

Technical Information

Schenk & Hildebrandt Macroelements

Product Code: TS2089

Application: Schenk & Hildebrandt macroelements has been specially formulated for plant cell, tissue and organ cultures. Potassium nitrate serves as the nitrate source.

Composition**

| Ingredients | mg/Litre |
|------------------------------------|-------------|
| Potassium nitrate | 2500.00 |
| Ammonium phosphate monobasic | 300.00 |
| Calcium chloride.2H ₂ O | 200.00 |
| Magnesium sulphate | 195.34 |
| TOTAL gm/litre | 3.20 |

Methodology

Suspend 3.15 grams of dehydrated macroelements powder# in 600ml of distilled water. 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. Sterilize the medium by autoclaving at 15 lbs or 121°C for 15 minutes. Cool the autoclaved medium to 45°C 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

Quality Control

Appearance

White to off-white, homogeneous, free flowing powder.

Solubility

3.15 gm/litre freely soluble in distilled water

Colour and clarity

Colourless to light yellow, clear solution.

pH at 25°C

5.0 ±0.5 of 0.315% w/v dehydrated macroelements powder.

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 | Type of Culture | Results |
|-----------------------|-----------------|---|
| <i>Musa</i> species | Shoot culture | No structural deformity observed No necrotic tissues, Actively growing shoots, No toxicity to shoots |
| <i>Daucus</i> species | Callus culture | No necrotic tissues, Actively growing shoots, No toxicity to shoots |

[The medium is prepared as per direction. The growth promoting activity of this vitamin mixture is evaluated using two plant species viz. *Musa* species and *Daucus* species through three passages. Plant growth hormones (e.g. 2,4-D, NAA, Kinetin and 6-BAP) are added in suitable combinations and concentrations.]

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.

Reference

1. Schenk R.U. & Hilderbrandt A.C., Can. J. Bot., (1972), 50, 199 - 204

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.