



西安子午生物科技有限公司  
Xi'an Sonwu Biotech Co.,Ltd.

### Certificate of Analysis

Product Name:	NAD <sup>+</sup>		
Molecular Formula:	C <sub>21</sub> H <sub>27</sub> N <sub>7</sub> O <sub>14</sub> P <sub>2</sub>		
Cas No.:	53-84-9	Quantity:	60kg
Manufacture Date:	2021.09.01	Batch No.:	SW210901
Report Date:	2021.09.04	Retest Date:	2023.09.02

Testing Items	Specifications	Results
Appearance	White to yellowish powder or crystalline powder	Conforms
Identification	Conform with NMR	Conforms
Na Content (ICP-OES)	≤0.5%	0.003%
Water	≤10.0%	8.4%
pH	2.0-4.0	2.9
Purity (HPLC)	≥98.5%	99.60%
Assay	≥97.0%	99.52%
Heavy metal		
Lead(Pb)	≤0.5ppm	0.314ppm
Arsenic(As)	≤0.5ppm	N.D
Cadmium(Cd)	≤0.5ppm	0.001ppm
Mercury(Hg)	≤0.5ppm	0.006ppm

Spectroscopy Detection		
A340/A260	0.39-0.47 (0.43±0.04)	0.43
A250/A260	0.75-0.91 (0.83±0.08)	0.83
A280/A260	0.19-0.23 (0.21±0.02)	0.21
ε260 (pH=7.5)	16.2-19.8(10 <sup>3</sup> L·mol <sup>-1</sup> ·cm <sup>-1</sup> ) (18.0±1.8)×10 <sup>3</sup>	18.2×10 <sup>3</sup>
ε340 (pH=10)	5.7-6.9(10 <sup>3</sup> L·mol <sup>-1</sup> ·cm <sup>-1</sup> ) (6.3±0.6)×10 <sup>3</sup>	6.1×10 <sup>3</sup>
Residual Solvent		
Methanol	≤1.0%	0.08%
Ethanol	≤2.0%	N.D
Microbial		
Colonies Number	≤750CFU/g	9CFU/g
Escherichia Coli	<3MPN/g	N.D
<b>Storage</b>	<b>Keep dry and away from light, storage at -4℃~7℃.</b>	

Quality Assurance Officer

Corrector

Analyst



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