

Technical Data Sheet

Vitamin B12

Compound Information

Product Name:	Vitamin B12
CAS No.:	68-19-9
Molecular Formula:	C ₆₃ H ₈₈ CoN ₁₄ O ₁₄ P
Molecular Weight:	1355.37
Storage:	Store at 0 -8 °C
Revision Date:	2026-04-15



Analytical Information

Tests	Specifications
Appearance	Dark red crystalline powder
UV	Wavelength range: 200-700 nm. The absorption spectrum exhibits maxima at 278 ± 1 , 361 ± 1 , and 550 ± 2 nm. $A_{361}/A_{550\text{nm}} = 3.15 - 3.40$. $A_{361}/A_{278} = 1.70 - 1.90$
LOD	$\leq 12\%$
Related Substances	7 β , 8 β -Lactocyanocobalamin : $\leq 1\%$. 50-carboxycyanocobalamin : $\leq 0.5\%$. 34-Methylcyanocobalamin : $\leq 2\%$. 32-Carboxycyanocobalamin : $\leq 1\%$. 8-Epi-cyanocobalamin : $\leq 1\%$. Any other unidentified impurity : $\leq 0.5\%$. Total impurities : $\leq 3\%$
Purity	96 - 102% (On dried basis)
Specification Reference	Meets USP specification
Additional Information	Identification B : A red or orange-red color appears immediately after the addition of nitroso R salt. The red color persists after boiling with the addition of hydro-chloric acid. Identification C: The retention of the major peak of the sample solution c
MS	Pass test
1H NMR	Pass test
ESR	Pass test
IR	Pass test

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