



Live Cell Imaging

zenCELL owl

Microscopy for the Incubator

Stay connected to your cells

automated remote monitoring

The zenCELL owl is your incubator microscope with 24 channels for automated remote monitoring of cell cultures. Data capturing, imaging and analysis is performed 24/7 in real-time. Cell cultures can be conveniently monitored from your PC, while saving working time and increasing data quality and quantity. The compact and lightweight device ensures space-saving and uncomplicated use in the incubator.

Streamline routine & basic applications:

- Cell culture monitoring
- Determination of cell confluence
- Migration assays
- Observation of stem cells
- Biocompatibility tests
- Analysis of drug effects like cytotoxicity tests





24



HQ



Monitor remotely

Monitor cell cultures online from outside the lab in your preferred frequency

Analyze 24 wells in parallel

Check cell confluence and morphology and compare different wells

Automate routine applications

Let zenCELL owl record & analyze your cells: set up the experiment & walk away

Increase data quality & quantity

Real-time data capturing, time-lapse videos and automated evaluation of confluence

Save space & stay flexible

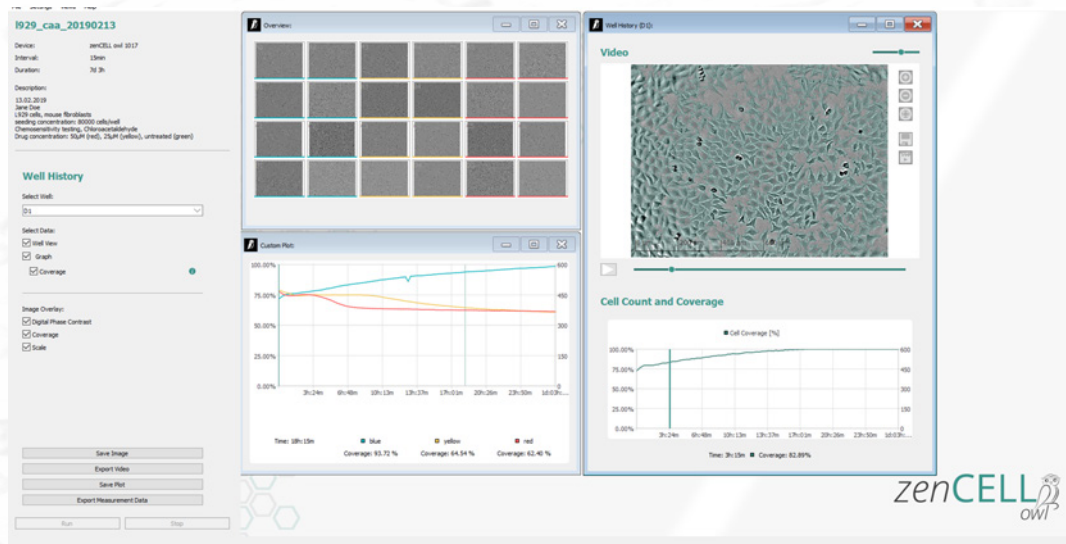
Small and light-weighted device leaves enough space for other vessels

Non-invasive

No user-intervention for microscopy and disruption of environmental incubator conditions

Don't even miss the smallest detail

long term measurement



24/7 long term measurement and automated data acquisition increase the validity of your assay by rising the number of tracked and analyzed data points.

Automated data analysis

Confluence evaluation and estimation of changes in the relative cell number of each image in real time without subjective user interpretation.

