

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-01-30 15:39:53  
 Date of Next Testing: 2027-01-29 15:39:53  
 Product Name: **β-Nicotinamide adenine dinucleotide (NAD)**  
 CAS Number: 53-84-9  
 Specifications & Purity: >98.0% (HPLC)  
 Lot #: A2312195  
 SKU #: **N111610**  
**Analysis: 170602**  
 Storage Temperature: Store at -20°C

Parameter	Limit Values	Result
abs-ratio(2a/2b)(E280/E260)	0.19-0.23	0.21
Solvent Content	0-3 (%)	0.00 %
Water by Karl Fischer	0-8 (%)	1.45 %
Purity(HPLC)	98-100 (%)	99.35700 %
abs-ratio(a/b)(E250/E260)	0.8-0.86	0.83
Molar extinction coefficient(H <sub>2</sub> O, 260.0 nm) (calcd.on anh.sub)	17000-18500	17001.00
Appearance (N111610)	white to pale yellow Powder, Crystals and/or Chunk	white to pale yellow Powder, Crystals and/or Chunk
Solubility in H <sub>2</sub> O , Colorless to Faint Yellow , Clear , 50 mg/ml H <sub>2</sub> O	pass	Pass
Carbon NMR Spectrum	Conforms to Structure	Conforms to Structure
Enzyme detection test	to pass test	to pass test



John Su  
QA & QC Manager