

M519
Murashige & Skoog (MS)
Basal Medium w/ Vitamins

Synonym: MS Medium

Properties

Form: Fine to Fluffy Powder
 Appearance: White to Yellow Powder
 Application: Plant Tissue Culture
 Solubility: Water
 Typical Working Concentration: 4.43 g/L
 Storage Temp: 2-6°
 Storage Temp of Stock Solution: Preparation of concentrated solutions is not recommended as insoluble precipitates may form.
 Other Notes: Contains the macro- and micronutrients and vitamins as described by Murashige and Skoog (1962).
 pH = 3.5-4.5

Formula (mg/L)

Ammonium Nitrate	1650
Boric Acid	6.2
Calcium Chloride, Anhydrous	332.2
Cobalt Chloride•6H ₂ O	0.025
Cupric Sulfate•5H ₂ O	0.025
Na ₂ EDTA•2H ₂ O	37.26
Ferrous Sulfate•7H ₂ O	27.8
Magnesium Sulfate, Anhydrous	180.7
Manganese Sulfate•H ₂ O	16.9
Molybdcic Acid (Sodium Salt)• 2H ₂ O	0.25

Potassium Iodide	0.83
Potassium Nitrate	1900
Potassium Phosphate, Monobasic	170
Zinc Sulfate•7H ₂ O	8.6
Glycine (Free Base)	2
myo-Inositol	100
Nicotinic Acid (Free Acid)	0.5
Pyridoxine•HCl	0.5
Thiamine•HCl	0.1

Application Notes

Plant Tissue Culture Tested

Plant species: This medium is used for a numerous species.

References

Murashige, T and F Skoog. 1962. A revised medium for rapid growth and bioassays with tobacco tissue cultures. *Physiol. Plant.* 15: 473-497.

Revised 3/2007