

**iGEM TU/e 2017**  
Biomedical Engineering

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## Flow chamber

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# 1 Preparation and loading of the Flow chamber

**Estimated bench time:** 0.5 hours

**Estimated total time:** depending on the amount of samples roughly 20 mins per sample

**Purpose:** Preparing samples for microscopy assays.

## 1.1 Materials

- Cover plate
- BSA (30 mg/ml)
- Double-sided adhesive tape
- Ethanol 100%
- Microscopy glass slides
- samples
- Nail polish
- Tissues fiber-free
- Assay Buffer

## 1.2 Setup

- Clean the glass plates with 100% ethanol
- Cut the double-sided adhesive tape in half and place two strips of approximately 2-3 cm on the long sides of the glass plates leaving a channel in the middle.
- Clean the cover plate with 100% ethanol and place it over the channel.
- This creates a flow channel with an approx. volume of 20-25  $\mu$ l

## 1.3 Loading flow chamber

### 1.3.1 Materials

- BSA (30 mg/ml)
- samples
- Nail polish
- Tissue
- Assay Buffer

### 1.3.2 Setup & Protocol

- First wash the flow chamber with 100  $\mu$ l of buffer, speed this up by holding a fiber-free tissue at the other side to 'pull' the buffer through. This movement is because of the capillary effect
- Add 30 $\mu$ l of BSA and let it incubate for 15 minutes
- Wash away residual BSA with 100  $\mu$ l assay buffer
- Add 30 $\mu$ l of your protein mix
- Close sides with nail polish to prevent water from evaporating