

# LED Stirred Tank Option

The traditional Labfors 5 Lux stirred tank for photosynthesis applications

Web  
Version  
low resolution

NEW  
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VERSION



- ▶ New: LED lighting
- ▶ Extremely adaptable
- ▶ Traditional stirred tank vessel
- ▶ Controllable light intensity
- ▶ Choice of light spectra
- ▶ Multiple applications



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May be subject to technical amendments

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# Now high tech with LED!

## ▶ New: LED lighting

A total of 16 LED strips with air cooling offer a reproducible light source with a long service life. The maximum light intensity of approx. 700  $\mu\text{mol}/\text{m}^2\text{s}$  is entirely sufficient for the majority of applications. The energy efficiency is approx. five times greater than for fluorescent tubes.

## ▶ Extremely adaptable

The LED strips are replaceable individually, which in turn also allows the light spectrum to be matched to the application at a later point.

## ▶ Traditional stirred tank vessel

The standard cultivation technique on a laboratory scale.

## ▶ Controllable light intensity

Continuously variable electronic dimming from 0–100 % facilitates the precise adjustment of light intensity. When used in conjunction with Iris 6 parallel bioprocess control software, not only are on/off cycles possible, but even the simulation of a daylight curve.

## ▶ Choice of light spectra

Warm white light in the standard design offers an ideal spectrum in the visible range that is similar to sunlight and contains a high proportion of photosynthetically-active light. Alternatively, other light colours such as red, blue, UV-A or infrared can be selected. The dimming of two colours independently of one another, allowing a dynamic change to the spectrum to be achieved, is optional.

## ▶ Multiple applications

Designed for the cultivation of algae, plant cells and cyanobacteria, the Labfors 5 Lux is ideal for every photosynthetic process, e.g. investigations into the feasibility of biofuel production using algae. The Labfors 5 Lux control unit is also perfectly suited for other applications, e.g. for bacteria or mammalian cell cultures – depending on the specification.



### Key technical data

**Total volume:** 3.6 L

**Working volume:** 0.5–2.3 L

**Light:** approx. 600–700  $\mu\text{mol}/\text{m}^2\text{s}$  (approx. 50 000 lux)

**Standard parameters:**

- Stirrer speed
- temperature
- light
- pH
- $\text{pO}_2$
- antifoam
- feed

**Additional parameters:**

Easy integration of many online systems, e.g. extra sensors, balances, external pumps

- 4 Analogue In
- 6 Analogue Out
- 2 Digital Out

Advanced process control features via Iris 6 software, e.g. regulated control of medium feed

**Infors AG**  
Headoffice, Switzerland

Rittergasse 27  
CH-4103 Bottmingen  
T +41 (0)61 425 77 00  
F +41 (0)61 425 77 01  
info@infors-ht.com

For more information and your local sales office please visit:

[www.infors-ht.com](http://www.infors-ht.com)

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