

Preparation of a Lipid Monolayer Surface Coating in ibidi μ -Slide I Luer

This Application Note describes an example protocol for creating a lipid monolayer in ibidi μ -Slide I. Using different volumes for coating and washing, this protocol may be adapted to all μ -Slides with the hydrophobic, uncoated version of the ibidi Standard Bottom.

Used Lipid: SOPC (Stearoyl-Oleoyl-Phosphatidylcholine, Avanti Polar Lipids)
Used μ -Slide: μ -Slide I^{0.4} Luer Uncoated (ibidi, #80171, sterilized)

1. Preparation

Preparation of dry lipids (Only necessary if lipids are delivered in chloroform):

Fill 1 mg of dissolved lipids in a clear glass vessel. Remove chloroform under a slight nitrogen stream. Remove the rest of chloroform by storing the open glass vessel in a vacuum chamber for several hours.

Preparing the lipid solution:

Dissolve 1 mg dried lipids in 1 ml of a 70/30 milliQ water-isopropanol mixture in a clear glass vessel. Vortex for 30 sec. In case the solution is not absolutely clear carefully titrate isopropanol to the solution until the solution is absolutely clear.

2. Coating

Fill 100 μ l of the lipid solution into the channel. Slowly (about 1 ml in 30 sec) add pure milliQ-water into one of the two vessels (vessel 1) in order to exchange the lipid solution against clear water. Remove the liquid successively from vessel 2. Rinse extensively with pure water to remove the alcohol totally.

