MZ Biolabs

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CERTIFICATE OF ANALYSIS

HPLC, Mass Spectrometry & Elemental Impurities Report

Sample Name	**GHK-Cu**
Client Name	Genix Labs
Lot Number	**830472**
Report Number	**ID-GHK-100-830472**
CAS Number	**89030-95-5**
Chemical Name	Glycyl-L-Histidyl-L-Lysine · Cu(II) (Copper Tripeptide-1)

Molecular Formula	$C_{14}H_{22}CuN_6O_4$
Molecular Weight	**401.91 g/mol**
Amount / Fill	**100 mg**
Analysis Date	Jun 9, 2026
Report Date	Jun 10, 2026
Analytical Method	HPLC-UV-MS (220 nm)

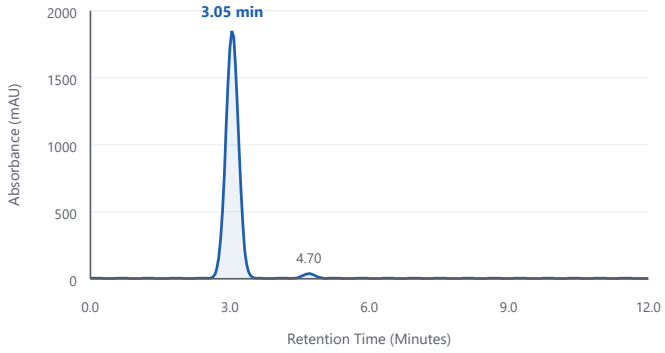
ANALYTICAL RESULTS

Test Parameter	Specifications	Observed Result	Status
Appearance	Blue lyophilized solid	Conforms	**PASS**
Identity (LC-MS)	Observed mass conforms to structure	401.9 amu	**PASS**
Purity (HPLC-UV)	Minimum 98.00% by chromatogram area	**99.10%**	**PASS**
Peptide Content	Report actual content percentage	98.70%	**PASS**
Copper Content (ICP-OES)	15.0 – 16.5% w/w	15.7%	**PASS**

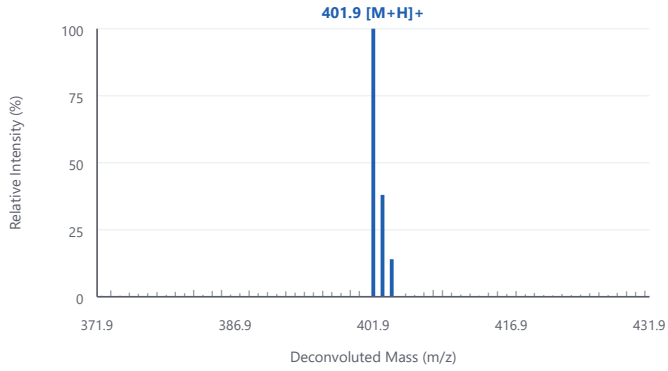
ELEMENTAL IMPURITIES — USP <232> / <233> (ICP-MS)

Lead (Pb)	Arsenic (As)	Cadmium (Cd)	Mercury (Hg)
< 0.20 ppm	**< 0.05 ppm**	**< 0.05 ppm**	**< 0.10 ppm**
PASS · ≤ 10 ppm	PASS · ≤ 1.5 ppm	PASS · ≤ 0.50 ppm	PASS · ≤ 1.5 ppm

HPLC CHROMATOGRAM (UV @ 220 NM)



MASS SPECTRUM (ESI-MS DECONVOLUTED)



Peak #	Retention Time (min)	Peak Area (mAU*s)	Area %
1	3.05	15261.40	**99.10%**
2	4.70	138.60	**0.90%**
Total		**15400.00**	**100.00%**

Deconvolution Results:
Expected Mass: **401.91 amu**
Observed Mass: **401.87 amu** (± 0.5 amu)
Conclusion: Mass matches expected molecular structure.

Report Notes & Disclaimer:

This analysis was performed by High-Performance Liquid Chromatography (HPLC) with Ultraviolet (UV) detection coupled with Electrospray Ionization Mass Spectrometry (ESI-MS). Purity value is calculated by integrating chromatogram peak areas at 220 nm. Copper content was determined by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES). Elemental impurities (Pb, As, Cd, Hg) were determined by ICP-MS in accordance with USP <232>/<233> and were below the specified limits. Salts, counter-ions, sugars (excipients), or residual water molecules resulting from lyophilization are not counted as chemical impurities under normal UV chromatographic detection protocols. The results detailed in this Certificate of Analysis relate solely to the specific sample lot number tested as received. For laboratory research use only. Not for human use.

Ken Pendarvis, ChE
Lead Analytical Chemist, MZ Biolabs
Quality Assurance Sign-Off

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