

# Certificate of Analysis

## Product Information

- Product Name:** NAD+ (Nicotinamide Adenine Dinucleotide, oxidized form)
- CAS Number:** 53-84-9
- Molecular Formula:** C21H27N7O14P2
- Molecular Weight:** 663.4 g/mol
- Appearance:** White to off-white lyophilized powder

## Batch Information

- Batch / Lot Number:** NAD2025-001
- Quantity:** 100mg
- Date of Manufacture:** 20-Sep-2025
- Retest Date:** 20-Sep-2027
- Storage Conditions:** -20 °C, dry and protected from light

## Analytical Results

Test	Specification	Result	Method
Identity (Mass Spectrometry)	Consistent with theoretical mass of 663.4 Da	663.5 Da (M+H)+	ESI-MS
Purity (HPLC)	≥ 98.0 % (by area)	99.3 %	RP-HPLC
Appearance	White to off-white lyophilized powder	White powder	Visual
Solubility	Soluble in water (>10 mg/mL)	Pass	Visual
Residual Solvent (if applicable)	≤ 0.5 %	<0.1 %	GC
Water Content (Karl Fischer)	≤ 5.0 %	1.8 %	KF titration
pH (1% solution)	6.5 – 8.5	7.2	Potentiometry
Assay (UV, $\lambda = 260$ nm)	≥ 95 %	98.7 %	UV Spectrophotometry
Endotoxin	< 0.25 EU/mg	0.08 EU/mg	LAL test
Microbial Limit Test	<100 CFU/g, no pathogens	Pass	USP <61>/<62>

## Compliance Statement

The above batch of **NAD+** complies with the stated specifications.

This batch of **NAD+** meets all specified analytical and microbiological criteria and is **suitable for research use only**. Manufactured and tested under controlled conditions to ensure consistency, purity, and integrity.