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TECHNICAL INFORMATION

Catalog Number: 2623120, 2623122

Murashige and Skoog basal salt medium

Physical Description: White to off white powder

Solubility: Soluble in water (clear, colorless to slight yellow solution)

Description: Supports or Facilitate Plant Growth and/or Shoot proliferation in two or more plant tissue cultures.

pH: 4.0-4.5

Formulation:

<i>Component</i>	<i>Quantity</i>	<i>Concentration</i>
	mg/L	(Molar)
Ammonium Nitrate	1650	20.61 mM
Boric Acid	6.2	100 uM
Calcium Chloride, Anhydrous	332.2	2.99 mM
Cobalt Chloride· 6H ₂ O	0.025	0.11 uM
Cupric Sulfate· 5H ₂ O	0.025	0.1 uM
Na ₂ -EDTA	37.26	100 uM
Ferrous Sulfate· 7H ₂ O	27.8	100 uM
Magnesium Sulfate	180.7	1.5 mM
Manganese Sulfate· H ₂ O	16.9	100 uM
Molybdic Acid, Sodium Salt, 2H ₂ O	0.25	1.03 uM
Potassium Iodide	0.83	5 uM
Potassium Nitrate	1900	18.79 mM
Potassium Phosphate Monobasic	170	1.25 mM
Zinc Sulfate· 7H ₂ O	8.6	29.91 uM
myo-Inositol	100	0.56 uM
Glycine	2	26.64 uM
Nicotinic Acid	0.5	4.06 uM
Pyridoxine HCl	0.5	2.43 uM
Thiamine	0.1	0.30 uM

Grams of Powder to prepare 1 liter	4.44
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Preparation of Liquids from Powder Plant Tissue Culture Media

1. Measure out approximately 25% less purified water (distilled or deionized) than the final volume of medium required. The water should be at room temperature (15°C to 30°C).
 2. Stir the water and slowly add the powder. Rinse out the inside of the container to remove all traces of powder. Continue stirring until the powder has dissolved. Some media will not dissolve completely unless the pH is reduced. For these, lower the pH to about 3.0 to facilitate solution.
- Note:** It is possible to weigh out the desired quantity of powder from a container, using the weight noted on the product label. It is recommended, however, to use an entire container at once, in which case it is not necessary to weigh the powder.
3. Add the required supplements and stir to disperse.
- Note:** Heat-labile substrates should be added at step 8, after autoclaving.
4. Check and if necessary, adjust the pH of the medium to the desired level (normally 5.5 ± 0.1). Mix gently during additions.
 5. Add sufficient purified water to give a volume equal to the final volume less any heat-labile substance to be added in step 8.
 6. Add the desired quantity to agar. Heat, with continuous mixing, until the solution is clear. Do not boil. Do not allow to cool below 50°C during dispensing.
 7. Dispense the medium into suitable containers, plug or cap, then autoclave at 121°C (1 bar, 15 psi) for 15 minutes, using a slow exhaust cycle. Higher temperatures and/or longer times are not recommended.
 8. After cooling, aseptically add desired sterile heat-labile supplements.
 9. Label and store at 2°C to 8°C.

Availability:

Powders:

Catalog Number	Description	Size
2623022 2623020	Murashige and Skoog Basal Salt Mixture with Biotin, Thiamine, Nicotinic acid and micronutrients as described by Murashige and Skoog, 1962	1 x 10 liter 10 x 1 liter
2622922 2622920	Murashige and Skoog Modified Basal Salt Mixture, Includes the macro- and micronutrients as described by Murashige and Skoog, 1962. Modified by eliminating NH ₄ , NO ₃ and KNO	1 x 10 liter 10 x 1 liter

Also Available:

Catalog Number	Description	Size
2672206	PlantCon™ Containers, sterile, includes: Bottom (9.5 x 9.5 x 3.5 cm) Cover (9.5 x 9.5 x 7.0 cm)	200 units per case
150180	Gel-Gro™ Gellan Gum, Agar replacement gelling agent	100 gm 250 gm 500 gm 1 kg