Product Specification

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Technical Information

Schenk & Hildebrandt Modified Medium

With ½ Macroelements, ½ Microelements, ½ Vitamins, Sucrose And Without Agar

Product Code: PT1137

Composition**

Ingredients	mg/litre
Potassium nitrate	1250.00
Ammonium phosphate monobasic	150.00
Calcium chloride.2H2O	100.00
Magnesium sulphate	97.67
Manganese sulphate.H2O	5.00
Boric acid	2.50
Potassium iodide	0.50
Molybdic acid (sodium salt).2H2O	0.05
Zinc sulphate.7H2O	0.50
Copper sulphate.5H2O	0.10
Cobalt chloride.6H2O	0.05
Ferrous sulphate.7H2O	7.50
EDTA disodium salt.2H2O	10.00
myo - Inositol	500.00
Thiamine hydrochloride	2.50
Pyridoxine hydrochloride	0.25
Nicotinic acid (Free acid)	2.50
Sucrose	10000.00
TOTAL gm/litre	12..13

Principle And Interpretation

Schenk & Hildebrandt modified medium has been specially formulated for plant cell, tissue and organ cultures. Potassium nitrate serves as the nitrate source. Sucrose serves as the source of carbohydrate. Medium does not contain agar; hence this component has to be added to the medium before use.

Directions

Suspend 12.10 grams of dehydrated medium# in 600ml of distilled water and rinse media vial with small quantity of distilled water to remove traces of powder. Apply constant gentle stirring to the solution till the powder dissolves completely. Add desired heat stable supplements prior to autoclaving. Adjust the medium to the desired pH using 1N HCl/NaOH. Make up the final volume to 1000ml with distilled water. Sterilize the medium by autoclaving at 15 lbs or 121ºC for 15 minutes. Cool the autoclaved medium to 45ºC before adding the filter sterilized heat labile supplements. Dispense the desired amount of medium aseptically in sterile culture vessels.

Weight after vacuum drying to remove all water

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Quality Control

Appearance : White to off-white, homogeneous, free flowing powder.
Solubility : 12.10 gm/litre soluble in distilled water.
Colour and Clarity : Colourless to light yellow, clear solution.
pH at 25°C : 4.6±0.5 of 1.210% w/v dehydrated medium.

Cultural Response :

Cultural condition :

- Incubation period : 5 weeks
- Relative humidity : 60% ± 2%
- Temperature : 22°C ± 2°C
- Photoperiod (D:N) in hours : 16:8

Cell Line	Type of Culture	Results
Musa species	Shoot culture	No structural deformity observed No necrotic tissues, Actively growing shoots, No toxicity to shoots
Daucus species	Callus culture	No necrotic tissues, Actively growing callus, No toxicity to callus

Storage and Shelf Life

Dehydrated plant tissue culture media powder is extremely hygroscopic and should be protected from atmospheric moisture. If possible, the entire content of each bottle should be used immediately after opening or else the unused portion should be stored in a desiccator and refrigerated at 2-8°C. Use before the expiry date

Further Reading

- Schenk R.U. & Hildebrandt A.C., Can. J. Bot., (1972), 50, 199 - 204

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
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