

**DKW / Juglans Medium
w/ Vitamins & Sucrose;
w/o Agar**

PT147

Composition :

Ingredients	milligrams/litre
Ammonium nitrate	1416.00
Calcium chloride.2H ₂ O	149.00
Calcium nitrate	1367.47
Magnesium sulphate	361.38
Potassium phosphate monobasic	265.00
Potassium sulphate	1559.00
Manganese sulphate.H ₂ O	33.50
Boric acid	4.80
Molybdic acid (sodium salt).2H ₂ O	0.39
Zinc nitrate.6H ₂ O	17.00
Copper sulphate.5H ₂ O	0.25
Ferrous sulphate.7H ₂ O	33.80
EDTA disodium salt.2H ₂ O	45.40
myo - Inositol	100.00
Thiamine hydrochloride	2.00
Nicotinic acid (Free acid)	1.00
Glycine (Free base)	2.00
Sucrose	30000.00

Directions :

Suspend 35.29 grams (the equivalent weight of dehydrated medium per litre) in 600 ml of distilled water. Rinse media vial with small quantity of distilled water to remove traces of powder if any. Dissolve the medium completely by gentle stirring. Add other heat stable plant nutrients as required prior to autoclaving. Adjust the desired pH using 1N HCl/NaOH. Make up the final volume to 1000 ml with distilled water. Mix well and sterilize by autoclaving at 15 lbs (121°C) for 15 minutes. Cool the medium to 45°C. Aseptically add any desired filter sterile growth nutrients if required. Mix well and aseptically dispense desired quantity in sterile culture vessels.

Principle and Interpretation :

DKW / Juglans medium has been specially formulated for plant cell, tissue and organ cultures. Ammonium nitrate and calcium nitrate serves as nitrate sources. Glycine serves as an amino acid source and sucrose as carbohydrate source. Medium does not contain gelling agents; hence these components have to be added to the medium before use.

Quality Control :

Appearance	: White to off-white, homogeneous, free flowing powder.
Solubility	: 35.29 gm/litre soluble in distilled water.
Colour and Clarity	: Colourless to light yellow, clear solution.
pH at 25°C	: 4.1 ±0.5 of 3.529% w/v dehydrated medium.

Cultural Response :

Cultural condition :

· Incubation period	: 5 weeks
· Relative humidity	: 60% ± 2%
· Temperature	: 25°C ± 2°C
· Photoperiod (D:N) in hours	: 16:8

Cell Line	Type of Culture	Results
<i>Musa</i> species	Shoot culture	No structural deformity observed No necrotic tissues, Actively growing shoots, No toxicity to shoots
<i>Daucus</i> species	Callus culture	No necrotic tissues, Actively growing callus, No toxicity to callus

[The medium is prepared as per direction. The growth promoting activity of this plant tissue culture medium is evaluated using two plant species viz. *Musa* species and *Daucus* species through three passages. Plant growth hormones (e.g. 2,4-D, NAA, Kinetin and 6-BAP) are added in suitable combinations and concentrations.]

Storage and shelf life :

Dehydrated plant tissue culture media powder is extremely hygroscopic and should be protected from atmospheric moisture. If possible, the entire content of each bottle should be used immediately after opening or else the unused portion should be stored in a desiccator and refrigerated at 2-8°C. Use before the expiry date.

Reference :

1. Driver J.A. & Kuniyuki A.H., Hort. Science, (1984), 19 (4), 507 - 509

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.