iGEM 2017 – Microbiology – BMB – SDU

Title: Antibiotic stock production	**Date issued:** 2017.05.11
SOP number: SOP20	**Review date:** 2017.09.10
Version number: 03	**Original by:** EG

1. Purpose

To produce antibiotic stocks

2. Area of application

This procedure is valid for ampicillin and chloramphenicol antibiotics

3. Apparatus and equipment

Apparatus/equipment	Location (Room number)	Check points	Criteria for approval/rejection
Weighing scale		●	
Weighing boats		●	
Pipettes (1000)		●	

4. Materials and reagents – their shelf life and risk labelling

Name	Components (Concentrations)	Manufacturer / Cat. #	Room	Safety considerations
Blue pipette tips		Contact lab-manager	Micro storage	
Chloramphenicol		Sigma Aldrich	Micro chemical room	
Eppendorph tubes		Contact lab-manager	Micro storage	
96% ethanol		Contact lab-manager	Micro storage	
Syringe		Contact lab-manager	Micro storage	
Needle		Contact lab-manager	Micro storage	
Filter		Contact lab-manager	Micro storage	
Ampicillin		Sigma Aldrich	Micro chemical room	

5. QC – Quality Control

Calculation of antibiotic concentration

$$Antiobiotic\ stock\ concentration \times Required\ volumen\ of\ antibiotica$$

$$= Desired\ concentration\ of\ antibiotica \times Total\ volumen\ of\ media$$

$$\Rightarrow$$

$$Required\ volume\ of\ antibiotica = \frac{Desired\ concentration\ of\ antibiotica \times Total\ volumen\ of\ media}{Antiobiotic\ stock\ concentration}$$

6. List of other SOPs relevant to this SOP

7. Environmental conditions required

8. Procedure

8.1: Ampicillin

A concentration of 100 mg/mL is required.

8.1.1: 5 mL of water is sucked up by a syringe.
8.1.2: Needle is added to the syringe
8.1.3: The needle is put into the Ampicillin stock and the water is added.
8.1.4: Needle is pulled out of the stock and the stock is shaken to mix the content.
Be aware: There can ocurre pressure in the container with the Ampicillin stock.
8.1.5: The now mixed ampicillin is again sucked into the syringe. This is done with the container upside down since the needle on the syringe is short.
8.1.6: Take the needle of the syringe and add a filter to the syringe instead.
8.1.7: By eye drip 500 µL or 1500 µL into an eppendorftube.

8.2: Choramphinicol

8.2.1: 150 mg of Chloramphinicol is added to 5 mL 96% ethanol to obtain a concentration of 30 mg/mL
8.2.1: Make stocks to the freezer in eppendorptubes containing 500 µL.

9. Waste handling

Chemical name	Concentration	Type of waste (C, Z…)	Remarks
Pipette tips	N/A	GMO waste (yellow bags)	

10. Time consumption

- Total-time:
  Ampicillin: 20 min.
  Chloramphinicol: 5min
- Hands-on-time:
  Ampicillin: 20 min
  Chloramphinicol: 5 min.

11. Scheme of development

Date / Initials	Version No.	Description of changes
13.06.17 / PRA	01	The SOP has been written
13.01.02 / TJK	01	The SOP has been approved
17.05.11/ EG	02	The SOP has been modified
17.09.10 / EG	03	The SOP has been modified

12. Appendices