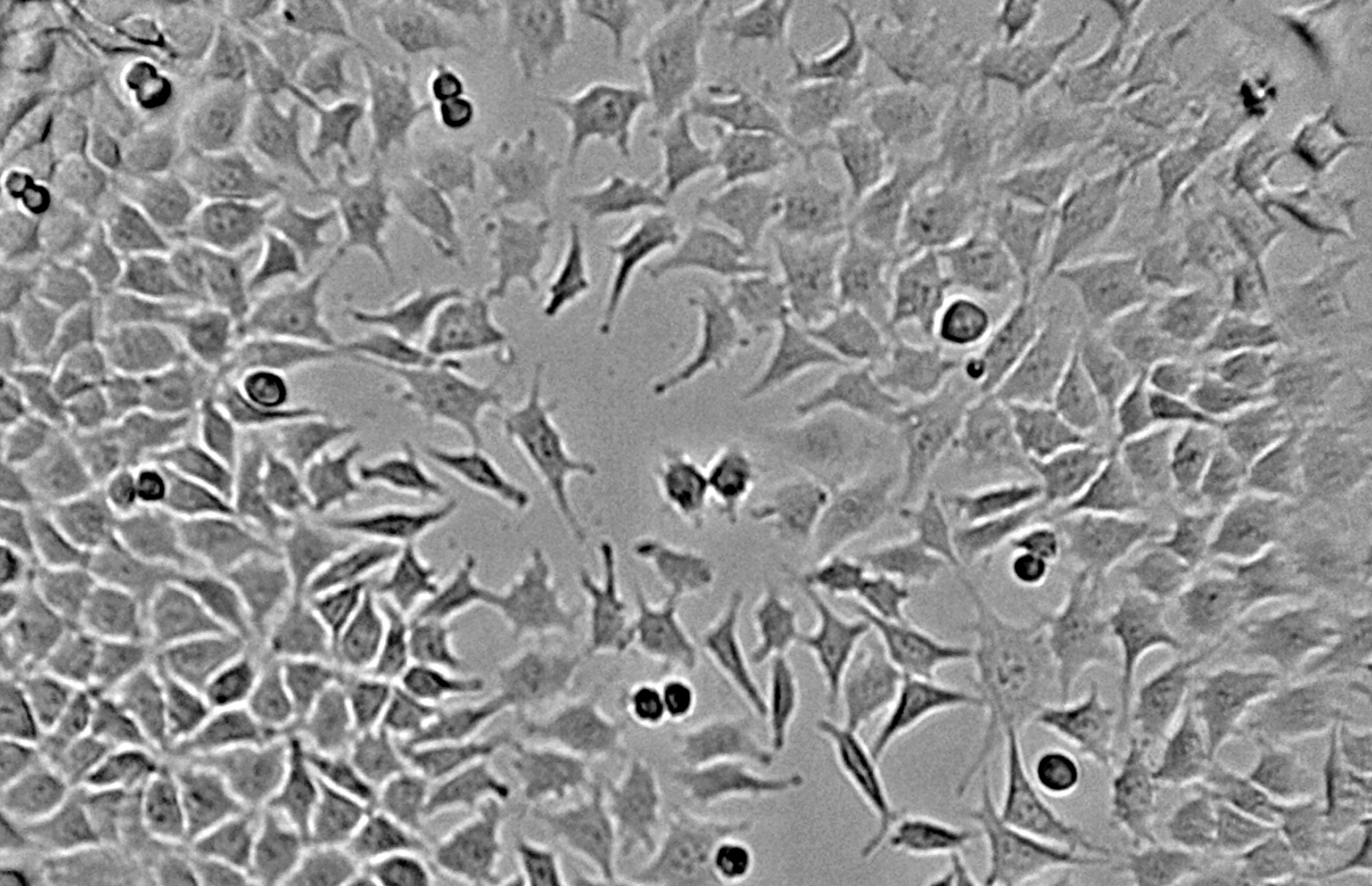
High quality photos & time-lapse videos

Data can be analyzed time-resolved and dynamic changes and developments of cell culture retrospectively down to cell level.

Put it in the incubator, install software – go!



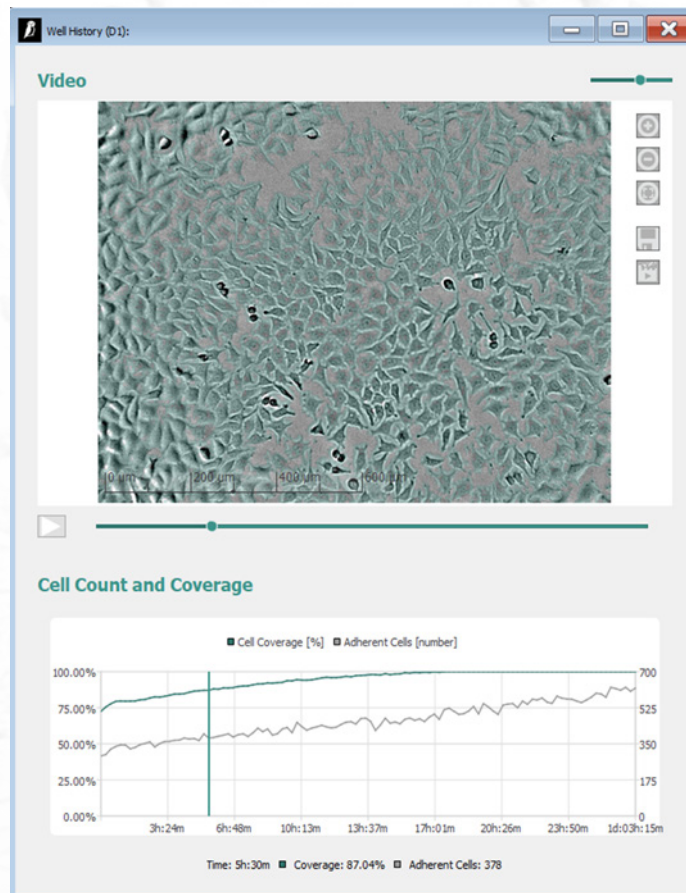
Just plug in the cable, start the intuitive software and get started. No cable clutter in the incubator or the lab. Quickly move or remove the only 18 x 10.5 x 18 cm and 1.05 kg device and leave enough space for other vessels - or further zenCELL owl devices. Benefit from easy cleaning and disinfection and a low-maintenance due to absence of mechanical parts.



