CERTIFICATE OF ANALYSIS

Product Description	POLYVINYLPYRROLIDONE, PVP-40
Product Number	P728
Lot Number	SXS0728017
Storage Temperature	Room Temperature
Molecular Weight	40,000 Avg.
Formula	$(C_6H_9NO)_n$
CAS Number	9003-39-8

Physiochemical Specifications:

TEST	SPECIFICATION	RESULTS
Solubility	Soluble in Water @ 10 mg/mL	Passes
pH	Under Development	3.9
Physical Appearance Color* Texture	 PM-1 to PM-4 Fine to Crystalline Powder	 PM-4 White Fine Powder
Solution Appearance Clarity Color	 Clear Colorless	 Clear Colorless
Average Time to Dissolve	For Information Only (Approx. 5 min)	5 min
Insolubles	None	Passes
FTIR	Conforms to Structure	Passes
K-Value	27.0-32.0	30.8

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

Biological Testing:

Test Concentration: 50.0 mg/L

TEST SPECIFICATION	PLANT CELL LINE	RESULTS
This product is commonly used as an anti-oxidant. This product is tested with two or more tissue cultured plant lines to ensure no phytotoxic impurities that would cause morphological aberrations to plants.	Begonia	Passes
	Ajuga	Passes

The material described in this certificate is synthetic. No animal- or plant-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: 21-December-2017
Recommended Shelf Life Date: December 2025

David S. Hart
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*Phyto*Technology Laboratories®
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