

# Reading a certificate of analysis

A COA is the lab report that should come with every vial. A good one answers two questions: is this the peptide the label says, and how pure is it. Tick each line, and if one fails, the number on the report means nothing.

## ● Is it for your vial?

- ☐ **Same name** as the label on your vial (and, if shown, the same sequence or CAS number: the molecule's ID).
- ☐ **Same lot number** as printed on your vial. A COA for a different lot tells you nothing about yours, even from the same seller.
- ☐ **A recent test date** that fits when your lot was made, not a years-old report reused for every batch.

## ● Who tested it?

- ☐ **An outside lab with a name and a website**, not the seller's own letterhead. The seller grading its own product is not a test.
- ☐ **A way to check it with the lab**: a report ID, a QR code or a lookup page. Accredited labs also print a code such as ISO/IEC 17025, which means their methods were inspected.

## ● What did they test?

- ☐ **Identity**: proof the vial holds the right molecule, usually by mass spectrometry ("mass spec"), where the measured weight matches the peptide's known weight.
- ☐ **Purity**: a percentage, usually from a test called HPLC, with its graph (the chromatogram) attached. Research grade is normally 98% or higher.
- ☐ **Amount**: how many milligrams were actually measured in the vial. 5 mg on the label and 4 mg in the vial changes your math.
- ☐ **The extras, when the label claims them**: sterile, endotoxin-tested, heavy metals, leftover solvents.

## ● Red flags

- A purity number with no graph behind it
- Purity of exactly 100.0%
- The same COA shown for different lots
- Blurry, cropped or edited-looking PDFs
- No way to contact or verify the lab
- Dates or lot numbers that don't line up