CUPRABIO PEPTIDES | REPRESENTATIVE CERTIFICATE OF ANALYSIS (COA)

GHK-Cu (Copper Tripeptide-1) >=99.0% HPLC Grade

Representative Lot Documentation · Shipped with Batch-Specific RP-HPLC Chromatogram & 14-Section MSDS

Document ID: CB-COA-20250222
Revision: 2026.11 (v2.0)
INCI: Copper Tripeptide-1
Web: cuprabio.com

1. Batch Identification & Dispatch Metadata

Product Name	Copper Peptide (GHK-Cu)	**INCI Name**	Copper Tripeptide-1
CAS Number	49557-75-7 (Acetate) / 89030-95-5	**SKU / Grade Code**	CB-GHK-CU-99
Representative Batch No.	20250222	**Manufacturing Date**	2025-02-22
Retest / Expiry Date	2027-02-21 (24 Months at 2–8°C)	**Molecular Formula**	C14H22CuN6O4 (403.9 g/mol)

2. Analytical Test Results (Lot #20250222)

Test Item	Specification / Acceptance Criteria	Tested Result (Lot #20250222)	Analytical Method	Status
Appearance	Blue to purple crystalline powder	Blue crystalline powder	Visual / Organoleptic	PASS
Identity (RP-HPLC)	Retention time matches reference std	Matches (RT = 9.937 min)	RP-HPLC (220 nm)	PASS
Identity (Mass Spec)	m/z consistent with structure	Complies (340.4 Da free ligand)	ESI-MS	PASS
Peptide Purity (HPLC)	>= 99.0% (Peak Area %)	99.6% (Chromatogram attached)	RP-HPLC (C18 Column)	PASS
Maximum Single Impurity	<= 0.5%	0.14%	RP-HPLC	PASS
Aqueous Solubility	>= 100 mg/mL in water	Complies (Clear blue solution)	USP General Notices	PASS
pH (2 mg/mL in water, 25°C)	5.5 – 7.5	6.2	USP <791> pH Meter	PASS
Copper Content (Cu^{2+})	10.0% – 16.0%	14.7%	ICP-OES / Atomic Absorption	PASS
Water Content (KF)	<= 5.0%	1.5%	USP <921> Karl Fischer	PASS
Acetic Acid Content	<= 15.0% (Acetate) / <= 2.5% (Low-Ac)	9.5% (Stoichiometric Acetate)	Ion Chromatography / HPLC	PASS
Heavy Metals (as Pb)	<= 10 ppm	< 5 ppm	USP <231> / ICP-MS	PASS
Arsenic (As)	<= 1.0 ppm	< 0.2 ppm	ICP-MS	PASS
Lead (Pb)	<= 2.0 ppm	< 0.5 ppm	ICP-MS	PASS
Total Plate Count (TAMC)	<= 100 CFU/g	< 10 CFU/g	USP <61>	PASS
Yeast & Mold (TYMC)	<= 10 CFU/g	< 10 CFU/g	USP <61>	PASS

3. RP-HPLC Chromatographic Conditions Summary

Column: C18 Reversed-Phase (4.6 × 250 mm, 5 µm) | **Detection Wavelength:** UV 220 nm | **Flow Rate:** 1.0 mL/min | **Column Temp:** 30 °C | **Mobile Phase A:** 0.1% TFA in Water | **Mobile Phase B:** 0.1% TFA in Acetonitrile (Gradient) | **Main Peak RT:** 9.937 min (Area: 99.6%+). Full instrument raw chromatogram ships with every commercial lot.

4. Quality Release Conclusion & Pre-Shipment Verification

Lot Disposition: APPROVED FOR RELEASE (Complies with CupraBio Enterprise Standard Q/CB 001-2026 for Cosmetic-Grade Copper Tripeptide-1). **Third-Party Verification Policy:** CupraBio welcomes pre-shipment verification via independent laboratories (SGS, Eurofins, Intertek). Every shipment includes lot-matched COA, RP-HPLC chromatogram, and 14-section English SDS/MSDS.

Analyzed By: Y. Zhang (QC Analyst) **Reviewed By:** M. Chen (QA Supervisor) **Approved By:** Xizhe Lei (Quality & Trade Director)

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