CERTIFICATE OF ANALYSIS

Product Description AGAR, PLANT TC

MICROPROPAGATION GRADE - GRACILARIA

Product Number A111

Lot Number AKK0111185

Storage Temperature Room Temperature

CAS Number 9002-18-0

Physiochemical Specifications:

| TEST | SPECIFICATION | RESULTS |
|-----------------------------------|---|-------------------------|
| Solubility | Soluble in Water Heated to Boiling | Passes |
| pH (8.00 g/L) | 5.5 – 9.5 | 7.2 |
| Physical Appearance | | |
| Color* | 2016-70 to 2021-70, 2151-70 to | |
| | 2156-70, 2150-60 to 2154-60, | |
| | HC-32, or HC-36 | 2016-70 Light Tan |
| Texture | Fine to Coarse Powder | Fine Powder |
| Solution Appearance After Heating | | |
| Clarity | Clear to Slightly Hazy | Slightly Hazy |
| Color | Colorless to Slight Yellow Tint | Slight Yellow Tint |
| Insolubles | None | Passes |
| Gel Strength | Minimum 900 g/cm ² | 1130 g/cm ² |
| | Forms Gel When Suspend in | |
| Gel Formation | Appropriate Solvent and Heated to | Passes |
| | Boiling | |
| Compression Break Force Test | Force Gauge Measurement (g/cm ²⁾ | 105.6 g/cm ² |
| | For Information Only | |

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

Biological Testing: Test Concentration: 8.0 g/L

| TEST SPECIFICATION | PLANT CELL LINE | RESULTS |
|---|-----------------|---------|
| This product is tested with two or more plant cell lines to ensure proper gelling, support, and that there are no phytotoxic impurities that would cause morphological aberrations to plants. | Begonia | Passes |
| | Sugar Cane | Passes |

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

PhytoTech Labs Inc. provides the above information intended to be used only as a guide to the appropriate handling of this material by a properly trained person. PhytoTech Labs Inc. 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: 20-May-2019

Recommended Shelf Life Date: May-2027

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