



Specification

Concerning Product:	
Article number	130405NLE
Trade name / designation / denomination	Vitamin B2 5-Natriumphosphat, EP
CAS number	130-40-5
Other names / synonyms	•RIBOFLAVIN-5'-PHOSPHATE; •Riboflavin 5'-Phosphate Sodium, Dihydrate, Electrophoresis Grade; •Riboflavin 5'-Phosphate Sodium, Dihydrate, FCC; •Riboflavin 5'-Phosphate Sodium, USP; •Riboflavin 5'-monophosphate sodium salt hydrate; •Riboflavin 5'-phosphate sodium salt hydrate; •riboflavin 5'-(sodium hydrogen phosphate); •sodium [(2S,3R,4R)-5-(7,8-dimethyl-2,4-dioxo-10-benzo[g]pteridiny)]-2,3,4-trihydroxypentyl] hydrogen phosphate;
EC number	204-988-6
Customs tariff number / CN code / TARIC	29362300
Molecular weight [g / mol]	478.325631
Formula	C ₁₇ H ₂₀ N ₄ NaO ₉ P

Parameter	Test Method	Specification	Unit
Organoleptic test			
Appearance		A Yellow or Organge Yellow Crystalline Powder, Hygroscopic.	
Physical parameter			
Loss on drying	USP	≤ 7,5	%
Loss on drying	EP/BP/E101 (ii)	≤ 8	%
pH value		1 % Solution 5,0 – 6,5	
Specific Optical Rotation	E101 (ii)	38 – 42	°
Specific Optical Rotation	EP/BP	38 – 43	°
Specific Optical Rotation	USP	37 – 42	°
Solubility		Soluble in water, very slightly soluble in ethanol (96 %)	
Identity			
Assay	USP	Riboflavin (o.d.b.) 73 – 79	%
Assay	EP/BP	Riboflavin (o.d.b.) 73 – 79	%
Assay	E101 (ii)	total coloring matters calculated as C ₁₇ H ₂₀ N ₄ NaO ₉ P·2H ₂ O ≥ 95	%
Identification	EP/BP	(A): Absorption test: 580 – 640	
Identification	EP/BP	(B) by HPLC test: The principle peak in the chromatogram obtained with the test of solution is similar in position and approximate size to the principle peak in the chromatogram obtained with the reference soltion b	
Identification	USP/EP/BP	(C) Fluorescence test: The lower layer exhibits yellow fluorescence	

Identification		(D) Reaction of Sodium Salt u. Phosphate: The filtrate gives reaction of sodium and reaction fo phosphate	
Infrared absorbtion spectrometry	E 101 (ii)	A375/A267 0,30 – 0,34	
Infrared absorbtion spectrometry	E 101 (ii)	A444/A267 0,35 – 0,40	
Impurities			
Heavy Metals (as Pb)		≤ 10	mg/kg
Phosphate (PO4)	E101 (ii)	Inorganic ≤ 1,5	%
Phosphate (PO4)	EP/BP	Inorganic ≤ 1,0	%
Sulphated ash	E101 (ii)	≤ 25	%
Impurity	EP/BP	(E): The filtrate is not more interseely coloured than reference solution BY 6	
Impurity		aromatic amines (as aniline): ≤ 70	ppm
Impurity	USP	Lumiflavine: ≤ 0,025	absorbance
Related substances		Free Riboflavin ≤ 6,0	%
Related substances		Riboflavin Diphosphate ≤ 6,0	%
Residual Solvents			
Residual solvents		Methanol: ≤ 0,3	%
Elemental Impurities			
Arsenic (As)		≤ 3	mg/kg
Cadmium (Cd)		≤ 1	mg/kg
Mercury (Hg)		≤ 0,1	mg/kg
Lead (Pb)		≤ 2	mg/kg
Organic volatile impurities			
Org. volat. Imp. Total		as Mentol ≤ 3000	ppm
Microbiological data			
Escherichia Coli.		in 1 gm: Absent	CFU/g
Total Plate Count		≤ 1000	CFU/gm
Yeast and Mould		≤ 100	CFU/g

Annotation:

o.d.b. = on dried basis / auf getrockneter Basis

Supplemental information:

Shelf life: 2 years

Storage conditions: Protect from light and store cool and dry in well-closed original packaging. The temperature should not exceed 25 °C.

Regional origin: IND

Chemische Werke Hommel GmbH & Co.KG

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Waltrop, 03. Jan. 2022

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