

## Certificate of Analysis

Product Name: **D-Calcium Pantothenate**  
 Country of Origin: **China**  
 Starting Material: **Acrylonitrile**  
 Batch Number: **Varies**  
 Manufacture Date: **Varies**  
 Retest Date: **Varies**

### Test Results Obtained by PureBulk

ITEMS	SPECIFICATIONS	RESULTS
D-Calcium Pantothenate (HPLC)	98-102%	100.14%
Identification (USP)	Positive	Confirmed
Pantothenic Acid (HPLC)	Report Only	91.73%
Calcium (Ca) (USP/NF Titration)	8.2-8.6%	8.24%
Loss on Drying (LOD) (USP<731>)	≤5.0%	2.56%
Aerobic Plate Count	≤1000 cfu/g	610 cfu/g
Yeast & Mold	≤100 cfu/g	<20 cfu/g
Coliforms	≤100 cfu/g	<20 cfu/g
<i>E. Coli</i>	Negative	Absent
<i>Salmonella</i>	Negative	Absent
<i>Staph aureus</i>	Negative	Absent
<i>Pseudo. aeruginosa</i>	Negative	Absent
Conclusion (PureBulk):	This product conforms to standards	

The following information is an indirect translation of information provided from the Manufacturer's Certificate of Analysis, and should not be used solely as an instrument for strict quality control.

ITEMS	SPECIFICATIONS	RESULTS
Characteristics	White powder	Conforms
Solubility	Soluble in water	Conforms
Chromogenic Reaction	Add copper sulfate solution to make it bluish purple	Conforms
Chromogenic Reaction	Add ferric chloride solution to give a bright yellow color	Conforms
Identification of Calcium Salts	Positive Reaction	Conforms
Infrared	Meet the requirements	Conforms
Specific Optical Rotation	+25.0° ~ +28.5°	+26.9°
Heavy Metals	≤0.002%	Conforms
Methanol Content	≤0.3%	0.1%
Nitrogen Content	5.7~6.0%	5.8%
3-Aminopropionic Acid	≤0.5%	<0.50%
Conclusion (Manufacturer):	This product conforms to enterprise standards	

**Additional Information:** Allergen || Melamine Free || Gluten Free || Sugar Free || No Pesticides || BSE/TSE Free || Vegan / Vegetarian || Sewer sludge used - no

**Sterilization:** Non-Irradiation || Non-ETO

**GMO Statement:** Non-GMO

**Storage Conditions:** **Keep in sealed container under 25°C.**  
**Keep away from strong light, heat and moisture.**

*Purebulk.Inc verifies that the information contained herein is true and correct to the best of our knowledge.*

*Verified By: Candace Gibson / Nicole Rammage*

( This document was produced electronically and is valid without signature. )