



Culturing kit for microscopy of adhesively growing cell structures

Introduction:

Various inserts are used in the cell culturing to obtain specimens of grown cells. Such specimens, due to their reduced size have a good accessibility for subsequent laboratory techniques such as detailed microscopic examination. Currently, the most used approach is the insertion of glass disks (so called cover slips). The usage of the glass cover slides has multiple disadvantages and limitations, so we developed plastic-based substitution in the form of a kit allowing cultivation and subsequent processing of the samples for microscopic examinations.

Technology description:

Special plastic inserts with hydrophilic surface allowing cultivation of adherently growing cells. The inserts are compatible with standard cultivation plastic and cultivation procedures. Inserts allow easy manipulation of the grown cell population like transfer into multi-well plate for subsequent experiments. Inserts are also compatible with various fixative procedures and can serve as an ideal specimen for microscopic analyses instead of commonly used cover slides-based specimens.

Advantages over existing solutions:

- ▶ Plastic surface is based on the same material which the cells are grown on – thus are not stressed by the change of the cultivation surface
- ▶ Insert consisting of 7 individual easy-to-remove disks is compatible with standard 10cm cultivation dish. Each disk is compatible with wells of standard 12-well plate
- ▶ Cells plated into 10cm dish are gaining ideal space distribution compared to smaller volumes. The insert in 10cm dish with seeded cells thus provides individual disks grown by well distributed cells which can be placed into the individual well of the 12-well plate in sterile conditions and allow further experiments including transfections, compound treatment etc
- ▶ Cells grown on optimized plastic surface have much better adhesion compared to glass allowing chemical pretreatments such as vigorous pre-extraction without unwanted washing of cells
- ▶ Compared to typically used glass coverslips, the disks are easier to handle
 - Easy to grip by a tweezers
 - Unbreakable material
 - Easy to find the side with cells
 - Available plastic chambers for different chemical treatment (standard 12-well plates)

Development status:

Prototype

IP protection:

CZ 29265

Ownership:

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