Product Information Sheet

L476
Leifert & Waites Sterility Test Medium

Properties

Form:	Powder
Appearance:	Cream to Yellow
Application:	Bacterial Screening
Solubility:	Soluble in Water
Typical Working Concentration:	45.22 g/L
Storage Temp:	2 – 6 °C
Other Notes:	pH = 6.2 – 7.3

Formula (mg/L)

Ammonium Nitrate	825
Boric Acid	3.1
Calcium Chloride, Anhydrous	166.1
Cobalt Chloride•$6H_2O$	0.0125
Cupric Sulfate•$5H_2O$	0.0125
Na_2 EDTA•$2H_2O$	18.63
Ferrous Sulfate•$7H_2O$	13.9
Magnesium Sulfate, Anhydrous	90.35
Manganese Sulfate•H_2O	8.45
Molybdic Acid (Sodium Salt)•$2H_2O$	0.125
Potassium Iodide	0.415
Potassium Nitrate	950
Potassium Phosphate, Monobasic	85

Sodium Chloride	2000
Zinc Sulfate•$7H_2O$	4.3
D-Glucose, Anhydrous	5000
Glycine (Free Base)	1.0
Meat Extract	7000
myo-Inositol	50
Nicotinic Acid (Free Acid)	0.25
Peptone from Meat	4000
Pyridoxine•HCl	0.25
Sucrose	15,000
Thiamine•HCl	0.05
Yeast Extract	10,000

Application Notes

This medium is commonly used to screen plant tissues for microbe contamination prior to tissue culturing. Screening plant tissues on a bacterial screening medium prior to culturing can detect unwanted microbial contamination in tissues that may not be apparent on plant tissue culture growth medium, as high sucrose levels (30 g/L or higher) can sometimes inhibit or slow the growth of microbes.

This medium contains nutrients to support the growth of a wide range of microbes as well as plant tissues. It does not contain a gelling agent and can therefore be used for aquatic plant tissue testing, or a gelling agent can be added. Plant tissues are generally inoculated on this medium either by submerging aquatic tissues into the liquid medium, or by adding a gelling agent and placing the plant tissue on the surface of the medium. If you find that your plant tissue is not performing well on this medium during the screening period, it can be removed and placed on appropriate growth medium, as long as the tissue has been inoculated on the L476 or swiped across the surface of the gelled medium. Any microbe contamination should be evident in the area where the tissue was in contact.

A general screening period is 2 weeks, however some microbes may grow faster or slower than what may be observable in the 2 week time period. It is dependent on the microbe. Screening your tissues prior to tissue

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culturing is one of the best ways to prevent future contamination stemming from improper initial disinfestation of plant tissues.

References

1. Leifert, C and WM Waites. 1992. Bacterial growth in plant tissue cultures. J. Applied Bacteriology 72, 460-466.

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