

Shanghai Aladdin Biochemical Technology Co., LTD  
809 Chuhua Branch Road, Fengxian District, Shanghai 201400, China

## Certificate of Analysis

Date of Testing: 2023-12-06 09:59:49  
Date of Next Testing: 2027-12-05 09:59:49  
Product Name: **D-Panthenol**  
CAS Number: 81-13-0  
Specifications & Purity: 98%  
Lot #: K2328056  
SKU #: **P107368**  
**Analysis:** **301723**  
Storage Temperature: Store at 2-8°C, Argon charged

| Parameter                                                       | Limit Values                                | Result                                      |
|-----------------------------------------------------------------|---------------------------------------------|---------------------------------------------|
| Water by Karl Fischer                                           | 0-1 (%)                                     | 0.30990 %                                   |
| Specific Rotation $[\alpha]_{20/D}(c=5 \text{ in H}_2\text{O})$ | 29-32 (°)                                   | 30.36600 °                                  |
| Refractive index $n_{20/D}$                                     | 1.498-1.5                                   | 1.49830                                     |
| Purity(HPLC area)                                               | 98-100 (%)                                  | 98.71600 %                                  |
| Appearance (P107368)                                            | Colorless to Yellow Viscous Liquid or solid | Colorless to Yellow Viscous Liquid or solid |
| Infrared spectrum                                               | Conforms to Structure                       | Conforms to Structure                       |
| Solubility in H <sub>2</sub> O                                  | Almost transparency                         | almost transparency                         |



John Su  
QA & QC Manager