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Certificate of Analysis

Product Name: D-Panthenol **Molecular Formula:** C₉H₁₉NO₄ **Batch No.:** HDC20230408 **Manufacturing Date:** Apr 8th, 2023 **Report Date:** Apr 9th, 2023 CAS No.: 81-13-0 Molecular Weight: 205.25 Batch Quantity: 1000.00kg Retest Date: Apr 7th, 2025 Packing Size: 20Kg/Drum

Test Items		Specifications	Test Results
Appearance		Colourless or slightly yellowish, viscous hygroscopic liquid	Conforms
Solubility		Freely soluble in water, in alcohol, in methanol, and in propylene glycol; soluble in chloroform and in ether; slightly soluble in glycerin; practically insoluble in heptane	Conforms
Identification	A: Infrared absorption <197F>	Conforms to USP2021	Conforms
	B: The Sample solution:	A deep blue colour develops	Conforms
	C: The Sample solution:	A purplish red colour develops	Conforms
Assay (on the anhydrous basis)		98.0% ~ 102.0%	99.3%
Water determination		Not more than 1.0%	0.13%
Specific Optical Rotation		+29.0°~ +31.5°	30.7°
Limit of Aminopropanol		Not more than 1.0%	0.88%
Residue on Ignition		Not more than 0.1%	0.04%
Refractive Index (20°C)		1.495 ~ 1.502	1.498

Conclusion: The testing results of this batch are complied with the Standard of USP2021.

Storage Conditions: Preserved in unopened original containers in a cool dry place before using; kept away from direct sunlight, heat and moisture.