Plantigen™ HIMEDIA

PRODUCT INFORMATION

BM-2 Terrestrial Orchid Medium

With Vitamins, Sucrose, Casein hydrolysate, 6-BAP and Agar

Product Code: PT064

Product Description :

BM-2 Terrestrial Orchid Medium has been specially formulated for the *in vitro* culture of the terrestrial orchid.

It is a nutrient blend of inorganic salts, vitamins, amino acid, carbohydrate and gelling agent. In addition, it is supplemented with casein hydrolysate which is ideal for improved germination, early protocorm formation and seedling development. L-glutamine and glycine serves as sources of organic nitrogen. Microelements like Manganese, Molybdenum, Copper, Iron and Zinc enhance metabolism in the plants. Boron plays a key role in the carbohydrate metabolism. Thiamine, pyridoxine, nicotinic acid act as enzymatic cofactors in universal pathways including glycolysis and TCA cycle along with the primary and secondary metabolism in the plants. 6-BAP aids in the cell division and differentiation of the plant tissue.

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	
Magnesium sulphate	100.000
Potassium phosphate monobasic	300.000
MICROELEMENTS	
Boric acid	10.000
Cobalt chloride hexahydrate	0.025
Copper sulphate pentahydrate	0.025
EDTA disodium salt dihydrate	37.250
Ferrous sulphate heptahydrate	27.850
Manganese sulphate monohydrate	25.000
Molybdic acid (sodium salt)	0.213
Zinc sulphate heptahydrate	10.000
VITAMINS	
Biotin	0.050
Folic acid	0.500
myo-Inositol	100.000
Nicotinic acid (free acid)	5.000
Pyridoxine HCl	0.500
Thiamine hydrochloride	0.500
AMINO ACID	
Glycine	2.000
L-Glutamine	100.000
CARBOHYDRATE	
Sucrose	20000.000
GELLING AGENT	
Agar	6000.000
OTHERS	
6-Benzylaminopurine	0.200
Casein hydrolysate	500.000
Total(gms/litre)	27.2

Material required but not provided :

- Autoclaved distilled water
- Plant growth regulators
- 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.
- 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.
• 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
27.2 gms/litre soluble after boiling in distilled water

Colour and Clarity
Colourless to light yellow solution, hazy gel is formed on cooling

Gelling
Firm gel formed at pH : 5.75 ± 0.5

pH at 25ºC
5.20 - 6.20

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.

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