D2470
DKW Basal Medium with Vitamins

Synonym: Driver and Kuniyuki Walnut Medium, with Vitamins

Properties

Form:	Powder
Appearance:	White to Yellow
Application:	Plant Tissue Culture
Solubility:	Water
Typical Working Concentration:	5.32 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 and vitamins as described by Driver and Kuniyuki (1984) and corrected by McGranahan, et al. (1987). pH = 3.5 – 4.5

Formula (mg/L)

Ammonium Nitrate	1416
Boric Acid	4.8
Calcium Chloride, Anhydrous	112.5
Calcium Nitrate	1367
Cupric Sulfate·5H_2O	0.25
Na2 EDTA·2H_2O	45.4
Ferrous Sulfate·7H_2O	33.8
Magnesium Sulfate, Anhydrous	361.49
Manganese Sulfate·H_2O	33.5

Molybdic Acid (Sodium Salt)·2H_2O	0.39
Nickel Sulfate·6H_2O	0.005
Potassium Phosphate, Monobasic	265
Potassium Sulfate	1559
Zinc Nitrate·6H_2O	17
Myo-Inositol	100
Glycine	2.0
Nicotinic Acid	1.0
Thiamine Hydrochloride	2.0

Application Notes

Plant species: Northern California Walnut (*Juglans hindsii*)
This medium was developed for the multiplication of shoots from nodal explants. The medium was supplemented with 4.5 µM BA and 5 nM IBA. Rooting the shoots was enhanced by dipping the basal ends of the shoots in 5 mM IBA prior to transferring to the greenhouse.

References

Driver, J.A. and A.H. Kuniyuki. 1984. In vitro propagation of Paradox walnut rootstock. *HortScience* 19:507–509.

McGranahan, GH, et al. 1962. In: Bonga, JB and DJ Durzan, Editors, Cell and Tissue Culture in Forestry. Martinus Nijhoff, Dordrecht, pp 261-271.

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