

GHK-Cu

Copper(II) complex of the tripeptide glycyl-L-histidyl-L-lysine

BATCH

IP-GK-261001 This is the code printed on your vial.

APPLICABLE STRENGTHS

50 mg

100 mg

99.29%

RP-HPLC

Specification ≥ 99.0%

IDENTITY Confirmed Mass spectrometry	ENDOTOXIN < 0.125 EU/mg Kinetic chromogenic LAL
STERILITY No growth Membrane filtration	ANALYSED 4 October 2026 Batch made 1 October 2026

Full analytical results

TESTS AND SPECIFICATIONS

Appearance

Visual inspection

SPECIFICATION Blue to deep blue lyophilised powder

RESULT **Conforms**

STATUS **PASS**

Purity

RP-HPLC (C18, 220 nm, water/acetonitrile with 0.1% TFA)

SPECIFICATION $\geq 99.0\%$

RESULT **99.29%**

STATUS **PASS**

Identity

ESI-MS

SPECIFICATION $[M+H]^+ = 402.92 \pm 0.50$

RESULT **402.76**

STATUS **PASS**

Copper content

ICP-OES

SPECIFICATION 10.5 to 12.5% w/w

RESULT **11.75%**

STATUS **PASS**

Free copper

ICP-OES after solid-phase separation

SPECIFICATION $\leq 0.5\%$

RESULT **0.20%**

STATUS **PASS**

Related substances

RP-HPLC, any single impurity

SPECIFICATION $\leq 1.0\%$

RESULT **0.49%**

STATUS **PASS**

Water content

Karl Fischer titration

SPECIFICATION $\leq 8.0\%$

RESULT **3.85%**

STATUS **PASS**

pH, 1% aqueous solution

Potentiometry at 25 °C

SPECIFICATION 4.5 to 7.0

RESULT 5.9

STATUS PASS

Bacterial endotoxins

Kinetic chromogenic LAL

SPECIFICATION < 1.0 EU/mg

RESULT < 0.125 EU/mg

STATUS PASS

Sterility

Membrane filtration (USP <71>)

SPECIFICATION No growth

RESULT No growth

STATUS PASS

Residual solvents

Headspace GC-FID (USP <467>)

SPECIFICATION Acetonitrile ≤ 410 ppm, methanol ≤ 3000 ppm, dichloromethane ≤ 600 ppm (ICH Q3C)

RESULT Conforms

STATUS PASS

Elemental impurities

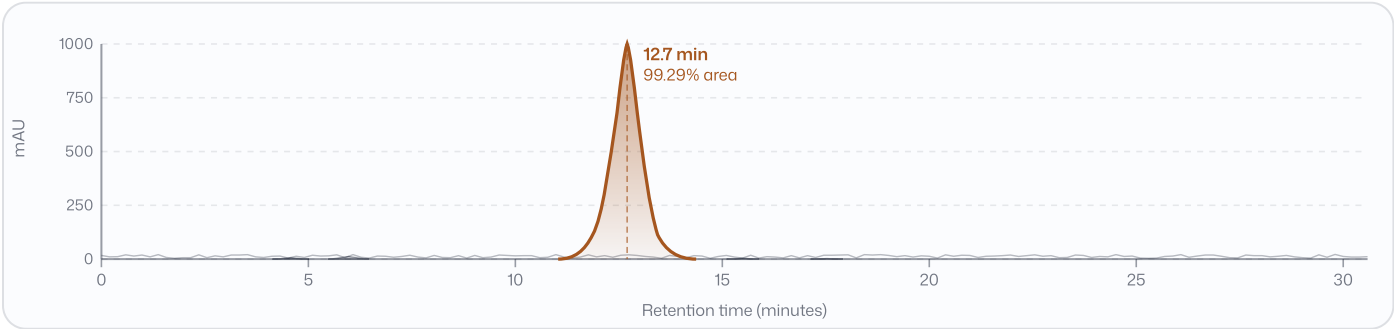
ICP-MS (USP <232> and <233>)

SPECIFICATION Pb ≤ 5, Cd ≤ 2, As ≤ 15, Hg ≤ 3 µg/day (ICH Q3D, parenteral)

