REDACTED COA COPY

Supplier identifiers removed; analytical data unchanged.

In-house report; not an independent third-party test.

CERTIFICATE NUMBER

PL-26-00036

LOT / BATCH

PL-2609-036

CERTIFICATE OF ANALYSIS · LOT RELEASE

GHK-Cu 100 mg

Lot **PL-2609-036** · Lyophilized powder · Label claim **100 mg/vial**

IN-HOUSE ANALYTICAL REPORT

In-house analytical result, not an independent third-party test

LOT / BATCH NUMBER	DATE MADE	DATE OF ANALYSIS	DATE ISSUED
PL-2609-036	2026-09-16	2026-09-18	2026-10-03
RETEST / EXPIRY	**UNITS IN LOT / SAMPLED**	**STORAGE**	**CERTIFICATE TYPE**
2028-09-16	250 / 2	−20 °C, desiccated, dark	Lot COA, 2 pages

COMPOUND	CAS NUMBER	MOLECULAR FORMULA	THEORETICAL MASS (AVG.)
GHK-Cu Copper tripeptide-1; Gly-His-Lys · Cu(II)	89030-95-5	$C_{14}H_{22}CuN_6O_4$	401.9 Da

SEQUENCE

`H-GHK-OH · Cu(II) (1:1 complex; copper bound by the Gly α-amine, the Gly–His amide nitrogen and the His imidazole)`

PURITY · RP-HPLC, AREA %

99.62%

Specification 99.0% • main peak at 2.20 min

IDENTITY · OBSERVED MASS

402.1 Da

Theoretical 401.9 Da • +0.2 Da (498 ppm)

OVERALL CONCLUSION

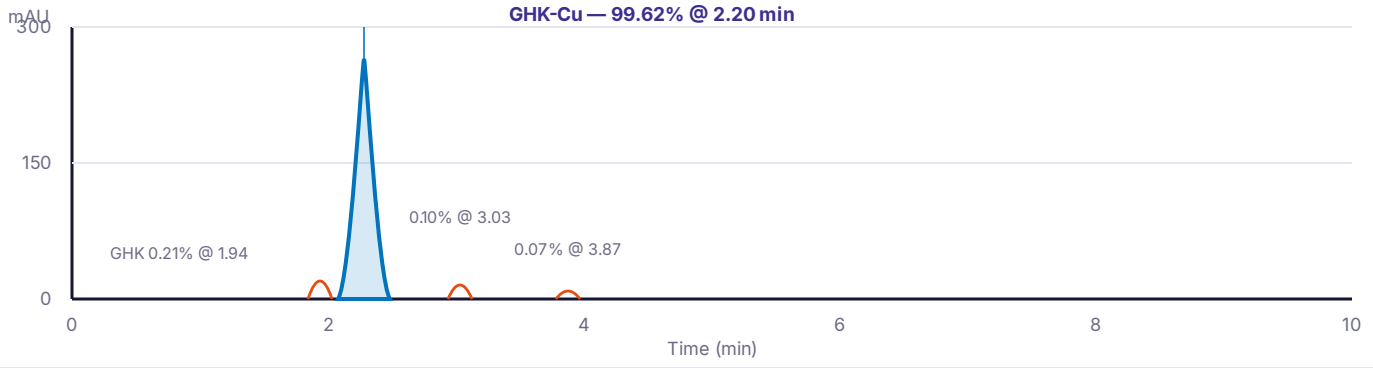
PASS

Meets every specification for the tests performed

TEST	METHOD	SPECIFICATION	RESULT	CONCLUSION
Appearance	Visual inspection	Blue to blue-violet lyophilized powder	Blue lyophilized powder	PASS
Identity (mass)	LC-MS, ESI positive	Theoretical ± 1.0 Da	402.1 Da	PASS
Purity	RP-HPLC, UV 214 nm, area%	99.0%	99.62%	PASS
Largest impurity	RP-HPLC, area%	1.0%	0.21% at 1.94 min (free-GHK dissociation)	PASS
Water content	Karl Fischer	5.0%	2.0%	PASS
Bacterial endotoxin	LAL, kinetic	≤ 5.0 EU/mg	0.04 EU/mg	PASS
Sterility / bioburden	USP <71>, membrane filtration	No growth after 14 days	No growth; conforms	PASS

1 HPLC CHROMATOGRAM

Data file: GHK_PL-2609-036_20260918_01 · Column C18 150 × 4.6 mm · UV 214 nm



Baseline uncropped; main peak, free-GHK dissociation peak, and impurities labeled with retention times. Peak table on page 2.

