

# CERTIFICATE OF ANALYSIS

Product Description L-ASPARTIC ACID, FREE ACID  
(S)-AMINOBUTANEDIOIC ACID  
Product Number A117  
Lot Number 01K11701  
Storage Temperature Room Temperature  
Molecular Weight 133.10  
Formula C<sub>4</sub>H<sub>7</sub>NO<sub>4</sub>  
CAS Number 56-84-8

## Physiochemical Specifications:

| TEST                                    | SPECIFICATION                           | RESULTS                 |
|---|---|-------------------------|
| Solubility                              | Soluble in Water                        | Passes                  |
| pH (0.10 g/L)                           | Under Development                       | 3.52                    |
| Physical Appearance<br>Color*           | RM-31 (Brilliant White)<br>RM-1 to RM-3 | RM-3 (Decorators White) |
| Texture                                 | Crystalline Powder                      | Crystalline Powder      |
| Solution Appearance<br>Clarity<br>Color | Clear<br>Colorless                      | Clear<br>Colorless      |
| Average Time to Dissolve                | Within 15 min                           | Passes                  |
| Insolubles                              | None                                    | Passes                  |
| Purity                                  | Minimum 98.5%                           | 99.3%                   |

\* Product color based upon comparisons between sample and standardized color wheel (Benjamin Moore® Color Preview™).

## Biological Testing:

| 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 | Syngonium       | Passes  |
|  | Cape Sundew     | Passes  |

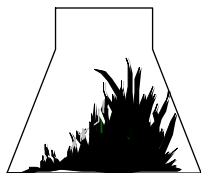
The material described in this certificate is synthetic. No animal- or plant-derived components were used in the manufacture of this product.

**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: October 2011



Gary Seckinger, Ph.D.



PhytoTechnology  
Laboratories, LLC  
Dedicated to Growth

### **PhytoTechnology Laboratories®**

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