Cryo Competence Center LIFE SCIENCES

Cryopreservable Tissue Models for in vitro Applications

Time- and cost-efficient method for the generation of cryopreservable tissue models in standardized multiwell and microtiter plates

Your products & applications

- Gel embedded cells
- 3D tissue models
- *In vitro* assays with tissue/cells
- Metabolic & functional models
- Tumor models
- Drug screening
- Biological safety assessment

...and more

Your objectives as manufacturer & user

- Storekeeping of cell-based products
- Unlimited shipment of cell-based products
- Flexible usage of cell cultures & tissue models
- Low planning effort for in vitro tests
- No need for special qualifications and equipment
- Time and cost saving application

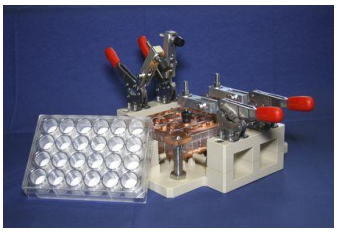
Your Benefits With Our Technology

☺ Modular and automatable technology for the efficient production of 3-dimensional tissue models and *in vitro* Assays

- Time and cost-saving manufacturing - no tissue culturing needed
- Production time per assay with 60 human tissue models <5 minutes
- Nutrient depot for up to 72 hours of assay cultivation after thawing
- Short product development cycles due to free combination of compatible modules (package, matrix, cell carrier gel, cryoprotocol & application protocol)

☺ Unlimited transport and storage (F*rozen* T*ransport* & S*torage* strategy)

- Total replacement of toxic cryoprotectants by natural tissue components
- Efficient cryopreservation with our sophisticated *multiwell*RACK
- Unlimited transportation boxed on dry ice or in dry shippers
- At least 12 month of shelf life in standard ULT-lab freezers
- Proven 100% cell survival in solid tissue after thawing
- Highly resistant against transport damages and adverse storage conditions



ILK *multiwell*RACK for vital cryopreservation of multiwell and microtiter plates in standard LN_2 convection freezers

Center of Cryo Competence in Life Sciences @ Institut für Luft- und Kältetechnik gemeinnützige Gesellschaft mbH
Bertolt-Brecht-Allee 20, D-01309 Dresden, Germany • **www.cryolifesciences.de**

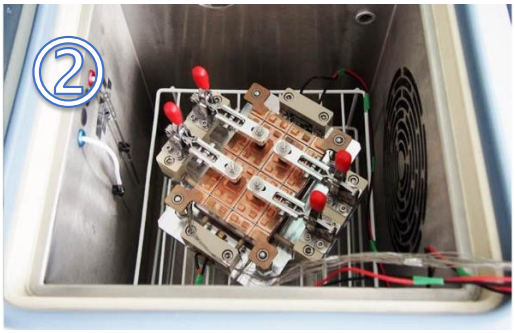
Application example - in vitro cytotoxicity assessment

Multiwell Assay for the Biological Safety Assessment of Solutes and Extracts with 60 Human 3D Gingiva Models

☺ **Very simple application (RTU – Ready to Use strategy)**

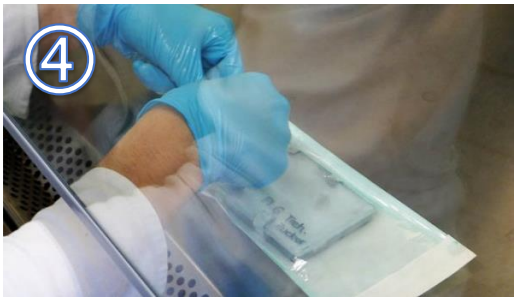
- 48 hours of revitalization without medium exchange & cell culture equipment
- Simple testing procedure - just add & measure directly on the assay plate
- No sterility needed during the whole application process
- Extremely robust against any kind of application errors

Automated manufacturing: combination of tailored components to the cryopreservable 3D tissue assay



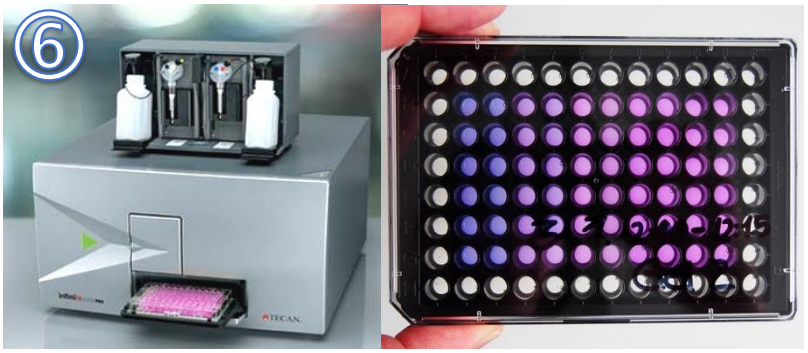
Vital cryopreservation of the multiwell assay in a LN_2 convection freezer by use of our *multiwell*RACK

View to the cryopreserved assay with 60 humane 3D gingiva constructs at -55°C



Sterile packaging of the frozen assay plate for subsequent transport or storage

Thawing of the free floating assay for only 1 min in the water bath



Automated application and photometric evaluation of the *in vitro* toxicity test for 4 different drug concentrations by use of a plate reader with reagent injector (pipette - incubate - read)

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