



Product Information Sheet

M290
Murashige & Skoog (MS)
Modified Basal Salt Mixture
($\frac{1}{2}$ x Ammonium Nitrate, $\frac{1}{2}$ x Potassium Nitrate,
and $\frac{1}{2}$ x Calcium Chloride)

Properties

Form: Fine to Fluffy Powder
Appearance: White to Yellow
Application: Plant Tissue Culture
Solubility: Soluble in Water
Typical Working Concentration: 2.39 g/L
Storage Temp: 2-6 °C
Storage Temp of Stock Solution: Preparation of concentrated solutions is not recommended as insoluble precipitates may form.
Other Notes: Contains the macro- and micronutrients as described by Murashige and Skoog (1962) with the following exceptions: $\frac{1}{2}$ Ammonium Nitrate, $\frac{1}{2}$ Potassium Nitrate, and $\frac{1}{2}$ Calcium Chloride.
pH = 3.5 – 4.5

Formula (mg/L)

Ammonium Nitrate	825
Boric Acid	6.2
Calcium Chloride, Anhydrous	166.1
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
Molybdic Acid (Sodium Salt)•2H ₂ O	0.25
Potassium Iodide	0.83
Potassium Nitrate	950
Potassium Phosphate, Monobasic	170
Zinc Sulfate•7H ₂ O	8.6

Application Notes

Plant Tissue Culture Tested

References

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

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