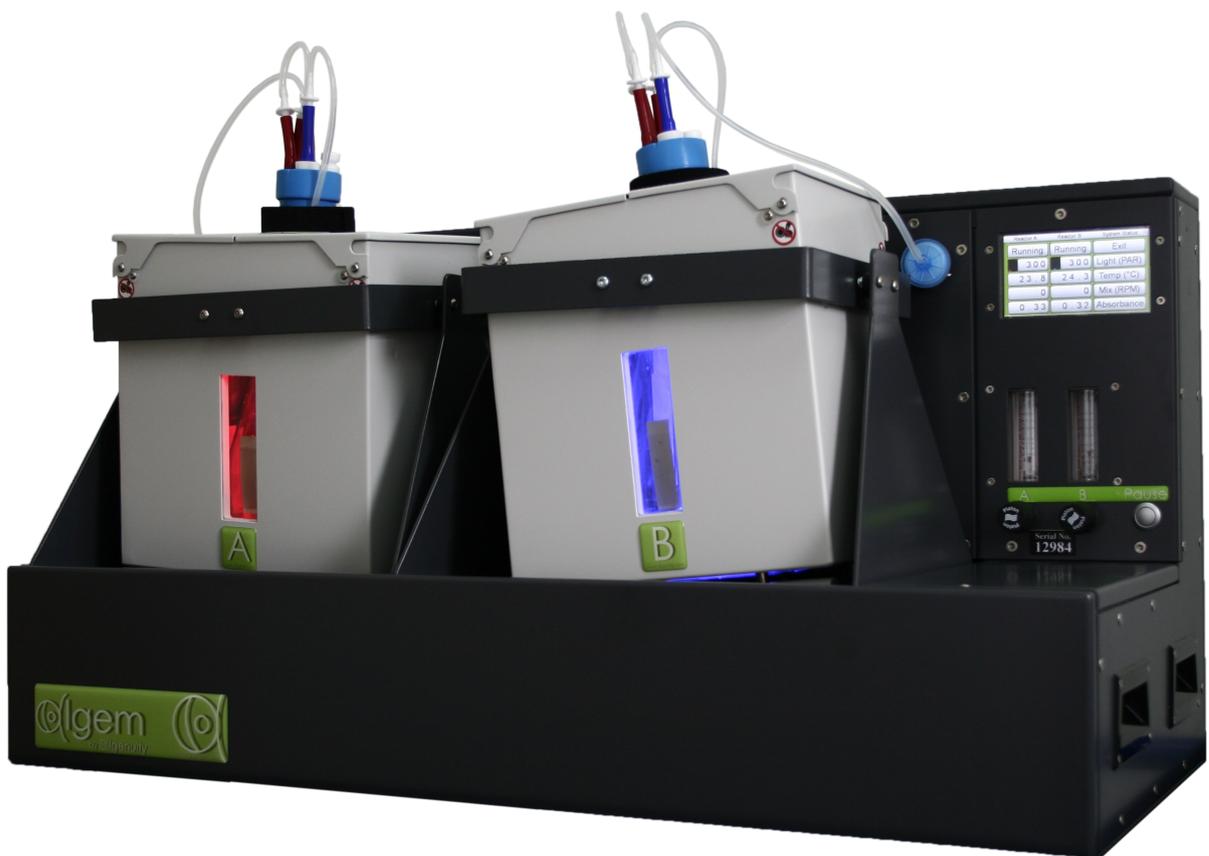




algae environment modelling  
lab scale photobioreactor



- ➡ designed by algal biologists for algal biologists
  - ➡ unlimited experimental design possibilities
    - ➡ precision light and temperature control - data you can trust
      - ➡ drive new publications and intellectual property

