

Directions For Use:

Murashige & Skoog Media

1. Product Summary

Murashige and Skoog (MS) media is the extensively used growth or culture medium used in tissue culture labs worldwide. It is composed of several micronutrients, macronutrients, vitamins, and amino acids. It supports or facilitates plant growth and/or shoot proliferation in two or more plant tissue cultures (both in monocotyledons and dicotyledons).

PCT MS media is available in powder form in bottles of different sizes, customized according to culturists' use, in the PCT store. The available sizes of MS media bottles contain different amounts of media that in one time can be used to make [1 L media](#), [5 L media](#), [10 L media](#), [25 L media](#), and [50 L media](#).

2. Procedure

Materials Required:

- a. 1000 ml of Distilled Water
- b. 4.54 g of MS Media
- c. 6-10 g of Agar
- d. 30 g of Sugar
- e. 2 ml of PPM

Directions:

1. Dissolve 4.54 grams of the dry medium in 800 ml of distilled or deionized water at room temperature (20-25°C).
2. Rinse the media vial with a small quantity of distilled water to remove traces of power.
3. Add the desired heat-stable supplements prior to autoclaving.
4. Continue stirring until the powder has dissolved.
5. Sometimes media does not dissolve completely unless the pH is reduced. For this purpose, lower the pH to about 3.0 to facilitate the dissolution of media.
6. Adjust the pH of the media using 1N HCL/ 1N NaOH/ 1N KOH.
7. Then add the rest of the water (to make up the volume to 1000 ml or 1 L).





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8. Add gelling agent (Agar, Gellan Gum, Gelzan...)
9. Mix Gently, heat, and rotate between intervals until the solution becomes clear.
10. Do not boil, reheat and allow to cool below 50 °C during dispensing. Dispense the medium into suitable containers, loosely plug or cap, then autoclave at 15 psi (121 °C) for 15 minutes, using a slow exhaust cycle.
11. Higher temperatures and/or longer times are not recommended.
12. Cool the autoclaved culture vessels containing medium to 45-50 °C and aseptically add desired sterile heat-labile supplements.

Note: Media should be prepared according to the formula mentioned on the label. However, it is recommended to use an entire container at once. Heat-labile supplements should be added after autoclaving.

3. Disposal Information

MS media containing can be discarded in normal trash cans after use. However, if it contains any biohazardous additives, compounds, or used on genetically engineered plants, then it should be sterilized before disposal.

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