

Gel Electrophoresis Basics

Safety tips for making and pouring agarose gels

1. Use an Erlenmeyer flask two-three times as large as the amount you are mixing to help prevent boil overs.
2. **Prepare buffer:** add powder in the flask, add required amount of distilled or de-ionized water. Swirl to dissolve.
3. **Prepare agarose:** Use the agarose tabs, then add 60 ml 1X TBE buffer for Bandit gel electrophoresis (this will depend on your system). Allow tab to dissolve fully before heating. *Important! Use **BUFFER** to make agarose gels, NOT distilled water.
4. If using powdered media, measure amount needed. Once a substance is taken out of the stock container, it is not to be put back in. Excess must be discarded. Take LESS than you think you will need.
5. Microwave at 30 second intervals until boiling (usually takes 3 rounds). Agarose solution will look very clear with no powder/granules observed.
6. Media may also be heated until clear on a low boil on a hot plate, with a stir bar. **Carefully watch for boil overs and scorching!**
7. **Always stand while making media.** This helps prevent burns to legs, if molten agarose would be spilled.
8. Wait until cool enough to pour (should be very warm, but comfortable to hold in bare hands). Pouring agarose that is too hot can warp trays.
9. Place comb near the negative end of the casting tray unless otherwise instructed.
10. Never pour unused media down the sink. It will solidify and clog the sink. **Wash glassware immediately** to prevent agarose from solidifying in the glassware, making clean up much more difficult.

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