Catalog Number: 2610022

Murashige and Skoog Medium, powder, Without IAA, Kinetin, Sucrose

Physical Description: Off white powder

Chemicals used are carefully selected and, whenever possible, analytical grade materials were used. Finished batches are checked to ensure that they conform to preset high standards before they are released for sale.
Except where otherwise indicated the amounts shown relate to single strength media.
Please note that in all MP's plant media, iron is added as FeNa EDTA rather than the salt specified in the original formulation. This is to ensure that iron is available in solution over a wide pH range.

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 $\pm$ 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.

Formulation:

Component	*mg/lt*	*Mol. Wt.*	*Mol. (mM)*
Amino Acids			
Glycine	2.00000	75.07	0.03
Vitamins			
myo-Inositol	100.00000	180.2	0.55
Niacin	0.50000	123.1	0.0041
Pyridoxine HCl	0.50000	205.6	0.0024
Thiamine HCl	0.10000	337.3	0.0003
Inorganic Salts			
Ammonium Nitrate [NH_4NO_3]	1650.00000	80.04	20.61
Boric Acid [H_3BO_3]	6.20000	61.83	0.10
Calcium Chloride [$CaCl_2$ $2H_2O$] (anhyd)	332.0000	111	2.99
Cobalt Chloride [$CoCl_2$ $6H_2O$] Hexahydrate	0.02500	237.9	0.0001
Cupric Sulfate [$CuSO_4$]	0.01600	159.68	0.0001
EDTA Fe Na	36.70000	367.05	0.10
Magnesium Sulfate [$MgSO_4$]	180.70000	120.4	1.50
Manganese Sulfate [$MnSO_4$ H_2O] Monohydrate	16.90000	169.013	0.11
Potassium Iodide [KI]	0.83000	166	0.01
Potassium Nitrate [KNO_3]	1900.00000	101.1	18.79
Potassium Phosphate Monobasic [KH_2PO_4]	170.00000	136.09	1.25
Sodium Molybdate [Na_2MoO_4 $2H_2O$] Dihydrate	0.25000	241.9	0.0010
Zinc Sulfate [$ZnSO_4$ $7H_2O$] Heptahydrate	8.60000	287.5	0.03

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