

SOP details

Title	Sterilization of TopoChip
Description	This SOP describes how to sterilize the TopoChip using 70 % ethanol.
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	Name	Date	Signature
Prepared	Phani Krishna Sudarsanam	07-05-2020	
Reviewed	Jan de Boer	18-03- 2021	
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Version changes

Version	Name	Date	Changes made
1	Phani Krishna Sudarsanam	07-05-2020	Made in TU/e
2	Jan de Boer	16-4-21	With track changes
3			
4			
5			

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1 Purpose

This SOP describes how to sterilize the TopoChips before using them for cell culture experiments.

2 Principle

TopoChips are produced under septic conditions in the microfabrication lab, so they must be sterilized before being used for cell culture experiments. Immersion in 70% ethanol ensures that there is no contamination on the TopoChips.

3 Before You Start

This SOP precedes TopoChip screening. Before using this SOP, one should be familiar on how the TopoChips are fabricated and which kind of polymer is used for making them that are used for the cell culture experiments and whether ethanol sterilization is compatible with the chemistry of the TopoChip. Generally, TopoChips made of Polystyrene, Polylactic acid (PLA), Poly(styrene-block-isobutylene-block-styrene) or SIBS can be used to sterilize using 70 % ethanol.

4 Required materials

4.1 Workplace

This SOP can be performed in the Cell lab (Gemini-Zuid 4.01 & 4.02). Follow the safety protocols instructed by the lab managers and perform the experiment accordingly in allocated locations in the lab.

4.2 Equipment and disposables

- Class II-biological safety cabinet with UV light
- Incubator with 5% CO2 and set to 37 °C
- Conical flask for waste with chlorin tablets
- Biohazard waste bag and standard
- Paper tissues
- Micro pipettes
- Sterile pipette tips (1000 μl)

4.3 Reagents

- 70% ethanol at room temperature for sterilization
- Phosphate Buffered Saline (sterile PBS, Sigma, Cat. No: D8537)
- 6-well plate
- Marker pens

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5 Procedure

5.1 Working procedure

- All the steps are performed in a laminar air flow safety cabinet.
- A new sterile 6-well plate is opened and properly labelled using a marker.
- Place TopoChip in a well.
- 500 μ l of 70 % ethanol is added to the well and left in the laminar air flow safety cabinet for 30 minutes. Make sure that the TopoChip is submerged in the ethanol solution.
- After 30 minutes of ethanol treatment, ethanol is aspired out of the well, and TopoChips are washed with 1 ml of sterile PBS for three times.
- PBS is aspirated out of the wells and the well plate with TopoChips inside are ready for cell seeding.

5.2 Safety.

Work in the Cell lab in Gemini-Zuid according the safety regulations. Follow the instructions given in the lab introduction by the lab managers

6 Waste

When working in the cell lab, handle waste according to guidelines which are labelled at the waste disposal based on its categories as given below in the table 1

7 References

SOPnr	Title
2.2	Cell seeding for TopoChips

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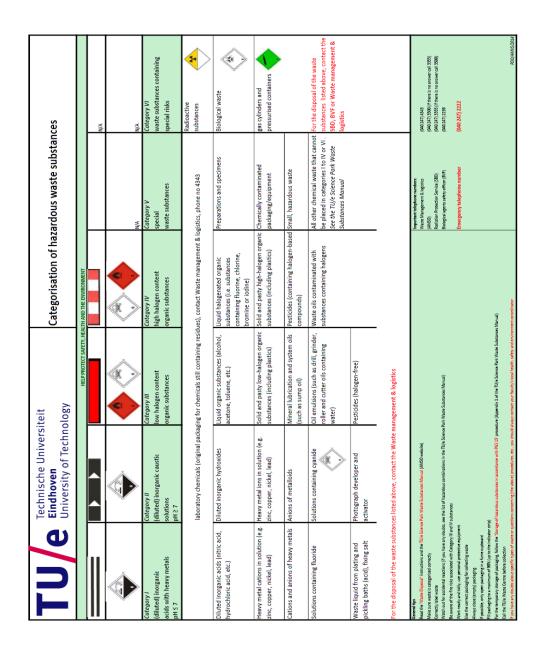


Table 1: Categories of hazardous liquid waste

File name: SOP_2.1_Sterilization of Topochips.docx

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