

Leifert & Waites Medium w/ Vitamins, Sucrose, Glucose, HiVeg™ peptone and Yeast extract

PT125

Composition :

Ingredients	milligrams/litre
Potassium nitrate	950.00
Ammonium nitrate	825.00
Calcium chloride.2H ₂ O	166.10
Magnesium sulphate	90.35
Potassium phosphate monobasic	85.00
Sodium chloride	2000.00
Manganese sulphate.H ₂ O	8.45
Boric acid	3.10
Potassium iodide	0.415
Molybdic acid (sodium salt).2H ₂ O	0.125
Zinc sulphate.7H ₂ O	4.30
Copper sulphate.5H ₂ O	0.0125
Cobalt chloride.6H ₂ O	0.0125
Ferrous sulphate.7H ₂ O	13.90
Na ₂ -EDTA	18.63
myo - Inositol	50.00
Thiamine hydrochloride	0.05
Pyridoxine hydrochloride	0.25
Nicotinic acid (Free acid)	0.25
Glycine (Free base)	1.00
Meat extract	7000.00
HiVeg™ peptone	4000.00
Yeast extract	10000.00
Glucose	5000.00
Sucrose	15000.00
TOTAL gm/litre	45.22

Directions :

Suspend 45.17 grams of dehydrated medium[#] in 600ml of distilled water and rinse media vial with small quantity of distilled water to remove traces of powder. Add desired heat stable supplements prior to autoclaving. Adjust the medium to the desired pH using 1N HCl/NaOH. Make up the final volume to 1000 ml with distilled water. Sterilize the medium by autoclaving at 15 lbs or 121°C for 15 minutes. Cool the autoclaved medium to 45°C before adding the filter sterilized heat labile supplements. Dispense the desired amount of medium aseptically in sterile culture vessels.

Weight after vacuum drying to remove all water

Principle and Interpretation :

Leifert & Waites medium has been specially formulated for *in vitro* detection of endogenous contaminants in plant cell, tissue and organ cultures. Ammonium nitrate and potassium nitrate serves as the sources of nitrate. Glycine serves as the source of amino acid. Glucose and sucrose serves as carbohydrate sources. Medium does not contain agar; hence this component has to be added to the medium before use.

Quality Control :

Appearance	: Light yellow to yellow, homogeneous, free flowing powder.
Solubility	: 45.17 gm/litre soluble in distilled water.
Colour and Clarity	: Light yellow to yellow, clear solution.
pH at 25°C	: 6.4 ±0.5 of 4.517% w/v dehydrated medium.

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. Leifert, C & W.M Waites; 1992, Bacterial growth in plant tissue cultures. J. Applied Bacteriology 72, 460 – 466.

Disclaimer :

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