Application Note: Cell culture monitoring

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Non-invasive. Automated. Remote

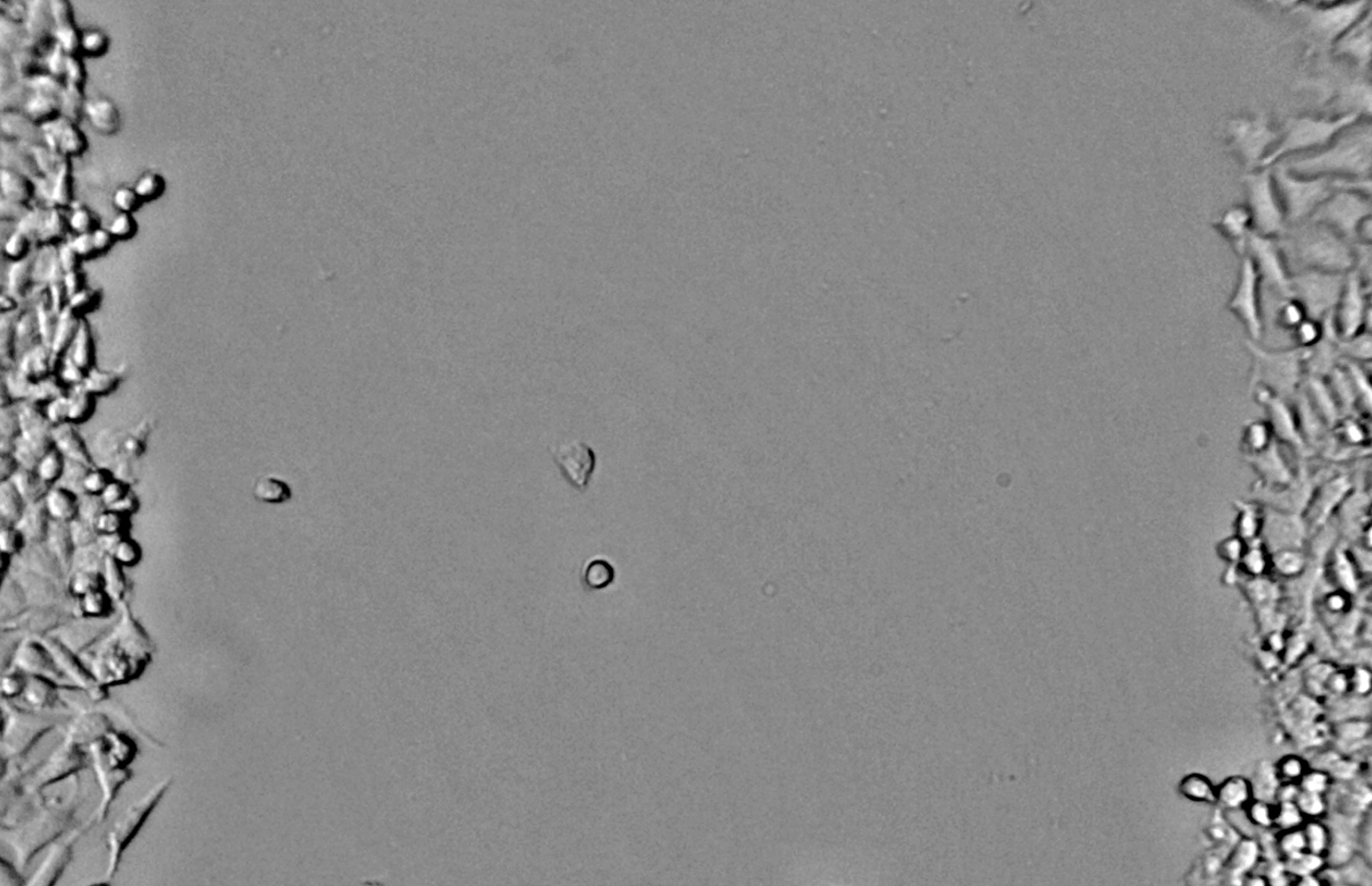


Perfect start of analysis with perfect cells

Automatic calculation of cell confluence enables to get more objective and significant information about the confluence status. You can determine the perfect starting point for your experiments without subjective interpretation.

