

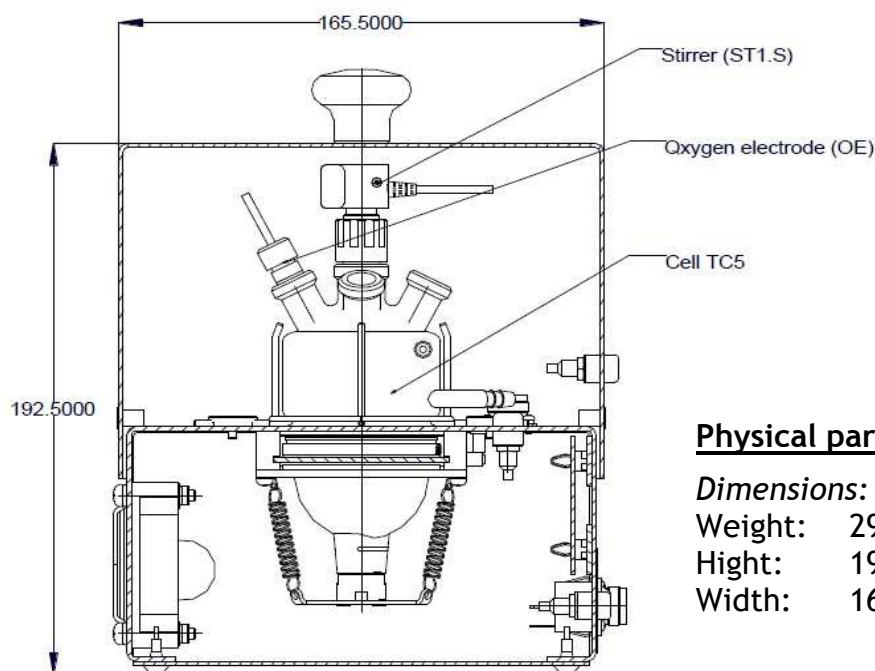
ALGAE GROWTH ANALYZER

Type: AGA1.S

Description

Algae Growth Analyzer is universal device enabling to follow the lifecycle of algae or other biological objects producing oxygen. The device bears light source, exchangeable color filters, sensitive oxygen electrode and cover to model dark phase. It is controlled by Bioanalyzer potentiostat that allows user to programme light and dark phases, measure and evaluate the oxygen electrode response. Oxygen concentration resolution is 0.1 μM .

Fast response constant is $\tau_{95} = 3\text{s}$. Long-time measurement is possible due to full automated function. The device provides faster analogy of DIN 863 toxicity test that takes about 1 hour.



Physical parameters

Dimensions:

Weight: 2900 gms
 Height: 192.5 mm
 Width: 165.50 mm

The apparatus consists of

- Faraday cage - blocks out external static electric fields and external light, contains control panel for connection with Bioanalyzer
- The glass cell TC5
- Colour filters
 - Blue Filter - Mounted M 52 x 0.75 Threaded
 - Green Filter - Mounted M 52 x 0.75 Threaded
 - Red Filter - Mounted M 52 x 0.75 Threaded
- Mounted Absorptive ND Filter 0.3 OD M 52 x 0.75
- Mounted Absorptive ND Filter 0.9 OD M 52 x 0.75
- Light source and control
- Oxygen electrode OE1
- Potentiostat BA1 - controls dark and light phases, reads and evaluates oxygen electrode signal

Oxygen sensor

- Air saturated water (~ 0,25 mM O₂) typically 400 nA
- Background current 5 nA
- Current resolution 10 pA
- Typical noise 0,2 % of current value
- Stability of calibration > 24 hour



Bioanalyzer controls the stirrer and oxygen electrode. Bioanalyzer connector is attached to a Faraday cage basement.

Device parts

Faraday cage front panel



Optional accessories

- pH electrode/pH meter
- Screen printed or classical mini-electrodes
- Thermometer