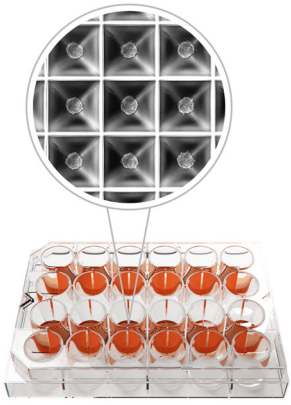
From Eye to Insight

Leica MICROSYSTEMS



KUGELMEIERS®

The revolutionary duo for decoding 3D biology in real-time*: Sphericalplate 5D & THUNDER Imager 3D Cell Culture

Superior method for a standardized, high through-put spheroid generation with high contrast and temporal resolution 3D imaging paralleled with low phototoxicity:

> **Fast preparation of spheroids:**

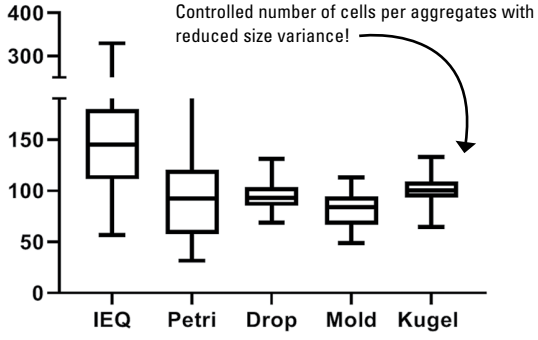
Ready-to-use plate – no pre-prep needed
750 cell clusters with one move – 9000 per plate

> **Simple imaging workflow:**

No carrier exchange for imaging necessary
Computational Clearing during acquisiton

> **User friendly:**

Use LAS X Navigator for easy sample overview to high res scans



Ref: Wassmer et al. Cell Transplantation Volume 29: 1–8; 2000; DOI: 10.1177/0963689720937292

Preserve sample integrity followed by advanced analysis in one platform!

Typical fields of research

*in accordance with ISO/IEC 2382:2015

Speed up the workflow using combined Sphericalplate 5D & THUNDER technologies for spheroid formation & imaging

Sphericalplate 5D Preparation

Ready to use Sphericalplate 5D: Grow spheroids from single cells according to the appropriate protocol. Natural spheroid formation happens upon cells seeding and can be directly investigated in the Sphericalplate 5D.

Computational Clearing-based microscopy

Observe multiple, uniformed spheroids live or by end-time measurements. Acquire high spatial and temporal resolution with low phototoxicity.

Data handling

Save your data during the acquisition via continuous streaming from temporary memory to final storage medium – no extra time for saving is necessary.

Visualization

Visualize your large data sets after image acquisition by the LAS X 3D Visualization tool.

Analysis

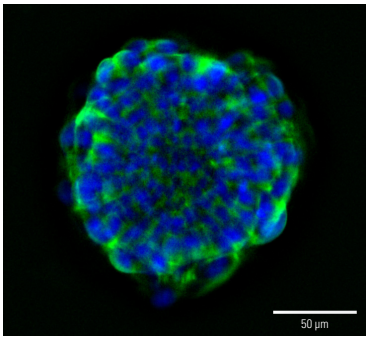
Quantify relevant parameters in your experiment (e.g. growth rate, volume change) by the LAS X 3D Analysis tool.

Share

Export your imaging data rapidly using the LAS X movie editor and share your results with other scientists worldwide.

Addressing multiple customized workflows in parallel to increase experimental output & maximize data stream

Spheroid was generated from mouse embryonic stem cells and grown for 3 days in the Sphericalplate 5D. Spheroids stained with DAPI (blue) and Alexa Fluor® 488-phalloidin (green) visualized by THUNDER Imager 3D Cell Culture. Real-time Computational Clearing was used during acquisition to deblur the 3D cell structure and to visualize cells on a single cell level without any sample carrier exchange.



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