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# FLUORESCENCE-BIOSENS Line
# Fluorescence BioSensor Systems

System of Measurement for Algae (SMA) is a small portable instrument to optically characterize the fluorescence emission and the optical density (correlated to a cell density) of algae culture (e.g *Haematococcus pluvialis*, *Spirulina sp.* *Chlorella minutissima*, etc.). It is possible to connect the SMA instument directly to a by-pass of a bioreactor to monitor the algae culture condition.
Keyboard and display can be used to set-up the parameters.
It is important to verify the cleaning procedures above all for OD measurements and the dark time for the fluorescence emission.

The biological material is introduced into a Delrin tube by a solenoid injection valve; optical sensors allow to measure the fluorescence emitted by chlorophyll inside the green algae cells in culture medium and the density of the these cells culture medium through a light transmission measurement. It is equipped with current measurement system, and an electronic control board for data read-out, processing and PC transfer.

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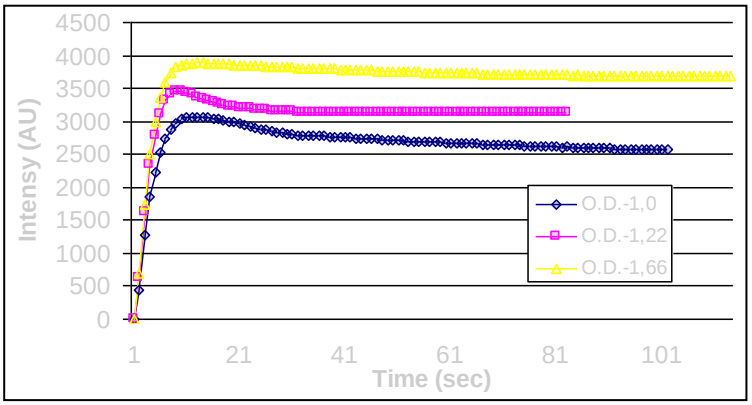
# Main Characteristics

| | |
|---|---|
| ***Functional Characteristic*** | Optical density and fluorescence biosensor used in environmental analysis |
| ***Sample*** | Algae culture monitoring |
| ***Readings*** | This instrument measures the Optical Density (O.D.) detected by the optical system and the fluorescence emission |
| **Optical** | |
| ***Fluorescence Cell*** | Light source<br>LED, peak emission wavelength: 475 nm |
| ***Measurement Optical Density (Cells density measurement)*** | Light source<br>LED emission peak wavelength: 750 nm |
| ***Instrument Dimensions*** | 22 x 15 x 10 cm (W x L x H) |
| ***Weight*** | 980 gr |

Fluorescence Test on green algae (*Haematococcus pluvialis)* Dark time 10 min; Light source 10 sec; Level led 127; Relax time 2min




It is possible to customize the instrument meet the customer requirement (e.g. Leds wavelength, Leds intensity, etc).

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