

## FRAUNHOFER INSTITUTE FOR MANUFACTURING ENGINEERING AND AUTOMATION IPA

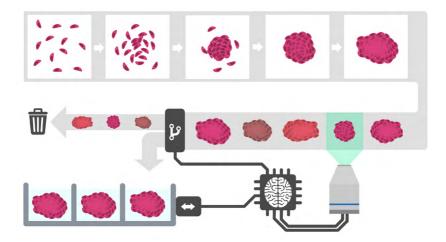
## **ORGANICER** MACROSCOPIC ENTITY SORTER





The **ORGANICER** is a high-throughput sorting device for the analysis and separation of macroscopic entities.

Early identification and separation of organoids can significantly **increase the productivity** while **reducing the overall production costs**. Isolation of functional organoids is a tedious and work-intensive process and there is no commercially available technology for efficient sorting of microspheres in a high throughput manner.



The **ORGANICER** is a technological solution for high-throughput separation of early stage organoids. The macroscopic spheres are mechanically isolated, analyzed individually by light microscopy and sorted or even isolated into the labware of choice according to their morphological attributes, such as border shape, roundness and interior homogeneity.

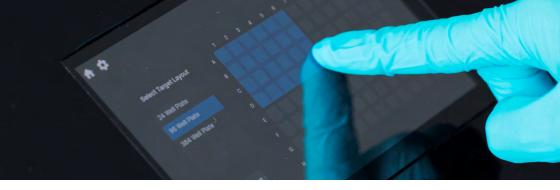
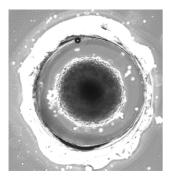


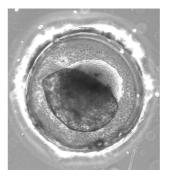
Image acquisition is supported by a **machine learning algorithm**, leading to improved determination of functional organoids. In addition to this, the system uses a **low dead volume** dispensing technology which allows direct deposition of the spheres in extracellular matrix.



Spheroid (800 µm)

#### System Quick Facts

Entity size Dead Volume Target Formats Device Size



Zebrafish egg (1200 µm)

200 - 2000 μm < 600 nl (Entity size: 1000 μm) Microtiterplates, Collection Tubes 41 x 31 x 31 cm

The system can be used to **improve development** and validation of new standard protocols for organoid differentiation into any functional tissue. In addition, **increased production** of functional organoids with already well-established protocols may contribute to serving the **growing demand** for the new model system for drug target research all around the globe.



## CONTACT

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