

### Technical Information

#### S - Medium (Morel & Wetmore Modification) With Vitamins, Sucrose, MES And Without Agar

**Product Code: PT1058**

#### Composition\*\*

| Ingredients                   | mg/litre     |
|-------------------------------|--------------|
| Potassium nitrate             | 950.00       |
| Ammonium nitrate              | 825.00       |
| Calcium chloride.2H2O         | 220.00       |
| Magnesium sulphate            | 90.34        |
| Potassium phosphate monobasic | 85.00        |
| Manganese sulphate.H2O        | 0.08         |
| Boric acid                    | 1.00         |
| Potassium iodide              | 0.01         |
| Zinc sulphate.7H2O            | 1.00         |
| Copper sulphate.5H2O          | 0.03         |
| Aluminium chloride.6H2O       | 0.05         |
| Nickel chloride.6H2O          | 0.03         |
| Ferric ammonium citrate       | 50.00        |
| myo - Inositol                | 100.00       |
| Thiamine hydrochloride        | 1.00         |
| Pyridoxine hydrochloride      | 1.00         |
| Nicotinic acid (Free acid)    | 1.00         |
| Biotin                        | 0.01         |
| Ca - pantothenate salt        | 1.00         |
| Sucrose                       | 10000.00     |
| MES                           | 700.00       |
| <b>TOTAL gm/litre</b>         | <b>13.03</b> |

#### Principle And Interpretation

S - Medium (Morel & Wetmore Modification) has been specially formulated for plant cell, tissue and organ cultures. Ammonium nitrate and potassium nitrate serves as nitrate sources. MES prevents acidification by buffering the medium. Sucrose serves as the carbohydrate source. Medium does not contain agar; hence this component has to be added to the medium before use.

#### Directions

Suspend 12.97 grams of dehydrated medium# 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 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

|                           |  |
|---------------------------|--|
| <b>Appearance</b>         | : White to light pink, homogeneous, free flowing powder. |
| <b>Solubility</b>         | : 12.97 gm/litre soluble in distilled water.             |
| <b>Colour and Clarity</b> | : Yellow to dark yellow, clear solution.                 |
| <b>pH at 25°C</b>         | : 4.2 ±0.5 of 1.297% w/v dehydrated medium.              |

#### 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 species</i>   | Shoot culture   | No structural deformity observed<br>No necrotic tissues,<br>Actively growing shoots,<br>No toxicity to shoots |
| <i>Daucus species</i> | Callus culture  | No necrotic tissues,<br>Actively growing callus,<br>No toxicity to callus                                     |

### Storage and Shelf Life

Dehydrated plant tissue culture media 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.

### Further Reading

- Bourgin J.P., Chupeau Y., Missonier C., *Physiol. Plant.*, (1979), 45, 288 - 292
- Chupeau *et al.*, *Biotechnology.*, (1989), 7, 503 - 507

### 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.