New insights in your cells' behavior

Analyze dynamic changes and developments of your cell culture retrospectively and in detail. Track changes in cell morphology by zooming down to single cell level and visualizing a cell while it's dividing, moving or dying.



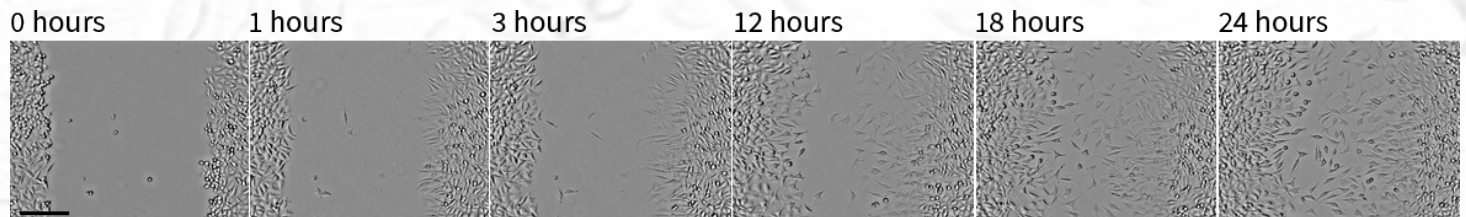
Application Note: Scratch assay

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Record movement. Calculate speed accurately.

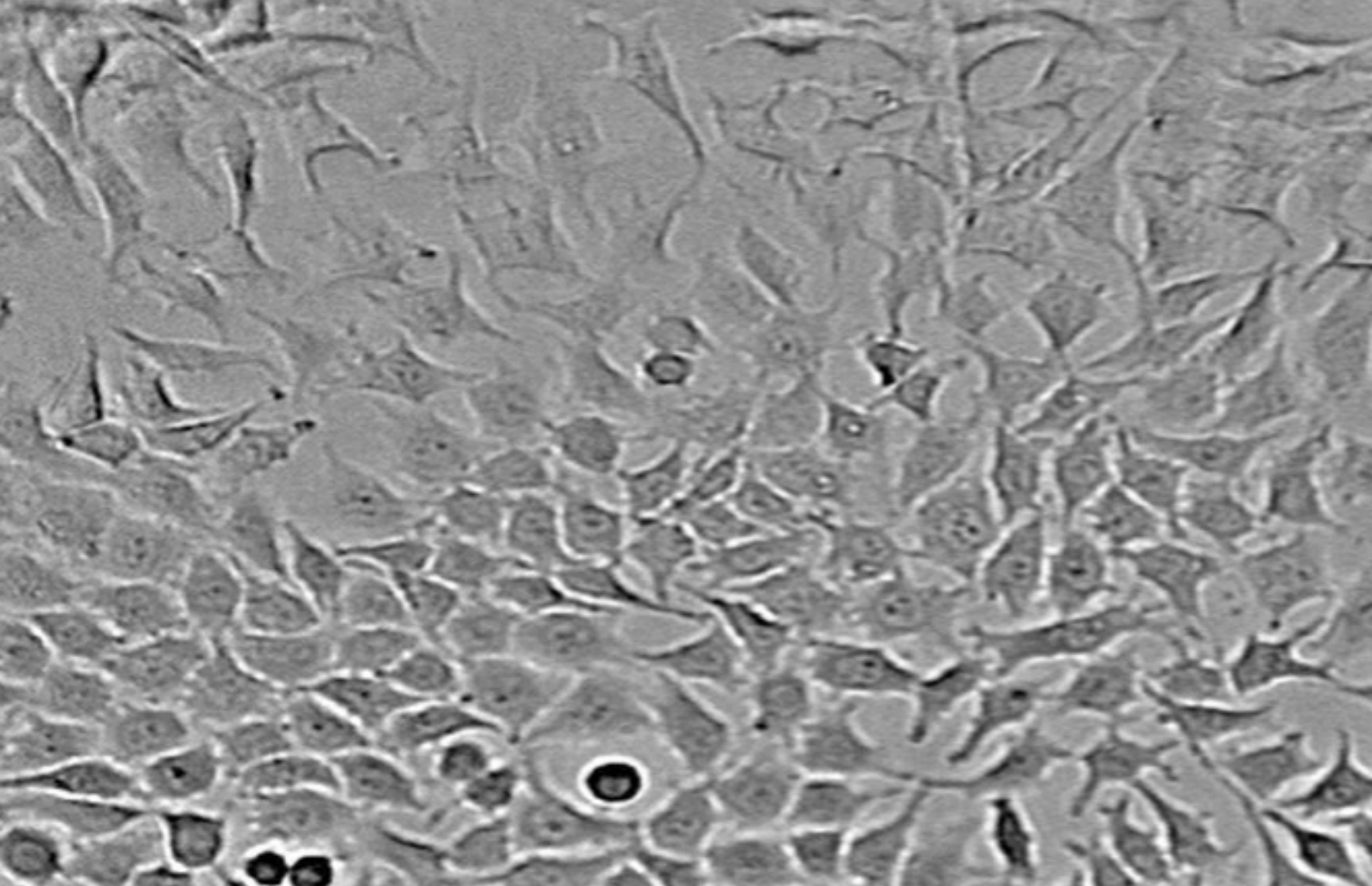
Wound healing speed – accurately calculated

