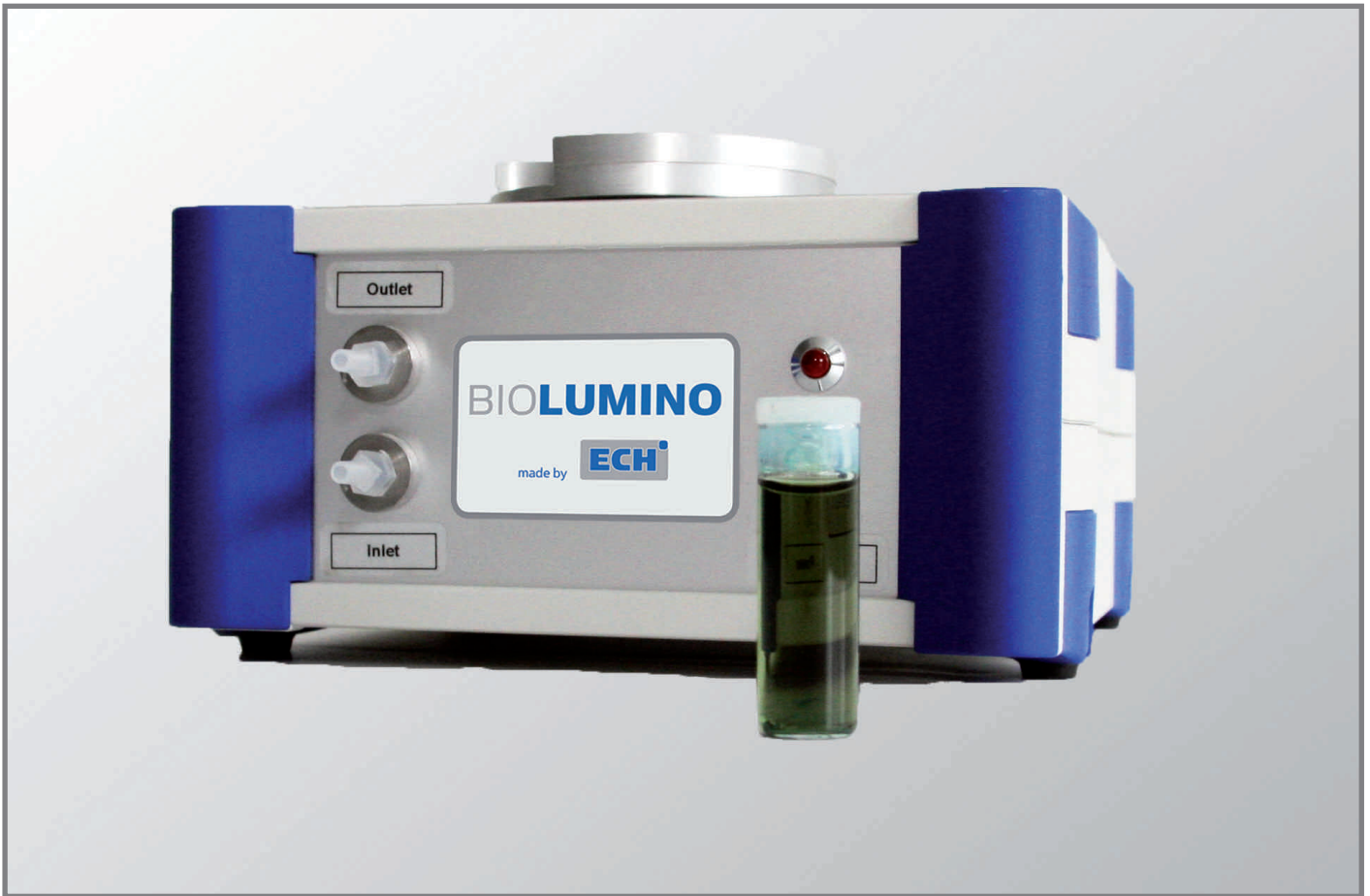


BIO**LUMINO**

Toxicity Testing based on the
Bioluminescence of Algae

www.ECH.de

BIO LUMINO



Description

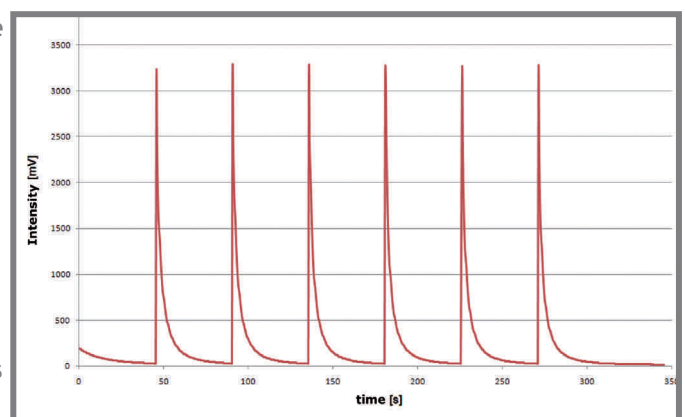
It is effective to use a biological testing for fast and precise determination of the toxicity.

Toxicity testing based on the bioluminescence of algae provides quick information and is easy to use.

BIO LUMINO is suitable for both continuous and discontinuous analysis.

The detection of the toxic compounds is based on the bioluminescence delayed-fluorescence-curve and happens a long time before the actual cell dies.

