

## SPECIFICATION

**Product name** Vitamin B12 (Methylcobalamin)  
**Product code** SPJB01  
**Production unit** Heilongjiang NHU Biotechnology

### Description

**Ingredients** Methylcobalamin  
**Synonym** Mecobalamin, Vitamin B 12,  
Carbanide;cobalt(3+);[(2R,3S,4R,5S)-5-(5,6-dimethylbenzimidazol-1-yl)-4-hydroxy-2-(hydroxymethyl)oxolan-3-yl] [(2R)-1-[3-[(2R,3R,4Z,7S,9Z,12S,13S,14Z,17S,18S,19R)-2,13,18-tris(2-amino-2-oxoethyl)-7,12,17-tris(3-amino-3-oxopropyl)-3,5,8,8,13,15,18,19-octamethyl-2,7,12,17-tetrahydro-1H-corrin-21-id-3-yl]propanoylamino]propan-2-yl] phosphate  
**Formula** C<sub>63</sub>H<sub>91</sub>CoN<sub>13</sub>O<sub>14</sub>P  
**Molecular weight** 1344,38 g/mol  
**CAS-No.** 13422-55-4

### Properties

**Shelf life** 36 months in unopened original packaging  
**Aspect** Dark red, crystalline powder or dark red crystals  
**Assay (on the dried basis)** 98 – 102 %  
**Loss on drying** ≤ 12 %  
**Solubility** sparingly soluble in water, slightly soluble in ethanol (99,5 %), practically insoluble in acetone, acetonitrile and ether  
**Clarity of solution** Clear and red colour in water

**Identification**

Co	positive reaction
UV	Have maximum absorption at 267 ± 2 nm, 342 ± 2 nm and 522 ± 2 nm
IR	The infrared light absorption map is consistent with the control map.
HPLC	The retention time of the major peak of the sample solution corresponds to that of the standard solution, as obtained in the assay.

### Heavy metals

Copper (Cu)	≤ 2,0 mg/kg
Arsenic (As)	≤ 0,5 mg/kg
Lead (Pb)	≤ 0,2 mg/kg
Mercury (Hg)	≤ 0,1 mg/kg
Cadmium (Cd)	≤ 0,3 mg/kg
Iron (Fe)	≤ 2,0 mg/kg

### Microbiological specs

Total plate count	≤ 1000 CFU/g
Mould and Yeast	≤ 100 CFU/g
E. coli	negative in 10 g
Salmonella	negative in 25 g
Staph. aureus	negative in 25 g

### Related substances

Each area of the peaks other than mecobalamin is not more than 0,5 % of the peak area of mecobalamin.

The total area of the peaks other than mecobalamin is not more than 2,0 % of the peak area of mecobalamin.

### Handling

Usage for food industry

### Storage

product is hygroscopic, see light easy to decompose  
store in tight, light-resistant containers, room temperature

### Transport instructions

please see our latest safety data sheet

## NHU EUROPE GmbH