

CellFactor table-top system measures $35 \mathrm{~cm} \times 58 \mathrm{~cm} \times 39$ cm (w $\times 1 \times h$ ) and weighs 23 kg .

In pharmaceutical research or toxicity testing, large single cells, cell clusters, or small model organisms such as fertilized Zebrafish eggs are important standards. Such biological entities can replace ethically questionable animal testing, while still providing biologically relevant information. As a result, the demand for automated solutions for cell sample preparation is increasing. Currently, the main bottlenecks for widespread usage of large microbiological entities in life science applications are (i) processing a large number of entities in a short time, and (ii) ensuring reproducible results.
Our automatic cell-handling system, the CellFactor, resolves these two problems: saving time and money and allowing researchers to concentrate on the characterization phase of their experiments. The CellFactor combines a closed-loop sorter module with a wellplate feeder module together with all electronics and fluid handling components into a table-top sized instrument.

## Specifications

- Fully automated sorting \& dispensing into wellplates (96, 48, 24, 12 format)
- 96 format wellplate filled in circa 5 minutes
- Parallel sorting into collection vessel
- Vision-based, self-learning classification \& sorting of entities
- Closed-loop sorting, i.e. no sample loss
- Highly reproducible, 24 hours/day, 7 days/week
- Can handle entities 500-2000 $\mu \mathrm{m}$ in size, e.g. fertilized Zebrafish or Medaka eggs, Xenopus laevis oocytes, microtissue


## Automated processing of small model organisms



Sorted entities are dispensed into wellplate together with defined volume of liquid.


Inside of instrument showing sorter (top left) and wellplate being filled (bottom right).


Close-up of sorter module with vision-based sorting.

Watch

