



An Emerging Tool in the Fresh Water Analysis Of Algae



Bathing water

DIRECTIVE 2006/7/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 15 February 2006
concerning the management of bathing water quality and repealing Directive 76/160/EEC

...

Article 8

Cyanobacterial risks

1. When the bathing water profile indicates a potential for cyanobacterial proliferation, appropriate monitoring shall be carried out to enable timely identification of health risks.
2. When cyanobacterial proliferation occurs and a health risk has been identified or presumed, adequate management measures shall be taken immediately to prevent exposure, including information to the public.

Article 9

Other parameters

1. When the bathing water profile indicates a tendency for proliferation of macro-algae and/or marine **phytoplankton**, investigations shall be undertaken to determine their acceptability and health risks and adequate management measures shall be taken, including information to the public.
2. Bathing waters shall be inspected visually for pollution such as tarry residues, glass, plastic, rubber or any other waste. When such pollution is found, adequate management measures shall be taken, including, if necessary, information to the public.

...



Bathing water quality - data viewer - Status and monitoring — EEA - Mozilla Firefox

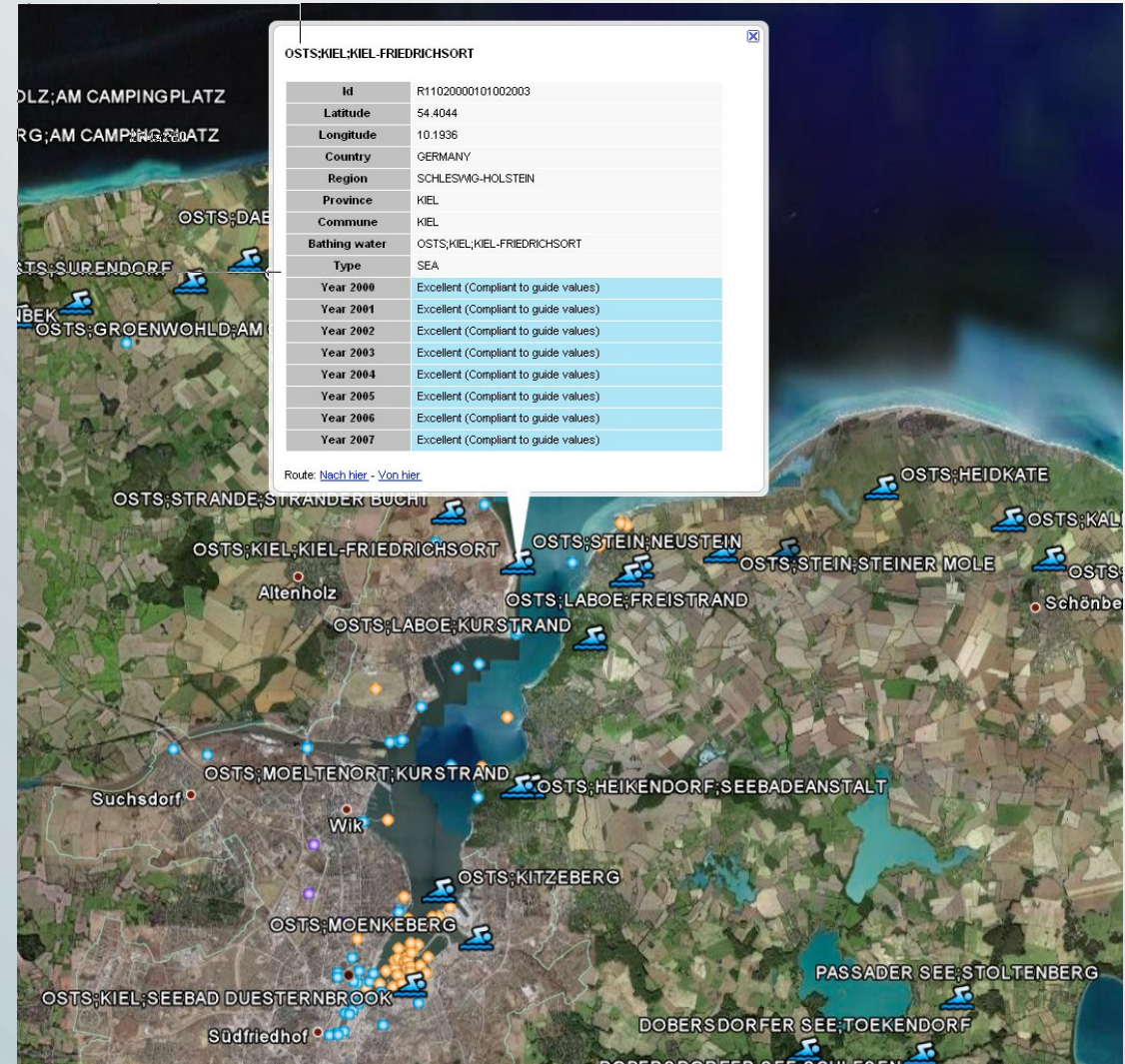
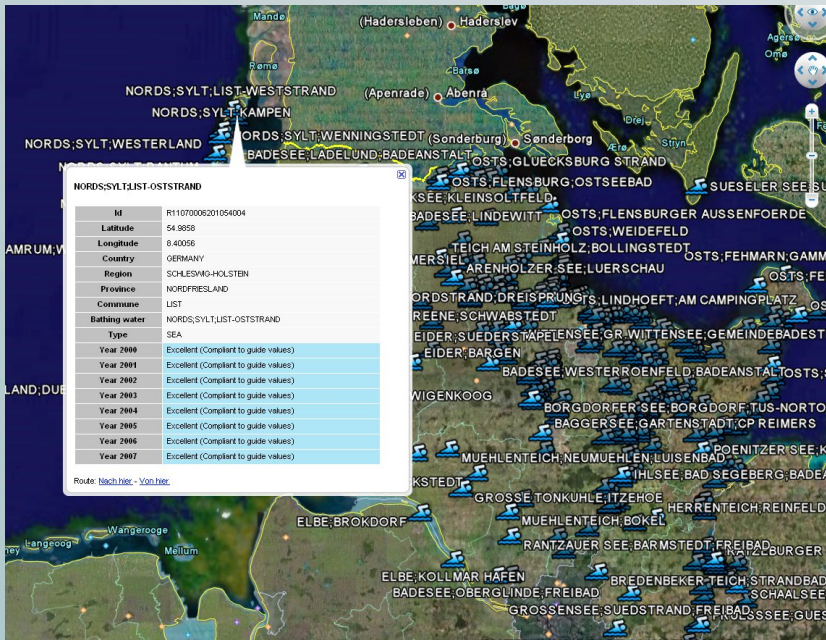
http://www.eea.europa.eu/themes/water/status-and-monitoring/bathing-water-data-viewer

