

PhytoTechnology Laboratories, Inc.

Product Information Sheet

Orchid Stem Propagation

- 1. Remove any flowers that may remain on the flower stalk. Use clean, healthy, vigorous flower stalks with bunds in their nodes. Stalks on which only a few flowers have bloomed are best. Avoid old flower stalks.
- 2. Wash the flower stalk under running tap water for 5 minutes.
- 3. Prepare a 10% commercial bleach solution and add 2-3 drops of Tween 20 (Product Number P720) to this solution.
- 4. Section the flower stalk into smaller section by using a clean razor blade or scalpel cutting between the nodes. Cut the flower stalk into $50 100 \text{ mm} (1/2 \frac{3}{4})$ sections leaving about 40mm's (1/2") below the node and the remainder above the node.



around the node.

- 5. Place the nodal section in the commercial bleach solution (Step 3) for 15 minutes. Swirl the solution every 2-3 minutes.
- 6. After surface sterilizing, discard the bleach solution, and then under aseptic conditions, carefully remove the bract from
- 7. Prepare a 5% commercial bleach solution and add 2-3 drops of Tween 20 (Product Number P720) to this solution.
- 8. Once all of the bracts have been removed, surface sterilize the nodes in the 5% commercial bleach solution prepared in Step 7. Keep in this solution for 10 minutes, swirling the solution every 2-3 minutes.
- 9. Remove all of the bleach solution and rinse the nodes with sterile distilled water. Rinse by pouring the water over the nodes, swirling, then pour off the water. Repeat this step three times.



10. Under sterile conditions, remove approximately 10 mm (1/8") from each end of the nodal sections

using a clean, sterile scalpel or razor. All tools should be dipped frequently in alcohol and flamed with a alcohol lamp (Product Number B910), or heated in a glass bead sterilizer (Product Number S636) to maintain sterility.

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- 11. Transfer the nodal section to the culture vessels containing Orchid Multiplication Medium (Product Number O753). Insert the longer portion of the nodal section into the medium at a slight angle to just below the bud. This should result in the emerging shoot pointing upwards.
- 12. Most shoots will generally appear within one month and they are ready for replating after about 60 days.



- 13. Many nodes exudates phenolic compounds into the media which may turn the media dark
 - brown to black. This phenolic exudation will kill your nodes if you do not replate them to fresh media. The use of media containing charcoal will reduce the frequency of replating to remove pheonlics as the
- 14. Replate onto Orchid Maintenance Medium (Product Number P748) and allow the plantlets to continue to develop and root. Roots will begin to appear after 2

or 3 leaves have been produced.

charcoal absorbs and binds the phenolic compounds.

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