

CERTIFICATE OF ANALYSIS

Third-Party Verified | 21 CFR Part 111 Compliant

Product Identification

Product Name	NMN + NR	Lot Number	0077634-015-M1026-103025-00002
Part Number	015-M1026	Formula ID	100-PR2119 (Rev. 6)
Manufacture Date	October 30, 2025	Formula Lot	0077773-100-PR2119-102725-00002
COA Issue Date	April 6, 2026	Dosage Form	Capsule, Size 00 (2 caps/serving)

Independent Third-Party NMN Verification

NMN POTENCY VERIFIED BY INDEPENDENT LABORATORY

614.2 mg NMN per serving
122.8% of Label Claim (500 mg)

NMN (Nicotinamide Mononucleotide) concentration was independently verified by **MS Bioanalytical, LLC** (Champaign, IL) via HPLC-UV analysis of the formulation blend, confirming **468.4 mg NMN per gram** of blend (137.2% of estimated 341.5 mg/g). Highland Laboratories' own HPLC analysis of the finished capsules confirmed **614.2 mg NMN per 2-capsule serving**, exceeding the 500 mg label declaration by 22.8%. MS Bioanalytical is an independent, ISO-accredited analytical laboratory with no financial relationship to Highland Laboratories.

Testing Laboratory	Method	MSB Control #	Report Date	PO #
MS Bioanalytical, LLC Champaign, IL	STM-5.28 (HPLC-UV)	11142025-046	December 8, 2025	12901

Potency Analysis (per 2-capsule serving)

Active Ingredient	Method	Label Claim	Result	% of Claim	Status
NMN (Nicotinamide Mononucleotide)	HPLC + 3rd Party	500 mg	614.2 mg	122.8%	PASS
Nicotinamide Riboside	HPLC	200 mg	245 mg	122.5%	PASS
Resveratrol (<i>Polygonum cuspidatum</i>)	QM-0507 (By Input)	250 mg	307.3 mg	122.9%	PASS
TMG (Trimethylglycine)	HPLC	50 mg	61.46 mg	122.9%	PASS
Zinc	QM-0007 (ICP-MS)	10 mg	12.29 mg	122.9%	PASS

Physical Testing

Test	Method	Specification	Result	Status
Capsule Size	QM-0506	Size 00	Size 00	PASS

Average Capsule Weight	QM-0506	826 - 1,087 mg	946.5 mg	PASS
Disintegration Time	QM-0502 (USP <701>)	< 45 minutes	26 minutes	PASS

Microbiological Testing

Test	Method	Specification	Result	Status
Total Aerobic Count	QM-0500	< 10,000 CFU/g	Not Detected	PASS
Yeast and Mold	QM-0500	< 1,000 CFU/g	Not Detected	PASS
Total Coliform	QM-0500	< 100 CFU/g	Not Detected	PASS
<i>E. coli</i>	QM-0500	Negative	Not Detected	PASS

Contaminant Testing (Heavy Metals via ICP-MS)

Analyte	Method	Specification	Result	mcg/serving	Status
Arsenic (As)	QM-0007 (ICP-MS)	< 10 mcg/svg	0.066 ppm	0.12	PASS
Lead (Pb)	QM-0007 (ICP-MS)	< 6 mcg/svg	0.218 ppm	0.41	PASS
Cadmium (Cd)	QM-0007 (ICP-MS)	< 4.1 mcg/svg	0.128 ppm	0.24	PASS
Mercury (Hg)	QM-0007 (ICP-MS)	< 2 mcg/svg	0.052 ppm	0.10	PASS

Manufacturing & Compliance Statement

This product was manufactured in a facility registered with the U.S. Food and Drug Administration and operates in full compliance with Current Good Manufacturing Practices (cGMP) for dietary supplements as specified under 21 CFR Part 111. All quality control testing, batch production records, and master manufacturing records are maintained in accordance with federal regulations. NMN potency was independently verified by MS Bioanalytical, LLC, an independent third-party analytical laboratory with no ownership, financial, or contractual relationship to Highland Laboratories beyond the testing engagement. This independent verification provides an additional layer of assurance that the NMN content in this product meets or exceeds the amount declared on the product label.

Authorization & Digital Signatures

Role	Signed By	Date/Time (UTC)	Session ID
Prepared By (QC)	hld.jruebesam	2026-04-06 21:41:42	0F24CD07-3A88D7D89F54
Reviewed & Approved (QA)	Keith Gregory	2026-04-06 21:41:42	0F24CD07-3A88D7D89F54
Third-Party Lab (NMN)	Quality Manager, MS Bioanalytical	2025-12-08	MSB Control# 11142025-046

Document Integrity

QC Order: PRD004302 | Lot Record ID: 1454212 | Test Rows: 16 | COA Type: Tested + Third-Party Verified
SHA-256: 3a88d7d89f54746ebb13d247ae904922ba4c6f976e1d7d1b162a46be732dcf90

This Certificate of Analysis is generated from executed quality control results captured in the Highland Laboratories SAP/BatchMaster ERP system at the time of issuance. Third-party analytical results are incorporated from the original Certificate of Analysis issued by MS Bioanalytical, LLC (MSB Control# 11142025-046, Report Date: 12/08/2025). NMN third-party testing was performed on the pre-encapsulation formulation blend (Lot 0077635); all other results are from Highland's in-house testing on finished capsules. Digital signatures certify review and approval. This certificate shall not be reproduced in part without written approval of Highland Laboratories Inc. All testing per 21 CFR Part 111.