

Product Information Sheet

L476

Leifert & Waites Sterility Test Medium

Properties

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|--------------------------------|---------------------|
| 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)

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

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|--------------------------------|--------|
| Sodium Chloride | 2000 |
| Zinc Sulfate•7H ₂ O | 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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