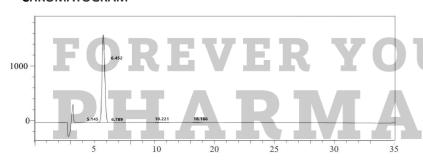


# **CERTIFICATE OF ANALYSIS**

## **SAMPLE INFORMATION**

Product Name	Vitamin B-12 (methycobalamin, cyanocobalamin, adenosylcobalamin, hydroxocobalamin) 1000mcg in 10mL Lipo-0	
Client Name/Lot No.	Step One Ventures LLC /Batch# 001003	
Sequence	C <sub>63</sub> H <sub>88</sub> CoN <sub>14</sub> O <sub>14</sub> P	
Dissolution condition	100% H20	
Length	N/A	
Molecular Weight	1355.37 g/mol	

### **CHROMATOGRAM**



Peak #	Ret. Time	Area %	
1	5.145	0.210	
2	6.452	98.909	
3	6.789	0.540	
4	10.221	0.300	
5	18.166	0.041	

#### **TEST RESULTS**

	Specifications	Results
Strength	1000.00 mcg/mL	1115.60 mcg/mL
Appearance	Red Suspension	Conforms
Purity	≥98.0%	99.0%
pH value	6.0-8.0	7.0
Impurity	Single Impurity ≤1.0%	0.5%
	Total Impurity ≤2.0%	1.0%

#### **TEST PARAMETERS**

Pump A	0.1% Tris Buffer in 100% water
Pump B	0.1% acetic acid in 100% acetonitrile
Total Flow	1.0ml/min
Wavelength	360 nm
Analytical Column Type	Agilent ZORBAX StableBond 5μm C18 (4.6*250mm*5 μm)
Dissolution Method	100% H2O
Injection Volume	30uL

# CONCLUSION

One 10 ml vial contained a red suspension and has a clear cap with a silver foil and is Batch# 001003.

The sample was analysed using Reverse Phase High Performance Liquid Chromatography (RP-HPLC) and determined to contain 99.0% Vitamin B-12 as Cyanocobalamin (1115.60 mcg/mL) , and the rest are impurities of minor significance.

## **CERTIFIED BY:**

Dutas.

Dane Fredericksen Analytical Chemist 03/06/2025

