

CERTIFICATE OF ANALYSIS

Product Description MURASHIGE & SKOOG MODIFIED VITAMIN SOLUTION (1000x)
CONTAINS ADDITIONAL THIAMINE HCl
Product Number M557
Lot Number 10A0557008
Storage Temperature 2-6° C

Physiochemical Specifications:

| TEST | SPECIFICATION | RESULTS |
|---|---------------------------|---------------------------|
| Solubility | Miscible with Water | Passes |
| pH (Neat) | 3.2-4.2 | 3.92 |
| Physical Appearance Color Texture | Colorless Clear Liquid | Colorless Clear Liquid |
| Solution Appearance Clarity Color | Clear Colorless | Clear Colorless |
| Sterility by USP<71> | Sterile | Passes |
| Insolubles | None | Passes* |

*Myo-Inositol may precipitate out of solution as the product ages in cold storage. This will re-dissolve upon warming and does not detrimentally affect the product.

Biological Testing:

Test Concentration: 1.0 mL/L

| TEST SPECIFICATION | PLANT CELL LINE | RESULTS |
|--|-----------------|---------|
| Supports and/or facilitates plant growth and/or shoot proliferation in two or more plant tissue cultured lines with no morphological aberrations to plants | Dianthus | Passes |
| | Hosta | Passes |

The material described in this certificate was manufactured in the United States of America and is synthetic. No animal- or plant-derived components were used in the manufacture of this product.

PhytoTechnology Laboratories® provides the above information intended to be used only as a guide to the appropriate handling of this material by a properly trained person. PhytoTechnology Laboratories shall not be held liable for any damage resulting from handling or from contact with the above product. This product is intended for LABORATORY USE ONLY. Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticidal products, food additives or as household chemicals.

Recommended Shelf Life Date: January 2014



Gary Seckinger, Ph.D.



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