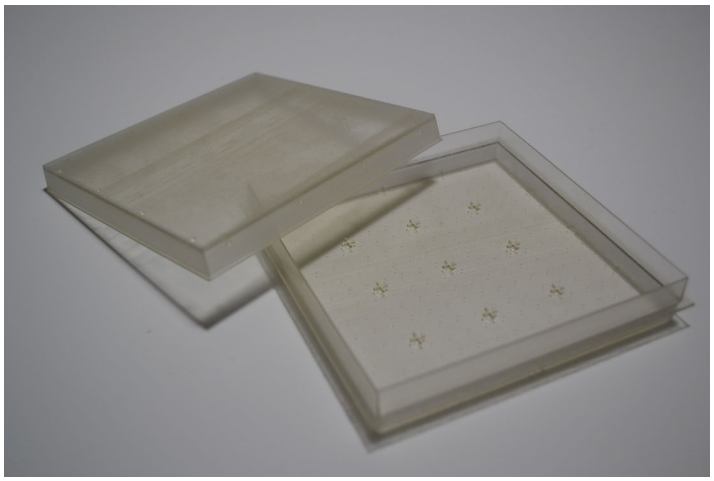
A tissue culture dish engineered for the preparation of microscopic examination slides

Introduction:



The preparation of slides for microscopic examination of adherent cultures is a common practice in cellular and molecular biology laboratories. Briefly, multiple glass slides are placed alongside one another lengthwise, and the dish is seeded with cells. Once the seeded cells adhere and multiply, the slides are removed, processed and examined under a microscope. However, there are flaws in the design of culture dishes currently in use that make this procedure less than optimal. For one, the slides may move sideways over one another during a medium change, or during transport. This damages the cells on the slides and renders the slides unusable. For another, the slides may stick to the dish bed because of capillary forces. This is a problem as it complicates their removal with forceps. If they are tightly bound they may break in the process, again rendering them useless. The culture dish prototype designed at IMTM addresses these issues.

Technology description:

The prototype culture dish is made of glass or plastic and has an engineered dish bed for eliminating the described issues. Tiny projections called "Limit stops" engineered into the dish bed/bottom delineate the space for each slide and restrict its motion to this space. The limit stops are spaced at intervals which allow to accommodate four to six slides in the dish. Additionally, a rasterized surface in the said spaces elevates the slides above the dish bed by 0.05 – 5 mm above the dish bed. The elevation prevents them from sticking to the bed and facilitates their removal with forceps. These spacer elements have a height of 0.05 – 5 mm above the dish bed. It is important to note that the elevated glass slides still grow the cultivating cells and do not interrupt cell-culture in the dish.

Advantages over existing solutions:

In conventional tissue culture dishes, a shifted slide or a slide that breaks during removal necessitates a repetition of the experiment. This results in wastage of labour, time and material resources and impedes discovery. The prototype culture dish effectively eliminates such wastage and is an improvement on the conventional dish.

Development status:

Prototype

IP protection:

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CZ 36622
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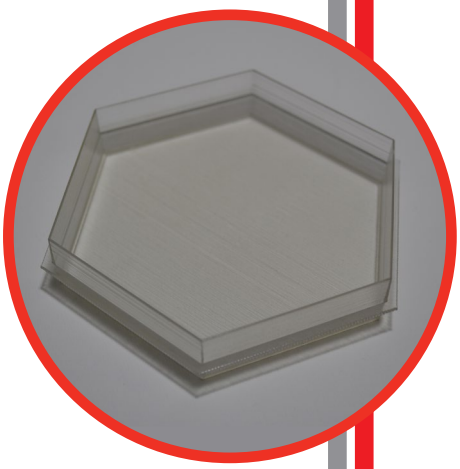
EP 16190447.9



Ownership:

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More information is available upon signing a CDA/NDA. Please contact IMTM´s director (director@imtm.upol.cz) or the technology transfer office (tto@imtm.upol.cz)