Jan 20

- Sanitize location for sterility

- Organize materials on the table
  - Plasmids & transformation mix aren't necessary yet.

- Creating Agar Plates by:

  1 - Mixing powder with water

  2 - Microwave
  - ~30 second intervals
  - Wait until the mixture nearly boils, then take out. Not letting it bubble for too long

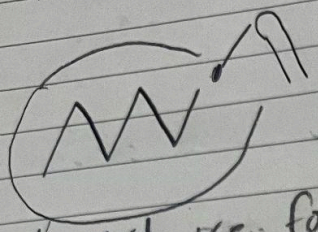
- Mixture is really hot so I'm waiting for it to cool.

1. Pour plates from Agar mixture

2. Let it settle for 1 hr
   - Agar plate is hard & solidified

3. Streak bacteria on plate

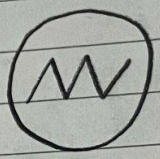
Motion: Of streak



-5 stroke
-Zig-Zag for coverage

-I must use for rest of experiment to keep consistent

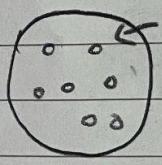
-I make 4 plates



-Wait until tommorow for bacterial growth
↖ I ended up waiting 1 week since there was little growth

Jan 27

1. Using the inoculation tube I'm scraping off 1 colony

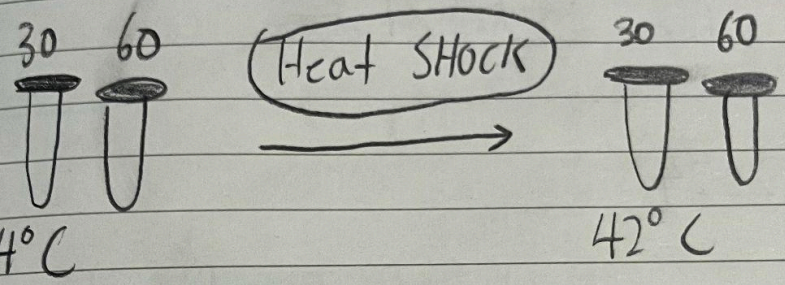


-Bacteria has grown a lot

2. Put it in transformation mix which includes Peg80
Add GFP Plasmids
-I'm mixing it by flicking the tube

3. Incubate in the fridge
-30 mins

-For the heat shock process, I need to let the bacteria be adjusted to the cold, then when its placed in 42 C°, water, it is shocked



4. Heat Shock!

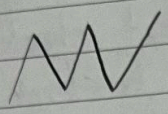
-I'm putting one tube in 42°C water for 30 secs while the other one for 60 secs

-I'm maintaining it by using a thermometer & adjusting by adding warm water.

5. Incubation:

-I'm incubating it for 12 hrs so that the plasmids can settle into the bacteria, this step is crucial for the transformation

6. Streak bacteria
- I used the same streaking pattern of:



- I'm letting the transformed bacteria grow for 24 hrs / 1 day

Jan 28, 2024
Results:

Table of Transformation

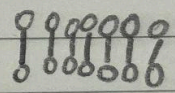
	1	2	3	4
30 SECS	X	X	X	X
60 SECS	X	X	X	✓

30 seconds had no transformation, this is probably due to little time for the heat shocking process. It looks the same, just white bacteria.
60 seconds only had 1 plate of transformation I expected more from 60 seconds

Next time I'm going to try heat shocking it for 90 seconds

* My Science teacher just told me that labs typically heat shock for 90 seconds however it depends on the bacteria.

I'm concluding that 30 seconds is not effective due to little disruption of the lipid bilayer.



Next time I will perform with 60 secs & 90 secs