

Typical Certificate of Analysis

Product: Vitamin B5 (Pantothenic Acid) Powder – USP Grade
Country of Origin: United Kingdom

Test	Specification	Typical Result
Appearance	White or almost white powder, slightly hygroscopic	Complies
Solubility	Freely soluble in water	Complies
Identification A / B / D	Optical rotation / IR / calcium	Complies
Appearance of solution	Clear and colourless	Complies
pH	6.8 – 8.0	7.0
Specific optical rotation	+25.5° to +27.5°	+26.4°
Impurity A + aminocarboxylic acids	≤ 0.50%	0.11%
Impurity B	≤ 0.8%	0.58%
Impurity C	≤ 0.3%	0.07%
Impurity E	≤ 0.25%	0.04%
Impurity H	≤ 0.15%	0.08%
Unspecified impurities	≤ 0.10%	<0.05%
Total impurities	≤ 1.2%	0.78%
Chlorides	≤ 200 ppm	<200 ppm
Loss on drying	≤ 3.0%	1.85%
Assay (dried basis)	98.0 – 101.0%	99.6%
Calcium	8.2 – 8.6%	8.6%
Total bacteria	≤ 1000 CFU/g	Complies
Yeasts and moulds	≤ 100 CFU/g	Complies
Enterobacteriaceae	≤ 20 CFU/g	Complies
E. coli / S. aureus / P. aeruginosa	Negative /10 g	Complies
Salmonella	Negative /25 g	Complies
Heavy metals, total (as Pb)*	≤ 10 ppm	Complies
Lead (Pb)*	≤ 1 ppm	Complies
Alkaloids (FCC)*	No turbidity	Complies
Methylene chloride / methanol*	≤ 50 ppm / ≤ 200 ppm	Complies

* Tested periodically. Complies with Ph. Eur.; producer declares USP; complies with FCC. Synthetic, spray-dried.
 Also stated: GMO-free, BSE/TSE-free, melamine-free, not irradiated, free from food allergens, lactose and latex free.

TYPICAL / representative analysis from a prior production lot. Not the lot in your bag.