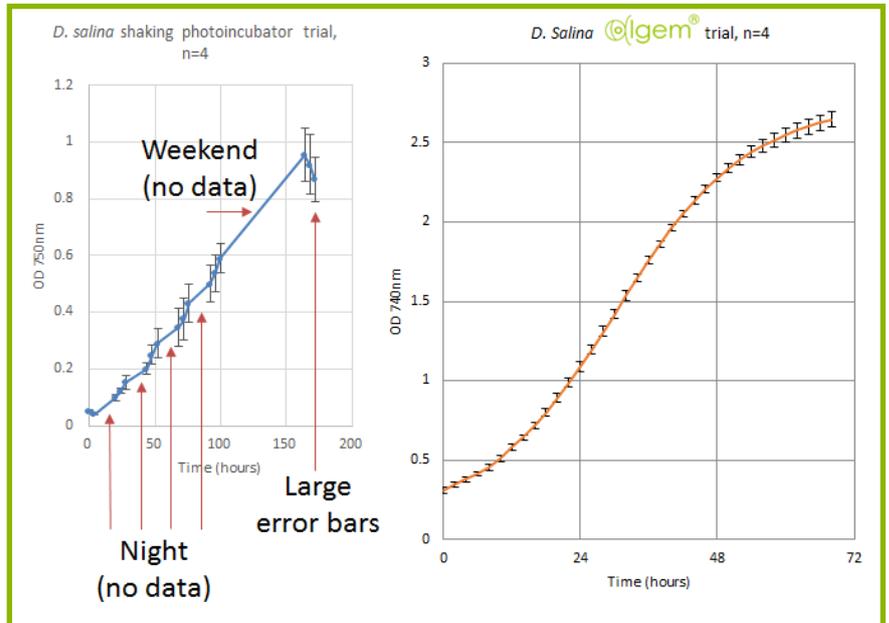
Ilgenuity<sup>®</sup>  
making algae work

## Why Algem?

You need a Labscale Photobioreactor system that models a wide range of variables for algal and cyanobacterial growth.

These variables can include lighting and temperature conditions, mixing, aeration, and pH.

The Algem was specifically designed by Algenuity's dedicated team of algal R&D scientists to drive forward algal biology research.



Raise your standards of algae cultivation and improve your data accuracy and reproducibility with the Algem



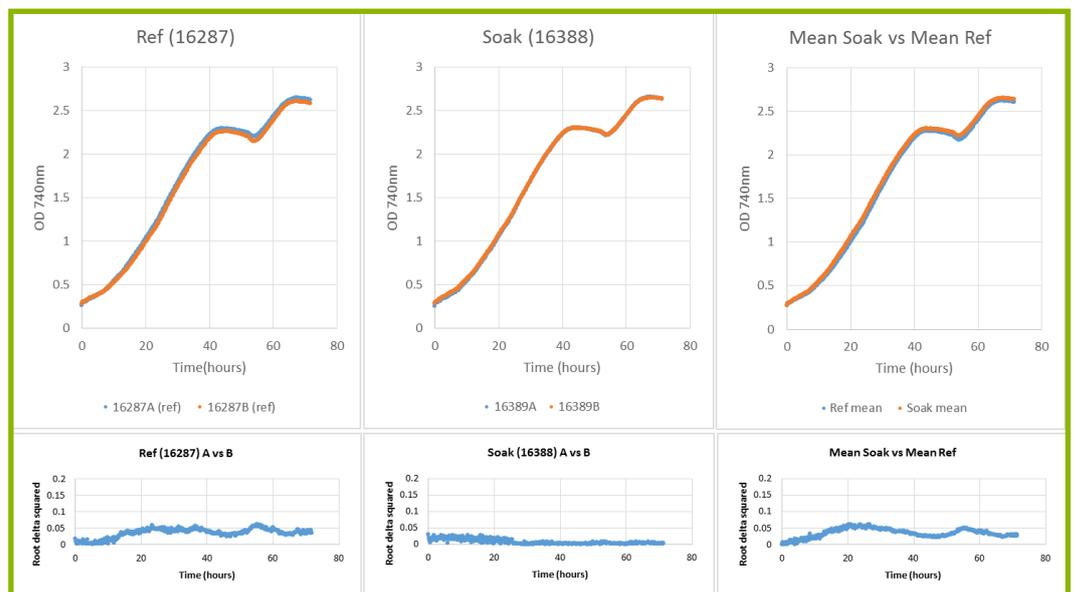
## Twice the Capability

Each Algem system contains two separately operated, individually programmable photobioreactors to optimize your throughput and flexibility (both reactors are controlled independently from a single computer).