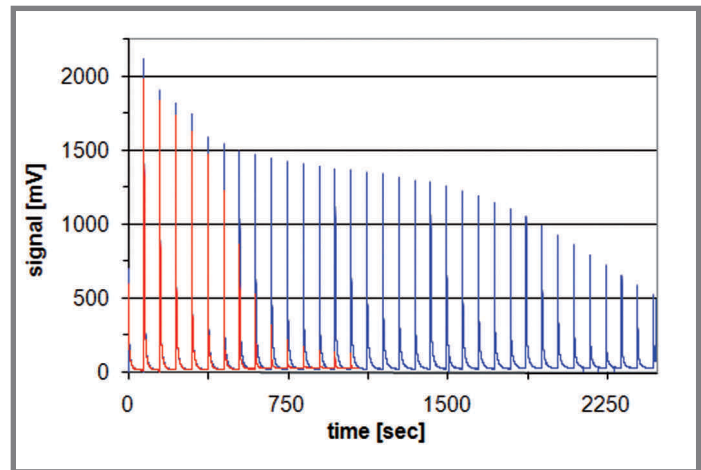
The bioluminescence is a selective characteristic of living cells. By providing constant measurement conditions, a high reproducibility of measurements is guaranteed.



Bioluminometer measurement curve

Applications

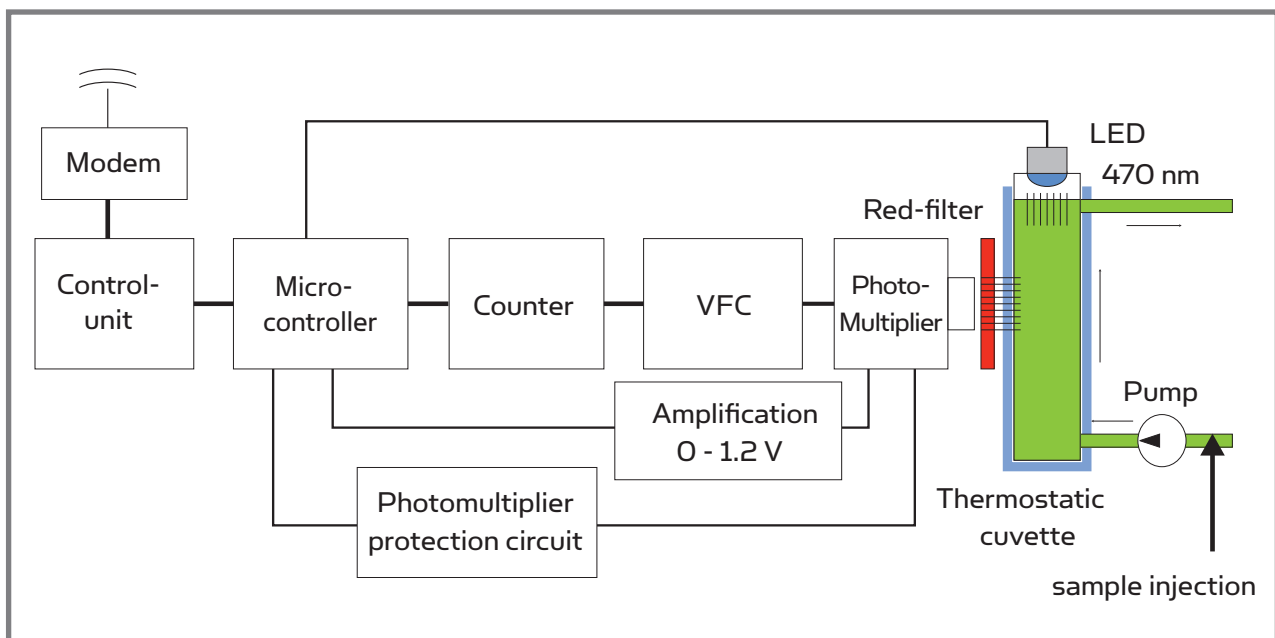
- Toxicity testing of plants
- Cultivation of microalgae
- Environmental analysis
- Sewage analysis
- Chemicals testing
- Agricultural applications
- Quality management



