

CERTIFICATE OF ANALYSIS

Name	Vitamin B12	CAS No.	68-19-9
Batch No.	MEDF20220214	Molecular weight	1355.37
Molecular formula	C ₆₃ H ₈₈ CoN ₁₄ O ₁₄ P	Batch quantity	60.31kg
Manufacturing Date	2022.02.17	Exp. Date	2027.02.16
Report date	2022.02.24	According AS	USP42 and enterprise standard.

ITEMS		STANDARD	RESULT	TEST METHOD
Appearance		Dark red crystal or crystalline powder. with no smell and no taste hygroscopicity.	Dark red crystalline powder, with no smell and no taste; hygroscopicity.	Visual Method
Identification	A	A361nm/A278nm:1.70-1.90 A361nm/A550nm:3.15-3.40	1.85 3.26	UV
	B	The retention time of major peak of the sample solution corresponds to that of the standard solution.	Complies	HPLC
	C	Positive	Complies	
Lose on drying		≤12.0%	5.2%	USP<731>
Assay on dried basis		96.0%-102.0%	99.5%	UV
Total impurities		≤3.0%	1.68%	HPLC
7β、8β - lactocyanocobalamin		≤1.0%	Not detected	HPLC
50-carboxycyanocobalamin		≤0.5%	0.12%	HPLC
34-methylcyanocobalamin		≤2.0%	0.60%	HPLC
32-carboxycyanocobalamin		≤1.0%	0.24%	HPLC
8-Epi-cyanocobalamin		≤1.0%	0.01%	HPLC
Any other unidentified impurity		≤0.5%	0.31%	HPLC
Total aerobic bacteria count		≤1000cfu/g	30cfu/g	USP<2021>
Molds、Yeasts		≤100cfu/g	Not detected	USP<2021>
E.coli		Negative	Not detected	USP<2022>
Residual solvents		Acetone≤0.5%	0.13%	Enterprise
Conclusion: This product complies with the specification of USP42 and enterprise standard.				

Analyst: Xia Fang

Checker: Court Yang

Approver: Julia Wang