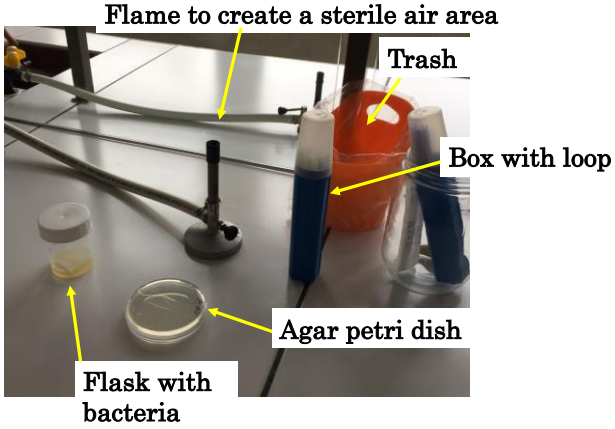
Bacterial degradation of several plastics:
Test for viability and development of bacteria

1. Preparation

1.1 Tie up your hair.

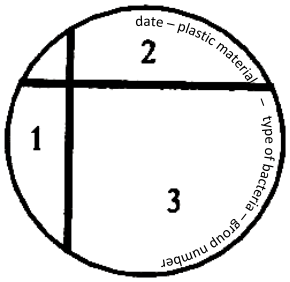
1.2 Set your workspace like in the picture.



1.3 Turn on the Bunsen burner.

1.4 Along the edge of the bottom of the petri dish, write: the date,
the plastic material,
the type of bacteria,
group number.

1.5 On the bottom of the petri dish, draw two lines as it is shown.



2. Sample collection

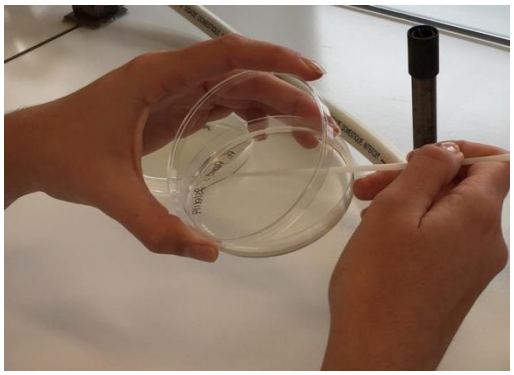
2.1 Sterilize the loop by heating in the flame of the Bunsen burner for 10 seconds.

2.2 Cool it down by touching the agar.

2.3 Collect a sample of the liquid medium with the sterilized loop.

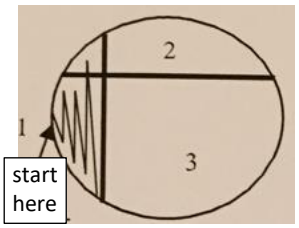
3. Inoculation

3.1 Inoculate the nutrient agar with the bacteria sample as shown. Do not open the petri dish completely.

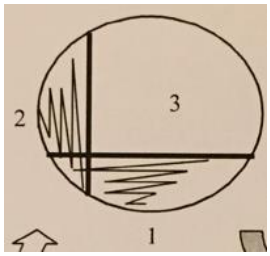


3.2 Spread the bacteria as shown below.

First, spread the sample without pressure on area 1 of the petri dish.



Turn the petri dish 90° anticlockwise so you can spread the sample on area 2 without pressure.



Turn the petri dish anew anticlockwise for the area 3. Do not put pressure on the petri dish at all.

4. Incubation

4.1 Petri dishes are incubated at 37° C for 24 hours.

5. Observe your results. Are there any differences in degradation rate of your plastic between Bacillus subtilis (B) and Pseudomonas fluorescens (P)?

6. Take a picture of each petri dish and interpret the results.

7. Prepare a presentation of your results and present it to the audience.

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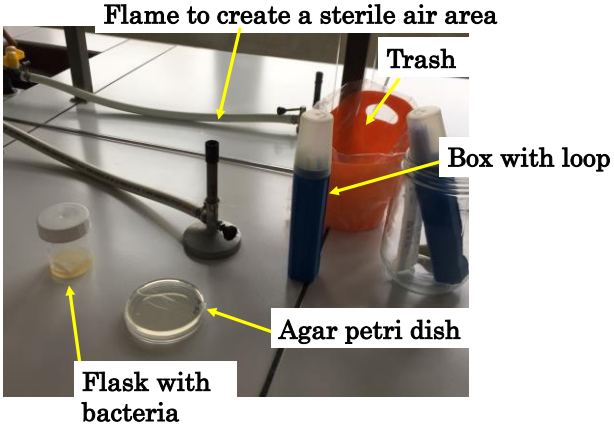
8. Forberedelse

8.1 Sæt dit hår op.

8.2 Stil din arbejdsplads op som på billedet.

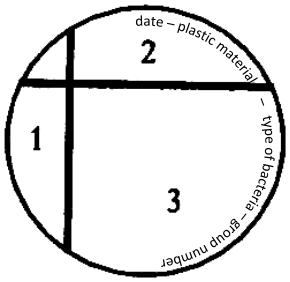


8.3 Tænd bunsenbrænderen

8.4 Skriv på bunden af petriskålen (langs kanten)

Datoen,
Plastik materialet,
Bakterietypen,
Gruppenummer.

8.5 På bunden af petriskålen tegn to linjer som på tegningen



9. Sample collection

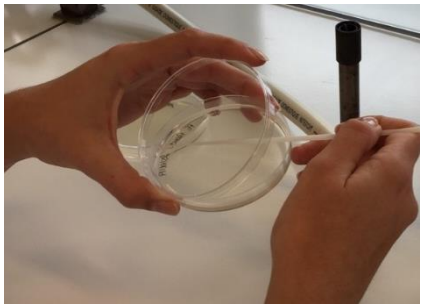
9.1 Steriliser podenålen ved at varme den op I flammen fra bunsenbrænderen I 10 sekunder

9.2 Køl den ned ved at røren agaren (vækstmediet)

9.3 Saml en prøve af det flydende vækstmedie med den sterilliserede podenål

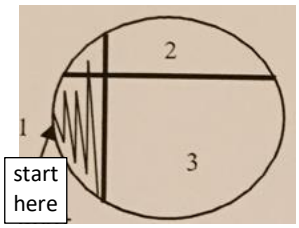
10. Podning

Pod vækstmediet med bakterien som vist på billedet, lad vær med at åbne petriskålen helt.

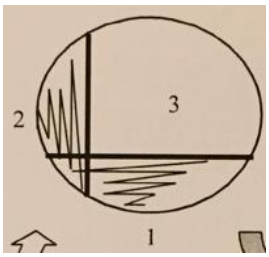


10.1 Fordel bakterien som vist nedenfor.

Først spred prøven uden at presse ned på område 1.



Vend petriskålen 90° Imod uret. Så du kan sprede prøven på område 2 uden at presse det ned.



Vend igen petriskålen imod uret, til område 3. Tryk på intet tidspunkt ned på petriskålen

11. Inkubering

11.1 Petriskålene bliver inkuberet ved 37° C i 24 timer.

12. Observer jeres resultater. Er der nogen forskelle I nedbrydningen af plastikken mellem, *Bacillus subtilis* (B) og *Pseudomonas fluorescens* (P)?

13. Tag et billede af hver petriskål og fortolk resultatet

14. Forbered en præsentation af jeres resultater og vis det for publikummet.