



CULTURE MEDIA PLATE PREPERATION Manual Preparation

1. Introduction

A microbiological culture, or microbial culture, is a method of multiplying microbial organisms by letting them reproduce in predetermined culture medium under controlled laboratory conditions in a specially prepared nutrient medium.

2. Culture Media Plate Preparation

General Component required

- Glassware
- Measuring scale
- pH meter
- Autoclave
- Purified water, pH 5.5-7.5
- Water bath
- Incubator

3. Procedure for preparation

1. Suspend appropriate amount of media powder (as per instruction on the media bottle) in 1 liter of distilled or deionized water.
2. Heat the mixture completely dissolved and avoid overheating.
3. Sterilize in autoclave at 121 °C for 15minutes. (Some agars do not need to be autoclaved such as SS Agar)
4. Cool to 45-50 °C and if needed, add the required additional component to the media (to prepare chocolate agar, reheat the media in water bath until it becomes brown in color).
5. Pour 15-20 ml of the ready media on to petri dishes.
6. Leave standing for thirty minutes to solidify.



Figure 1 : Cooling down the medium mixture



Figure 2 : Adding required component (if needed)

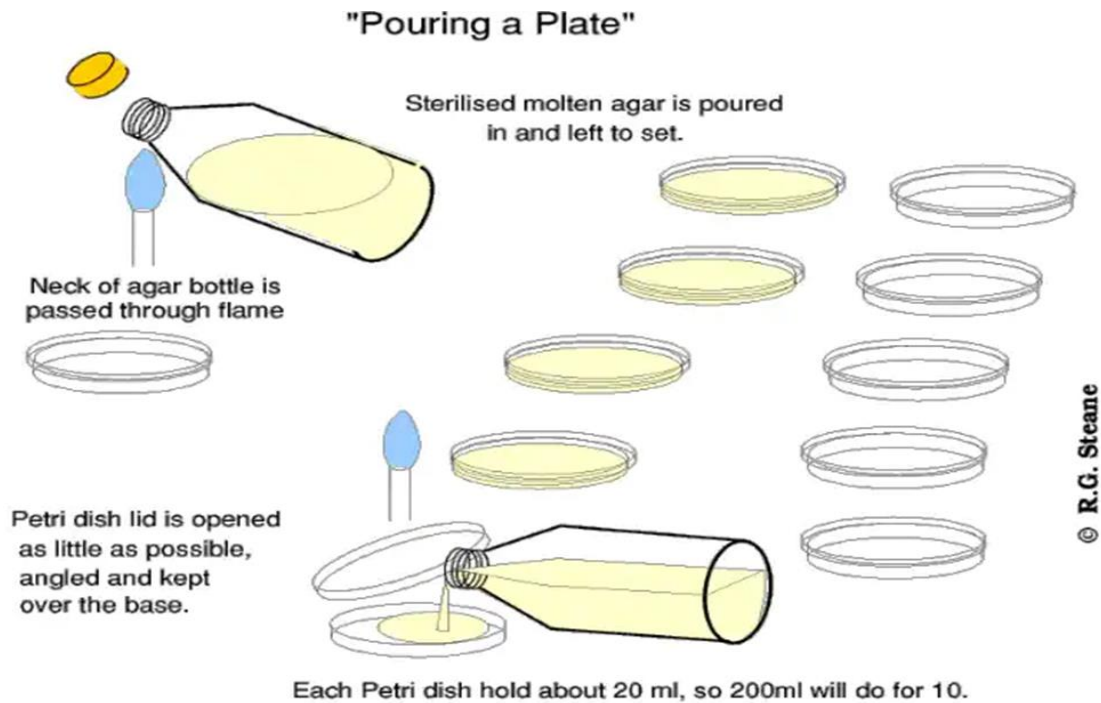


Figure 3 : Manual dispensation of the media into petri dishes

4. **Storage of Agar Plate**

- It is advisable to use freshly poured plated media on the day of preparation.
- Alternatively, plates should be placed in the refrigerator as soon as they have solidified.
- Representative plates incubated at $35 \pm 2^\circ\text{C}$ as a sterility check.
- If storage of plates is for more than several days, it is recommended that they be wrapped in plastic or otherwise protected to prevent moisture loss.
- Most media, and especially those containing dyes or indicators, should be protected from light during storage.
- Shelf life: agar plate can be used until the expired date mention on the media bottle and there is no change in the appearance of the medium to suggest contamination or deterioration.

References

- University of Medical Technology: Microbiology General Practical Guidance Handbook
- <https://microbiologyinfo.com/blood-agar-composition-preparation-uses-and-pictures/>