# Preparation of Agarose Gel

NUS iGEM[1]

[1]National University of Singapore

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NUS iGEM
National University of Singapore

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

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## ABSTRACT

2023 NUS-Singapore iGEM team followed this protocol to prepare a 1% agarose gel. The team used this 1% agarose gel to isolate the DNA fragments from the common PCR and the colony PCR products.

## MATERIALS

1. Agarose Powder
2. 1x TAE Buffer (Tris-Acetate-EDTA Buffer)
3. Ultra GelRed Gel Stain

**PROTOCOL integer ID:**
88416

**Keywords:** Agarose Gel, Gel, Agarose, Gel Electrophoresis, DNA Isolation

## SAFETY WARNINGS

Proper lab PPE must be worn at all times while preparing the agarose gel. Additionally, thermal gloves designed for high-temperature protection must be worn when handling the hot agarose solution after microwaving.

1 For a 1% agarose gel, mix the following in a conical flask:
- 5 g of Agarose powder.
- 50 mL of 1x TAE buffer (Tris-Acetate-EDTA Buffer).

2 Swirl the agarose solution to mix it well.

3 Heat the agarose solution in a microwave until it boils.

4 Take out the conical flask from the microwave and swirl the conical flask until the agarose solution is clear and without undissolved agarose powder or lumps.

**Safety information**

Wear thermal gloves when handling the hot conical flask from the microwave to prevent burns.

5 Add 5 µL of Ultra GelRed gel stain into the agarose solution and swirl the conical flask until the colour becomes uniform.

6 Secure a gel tray tightly onto a gel caster and place an 8-well comb or 15-well comb into the tray.

7 Pour the agarose solution into the tray, ensuring that there are no bubbles.

8 Cool down the agarose solution for at least 00:30:00 to get a solidified agarose gel. 30m