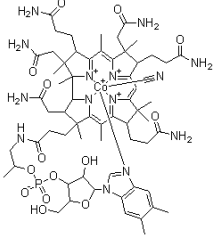


**CERTIFICATE OF ANALYSIS**

NO: DYC091712263

Product Name	Cyanocobalamin (Vitamin B12)
CAS Number	68-19-9
Molecular Formula	$C_{63}H_{88}CoN_{14}O_{14}P$
Molecular Structure	
Batch Quantity	2 KGS
Batch Number	1708142
Packing	1 KG/TIN
Mfg. & Exp. Date	2017-08-14 & 2022-08-13
Test Date	2017-08-12

Item	Standard	Result
Appearance	Dark red crystals or crystalline powder	Conform
Identification	UV: A_{361nm}/A_{278nm} : 1.70~1.90	1.87
	$A_{361nm}/A_{547\sim 559nm}$: 3.15~3.45	3.27
	TLC: Should conform	Conform
Loss on drying	$\leq 10.0\%$	2.9%
Residual solvent	Acetone $\leq 5000ppm$	340ppm
Related substances	Total impurities $\leq 3.0\%$	0.7%
Total plate count	$\leq 1000cfu/g$	$< 10cfu/g$
Yeasts & molds	$\leq 100cfu/g$	$< 10cfu/g$
Assay	97.0~102.0%	99.4%
Conclusion	This product conforms to EP9.0 & In-house standard.	

QUALITY CONTROL:

Hangzhou Dingyan Chem Co., Ltd.
Quality Control *Lucy Tang*

CHECK: 姚仙娟

INSPECTOR: 刘清风