

## Protocol Magnetophoresis

### Procedures:

1. Fill Syringes with the solutions and place them into the syringe pumps.
2. Connect syringes with the magnetophoresis chamber.
3. Start the syringe pump with buffer solution with 30 ml/h. Stop when no air is left in the chamber.
4. Place collector pipette tips in the outlet ports.
5. Start syringe pumps with buffer- and particle solution, both at 20 ml/h.
6. When collector tip is 2/3 full stop the pumps.
7. Remove 200  $\mu$ l collector tip simultaneously.
8. Fill the output solutions into collectors.
9. Resuspend the solution.
10. Fill the solution into the counting device and determine the particle concentration.

### Cleaning :

1. Rinsing with soap water
2. Rinsing with demineralised water

### Sterilization (optional) :

1. Rinsing with Ethanol 70% (v/v)

### Equipment:

- two syringe pumps
- Magnetophoresis chamber (contact us for the 3d printable file)
- Neubauer cell counter
- Glass plates
- Brightfield microscope
- Neodymium-Alloy-Magnet
- 200  $\mu$ l pipette tips

### Reagents:

#### Buffer solution

Reagent	Volume [ml]
water	39,5
Baktolin <sup>®</sup>	0,5
<b>total</b>	<b>40</b>

#### Nanoparticle solution of magnetic beads

Reagent	Volume [ $\mu$ l]
water	9200
Baktolin <sup>®</sup>	300
blue dye	100
magnetic beads	100
<b>total</b>	<b>10000</b>

### Iron micro particle solution

Reagent	Volume [ $\mu$ l]
water	800
Baktolin <sup>®</sup>	50
blue dye	50
iron particles 10% (w/V)	100
<b>total</b>	<b>1000</b>