Long-term measurement

Principle

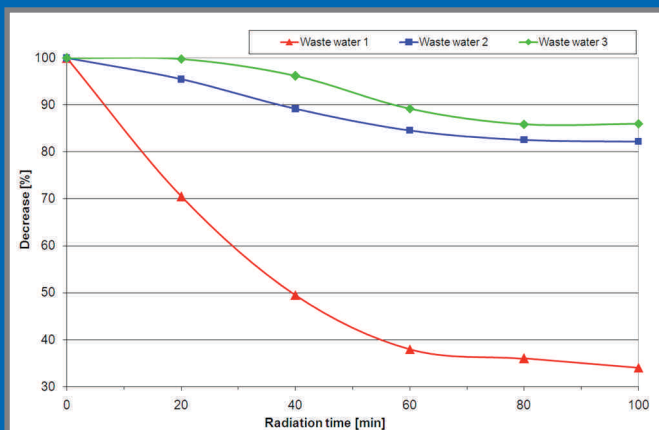
- Detectable emission of light as delayed fluorescence in the moment of transfer a healthy plant from the lightness into the darkness
- During its dark adaptation, partial reverse of the process of photosynthesis happens
- Special suitability of algae because of the easy handling allows testing of toxic pollutants in sewage
- Dependence of the light intensity of the biological activity of the algae, Decreasing of the bioluminescence in case of harmed algae
- Typical delayed fluorescence intensity-curves
- Evaluation of the peak area or the peak height
- Well-arranged software allows specific and easy evaluation
- Possibility of long-term measurements with kinetic information



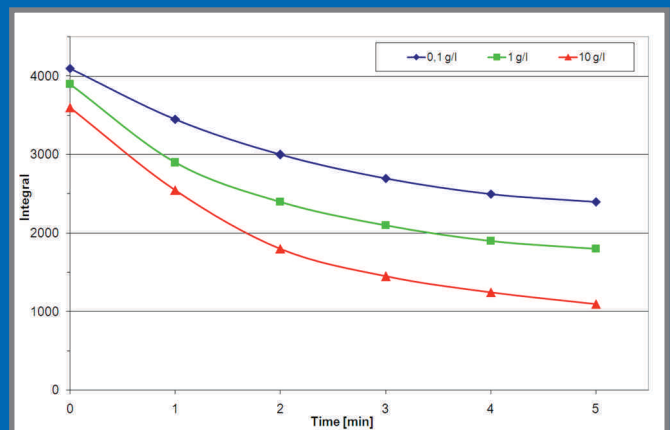
principle of measurement

Advantages

- Fast and reproducible analysis
- Compact measurement device for bioluminescence / delayed fluorescence
- Use of ready assembled algae cultures
- Registration of the complete decay-curves
- Convenient software with statistics module
- Suitable for on-line analysis and on-site-applications



Bioluminometer measurement curve of toxicity of various wastewater



Measurement of different concentrations of pollutants

Specifications

Working range:	depends on the pollutants & algae culture
Typical measurement time:	2 min (multiple measurement)
Power supply:	115 - 230V, 50-60 Hz
Power input:	25 W
Dimensions W x L x H:	170 x 200 x 85 mm
Weight:	200 g

We are here for you



ECH Elektrochemie Halle GmbH
Otto-Eissfeldt-Str. 8
D-06120 Halle (Saale), Germany
Tel.: +49 345 2795700
Fax: +49 345 27957099
E-mail: info@ech.de
Internet: www.ech.de