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Specification

Concerning Product:	
Article number	137086V02
Trade name / designation / denomination	Vitamin B5 (Calcium-D-Pantothenat)
CAS number	137-08-6
Other names / synonyms	•Calcium DL-Pantothenate; •Calcium pantothenate; •DL-Pantothenic Acid Calcium Salt; •Vitamin B5; •calcium 3-[(2,4-dihydroxy-3,3-dimethyl-1-oxobutyl)amino]propanoate;
EC number	205-278-9
Customs tariff number / CN code / TARIC	29362400
Molecular weight [g / mol]	476,54
Formula	$C_{18}H_{32}CaN_2O_{10}$

Parameter	Test Method	Specification	Unit
Organoleptic test			
Appearance of solution	Ph. Eur.	clear and colourless	
Appearance		Fine, white free flowing granulate	
Physical parameter			
Acidity/Alkalinity	USP / FCC	Must comply	
Loss on drying	Ph. Eur. / USP / FCC	≤ 3,0	%
pH value	Ph. Eur.	[1] 6,8 – 8,0	
Specific Optical Rotation	Ph. Eur.	(@ 20°C) (calculated on dried basis)[1]	°
Identity			
Assay	PM00329QC	Calcium (complexometric) (calculated on dried basis) 8,2 – 8,6	%
Assay	USP / FCC)	Calcium-D-Pantothenate (HPLC) (calculated on dried basis) 98,0 – 102,0	%
Assay	PM00209QC	Calcium-D-Pantothenate (titrimetric) (calculated on dried basis) 98,0 – 101,0	%
Identification	Ph. Eur.	(calcium)[1]: Must comply	
Identification	USP / FCC	(IR): Must comply	
Identification	Ph. Eur.	(IR)[1]: Must comply	
Identification	FCC	(optical (specific) rotation, 25°C) 25,0 – 27,5	°
Identification	Ph. Eur.	(specific optical rotation)[1] 25,5 – 27,5	°
Identification	USP	(specific rotation, 25°C) 25,0 – 27,5	°
Impurities			
Impurity	FCC	(Alkaloids): Must comply	
Impurity	Ph. Eur. / USP	A: ≤ 0,50	%
Related substances	USP	(HPCL) Any unspecified impurity, each ≤ 0,2	%
Related substances	USP	(HPCL) Total impurities (reporting threshold 0.05%, excluding ß-alanine and other amniocarboxylic acid impurities) ≤ 1,5	%

Related substances	USP	(HPLC) Pantoic acid ≤ 1,0	%
Related substances	USP	(HPLC) Pantolactone ≤ 0,5	%
Related substances	USP	(HPLC) ß-alanyl pantothenamide ≤ 0,25	%
Related substances	Ph. Eur.	(HPLC)[1] Any unspecified impurity (reporting threshold 0.05%, excluding impurity A), each: ≤ 0,1	%
Related substances	Ph. Eur.	(HPLC)[1] Impurity B: ≤ 0,8	%
Related substances	Ph. Eur.	(HPLC)[1] Impurity C: ≤ 0,3	%
Related substances	Ph. Eur.	(HPLC)[1] Impurity E: ≤ 0,25	%
Related substances	Ph. Eur.	(HPLC)[1] Impurity H: ≤ 0,15	%
Related substances	Ph. Eur.	(HPLC)[1] Total impurities (reporting threshold 0.05%, excluding impurity A) ≤ 1,2	%
Residual Solvents			
Residual solvents	PM00473QC	Methanol: ≤ 100	ppm
Elemental Impurities			
Arsenic (As)	PM/01906	[1] ≤ 1,0	ppm
Cadmium (Cd)	PM/01906	[1] ≤ 0,5	ppm
Chlorides (Cl)	Ph. Eur.	[1] ≤ 200	ppm
Mercury (Hg)	PM/01906	[1] ≤ 0,1	ppm
Nitrogen (N)	PM/00335	(Kjeldahl) (calculated on dried basis) 5,7 – 6,0	%
Lead (Pb)	PM/01906	[1] ≤ 0,5	ppm
Microbiological data			
Aerobic microorganisms	Ph. Eur. / USP	(TAMC)[1]: ≤ 1000	CFU/g
Escherichia Coli.	Ph. Eur. / USP	Negative [1]	
Bile-tolerant gram-neg. bacteria	Ph. Eur. / USP	[1] ≤ 100	CFU/g
Salmonella	Ph. Eur. / USP	Negative [1]	
Staphylococcus Aureus	Ph. Eur. / USP	Negative [1]	
Yeast and Mould	Ph. Eur. / USP	(TYMC)[1]: ≤ 100	CFU/g

Annotation:
[1] Not routinely tested

Supplemental information:

Complies with monographie: Calcium-D-Pantothenate meets the specification of the current monograph "Calcium Pantothenate" of FCC. The substance complies with the acceptance criteria specified in the current monographs Ph.Eur. and USP-NF "Calcium Pantothenate".

Chemische Werke Hommel GmbH & Co.KG
This document was generated electronically and is valid without signature.
Waltrop, 31. Aug. 2026

LF-Basis: 19 (2025-02-01)

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