

# INDUSTRIAL CULTURE OF MICROALGAE & CYANOBACTERIA

APPLIED RESEARCH & LIFELONG LEARNING

**4 DAYS**  
**8 -11**  
of june 2021



**TRAINING • APPLICATIONS • DEMONSTRATIONS**



**ALGO SOLIS**  
MICROALGAE R&D FACILITY

training labeled by  
the economic cluster  
Pôle Mer Bretagne Atlantique



## TRAINING AIMS

Acquire the theoretical and practical elements implemented on the whole micro-algae production line, preparation of media and inocula, to the final harvest of the biomass produced under solar conditions.

## AUDIENCE

Technical staff related to the activity of producing microalgae.

## LEVELS

Engineer or technicians.

## PREREQUISITES

Basic knowledge of Biological Engineering or Process Engineering and Bioprocesses (*biology, microbiology, bioreactors, basic chemistry*).

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UNIVERSITÉ DE NANTES

# INDUSTRIAL CULTURE OF MICROALGAE & CYANOBACTERIA

This training covers the basic elements necessary to the controlled culture of microalgae / cyanobacteria on an industrial scale :

- Preparation of media and inocula.
- The launch of raceway type production systems and culture monitoring.
- Optimization of production and the basics of process engineering.
- Harvest of the biomass produced.

This first module can be supplemented by Module 2 «Industrial production of microalgae and cyanobacteria : advanced engineering and optimizations».

## PROGRAM

### DAY 1

Best cultivation practices

Physiology, microbiology, pre-cultures of culture media, physico-chemistry

Set-up of appropriate culture media, physico-chemistry need

Preparation of culture media and inocula

### DAY 2

Culture process engineering : modus operandi, specificity of operation, design tools, optimized control and management, solar culture

Preculture and seeding of raceway AlgoSolis platform

### DAY 3

Culture process Engineering : Solar Culture conditions

Industrial production of Spirulina: technologies and practices, industrial integration

Culture monitoring / optimization (*AlgoSolis platform*)

### DAY 4

Harvesting microalgae : existing technologies and associated principles

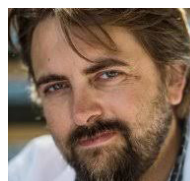
Culture monitoring / optimization (*AlgoSolis platform*)

Biomass harvesting (*AlgoSolis platform*)



## SCIENTIFIC OFFICER

### Jérémy PRUVOST



Professor at Polytech Nantes to the Engineering Department Processes-Bioprocesses the University of Nantes, its research activities are related to the

Engineering of photobioreactors, within the laboratory GEPEA.

He is working on intensification and design of photobioreactors, optimization of industrial solar culture, and on the place of new technology transfer of microalgae.

## TRAINING TEAM

### Academics & members of CNRS (Centre National pour la Recherche Scientifique)

: Jeremy Pruvost, Matthieu Frappart, Benjamin Le Gouic, Dominique Grizeau.

**Capacités SAS :** Raphaëlle Touchard, Lucie Van Haver, Jordan Tallec.

## TRAINING LOCATIONS



**GEPEA laboratory**  
**CRIT & ALGOSOLIS Platform**  
37, bd de l'Université - Saint-Nazaire

## RATE

The registration cost is € 3,200 including tax.

Includes lunch and coffee breaks.

Maximum group size : 10 people.



## INFORMATION AND REGISTRATION

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