

CERTIFICATE OF ANALYSIS

Third-Party Verified | 21 CFR Part 111 Compliant | Non-GMO • Gluten Free • Dairy Free • Soy Free

Product Identification

Product Name	NMN + NR with Resveratrol and TMG, 60 ct	Lot Number	0078499-015-M1026-072326-00005
Part Number	015-M1026	Formula ID	100-PR2119 (Rev. 7)
Manufacture Date	July 23, 2026	Expiration Date	July 23, 2031
COA Issue Date	August 6, 2026	Dosage Form	Vegetarian capsule (2 caps/serving, 30 servings)

Independent Third-Party Raw Material Verification

KEY RAW MATERIALS VERIFIED BY INDEPENDENT LABORATORY

NMN • Resveratrol • Nicotinamide Riboside • Bioperine®

NMN and Resveratrol Lots Tested Days Before This Production Run

Key raw materials for this batch were independently verified by **MS Bioanalytical, LLC** (Champaign, IL) via HPLC and USP methods. The NMN lot used in this run assayed at **100% purity** (spec: NLT 98%). The resveratrol lot assayed at **52% resveratrol** (spec: 50%) with botanical identity independently confirmed as *Polygonum cuspidatum* by USP <203> HPTLC. Nicotinamide riboside assayed at **67%** (spec: 66%) and Bioperine® black pepper extract at **96.6% piperine** (spec: 95%). MS Bioanalytical is an independent, ISO-accredited laboratory with no financial relationship to Highland Laboratories.

Material	RM Lot	Method	Spec	Result	Status
NMN (β-Nicotinamide Mononucleotide)	300-1366 -071626-00003	STM-5.28 (HPLC-UV)	NLT 98%	100%	PASS
Resveratrol (<i>Polygonum</i>)	300-0887A -071626-00008	STM-3.66 (HPLC-UV)	50%	52%	PASS
Resveratrol Botanical Identity	300-0887A -071626-00008	USP <203> HPTLC	<i>P. cuspidatum</i>	Confirmed	PASS
Nicotinamide Riboside	300-1367 -101725-00002	STM-5.28 (HPLC-UV)	66%	67%	PASS
Bioperine® Black Pepper Extract	300-QRM1077	STM-3.76 (HPLC)	95% piperine	96.6%	PASS

Active Ingredient Verification (per 2-capsule serving)

Active Ingredient	Label Claim	Method	RM Third-Party Assay	Verification	Status
β-Nicotinamide Mononucleotide (NMN)	500 mg	QM-0507 + 3rd Party HPLC	100% purity	RM Purity Confirmed	PASS
Resveratrol (from <i>Polygonum cuspidatum</i> root)	250 mg	QM-0507 + 3rd Party HPLC	52% + ID confirmed	RM Potency & Identity Confirmed	PASS
Nicotinamide Riboside	200 mg	QM-0507 + 3rd Party HPLC	67% purity	RM Purity Confirmed	PASS
Trimethylglycine (TMG) (Betaine anhydrous)	50 mg	QM-0507 (By Input)	—	Formulation Verified	PASS
Zinc (as Zinc Bisglycinate)	10 mg	QM-0507 (By Input)	—	Formulation Verified	PASS

Bioperine® (<i>Piper nigrum</i> fruit)	10 mg	QM-0507 + 3rd Party HPLC	96.6% piperine	RM Potency Confirmed	PASS
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Physical Testing

Test	Method	Specification	Result	Status
Average Capsule Weight	QM-0506	618 mg	650 mg	PASS
Disintegration Time	QM-0502 (USP <701>)	< 45 minutes	24 minutes	PASS

Microbiological Testing

Test	Method	Specification	Result	Status
Total Aerobic Count	QM-0500	< 10,000 CFU/g	< 1,000 CFU/g	PASS
Yeast and Mold	QM-0500	< 1,000 CFU/g	< 100 CFU/g	PASS
Total Coliform	QM-0500	< 100 CFU/g	< 10 CFU/g	PASS
<i>E. coli</i>	QM-0500	Negative	Not Detected	PASS
<i>Salmonella</i>	QM-1006	Negative	Not Detected	PASS
<i>Pseudomonas aeruginosa</i>	QM-1005	Absent	Not Detected	PASS
<i>Staphylococcus aureus</i>	QM-1007	< 1,000 CFU/g	Not Detected	PASS

Contaminant Testing (Heavy Metals via ICP-MS)

Analyte	Method	Specification	Result	Status
Arsenic (As)	QM-0007 (ICP-MS)	< 3 mcg/serving	Not Detected	PASS
Lead (Pb)	QM-0007 (ICP-MS)	< 10 mcg/serving	Not Detected	PASS
Cadmium (Cd)	QM-0007 (ICP-MS)	< 3 mcg/serving	Not Detected	PASS
Mercury (Hg)	QM-0007 (ICP-MS)	< 3 mcg/serving	Not Detected	PASS

Manufacturing & Compliance Statement

This product was manufactured in an FDA-registered facility in full compliance with cGMP for dietary supplements per 21 CFR Part 111. All QC testing, batch production records, and master manufacturing records are maintained per federal regulations. Vendor Certificates of Analysis were received, reviewed, and verified for every incoming raw material lot used in this batch. Key raw materials were additionally 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.

Authorization & Digital Signatures

Role	Signed By	Date/Time (UTC)	Session ID
Prepared By (QC)	hld.chamlett, hld.kcoreson	2026-08-06 14:48:07	456651E0-A124C33CB350
Reviewed & Approved (QA)	Keith Gregory	2026-08-06 14:48:07	456651E0-A124C33CB350
Third-Party Lab (RM)	Quality Manager, MS Bioanalytical	Multiple dates	See RM verification table

Document Integrity

QC Order: PRD004711 | Lot Record ID: 1482760 | Packaging Lot ID: 0078499 | Test Rows: 15 | COA Type: Tested + Third-Party RM Verified
SHA-256: a124c33cb350681518fb266598d849552c3376a10571abda977147e36309d218

This COA is generated from executed QC results captured in the Highland Laboratories SAP/BatchMaster ERP system at the time of issuance. Third-party raw material testing by MS Bioanalytical, LLC: NMN (MSB# 07202026-021, lot 300-1366-071626-00003), Resveratrol potency and botanical identity (MSB# 07202026-020, lot 300-0887A-071626-00008), Nicotinamide Riboside (MSB# 10202025-054, lot 300-1367-101725-00002), Bioperine® black pepper extract (MSB# 06232025-017). Digital signatures certify review and approval. Not to be reproduced in part without written approval of Highland Laboratories Inc. All testing per 21 CFR Part 111. Bioperine® is a registered trademark of Sabinsa Corporation.