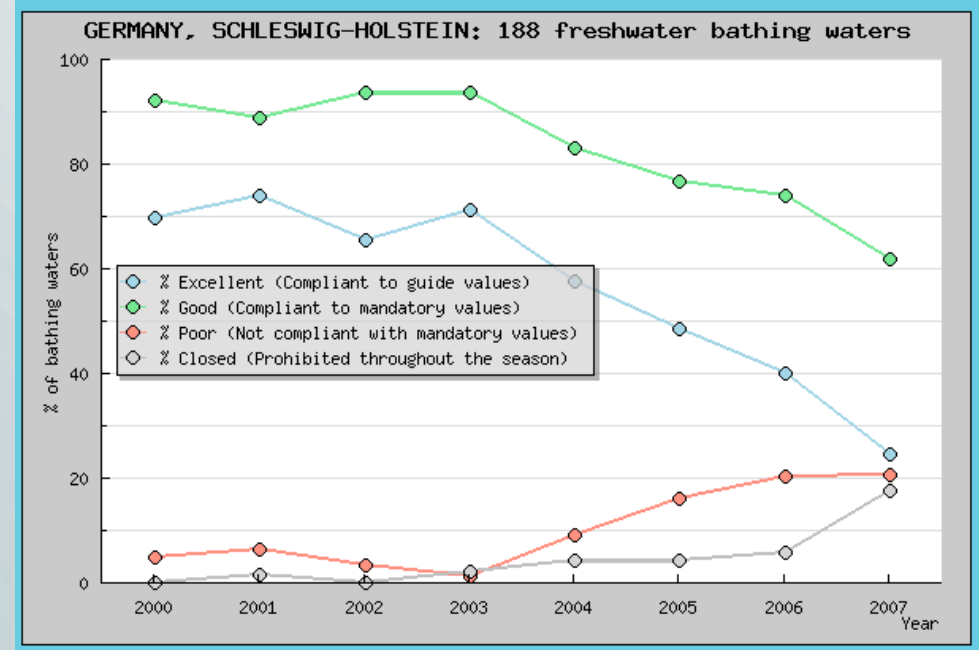
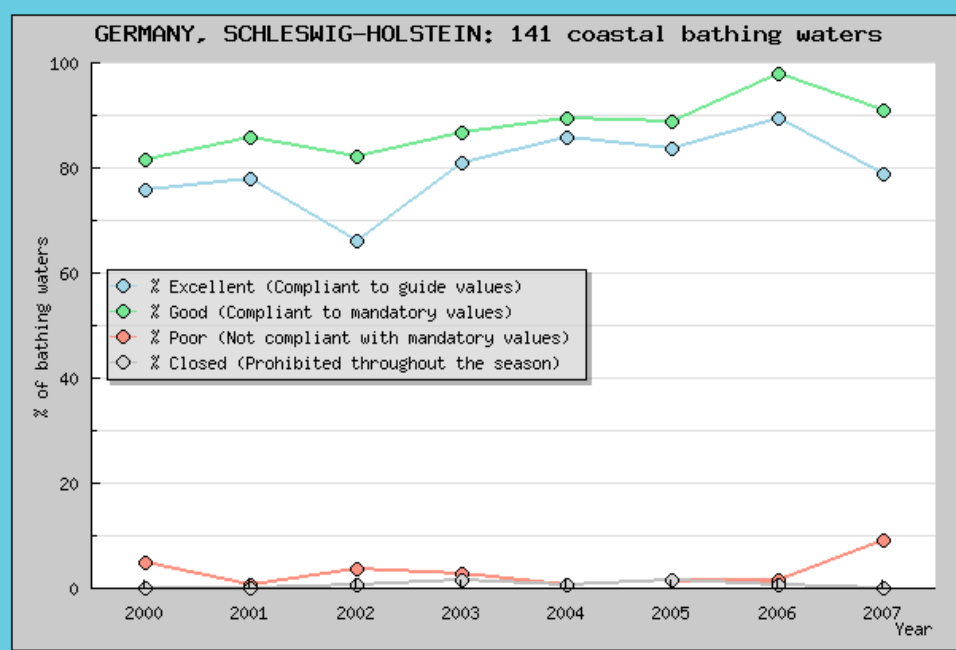
LexUriServ.do (application/pdf-...)

