CERTIFICATE OF ANALYSIS

Product Description D-SUCROSE, CRYSTALLINE

 β -D-Fructofuranosyl- α -D-glucopyranoside; Cane

SUGAR

Product Number S391

Lot Number SRS0391183

Storage Temperature Room Temperature

Molecular Weight 342.34 g/molFormula $C_{12}H_{22}O_{11}$ CAS Number 57-50-1

Physiochemical Specifications:

| TEST | SPECIFICATION | RESULTS |
|--------------------------|-------------------------|--------------------|
| Solubility | Soluble in Water | Passes |
| pH (30.00 g/L) | 4.5 - 6.5 | 4.0 |
| Physical Appearance | | |
| Color* | PM-1 to PM-4, PM-13, or | PM-4 White |
| Texture | PM-19 | |
| | Crystalline Powder | Crystalline Powder |
| Solution Appearance | | |
| Clarity | Clear | Clear |
| Color | Colorless | Colorless |
| | For Information Only | |
| Average Time to Dissolve | (Approx. 3 min) | 3 min |
| Insolubles | None | Passes |
| FTIR | Conforms to Structure | Passes |
| Purity | For Information Only | 99.94% |
| Moisture | For Information Only | 0.018% |

^{*} Product color based upon comparisons between sample and standardized color wheel (Benjamin Moore® Color PreviewTM).

Biological Testing:

Test Concentration: 30.0 g/L

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

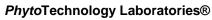
The material described in this certificate was manufactured in the United States of America and is highly refined, so as to be considered synthetic from plant (sugar cane) starting material. No animal-derived components were used in the manufacture of this product.

Phyto Technology 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. Phyto Technology 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.

Date of Release: 02-Jun-17

Recommended Shelf Life Date: Jun-2025

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