

## TECHNICAL INFORMATION

Catalog Number: 26216, 26215, 5101225

### GAMBORG'S B-5 MEDIA

**Physical Description:** White to off white powder

**Solubility:** Soluble in water (clear, colorless to slight yellow solution)

**Formulation:**

<b>Gamborg's B5 Basal Salt (mg/L)</b>	
<b>Macronutrient Salts</b>	
Ammonium Sulfate	134.000
Calcium Chloride Anhydrous	113.240
Magnesium Sulfate Anhydrous	122.090
Potassium Nitrate	2500.000
<b>Total</b>	<b>2869.330</b>
<b>Micronutrient Salts</b>	
Boric Acid	3.000
Cobalt Chloride.6H2O	0.025
Cupric Sulfate Anhydrous	0.025
Ferrous Sulfate.7H2O	27.800
Manganese Sulfate.H2O	10.000
Molybdic Acid Sodium Salt.2H2O	0.250
Na2-EDTA.2H2O	37.300
Potassium Iodide	0.750
Zinc Sulfate.7H2O	2.000
<b>Total</b>	<b>81.150</b>
<b>Vitamins</b>	
myo-Inositol	100.000
Nicotinic Acid	1.000
Pyridoxine-HCl	1.000
Thiamine-HCl	10.000
<b>Total</b>	<b>112.000</b>
<b>Gamborg's B5 Complete Medium w/Agar (mg/L)</b>	
Basal Salts Vitamins	3062.480
Sucrose	20000.000
Agar	8000.000

**Description:** Supports and facilitates plant growth and/or shoot proliferation in plant tissue cultures.

**Preparation Instructions:** Powdered media are extremely hygroscopic and must be protected from atmospheric moisture. If possible the entire contents of each package should be used immediately after opening. Preparing the medium in a concentrated form is not recommended as some salt added to the medium may affect shelf life and storage conditions. The basic steps for preparing the culture medium are listed below:

- (1) Measure out approximately 90% of the final required volume of tissue culture grade water, e.g. 900 ml for a final volume of 1000 ml.
- (2) While stirring the water add the powdered medium and stir until completely dissolved. Heating may be required to bring powders into solution.
- (3) Add desired heat stable components (e.g. sucrose, gelling agent, vitamins, auxins, cytokinins, etc.).
- (4) Add additional tissue culture grade water to bring the medium to the final volume.
- (5) While stirring, adjust medium to desired pH using NaOH, HCl or KOH.
- (6) If agar is used, heat until the solution is clear.
- (7) Dispense the medium into the culture vessels before (or after) autoclaving according to your application. Add heat labile constituents after autoclaving.
- (8) Allow media to cool prior to use

**NOTE:** With time precipitates are known to occur in plant tissue culture media. Usually the precipitates are composed of small, pale yellow-white particles which are predominantly of iron, phosphate and zinc. The probable cause of the precipitates is the inevitable oxidation of ferrous ions. There are no reports of detrimental effects on growth and development in plant tissue culture due to the precipitates.

**Sterilizing Plant Material:** The explants should be washed in a mild soapy detergent before treatment with a sterilizing solution. After the tissue is washed, it should be rinsed under running tap water for 10-30 minutes and then be submerged into the disinfectant under sterile conditions. All surfaces of the explant must be in contact with the sterilant. After the allotted time for sterilization, the sterilant should be decanted and the explants should be washed at least three times in sterile distilled water.

**Availability:**

<b>Gamborg's B5</b>		
Macro and Micronutrient	092621622	1 X 10 L
Macro and Micronutrient and vitamins	092621522	1 X 10 L
Macro and Micronutrient, vitamins, sucrose, agar	115101225	1 X 1L