BUI SY - Rechtliche Bestimmungen

Bathing water quality - data...

Country	Region	Province	Bathing water	Visualisation
EU 27	--- Geographic region ---		21368 bathing waters	
AUSTRIA	--- Region ---		268 bathing waters	
BELGIUM	--- Region ---		115 bathing waters	
BULGARIA	--- Region ---		92 bathing waters	
CYPRUS	--- Region ---		100 bathing waters	
CZECH REPUBLIC	--- Region ---		188 bathing waters	
DENMARK	--- Region ---		1271 bathing waters	
ESTONIA	--- Region ---		72 bathing waters	
FINLAND	--- Region ---		365 bathing waters	
FRANCE	--- Region ---		3236 bathing waters	
GERMANY	--- Region ---		1939 bathing waters	
GREECE	--- Region ---		2055 bathing waters	
HUNGARY	--- Region ---		238 bathing waters	
IRELAND	--- Region ---		131 bathing waters	
ITALY	--- Region ---		5706 bathing waters	
LATVIA	--- Region ---		278 bathing waters	
LITHUANIA	--- Region ---		85 bathing waters	
LUXEMBOURG	--- Region ---		20 bathing waters	
MALTA	--- Region ---		87 bathing waters	
NETHERLANDS	--- Region ---		641 bathing waters	
POLAND	--- Region ---		346 bathing waters	
PORTUGAL	--- Region ---		519 bathing waters	
ROMANIA	--- Region ---		35 bathing waters	
SLOVAKIA	--- Region ---		38 bathing waters	
SLOVENIA	--- Region ---		37 bathing waters	
SPAIN	--- Region ---		2075 bathing waters	
SWEDEN	--- Region ---		847 bathing waters	
UNITED KINGDOM	--- Region ---		584 bathing waters	







Bathing water monitoring in Europe (WFD)

Frequency:	4	times a year
Number in Europe:	21,368	sites

Total:	85472	analyses
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-> what is the right instrument for this?

