CDH

Product Specification

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Technical Information

CHU (N6) Medium
With Vitamins and Sucrose Without Agar

Product Code: PT1113

Application: CHU (N6) Medium has been developed by C.C.et al. in 1975 for the *in vitro* anther culture of *oryza sativa*, family *Graminae*. The medium promotes the initiation, growth and differentiation of callus from the rice pollen cultures.

CHU (N6) Medium is a nutrient blend of inorganic salts that consists of macroelements, microelements, vitamins amino acid and carbohydrate. Potassium nitrate serves as a source of nitrate. Ammonium sulphate quantity has been reduced as ammonium ions have inhibitory effect on the growth and quality of rice callus but aids in morphogenesis. Microelements like Boron, Manganese, Molybdenum, Copper, Iron and Zinc play vital role in plant metabolism and improve the quality of anther callus. Thiamine, pyridoxine, nicotinic acid acts as enzymatic cofactors in the universal pathways including glycolysis and TCA cycle along with the primary and secondary metabolism in the plants.

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	
Ammonium nitrate	463.000
Calcium chloride	125.330
Magnesium sulphate	90.370
Potassium nitrate	2830.000
Potassium phosphate monobasic	400.000
MICROELEMENTS	
Boric acid	1.600
EDTA disodium salt dehydrate	37.300
Ferrous sulphate heptahydrate	27.800
Manganese sulphate monohydrate	22.300
Molybdic acid (sodium salt)	3.330
Potassium Iodide	0.800
Zinc sulphate heptahydrate	1.500
VITAMINS	
Nicotinic acid (free acid)	0.500
Pyridoxine HCl	0.500
Thiamine hydrochloride	1.000
AMINO ACID	
Glycine	2.000
CARBOHYDRATE	
Sucrose	20000.000
Total	**24.0 gms/litre**

Material required but not provided

- Autoclaved distilled water
- Plant growth regulators
- Gelling agents like Agar (PCT1901) or CleriGel (PCT1903)
- 1N NaOH/HCl

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Quality Control

Appearance
White to off-white, homogenous, free flowing powder
Solubility
24.0 gms/litre soluble in distilled water
Colour and Clarity
Colourless to light yellow, clear solution
pH at 25ºC
3.50 – 4.50
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.
- Do not use the products if it fails to meet specifications for identity and performance parameters.

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.