

## Orchid Maintenance Organic Mixture

TS1083

### Composition :

Ingredients	milligrams/litre
Tryptone	2000.00
Sucrose	20000.00
Activated charcoal	2000.00
<b>TOTAL gm/litre</b>	<b>24.00</b>

### Directions :

Suspend 24.00 grams of dehydrated organic mixture<sup>#</sup> 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

### Principle and Interpretation :

Orchid maintenance organic mixture has been specially formulated for the *in vitro* culture of orchid species. Tryptone serves as a source of organic nitrogen. Sucrose serves as the source of carbohydrate. Activated charcoal serves as an adsorbing agent.

### Quality Control :

Appearance	: Grey to black, homogeneous, free flowing powder.
Solubility	: 24.00 gm/litre freely soluble in distilled water.
Colour and Clarity	: Grey to black, opaque solution.
pH at 25°C	: 6.8 ±0.5 of 2.40% w/v dehydrated organic mixture.

**Cultural Response :**

Cultural condition :

- Incubation period : 5 weeks
- Relative humidity : 60%  $\pm$  2%
- Temperature : 22°C  $\pm$  2°C
- Photoperiod (D:N) in hours : 16:8

Cell Line	Type of Culture	Results
<i>Vanda</i> species	Shoot culture	No structural deformity observed No necrotic tissues, Actively growing shoots, No toxicity to shoots

[The medium is prepared as per direction. The growth promoting activity of this dehydrated macroelements is evaluated using plant species viz. *Vanda* 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 organic mixture 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.

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