

Technical Information

Hoagland & Knop Medium w/ Agar; w/o Vitamins

Product Code: PT1126

Composition**

Ingredients	mg/Litre
Potassium nitrate	610.00
Calcium nitrate	660.11
Magnesium sulphate	239.29
Ammonium phosphate monobasic	120.00
Manganese sulphate.H ₂ O	2.27
Boric acid	0.50
Molybdic acid (sodium salt).2H ₂ O	0.25
Zinc sulphate.7H ₂ O	0.50
Copper sulphate.5H ₂ O	0.025
Ferric tartarate	2.00
Agar	8000.00
TOTAL	9.63 gm/litre

Principle And Interpretation

Hoagland & Knop medium has been specially formulated for plant cell, tissue and organ cultures. Potassium nitrate and calcium nitrate serves as the sources of nitrate. Agar is incorporated into the medium to provide firm base to the explants.

Directions

Suspend 9.63 grams of dehydrated medium# in 600ml of distilled water and rinse media vial with small quantity of distilled water to remove traces of powder. 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 1000 ml with distilled water. Boil the medium to dissolve agar completely. Sterilize the medium by autoclaving at 15 lbs or 121°C for 15 minutes. Cool the autoclaved medium to 45°C 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

Quality Control

Appearance	: White to off-white, homogeneous, free flowing powder.
Solubility	: 9.63 gm/litre soluble after boiling in distilled water
Colour and Clarity	: Colourless to light yellow, hazy gel is formed on cooling.
pH at 25°C	: 5.2 ±0.5 of 0.963% 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	Types Of Culture	Results
<i>Musa species</i>	Shoot culture	No structural deformity observed No necrotic tissues, Actively growing shoots, No toxicity to shoots
<i>Daucus species</i>	Callus culture	No necrotic tissues, Actively growing callus, No toxicity to callus

[The medium is prepared as per direction. The growth promoting activity of this plant tissue culture medium is evaluated using two plant species viz. Musa species and Daucus species through three passages. Plant growth hormones (e.g. 2,4-D, NAA, Kinetin and 6-BAP) are added in suitable combinations and concentrations.]

Storage and Shelf Life

Dehydrated macroelements 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.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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