



Certificate of Analysis

Vitamin B12 USP

Catalog Number: CC1008
Lot Number: 0305803
CAS Number: 68-19-9
Synonym: Cyanocobalamin
Molecular Formula: $C_{63}H_{88}CoN_{14}O_{14}P$
Molecular Weight: 1355.57
Storage: 15°C – 30°C, protect from light
Date of Manufacture: December 29, 2015
Retest Date: December 28, 2020

Test	Specification	Result
Appearance	Dark red, crystalline powder/crystals	Conforms
Assay ¹	96.0 – 102.0%	98.77%
Identification A ¹	$A_{361}/A_{278} = 1.70 - 1.90$ $A_{361}/A_{550} = 3.15 - 3.40$	1.86 3.26
Identification B ¹	To meet USP requirement	Conforms
Identification C ¹	To meet USP requirement	Conforms
Moisture (LOD) ¹	≤ 10.0%	1.55%
Pseudo Cyanocobalamin ¹	To meet USP requirement	Conforms
Residual Solvent	Acetone ≤ 5000ppm Ethanol ≤ 5000ppm	17ppm < 5000ppm
Arsenic	≤ 3ppm	< 3ppm
Cadmium	≤ 1ppm	< 1ppm
Lead	≤ 1ppm	< 1ppm
Mercury	≤ 0.1ppm	< 0.1ppm
Total Plate Count	≤ 1,000cfu/g	< 10cfu/g
Yeast & Mold	≤ 100cfu/g	< 10cfu/g
Coliforms	Negative	Negative
E. Coli	Negative	Negative
Staph. Aureus	Negative	Negative
Salmonella	Negative	Negative

¹This lot meets the specifications for the USP38 standard.

Approved by:

John Grubb, PhD
Gojira Fine Chemicals, LLC
Quality Manager

Date: March 6, 2018



Gojira Fine Chemicals, LLC

Quality Products & Services Meeting Customer Needs
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