Tuesday Lab notebook

Morning: Data Analysis course with Jonathan

See Notes_DataAnalysis1

We got feedback on our protocol and comparison method: it is much easier and more automated to compare absorbances → it would be more relevant to do measure absorbance over time to obtain a growth curve. We can convert this growth curve (exponential function) into double log scales to obtain a linear curve from which we can obtain the slope. We can then compare the slope of the log growth of the bacteria in different concentrations of ethanol/triclosan to find the optimal one for our experiment.

Afternoon: Lab session

ATCC strain name

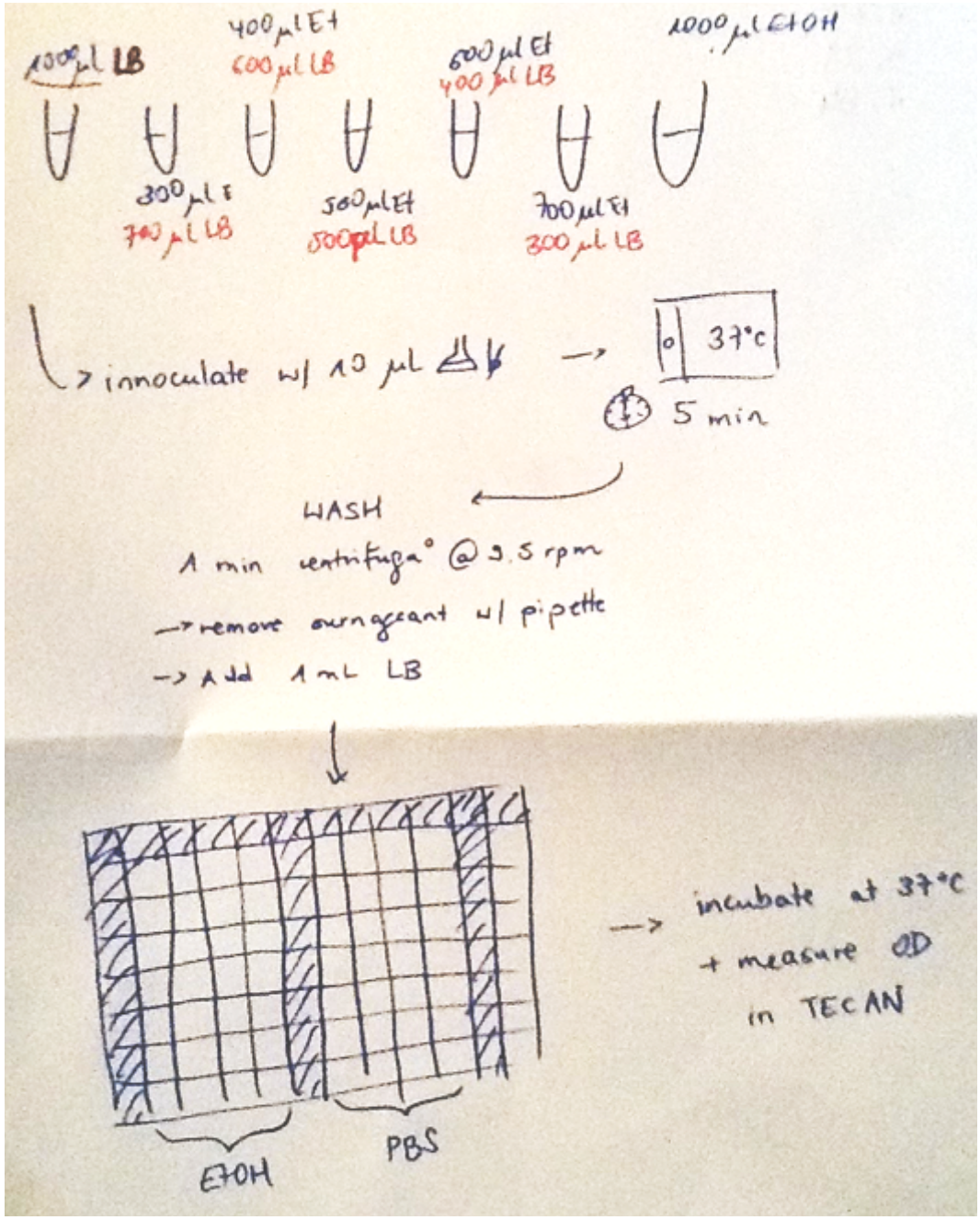
After much searching for triclosan (pharmacies, labs in Cochin), we decided to change one of our detergent liquids.
We first decided to compare ethanol with another alcohol: phenol. Seeing as we did not have lot we decided on our third choice: SDS (sodium dodecyl sulfate).
SDS is used in cosmetics, toothpaste, shaving cream and shampoo to kill bacteria.

We therefore did bibliography to find the correct concentration range to use in both cases and devised a new protocol that you can see in a visual form on the next page.

We used 99,9% ethanol and 1% SDS for the dilutions.
For the SDS we did a serial dilution with a 10 dilution factor from 1%, 0,1%, 0,01%, 0,001%, to 0,0001%.

We did all these manipulations under the hood.

We were concerned because the LB in our night culture falcon was not opaque and we therefore felt that the bacteria had not grown. This thought was somewhat confirmed when we centrifuged the eppendorfs and saw no group of cells at the bottom. We continued the preliminary experiment nonetheless, hoping that there was in fact bacteria in the solutions.


1000 µL LB
400 µL Et
600 µL LB
600 µL Et
400 µL LB
1000 µL EtOH
300 µL E
700 µL LB
500 µL Et
500 µL LB
700 µL Et
300 µL LB
> innoculate w/ 10 µL
37°C
5 min
WASH
1 min centrifuga° @ 3.5 rpm
-> remove supernatant w/ pipette
-> Add 1 mL LB
EtOH
PBS
-> incubate at 37°C
+ measure OD
in TECAN