

**PHYTAMAX™ ORCHID MEDIUM
WITH CHARCOAL AND BANANA POWDER**

This powder is extremely hygroscopic and must be protected from atmospheric moisture. Do not open the container until its contents are allowed to warm to room temperature. If possible the entire contents of the package should be used immediately after opening.

<u>Components:</u>	<u>mg/L</u>
Ammonium Nitrate.....	825.0
Banana Powder (50% Malto-dextrin)	30000.0
Boric Acid.....	3.10
Calcium Chloride Anhydrous	166.0
Cobalt Chloride Hexahydrate.....	0.0125
Cupric Sulfate Pentahydrate	0.0125
Disodium EDTA Dihydrate.....	37.240
Ferrous Sulfate Heptahydrate.....	27.850
Magnesium Sulfate Anhydrous.....	90.350
Manganese Sulfate.....	8.450
Potassium Iodide	0.4150
Potassium Nitrate	950.0
Potassium Phosphate Monobasic	85.0
Sodium Molybdate Dihydrate.....	0.1250
Zinc Sulfate Heptahydrate	5.30
Charcoal	2000.0
MES (Free Acid)	1000.0
Myo-Inositol.....	100.0
Nicotinic Acid (Free Acid)	1.0
Peptone Type I.....	2000.0
Pyridoxine Hydrochloride	1.0
Sucrose	20000.0
Thiamine Hydrochloride.....	10.0

57.3 g of powder are required to prepare 1 L of medium.

**THIS PRODUCT IS INTENDED FOR LABORATORY USE ONLY.
NOT FOR DRUG, HOUSEHOLD, OR OTHER USES.**

PREPARATION: Preparing the medium in a concentrated form is not recommended as some salt complexes may precipitate. Supplements may be added prior to sterilization or added aseptically to a sterile medium. Certain supplements (i.e. heat labile) may require filter sterilization and may affect the shelf life of the medium. The basic steps for preparing the culture medium are the following:

1. Using a container twice the size of the desired final volume, measure out approximately 90% of the final required volume of tissue culture grade water (e.g. Sigma Product No. W-3500). Example: 900 ml for a final volume of 1000 ml.
2. While stirring, add the powdered medium.

3. Rinse the original container with a small volume of tissue culture grade water to remove traces of the powder. Add to the solution in Step
4. Add desired supplements (e.g. gelling agent, auxin, cytokinin, etc.).
5. While stirring, adjust the medium to the desired pH (e.g. 5.6 ± 0.1) using KOH, NaOH, or HCl.
6. Add additional tissue culture grade water to bring the medium to the final volume.
7. If gelling agent is used, heat the solution to approx. 100°C while stirring.
8. Dispense the medium into culture vessels before or after autoclaving according to your application. Add heat labile constituents after autoclaving.
9. Sterilize the medium in a validated autoclave at Kg/cm² (15 psi). The medium should attain a temperature of 121°C for at least 15 min. Refer to the Sigma Plant Cell Culture Catalog for recommended autoclave times for different volumes.

STORAGE: All media preparations should be stored at 0-5°C. Store dry powder in a desiccator. Deterioration of powdered medium may be recognized by: 1) granulation, clumping, or particulate matter throughout the powder; 2) pH change; or 3) inability to promote growth when properly used.

The following information can be obtained from the Sigma Plant Cell Culture Catalog or by calling ext. 3952 at 1-800-521-8956 (USA) or 314-771-5765 (collect):

Manufacturing and testing specifications
Physical and chemical analysis
Biological performance testing

SPECIFICATIONS: Appearance: Dark gray powder

Moisture content: < 5.0%

Solubility: Black suspension

pH ± 0.5 at RT: 5.1

SIGMA warrants that its products conform to the information contained in this and other Sigma publications. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

P-1056 3H218

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FAX 1-800-325-5052

Outside USA/Canada (call collect)

Telephone 314-771-5750

FAX 314-771-5757

FOR CUSTOMER SERVICE (shipping problem):

USA/Canada 1-800-325-8070

Outside USA/Canada (call collect) 314-771-5765

FOR TECHNICAL SERVICE:

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