



>>Entry Name: Methylcobalamin

Synonym(s): Methylcobinamide hydroxide dihydrogen phosphate (ester) inner salt 3'-ester with 5,6-dimethyl-1- α -D-ribofuranosyl-1*H*-benzimidazole, 10Cl. *Co* α -(α -5,6-Dimethylbenzimidazolyl)-*Co* β -methylcobamide. **Mecobalamin**, BAN, INN, JAN, USAN. Algobaz. Hitocobamin M. Methycobal. Many other names

CAS Registry Number: 13422-55-4

As Vitamin B₁₂, [HQL41-U](#) with
R = Me, R' = CONH₂

Molecular Formula: C₆₃H₉₁CoN₁₃O₁₄P

Molecular Weight: 1344.397

Accurate Mass: 1343.587807

Percentage Composition: C 56.28%; H 6.82%; Co 4.38%; N 13.54%; O 16.66%; P 2.30%

Biological Use/Importance: Microorganisms effect Me transfer to heavy metals, e.g. Hg. Used for treatment of pernicious anaemia. Promotes nerve regeneration in animal models. Used for the treatment of peripheral nervous system disorders

Physical Description: Red needles (Me₂CO aq.), stable at r.t. in the absence of strong light

Development Status: Approved 1984

Solubility: Spar. sol. H₂O; sol. alcohols

pKa Value: pK_a 3.3-3.5 (2.72)

Other Data: Co-methyl bond cleaved by light. In aq. soln. in equilib. with methylcobinamide, i.e. axial coord. site occupied by H₂O not 5,6-dimethylbenzimidazole

Sigma: M9756

>>Derivative: 13-Epimer

Synonym(s): Methyl-13-epicobalamin

CAS Registry Number: 53701-54-5

Molecular Formula: C₆₃H₉₁CoN₁₃O₁₄P

Molecular Weight: 1344.398

Percentage Composition: C 56.28%; H 6.82%; Co 4.38%; N 13.54%; O 16.66%; P 2.30%

Physical Description: Red cryst. (MeOH aq.)

pKa Value: pK_a 2.2

References:

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