Plantigen™ HIMEDIA

PRODUCT INFORMATION

Carrot Organogenesis Medium

With Vitamins, Sucrose and Kinetin
Without Agar

Product Code: PT112

Product Description :

Carrot Organogenesis medium has been formulated to initiate the carrot callus from its tissue. It is a nutrient blend of inorganic salts that provides all the essential macronutrients, micronutrients, vitamins, carbohydrate and plant growth regulator required for the propagation of the species.

High potassium nitrate is effective in inducing somatic embryogenesis. Sodium dihydrogen phosphate serves as source of phosphate and promotes root development along with vigorous growth. Microelements like Zinc Boron, Manganese, Molybdenum and Copper enhance metabolism in the plants. Boron plays a key role in carbohydrate metabolism. Kinetin helps in the cell enlargement, cell division and morphogenesis.

The product is plant tissue culture tested but it is the sole responsibility of the user to ensure the suitability of the medium for individual species.

Composition :

Ingredients	mg/L
MACROELEMENTS	
Ammonium sulphate	134.000
Calcium chloride	113.250
Magnesium sulphate	122.087
Potassium nitrate	2500.000
Sodium dihydrogen orthophosphate	130.417
MICROELEMENTS	
Boric acid	3.000
Cobalt chloride hexahydrate	0.025
Copper sulphate pentahydrate	0.025
EDTA disodium salt dihydrate	37.300
Ferrous sulphate heptahydrate	27.800
Manganese sulphate monohydrate	10.000
Molybdic acid (sodium salt)	0.213
Potassium Iodide	0.750
Zinc sulphate heptahydrate	2.000
VITAMINS	
myo-Inositol	100.000
Nicotinic acid (free acid)	1.000
Pyridoxine HCl	1.000
Thiamine hydrochloride	10.000
CARBOHYDRATE	
Sucrose	20000.000
OTHERS	
Kinetin	0.200
Total(gms/litre)	23.2

Material required but not provided :

- Autoclaved distilled water
- Gelling agents like Agar (PCT0901) or CleriGel™ (PCT0903)
- 1N NaOH/HCl

Precautions :

- Ensure appropriate pH of the medium before addition of gelling agent as acidic pH will lead to decreased gelation resulting in semi solid flowing gel while alkaline pH will lead to formation of hardened gel.
- Use of Distilled water/Tissue culture grade water is recommended for media preparation as tap water or lower grade water may lead to salt precipitation and improper gelation.
- Avoid preparation of concentrated solutions, as it will lead to precipitation of salts.

Directions :

- Reconstitute medium by adding required quantity of powder in two-third of total volume with constant, gentle stirring till the medium gets completely dissolved.
- Add heat stable supplements prior to autoclaving.
- Make up the final volume with distilled water.
- Adjust the pH of the medium to 5.75 ± 0.5 using 1N NaOH/ HCl.
- Add gelling agent and heat the medium to boiling till complete dissolution of gelling agent.
- Sterilize the medium by autoclaving at 15 lbs and 121°C for 15 min.
- Cool the autoclaved medium to about 45°C before adding heat labile supplements.

Please refer disclaimer overleaf

• Aseptically dispense the desired amount of medium under a laminar airflow unit in sterile culture vessels.

Quality Control:

Appearance
White to off-white, homogenous, free flowing powder

Solubility
23.2 gms/litre soluble in distilled water

Colour and Clarity
Colourless to light yellow, clear solution

pH at 25ºC
3.40 - 4.40

Plant Tissue Culture Test
The growth promoting properties of medium is assessed by providing plant cultures with relative humidity of about 60%±2%, temperature 22ºC±2ºC and photoperiod of about 16:8. The plant species showed actively growing callus and shoots with no structural, necrotic and toxic deformity.

Storage and Shelf Life:

• The plant tissue culture medium powder is extremely hygroscopic and must be stored at 2-8°C in air tight containers.
• Preferably, entire content of each package should be used immediately after opening.
• Use before the expiry date.

Revision : 01 / 2017