You'll really appreciate the tremendous degree of accuracy and reproducibility inherent to each Algem due to the system's thoughtful, advanced design.

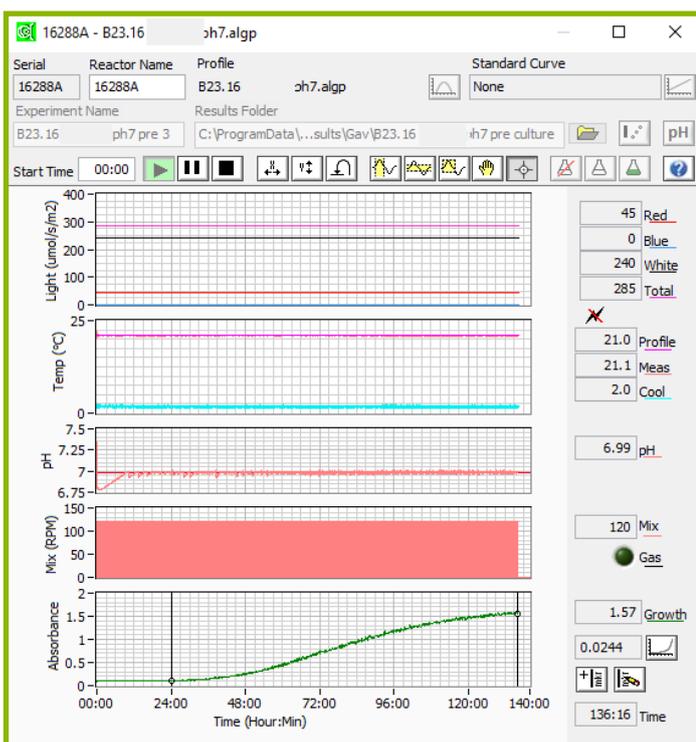
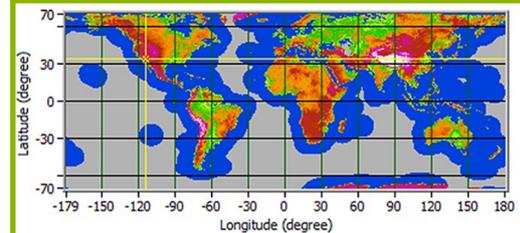
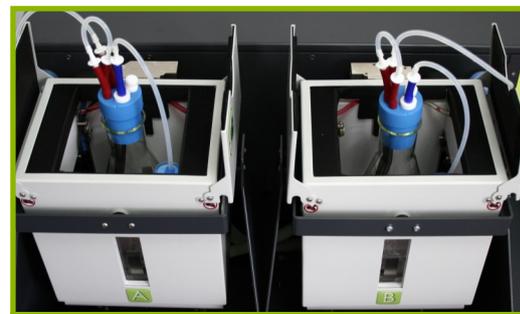
## Highest-Level Quality Control

Every Algem must pass final quality control testing with the photoautotrophic strain *Dunaliella salina* to make sure growth curves are tightly matched.



## The Most Powerful and Flexible Labscale Algal Culturing System

- Precisely calibrated, independently controlled red, white, and blue LEDs provide maximum flexibility with light intensity control, light cycle (light/dark periods) control, and flashing light effect. In addition, the system's fully enclosed design virtually eliminates contamination from unwanted light.
- Uses standard 1L Erlenmeyer lab flasks! Inexpensive, easy to use, install, and clean (fully autoclavable). These include a custom-designed flask lid with multiple inlets for gas supply and continuous sampling (peristaltic pump optional).
- Computer-generated geographical modelling of monthly light and temperature profiles. Just point and click to simulate monthly light and temperature environments almost anywhere in the world!
- Precise temperature control using both a cooling and heating system provides smooth temperature curves.
- Innovative mixing system prevents clumping in difficult-to-grow strains. Custom mixing profiles can be computer-programmed, ranging from continuous to pulsed mixing.
- Automated real-time monitoring of culture growth and pH.



