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Electrolysis agarose gel preparation V.1

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Protocol status: Working
We use this protocol and it's working

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Abstract

This is how students at Maastricht University's Biomedical Sciences bachelor are instructed to prepare agarose gel for electrolysis.

Materials

- Micropipettes + tips
- Glass erlenmeyer
- Microwave
- Gel casting module
- UV-transparent gel casting tray
- Combs
- Electrophoresis system
- Power Source
- UV visualization unit

Reagents

- 50x TAE buffer (Tris-EDTA-Acetic Acid buffer)
- Aragose
- GreenStar /!\
- DNA marker
- DNA gel loading dye

1 Prepare the casting tray by putting the sides together.

2 The silicon coated site should point towards the inside.

3 Apply the elastic band around the extruding parts in the middle of the sides to hold everything in place.

4 Flip the assembled tray in the correct position and press it lightly on the table to ensure proper alignment of the both sides.

5 Add the comb and put the tray in the box to catch any potential spills if not correctly assembled.

6 Prepare a 1% agarose gel in 1x TAE buffer. The total volume depends on the size of the casting tray; we will make 100 mL gels. Calculate and weigh the amount of agarose required for your volume. Deposit the agarose in a glass Erlenmeyer flask and add the indicated volume of 1x TAE buffer.

7 Pour the mixture in the casting tray with combs. Remove any air bubbles with a plastic filter tip.

8 Allow the gel to solidify (00:10:00). 10m

8.1 Remove the comb.

9 Insert the casting tray into the electrophoresis equipment; the side of the slots in the direction of the cathode (black).
Do not add the metal casting system into the electrophorese system, just the gel.

10 Prepare and add 1x TAE Buffer to the system until the gel is completely submerged.