RESULT Conforms

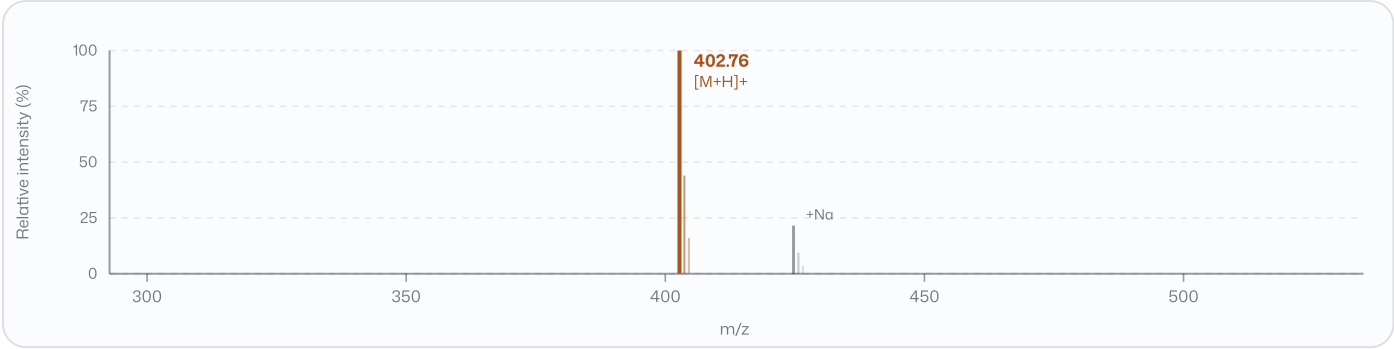
STATUS PASS

CHROMATOGRAM



Reversed-phase trace for this batch. One dominant peak at 12.7 minutes, 99.29% of the total peak area, largest single impurity 0.49%.

MASS SPECTRUM



Electrospray ionisation. Expected 402.92, observed 402.76, a difference of -0.16 m/z at charge state 1. The smaller peak to its right is the sodium adduct, [M+Na]⁺, which electrospray produces alongside the protonated ion.

REFERENCE DATA

ALSO KNOWN AS

Copper peptide, Glycyl-L-histidyl-L-lysine copper

CAS NUMBER

89030-95-5

MOLECULAR FORMULA

C₁₄H₂₂CuN₆O₄

MOLECULAR WEIGHT

401.91 g/mol

SEQUENCE

GHK

MODIFICATIONS

The 1 to 1 copper(II) complex, registered as copper tripeptide-1. The free tripeptide without copper is 340.38 g/mol and the 2 to 1 complex is 742.30, so a quoted mass identifies which species is in the vial.

Public reference values for the compound, not measurements on this batch. The batch measurements are in the table above.

STORAGE AND HANDLING

UNOPENED

2 to 8 °C, away from light

LONG TERM

-20 °C, lyophilised, for the stated shelf life

RECONSTITUTED

2 to 8 °C, use within 2 weeks; protect from light

IN TRANSIT

Stable at ambient temperature for up to 30 days

RECONSTITUTE WITH

Bacteriostatic water

THE VIAL THIS COVERS



The label on your vial carries the same batch code as this certificate, **IP-GK-261001**, and the QR goes to the results for it. If the code on the vial is not this one, the certificate for it is on this page under earlier batches.

Sticker shown at its printed size, 40 by 20 mm.
Cap colour may vary by batch.

RELEASE

BATCH DATE

1 October 2026

ANALYSIS DATE

4 October 2026

ISSUE DATE

5 October 2026

BEST BEFORE

October 2028

RELEASED BY

Quality review, Indigo Peptides

DOCUMENT

Valid only in its original, unmodified form

Results are taken from the batch testing documentation for this exact batch, supplied with the finished vials and held on file by us. Every value above is for the batch named on this certificate and for no other.

HOLDING AN OLDER VIAL?

IP-GK-260911

PURITY

99.34%

ANALYSED

14 September 2026

If the code on your vial is one of these, it is an earlier batch of ours and these are its results. A result we have published is never removed and never recalculated.