

PEG Coated Slides

Dogic Lab

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This protocol is for coating glass surfaces with a sterically repulsive (non-sticky) biocompatible brush for use in microscope flow channels.

Materials:

Microscope Glass & containers

PEG (mPEG-Silane-5000, [Laysan Bio](#) Item# MPEG-SIL-5000-1g)

Ethanol

Acetic Acid

Hellmanex Detergent

2M NaOH

Clean Microscope Glass Surfaces

1. Soak coverslips/slides in 2M NaOH for ~30minutes
2. Clean slips/slides using Hellmanex.
 - a. Immerse glass in DI water, add Hellmanex.
 - b. Heat in microwave to warm water and disperse soap
 - c. Sonicate for ~10minutes.
 - d. Rinse glass with DI water.
3. Immerse slides/slips in Ethanol and sonicate.
4. Dry slips/slides off in the oven.

PEG Coating the Glass

5. Right before use, prepare 0.5% PEG in Ethanol with 1% Acetic Acid, e.g. 5mg of PEG-Silane in 1mL of Ethanol and 10uL of Acetic Acid.
6. Drop 50uL onto the middle of a slide, and take another slide and drop it on top of the drop to spread the PEG solution and coat two pieces at a time.
7. Place the slide/PEG solution sandwich at 70C for ~30minutes.
8. Immerse the slides/slips in DI water and sonicate to remove extra PEG. Separate the glass slides underwater.
9. Rinse 2-3 times with DI water.
10. Dry and use.