For laboratory research use only. Not for human or veterinary use.

2 HPLC METHOD · GHK_PL-2609-036_20260918_01

INSTRUMENT	**DATA SYSTEM**	**DETECTOR**
Waters Alliance e2695, SN E2695B742	Empower 3, Build 3471	Waters 2998 PDA
DETECTION WAVELENGTH	**COLUMN**	**COLUMN PART / SERIAL**
214 nm	C18, 150 × 4.6 mm, 3.5 µm	18600003326 / USHX18211
MOBILE PHASE A	**MOBILE PHASE B**	**FLOW RATE**
0.1% TFA in water	0.1% TFA in MeCN	1.0 mL/min
COLUMN TEMPERATURE	**INJECTION VOLUME**	**RUN TIME**
30 °C	20 µL	10 min
SAMPLE DILUENT	**SAMPLE CONCENTRATION**	**BLANK INJECTED**
Water, 0.1% TFA	0.5 mg/mL	Yes

REFERENCE STANDARD

In-house GHK-Cu reference, lot PL-RS-GHK-01, RT 2.18 min (GHK reference, RT 1.92 min)

3 GRADIENT PROGRAM

TIME (MIN)	% A	% B
0.0	95	5
3.0	95	5
7.0	55	45
8.0	20	80
9.0	20	80
10.0	95	5

4 PEAK TABLE

PEAK	RT (MIN)	AREA	AREA %
1 (free GHK)	1.94	9,030	0.21
2 (GHK-Cu)	**2.20**	**4,283,660**	**99.62**
3	3.03	4,300	0.10
4	3.87	3,010	0.07
Total		4,300,000	100.00

Threshold 0.05% area · Blank subtracted: Y · Purity = main peak area ÷ total integrated area × 100, to two decimals; main peak shaded.

5 IDENTITY BY MASS SPECTROMETRY

INSTRUMENT	**IONIZATION / MODE**	**OBSERVED M/Z (CHARGE)**
Waters Acquity SQD	ESI, positive	402.8 (1+ [M+H]) · 424.8 (1+ [M+Na])
DECONVOLUTED MASS	**THEORETICAL MASS**	**DIFFERENCE**
402.1 Da	401.9 Da	+0.2 Da (498 ppm)
DATA FILE	**ACCEPTANCE**	
GHK_PL-2609-036_MS_20260918_01	Within ± 1.0 Da	

6 ADDITIONAL TESTS

TEST	PERFORMED BY	DATE	REPORT / FILE
Water content	In-house	2026-09-19	RPT-KF-PL-2609-036
Endotoxin	In-house	2026-09-20	RPT-ET-PL-2609-036
Sterility	In-house	2026-10-02	RPT-ST-PL-2609-036

A test with no row here was not performed on this lot. Outside-laboratory reports, when used, are attached and named below.

7 REVIEW AND APPROVAL

D. Reynolds
Analyst · performed the testing
Date: 2026-09-18

S. Calloway
Reviewer · checked against raw data
Date: 2026-10-02

M. Phelps
Lab Director · approved for release
Date: 2026-10-03

Raw data retained at: Empower 3 (Build 3471), project PL-2609, archive PL-ARC-2026; 7 years. Outside laboratory reports attached: None

Redacted copy: supplier name, logo, address, contact details and verification QR/URL have been removed. This certificate applies only to the named lot and sampled units. Results were obtained by the supplier's in-house laboratory and are not independent third-party testing unless an outside report is attached. Reference values (CAS, formula, theoretical mass, sequence) are literature values. For laboratory research use only; not for human or veterinary use.