Triton EV82 Blue Gree Algae Sensor

Applications Field:

Determination of blue-green algae in water as a method to estimate and monitor the total concentration of algae in rivers, lakes, ponds, sea water, marine surveys, aquaculture, drinking water sources and other fields of algae and phytoplankton monitoring.

Advantages/Features:

Compact design, sturdy build:
The titanium build of the sensor is resistant to corrosion even in the harshest industrial conditions.

Low operation cost:
An automatic cleaning wiper minimizes the maintenance needed. There are no reagents or filing solutions required for operations.

Wide measuring range and low detection limit:
Detection range of 0 – 300,000 cells/mL. Upon request range can be extended to 0 – 2 million cells/mL.

Measurement principle:
The sensor is based on the fluorescence photometric determination of chlorophyll dissolved in water.

Installation:
The sensor can be installed in a flow cell or with an immersion pole/pipe.

The sensor is to be used with a T80 Transmitter (see T80 datasheet for reference).

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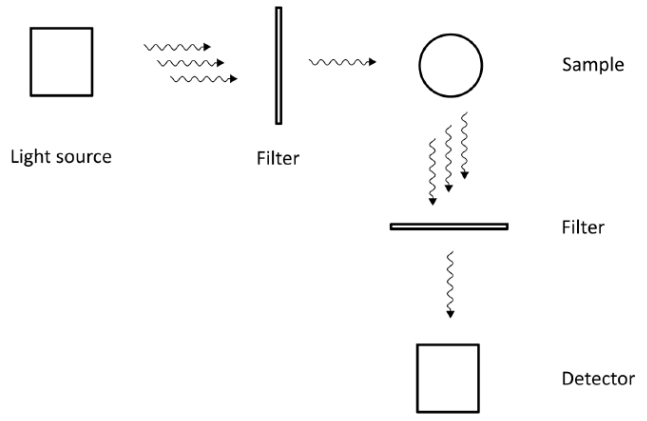
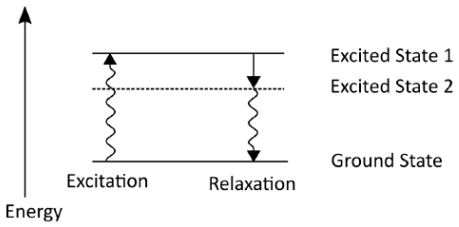
Technical Specifications:

Measured Parameter	Blue-green algae
Measuring Principle	Fluorescence photometry
Measuring Range	0 – 300,000 cells/mL
Resolution	1 cell
Lower limit of detection	300 cells
Analysis Frequency	≥ 1 s
Sample	Pressure-free vessel (probe up to 3 bar) Temperature: 0 – 50 °C (32 – 122 °F) Flow Rate: 80 to 500 mL/min Connection: 6mm (1/4 in.)
Dimensions	Ø 45mm, L 190.8 mm
Weight	Approx. 1 kg (2.2 lbs)
Body Material	Titanium
Operating Temperature	0 – 50 °C (32 – 122 °F)
Installation	Flow Cell or Immersion Pole
Protection Grade	IP68

Fluorescence Spectroscopy:

A polychromatic light source is filtered to select a specific wavelength. Molecules in the sample absorb the energy from the radiation and reach Excited State 1.
A part of the energy is released as heat and the species reach Excited State 2. The remaining energy is then released as a photon of appropriate wavelength and the molecule reach the Ground State again.
Another filter selects a specific wavelength, characteristic of the species we want to analyze and a detector measures the intensity of this emitted radiation. The detector is thus placed at an angle to avoid interference with the incident light.
The amount of emitted radiation is proportional to the concentration of our target molecule.





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