Product Specification

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Technical Information

Carnation Initiation Medium
w/ Vitamins, Sucrose, Casein hydrolysate, Kinetin, NAA and Agar

Product Code: PT1121

Composition**

Ingredients	mg/Litre
Potassium nitrate	80.00
Ammonium nitrate	400.00
Calcium nitrate	100.10
Magnesium sulphate	35.16
Potassium phosphate monobasic	12.50
Potassium chloride	65.00
Manganese sulphate.H_2O	6.50
Boric acid	1.60
Potassium iodide	0.75
Molybdic acid (sodium salt).$2H_2O$	0.25
Zinc sulphate.$7H_2O$	2.70
Ferrous sulphate.$7H_2O$	27.80
EDTA disodium salt.$2H_2O$	37.30
myo - Inositol	50.00
Thiamine hydrochloride	0.10
Pyridoxine hydrochloride	0.50
Nicotinic acid (Free acid)	0.50
Glycine (Free base)	2.00
Calcium pantothenate	5.00
Cinnamic acid	1.50
Kinetin	1.00
α-Naphthalene acetic acid	0.20
Casein hydrolysate	3000.00
Sucrose	30000.00
Agar	6000.00
TOTAL	**39.83 gm/litre**

Principle And Interpretation

Carnation initiation medium has been specially formulated for the *in vitro* culture of *Dianthus* species. Ammonium nitrate and calcium nitrate serves as the sources of nitrate. Glycine serves as the source of amino acid. Kinetin and NAA serves as plant growth regulators. Sucrose serves as the source of carbohydrate. Agar is incorporated into the medium to provide firm base to the explants

Directions

Suspend 39.83 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. Boil the medium to dissolve agar completely. 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 : 39.83 gm/litre soluble in distilled water.
Colour and Clarity : Colourless to light yellow, clear solution.
pH at 25°C : 6.5 ±0.5 of 4.181% 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
Daucus species	Callus culture	No structural deformity observed No necrotic tissues, Actively growing shoots, No toxicity to shoots

[The medium is prepared as per direction. The growth promoting activity of this plant tissue culture medium is evaluated using plant species viz. Dianthus species through three passages.]

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.

Further Reading

1. Lydiane K & Kleyn J (2003) Plants from test tube: An introduction to micropropagation. Timber Press Inc., USA

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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