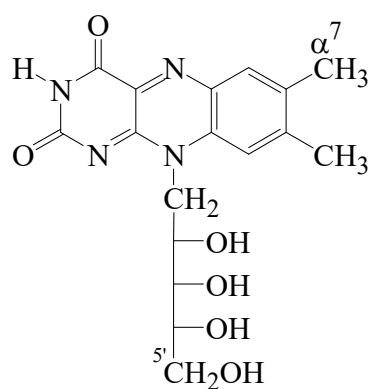




>>Entry Name: Riboflavine, 9CI, BAN, INN

ENTRY UNDER REVIEW

Synonym(s): 1-Deoxy-1-(3,4-dihydro-7,8-dimethyl-2,4-dioxobenzo[g]pteridin-10(2*H*)-yl)-D-ribitol, 9CI. Flavaxin. Lactoflavine. Ovoflavine. Vitamin B₂. Vitamin G. Russupteridine yellow III. Many other names. E101



CAS Registry Number: 83-88-5

Related CAS Registry Numbers(s): 130-40-5 6184-17-4 129569-92-2 129569-93-3

Molecular Formula: C₁₇H₂₀N₄O₆

Molecular Weight: 376.368

Accurate Mass: 376.138286

Percentage Composition: C 54.25%; H 5.36%; N 14.89%; O 25.51%

Biological Source: Widely distributed, but occurs naturally in free form only in the retina, in whey and in urine. Main forms occurring in tissues and cells are flavine mononucleotide and flavine-adenine dinucleotide

Use/Importance: Colour additive in food, nutrient supplement. Vitamin cofactor. Used as adsorption indicator in titrimetric detn. of Ag

Physical Description: Orange needles

Melting Point: Mp 280 dec.°

Optical Rotation: [α]_D −9.8 (H₂O). [α]_D −125 (20*N* NaOH)

Solubility: Sol. EtOH; spar. sol. H₂O

pKa Value: p*K*_{a1} 1.9; p*K*_{a2} 10.2 (25°)

Other Data: λ_{max} 220, 265, 365 and 455 nm (H₂O). Green fluor. in soln.

Hazard & Toxicity: LD₅₀ (rat, ipr) 560 mg/kg

Aldrich: R170-6

Fluka: 95170

Sigma: R9504

Supelco: R47-5060

>>Derivative: 5'-Adenosine diphosphate

>>Derivative: 2',3'-Dinicotinate 4'(5')-phosphate

Synonym(s): Riboflavine 2',3'-di-3-pyridinecarboxylate monodihydrogen phosphate (ester), 9CI. FMN-dinicotinate

CAS Registry Number: 36119-03-6

Molecular Formula: C₂₉H₂₇N₆O₁₁P

Molecular Weight: 666.54

Accurate Mass: 666.147546

Percentage Composition: C 52.26%; H 4.08%; N 12.61%; O 26.40%; P 4.65%

Use/Importance: Used in treatment of diabetic neuropathy

>>Derivative: 5'-Phosphate

Synonym(s): Riboflavine 5'-(dihydrogen phosphate), 9CI. Flavin mononucleotide. Lactoflavin phosphate. Monophosphoriboflavin. Riboflavin monophosphate. Vitamin B₂ phosphate. FMN. Bisulase