Observe and control every time-point and step of wound healing process retrospectively and in detail. Calculate the speed of wound healing by analyzing the increase of confluence in the gap area.



The gap was inserted in a confluent monolayer of L929 cells by a pipet tip (0 hours). Within a time-period of 24 hours the cell migration results in a continuous closure of the gap.

The simultaneous analysis of cell morphology and confluence in up to 24 wells under identical conditions optimizes the comparability of your results and reproducibility of data.



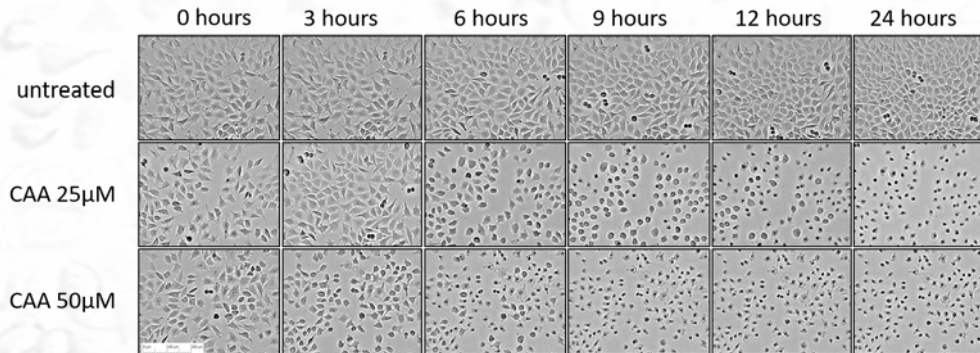
Application Note: Cytotoxicity assay

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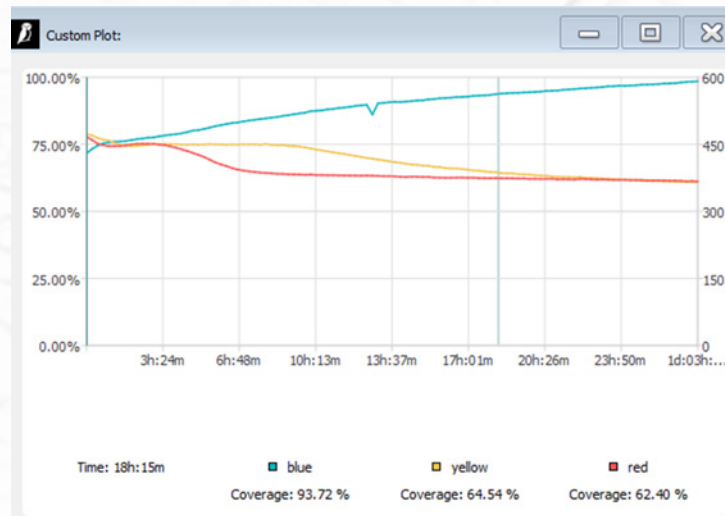
Long term. Parallelized. More detailed.

Visualize drug effects on cell morphology

Evaluate the cytotoxic effect of different agents on up to 24 cell cultures simultaneously and in long-term. Automatic and around the clock data capturing enables to analyze every time-point of your cytotoxicity assay retrospectively and detailed.



Chloroacetaldehyde (CAA) treatment results in a dose-dependent growth inhibition, loss of cell morphology and decrease in cell coverage. top: Digital phase-contrast imaging of L929 cells. Scalebar: 200 μm . bottom: Cell coverage. blue: untreated, yellow: CAA 25 μM , red: CAA 50 μM .



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