



# LabCIP

Automatic cleaning and sterilisation at the push of a button



« The Labfors 5 with LabCIP allowed us to double the throughput from 8 to 16 protein expressions per week. As a result, we make a greater contribution to the success of drug discovery projects. »

Dr. Alvar Gossert, Investigator II, Novartis AG, Basel, Switzerland



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May be subject to technical amendments

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# Just science! No cleaning.

## ▶ Automatic cleaning (CIP)

The reliable and reproducible base and/or acid cleaning is done automatically with variable cycles. This cleaning method is used as a standard in GMP cleaning processes, and can be validated.

## ▶ Automatic sterilisation (SIP)

Sterilisation of the Labfors 5, e.g. with hot sodium hydroxide solution, and the final rinse with sterile water (integrated sterile filter) proceeds automatically. All parts in contact with the product including the air feed and exhaust system of the bioreactor are included in the rinse. The process conditions (temperature, time, pH) can be configured flexibly. Typical sterilisation conditions are 60 °C, pH 12.8, for a duration of 2 h.

## ▶ High throughput

The CIP/SIP saves you an enormous amount of time. The Labfors 5 can be cleaned and sterilised automatically, e.g. overnight, and is then immediately ready for use on the next morning. This gives you more time for science and allows you to increase the throughput up to two-fold.

## ▶ Easiest operation

There is no need to dismantle and reassemble the bioreactor for cleaning purposes or to transport the vessel to the autoclave and back. This eliminates the sources of error and handling risks inherent in these steps.

## ▶ Robust, proven technology

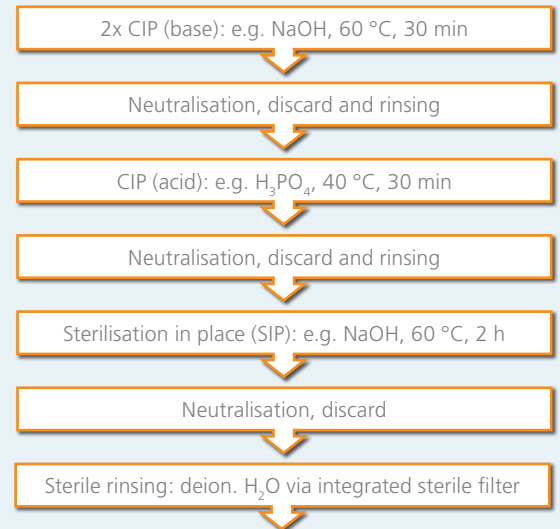
There is no single-use technology applied in the bioreactor. Its sustainability and robustness are arguments in favour of the Labfors 5 with LabCIP. The precise sensors and the powerful stirrer of the Labfors 5 ensure high cell densities and protein titers.

## ▶ Small footprint

The LabCIP needs less bench space than an A4-sized sheet of paper and can be placed behind the Labfors 5.

## ▶ Cost-saving

The unit saves valuable working time, since it takes less than 5 minutes to get the bioreactor ready for use. The downtime of the Labfors 5 is thus minimised. There are hardly any running expenses associated with preparation.



### Possible flow diagram of an automatic cleaning and sterilisation process

The parameters, pH, temperature, time, number of cycles, can be configured individually. The individual phases can be repeated as desired.

#### Applications

- High throughput bioprocesses
- Fermentation
- High throughput protein expression, e.g. antibodies
- Microbial bioprocesses (*E. coli*, *P. pastoris* etc.)
- Process development / process optimisation
- Scale-down / Scale-up

#### Key technical data

**Dimensions (W x D x H):** 210 x 295 x 600 mm  
**Labfors 5 compatibility:** All Labfors 5 bioreactors (microbial configuration) are compatible with the LabCIP: 2; 3,6; 7,5; 13 l total volume



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