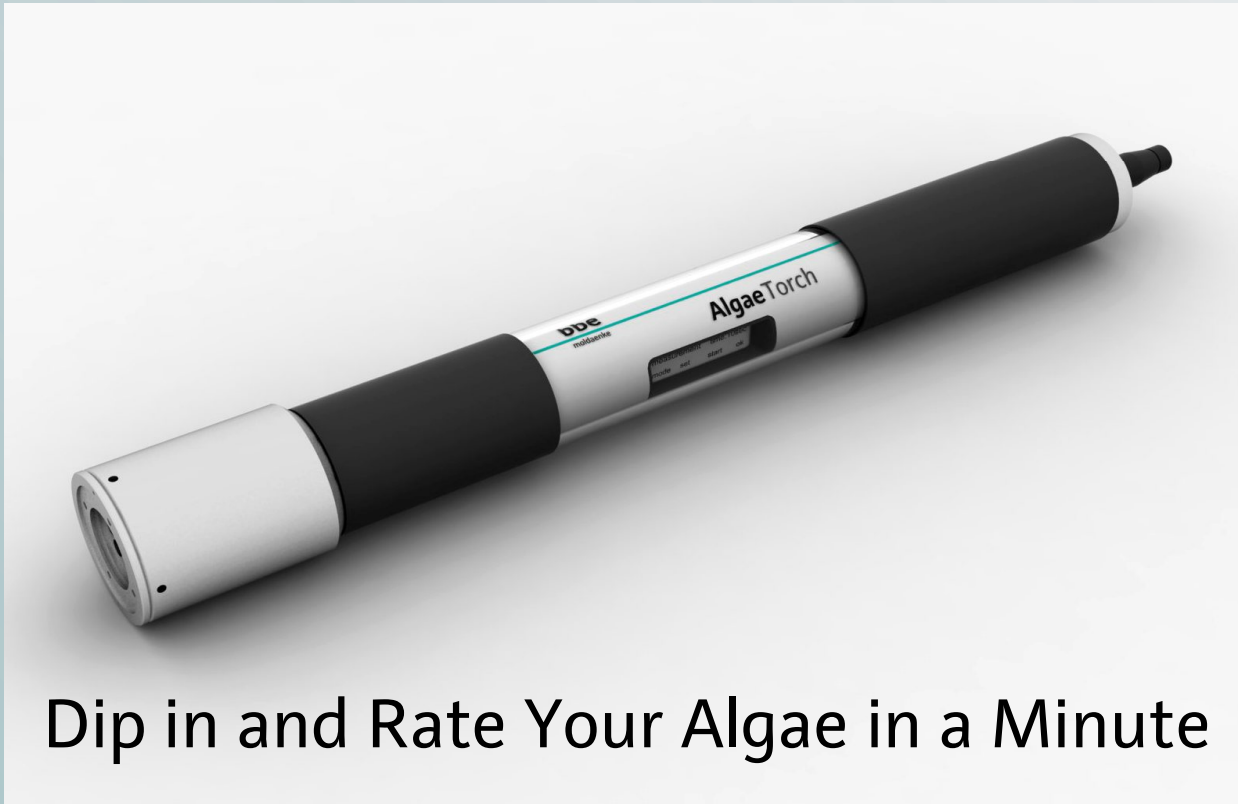


Requirements for a Bathing Water Algae Analyser

- Measurement of the chlorophyll concentration
- Measurement of the concentration of cyanobacteria
- Light weight
- Easy to handle
- Datalogger
- PC connectivity
- Internal rechargeable batteries

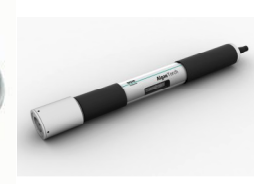
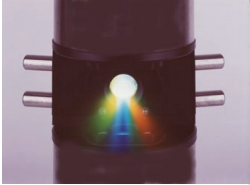


AlgaeTorch



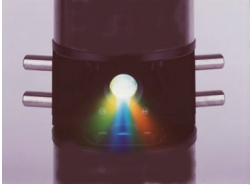
Dip in and Rate Your Algae in a Minute

- Total Chlorophyll
- Cyanobacteria
- High Sensitivity
- No Sample Preparation
- Easy Handling
- Cable-Free Operation
- Display on the Instrument
- Datalogger
- Internal Rechargeable Batteries
- Optional Pressure Sensor
- Optional Turbidity Sensor
- Attractive Pricing



