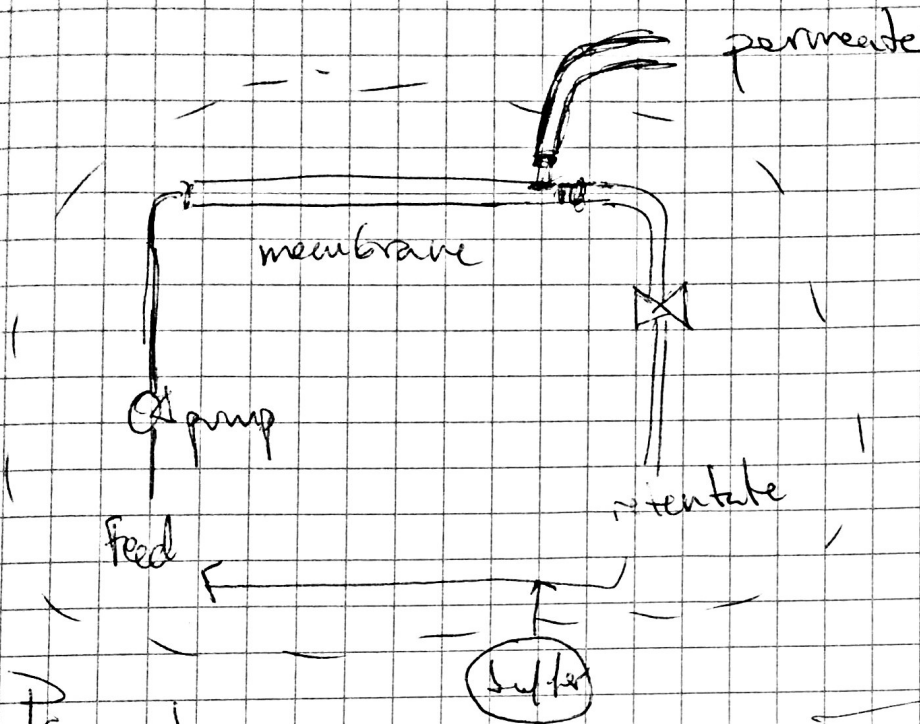


# Experiment #2: Membrane Filtration

10/10



## Parameters

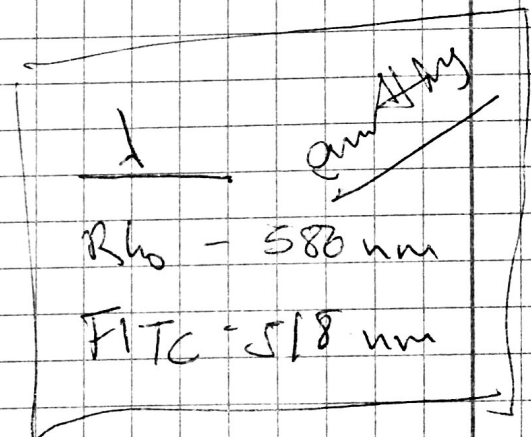
shear rate

transmembrane pressure

flow rate

volume in

back pressure valve



Make 1L of PBS solution for 10x stock (0.1L)

Trial 1, Just rinsing with 10x PBS

30 mL in Falcon tube

200 mL reservoir (199.0 g)

$BV = 14.7$ ,  $Q = 100 \text{ mL/min}$ , pump in D

## Meeting #1

- Calibration curve for RRV
- TMP vs Flux curve (dextran)
- R and DV

## Lab Day #2

Aimed for  $\begin{cases} R: 0.0119 \text{ mg/mL} \\ DFITC: 0.381 \text{ mg/mL} \end{cases}$   
in PBS (1:1  $\frac{\text{PBS}}{\text{DFITC}}$ )

(Based on 130 sales per dex)

TMP curve: Dextran (no FITC) + PBS  
[7.62 mg/mL]

40 mL solution = xD + yPBS

$7.62 \text{ mg/mL} \times 40 \text{ mL} = 30.48 \text{ mg Dextran}$

from 20 mg/mL  $\rightarrow 1.524 \text{ mL stock}$

Flow rates: [50, 100, 150, 200] mL/min + 38.476 mL PBS

TMP: [2, 2, 20] psi

↑  
initial feed

RhoB Dextran: NO FITC!

6 mL PBS  
6 mL Dextran  
3.73 mL RhoB

FITC      RFU

$R_H$  : 1503.1

$P_H$  : 150.1 , 129.9

Don't subtract 0.0001