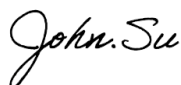


## Certificate of Analysis

Date of Testing: 2024-04-07 15:02:21  
Date of Next Testing: 2028-04-06 15:02:21  
Product Name: **β-Nicotinamide adenine dinucleotide (NAD)**  
CAS Number: 53-84-9  
Specifications & Purity: >98.0% (HPLC)  
Lot #: C2426274  
SKU #: **N111610**  
**Analysis: 327328**  
Storage Temperature: Store at -20°C

Parameter	Limit Values	Result
Molar extinction coefficient(H <sub>2</sub> O, 260.0 nm) (calcd.on anh.sub	17000-18500	17773.98
abs-ratio(2a/2b)(E280/E260)	0.19-0.23	0.21
Purity(HPLC)	98-100 (%)	99.66400 %
abs-ratio(a/b)(E250/E260)	0.8-0.86	0.83
Water by Karl Fischer	0-8 (%)	0.56 %
Solvent Content	0-3 (%)	1.56 %
Appearance (N111610)	white to pale yellow Powder, Crystals and/or Chunk	white to pale yellow Powder, Crystals and/or Chunk
Carbon NMR Spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , Colorless to Faint Yellow , Clear , 50 mg/ml H <sub>2</sub> O	pass	Pass
Enzyme detection test	to pass test	to pass test



John Su  
QA & QC Manager