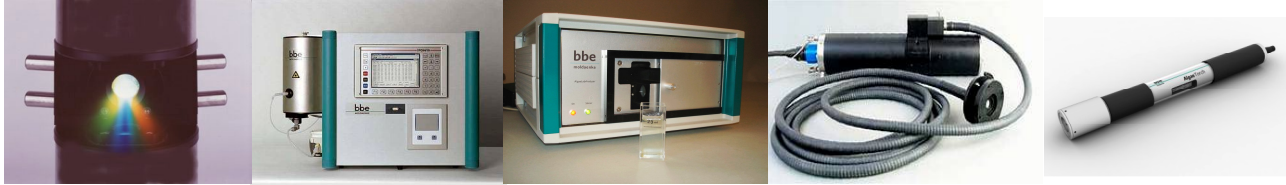
AlgaeTorch: Principle of operation

- LED Fluorometer with 3 excitation wavelengths based on the bbe FluoroProbe
- Orange LEDs to determinate the cyanobacteria
- Blue LEDs to determinate the chlorophyll in blue-green algae and diatoms
- Green LED to compensate for different spectra of diatoms
- Internal microcontroller to calculate the concentration
- Near infrared LED for turbidity control



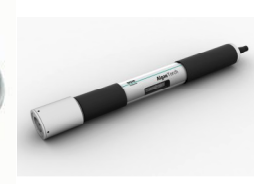
AlgaeTorch: Innovative Operation

- Internal display
- 4 capacity soft keys
- Vibration feedback
- Position sensor to start the AlgaeTorch
- Power-down feature



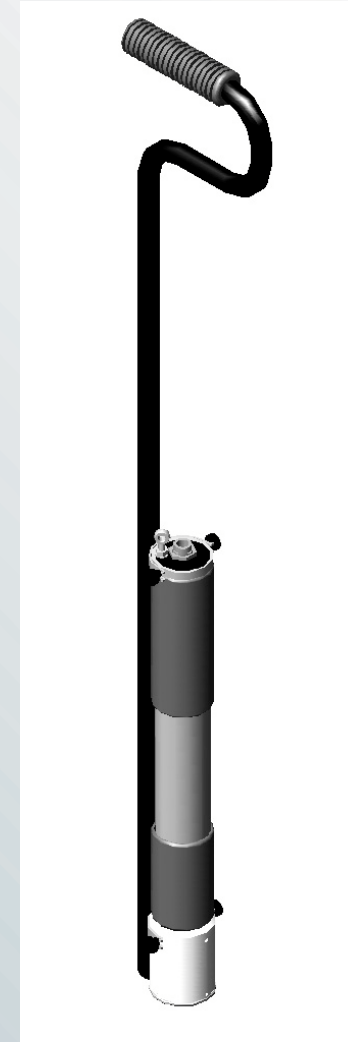
AlgaeTorch: Profiling Option

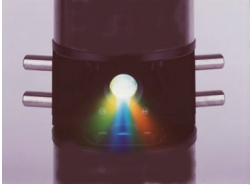
- Pressure sensor for depth measurement
- Pressure proof down to 100m
- Subconn connector
- Air pressure compensation



AlgaeTorch: Extension Handle

- Reach the water from a pontoon





AlgaeTorch: Applications

- Bathing Water
- Environmental Monitoring
- Ponds
- Profiling
- Education
- Fish Farming
- ...
- Your ideas and suggestions



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One more analyser...



AlgaeGuard: The Algae Analyser for Industrial Applications

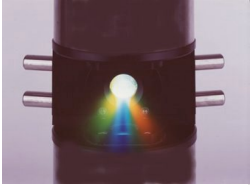
- Power Plants
- Drinking Water
- Ponds
- Environmental Monitoring





AlgaeGuard: Features

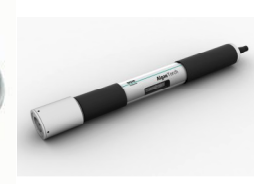
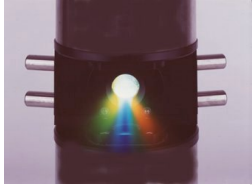
- Algae class determination with 4 algae classes
- Detection of yellow substances
- Transmission measurement (5 wavelengths)
- Integrated cleaning device
- Display with touchscreen
- Selectable PC operation with standard AOA Software
- 4 integrated relays
- RS232
- Optional 4-20mA outputs
- Attractive pricing



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**Thank you for
your attention!**



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