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Product Specification

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# Technical Information

## Schenk & Hildebrandt Plant Salt Mixture

## Product Code: TS2102

**Application:** Schenk & Hildebrandt plant salt mixture has been specially formulated for plant cell, tissue and organ cultures. The mixture contains macroelements, microelements and iron source.

## Composition**

| Ingredients | mg/Litre |
|---|---|
| Potassium nitrate | 2500.00 |
| Ammonium phosphate monobasic | 300.00 |
| Calcium chloride.$2H_2O$ | 200.00 |
| Magnesium sulphate | 195.34 |
| Manganese sulphate.$H_2O$ | 10.00 |
| Boric acid | 5.00 |
| Potassium iodide | 1.00 |
| Molybdic acid (sodium salt).$2H_2O$ | 0.10 |
| Zinc sulphate.$7H_2O$ | 1.00 |
| Copper sulphate.$5H_2O$ | 0.20 |
| Cobalt chloride.$6H_2O$ | 0.10 |
| Ferrous sulphate.$7H_2O$ | 15.00 |
| EDTA disodium salt.$2H_2O$ | 20.00 |
| **TOTAL gm/litre** | **3.25** |

## Methodology

Suspend 3.19 grams of dehydrated plant salt mixture# in 600ml of distilled water and rinse media vial with small quantity of distilled water to remove traces of powder. 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 121ºC for 15 minutes. Cool the autoclaved medium to 45ºC 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**
3.19 gm/litre soluble in distilled water


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**Colour and clarity.pH at 25°C**
Colourless to light yellow, clear solution
**Cultural Response**
4.4 ±0.5 of 0.319% w/v dehydrated basal salt mixture.

**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 |
|---|---|---|
| *Musa* species | Shoot culture | No structural deformity observed<br>No necrotic tissues,<br>Actively growing shoots,<br>No toxicity to shoots |
| *Daucus* species | Callus culture | No necrotic tissues,<br>Actively growing callus,<br>No toxicity to callus |

[The medium is prepared as per direction. The growth promoting activity of this plant salt 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 plant salt mixture 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. & Hildebrandt 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.
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