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## Mixotrophic batch growth of *Spirulina platensis* [↗](#)

PLOS One

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### EXTERNAL LINK

<https://doi.org/10.1371/journal.pone.0224294>

### THIS PROTOCOL ACCOMPANIES THE FOLLOWING PUBLICATION

Pereira MIB, Chagas BME, Sassi R, Medeiros GF, Aguiar EM, Borba LHF, Silva EPE, Neto JCA, Rangel AHN (2019) Mixotrophic cultivation of *Spirulina platensis* in dairy wastewater: Effects on the production of biomass, biochemical composition and antioxidant capacity. PLoS ONE 14(10): e0224294. doi: [10.1371/journal.pone.0224294](https://doi.org/10.1371/journal.pone.0224294)

- 1 1. Prepare the batch culture in 6 L plastic bottles.
- 2 Introduce 10 % of inoculum into 3,6 L of Zarrouk medium as control cultivation  
To mixotrophic cultivation introduce 10 % of inoculum into 4L of Zarrouk medium supplemented with 2.5%, 5.0% and 10% clarified buffalo mozzarella cheese whey. The initial *S. platensis* concentration should range from 0.2 to 0.3 g/L.
- 3 Then the culture should grown under the same light intensity and light regime as the inoculum (irradiance of 238  $\mu\text{mol m}^{-2} \text{s}^{-1}$  under a photoperiod (12 h light/dark).
- 4 Keep the cultures under temperature of 25 °C and constant sterile aeration promoted by pumps (JAD Air Pump S-510) at a specific flow rate of 0.5 vvm (volume of air per volume of medium per minute).
- 5 All assays should performed in triplicate.

- 6 When the cultures reach the stationary phase, the biomasses should be collected by filtration on 20  $\mu\text{m}$  screens and washed in distilled water to remove salt remnants, then the biomass will be lyophilized in a lyophilizer (LJJ02 - JJ Scientific) and frozen in a freezer at  $-20^{\circ}\text{C}$  until beginning the chemical characterization.



[go to step #6](#)

*Spirulina platensis* Mixotrophic culturing



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