CERTIFICATE OF ANALYSIS

Artifact ID: coa_8be89465cdbcc06cd06558494d80f699

ORDERED BY
Purity Analytics

PRODUCT
NAME: Vitamin B-12 10ml (1mg/10ml)
CATEGORY: Identity + Purity + Assay + Heavy Metals + Microbial

SAMPLE
BATCH: 20251225L06B12S10
TESTED: 2026-02-27

PERFORMING LAB **Analytical Formulations, Inc.**
8940 Fourwinds Drive STE 107, Windcrest, TX 78239
https://analyticalformulations.com
Lab-certified result data: 2026-06-02



Submitted vial

DIGITALLY SIGNED BY
Purity Analytics LLC

ISSUED	2026-08-07 22:38:34 UTC
ISSUER	Sectigo RSA Document Signing CA
ALGORITHM	RSA-SHA512
FIELD	PuritySignature
TYPE	adbe.pkcs7.detached
CERT SERIAL	80EE9C34821454C706346FA64888B1B5
TIMESTAMP	Sectigo RFC 3161 TSA

Click this panel in Adobe Reader to validate the embedded signature. Cryptographic validity is also shown at verify.purityanalytics.com.

ANALYTICAL RESULTS

COMPONENT	ANALYTE	SPECIFICATION	RESULT	P/F
Cyanocobalamin	Qualitative ID (Lambda Max)	TS λmax is a match compared to its characteristic reference standard.	**Matches**	✓
	Percent Purity	NLT 98% $r_{xy} = \frac{\Sigma (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\Sigma (x_i - \bar{x})^2} \cdot \sqrt{\Sigma (y_i - \bar{y})^2}}$	**99.0 %**	✓
Cyanocobalamin	Quantitative Assay	NLT 95% label claim $\% = \frac{A_{TS}}{A_{STD}} \times \frac{C_{STD}}{C_{TS}} \times 100$	**10.15 mg**	✓
	Heavy Metals (Total Quantity)	NMT 150 ppb/vial (including Pb, Cd, Hg, Ni, Fe & Co)	**<150 ppb**	✓
	TAMC (Aerobic/Coliform)	NMT 1,000 CFU · Incubated 48 hrs @ 37°C	**0 CFU**	✓
	TYMC (Yeast & Molds)	NMT 100 CFU · Incubated 48 hrs @ 30°C	**0 CFU**	✓

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METHODS & PERFORMING LABORATORY

METHODS

- Qualitative ID - Lambda Max
- Quantitative Assay - Beer-Lambert
- TAMC (Total Aerobic Microbial Counts)
- Percent Purity - Correlation Coefficient
- Heavy Metals - Total Quantity
- TYMC (Total Yeast and Mold Counts)

Microbial specifications follow the Substances for Pharmaceutical Use compendium. UV-Vis measurements performed on a Jenway 6715 UV/Vis Spectrophotometer.

PERFORMING LABORATORY

Analytical Formulations, Inc.

8940 Fourwinds Drive STE 107, Windcrest, TX 78239

https://analyticalformulations.com

A laboratory-authorized user certified on 2026-06-02 that the submitted result data and the Purity Analytics COA generated from that data accurately represent the laboratory's reported findings for the sample identified in this report.

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— END OF REPORT —

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