

## CERTIFICATE OF ANALYSIS

**Product name : D-Panthenol**

**Batch No. : 230404Y061**

**Manufacturing date: APR.04,2023**

**Quantity : 500KG**

**Expiry date: APR.03,2025**

**Standard: USP2021**

**Expiry : 2 years**

Items of analysis	Specification	Results
<b>Appearance</b>	A colorless or slightly yellowish,viscous hygroscopic liquid(may crystallized on storage)	Conform
<b>Identification</b>		
A:Infrared absorption < 197F>	Conform to USP2021	Conform
B: The Sample solution :	a deep blue color develops.	Conform
C:The Sample solution :	a purplish red color develops	Conform
<b>Assay (on the anhydrous basis)</b>	98.0%~102.0%	99.3%
<b>Water determination</b>	Not more than 1.0%	0.30%
<b>Specific optical rotation</b>	+29.0° ~+31.5°	30.5°
<b>Limit of aminopropanol</b>	Not more than 1.0%	<0.66%
<b>Residue on ignition</b>	Not more than 0.1%	0.1%
<b>Refractive Index (20°C)</b>	1.495~1.502	Conform
<b>Heavy metals</b>	Not more than 20ppm	Conform

**Conclusion:**

**Conform to USP2021**