CDH

Product Specification

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Technical Information

White Root Culture Modified Medium

With Vitamins, Sucrose And Without Agar

Product Code: PT1009

Application: White Root Culture Modified Medium is a nutrient formulation of macroelements, microelements, vitamins, amino acid and carbohydrate. Potassium nitrate and calcium nitrate serves as a nitrate source and sodium phosphate serves as a phosphate source which helps in the cell division leading to the development of new cells.

Microelements like Boron, Manganese, Molybdenum, Copper, Iron and Zinc enhance metabolism in plants. Boron plays a key role in 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. Glycine serves as a source of amino acid.

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/Litre
MACROELEMENTS	
Calcium nitrate monohydrate	200.000
Magnesium sulphate	360.000
Potassium nitrate	80.000
Sodium phosphate monobasic	16.500
Sodium sulphate	200.000
MICROELEMENTS	
Boric acid	1.500
Copper sulphate pentahydrate	0.013
Ferrous sulphate heptahydrate	2.500
Manganese sulphate monohydrate	4.500
Molybdic acid (sodium salt)	0.002
Potassium Iodide	0.750
Potassium chloride	65.000
Zinc sulphate heptahydrate	2.800
VITAMINS	
Nicotinic acid (free acid)	0.500
Pyridoxine HCl	0.100
Thiamine hydrochloride	0.100
AMINO ACID	
Glycine	3.000
CARBOHYDRATE	
Sucrose	20000.00
Total(gms/litre)	20.9

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Material required but not provided

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

Quality Control

Appearance

White to off-white, homogenous, free flowing powder

Solubility

20.9 gms/litre soluble in distilled water

Colour and Clarity

Colourless to light yellow, clear solution

pH at 25ºC

4.40 - 5.40

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.

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°Cfor 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

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.

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.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

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.

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