## Algen Software

The Algen features Algenity's own custom-designed user interface that displays acquisition of all major parameters simultaneously in real-time.

The Algen software is highly intuitive and easy to use, and also features advanced capabilities that support even the most demanding research requirements.

Each Algen system provides highly accurate, reproducible data that is displayed in real-time both graphically and in table format within the software, and also can be readily exported into Microsoft Excel®. If desired, up to 16 total reactors can be separately programmed and operated simultaneously from a single instance of the software.

# Algem Technical Specifications

System Housing W x H x D	745 x 410 x 380 mm
Power Supply W x H x D	230 x 160 x 250 mm
Chiller W x H x D	230 x 380 x 350 mm
Total volume	2 x 1 L
Working culture volume	2 x 400-800 ml
Illuminated area	2 x 133 cm <sup>2</sup>
Mixing rate	0, 5 - 120 rpm
Temperature range	4°C - 50°C
White LED (optimal spectral range)	0, 20 - 2000 μmol/m <sup>2</sup> /s
Red LED, 660 nm	0, 20 - 1700 μmol/m <sup>2</sup> /s
Blue LED, 465 nm	0, 20 - 1000 μmol/m <sup>2</sup> /s
Gas flow rate (manual adjustment)	0, 3 - 100 cm <sup>3</sup> /min
Gas input (particle filtered and regulated), dry and oil free	2 Bar (29 PSI) max
Power supply	110/230 VAC ±10%
Power requirement	450 W max
Weight	25 kg

Specifications may be subject to change



## About Algenity

Algenity is the biotechnology division of Spicer Consulting, Ltd. We are specialists in algal biology, with a multidisciplinary team of algal molecular biologists, bioinformaticians, software engineers, mechanical and electrical engineers, physicists, and manufacturing experts.

Algenity is active in algal R&D with strain engineering projects funded by UK & EU grants and technology development and licensing work with industry. When you buy an Algem, you gain access to this added value of algal biology expertise. We will work with you over the first 12 months to get the most out of the Algem. We are passionate about pushing your algal research forward!

## Flexible Options - Evaluation, Rental, Purchase

### Evaluation

- Great opportunity to try out the Algem and de-risk your decision
- One month evaluation period with no rental fee
- Nominal charge for shipping, training, and installation



### Rental

- An option to use the Algem with no capital cost
- Rental period is a minimum of three months
- Rental fee of three months offsets purchase price



### Purchase

- Choose between our standard two-reactor Algem system and our Super Algem (three Algem stack of six reactors)
- Chiller included as standard
- Work with our applications team to design experiments to meet your research goals

## Contact Us:

**Website:** [www.algenity.com](http://www.algenity.com)  
**Email:** [info@algenity.com](mailto:info@algenity.com)  
**Twitter:** [twitter.com/algenity](https://twitter.com/algenity)

### Headquarters:

Eden Laboratory  
Broadmead Road  
Stewartby, MK43 9ND, UK  
Tel: +44 1234 765 773

Offices Worldwide

## “Will it grow?” Service

The Algem has successfully grown the most diverse range of both routine and challenging strains, including *Arthrospira platensis*, *Chlorella* spp, *Emiliana huxleyi*, *Euglena gracilis*, *Galdieria sulfuraria*, *Nannochloropsis* spp, *Phaeodactylum tricornutum*, and *Trebouxia* spp.

If you would like to de-risk your decision and discover if your algae strain grows in the Algem, Algenity provides a service for a nominal charge where you 1) Post us your strain, 2) We will run your algae in our Algems, and 3) We will send you a report to support your decision making process. Learn more at [www.algenity.com/will-it-grow](http://www.algenity.com/will-it-grow)

  
making algae work