



Buying Peptides Without Getting Ripped Off

4 free checks · 4 things no check reaches · every claim cited

THE LONGEVITY DESK · DESK GUIDE N° 1 · 2026 EDITION · VERSION
1.9

THELONGEVITYDESK.ORG

About The Longevity Desk

The Longevity Desk is a research publication covering 65 compounds sold on the grey market. For each one we read the primary record: the trials, the labels, the regulator filings, and the independent lab tests. Then we report what that record actually says, including when the honest answer is that nobody knows yet. Every figure in this guide traces to a named source. Where a number has no source, we say so plainly instead of inventing one.

We hold ourselves to the standard we apply to everyone else. Every factual error we publish and then fix is logged publicly at thelongevitydesk.org/corrections: what we said, what is true, and how the mistake happened. If you find an error in this guide, it goes there too.

This guide may be shared freely, unmodified.

This guide is educational material, not medical advice. It does not recommend using, buying, or administering any compound. Consult a qualified clinician before making decisions about your health.

The short version

You are about to send a couple hundred dollars to a website you had not heard of last month, for a powder you cannot see.

Here is what labs found when they bought this stuff and tested it. Semaglutide from three online sellers came back 7 to 15 percent pure against 99 percent claimed, and it held 28.6 to 38.7 percent MORE drug than the label said. Both numbers wrong, in opposite directions, at once.

In another batch sold as TB-500, most vials contained no protein, no peptide, no amino acids. Nothing that was ever a peptide.

Four things are worth checking before you buy. All four are free. There are also things you cannot check at home no matter how careful you are, and it helps to know which is which.

By the numbers

FIGURE	WHAT IT IS
14.37 / 8.97 / 7.7%	Purity of three semaglutide samples, against 99 percent on the label. Bought from three online sellers in 2024, analysed independently (PMID 39509151)
28.6 to 38.7%	More semaglutide in those same vials than the label stated. Mostly filler, and still more drug than advertised

FIGURE	WHAT IT IS
13 and 14 of 22	Standard pharmacy quality checks failed by the same samples. All three also carried bacterial toxin
1	Vials in a tested TB-500 batch holding the molecule on the label. Most of the rest had no proteins, peptides or amino acids at all (PMID 36482504)
889 / 4,963	Molecular weight of what is sold as TB-500, then of thymosin beta-4. Five and a half times heavier, and vendors call them the same thing
4	Checks worth doing before you send money. All free, about a minute each

Small samples, both studies. The label is not evidence of anything.

Who this is for

You have read enough to want to try something. BPC-157 for a shoulder, maybe a GLP-1 for weight. You have six vendors open in six tabs, the sites look the same, and the prices differ by a factor of three.

This guide does not argue for or against taking anything. That is your call, and it belongs with the entry for whatever you are looking at. This is about what happens after: the vial that shows up, and what is in it.

What the testing found

Most sourcing advice assumes the problem is a weak product. Somebody cuts it, you get 70 percent of what you paid for, you are annoyed. That is not what the studies found.

Two numbers wrong in opposite directions. Researchers bought semaglutide from three online sellers in 2024 and had it analysed. Purity came back at 14.37, 8.97 and 7.7 percent against 99 percent on the label. That part you would expect. But the actual amount of semaglutide in the vials was 28.6 to 38.7 percent *higher* than stated (PMID 39509151).

Mostly filler, and still more drug than advertised. Someone dosing off that label is overdosing while being careful. The researchers' stated worry was accidental overdose, which is the opposite of what everybody warns you about.

All three samples also carried bacterial toxin, and failed 13 and 14 of 22 standard pharmacy quality checks.

Vials with nothing in them. A racing lab tested a batch of product sold as TB-500. Most had no thymosin beta-4 and nothing derived from it. Most had no proteins, peptides or amino acids at all. One sample out of the set contained the molecule on the label (PMID 36482504).

That is not a quality problem. A quality problem is 92 percent when you paid for 99. This is a jar of something else with a peptide's name on it.

None of that means every vendor does this. It means the spread of outcomes is much wider than people assume, and the label is not evidence of anything.

The four checks

Free, about a minute each, and a vendor who cannot survive them has told you something.

□ **1. There is a certificate for your batch, and its lot number matches your vial.** Not a certificate. A certificate for the lot in the box. A spotless report for lot RETA10-0616 tells you nothing if your vial says something else.

□ **2. The report gives content, not only purity.** Purity is what fraction of the powder is peptide. Content, sometimes called assay, is how many milligrams of peptide are actually in the vial. Different questions.

□ **3. The molecular weight matches what you ordered.** Look up the accepted weight, compare it to the report. A fraction of a Dalton is instrument tolerance. A whole Dalton or more is a different molecule.

□ **4. You can do the reconstitution math before the vial arrives.** If you cannot say with confidence how many units on an insulin syringe make your target, work it out before the box shows up, not at the kitchen table with a needle in your hand.

The lot number is the one almost nobody checks and the one that matters most, because reusing an old certificate costs a dishonest vendor nothing. A certificate for a different batch is a photo of a meal somebody else ate.

Content and purity sound like the same question and are not, and a vendor can pass one while failing the other badly, which is exactly what the semaglutide samples did. The full walkthrough, on two real certificates marked up line by line, is Desk Guide N° 2 and lives at **thelongevitydesk.org/articles/how-to-read-a-coa**.

The weight catches the swap nobody notices, because the wrong molecule can be perfectly pure. TB-500 is the clearest case. What is sold under that name weighs about 889. Thymosin beta-4, which vendors call the same thing, weighs about 4,963. Five and a half times heavier. If a seller says they are interchangeable, their own certificate settles it against them.

The math is the odd one out, because it is not about the vendor at all. It is about the most common way people get hurt with a completely legitimate vial. Reconstitution mistakes put people off by a factor of ten in either direction, and the syringe markings do not measure what most people think they measure. The arithmetic is Desk Guide N° 3, and at **thelongevitydesk.org/articles/reconstitution-math**.

Where to compare vendors

Biohack Blueprint (biohackblueprint.ai) lists what eleven vendors charge per milligram for the same compound, side by side, with each product's certificate linked where the vendor publishes

one. It is our price directory, and its outbound links are affiliate links.

What you cannot check

Being straight about the limits matters more than the checks, because a checklist hands you a feeling of control you did not actually buy. Four things never make it onto one, because there is no check to run.

Sterility and endotoxin: not at home, not by eye, not at any price. All three semaglutide samples carried bacterial toxin and looked completely normal.

Whether your vial is the vial the certificate describes. The document only proves a lab tested something. Everything between that sample and your package is trust that no document covers.

What happened in transit. Storage and temperature history are invisible by the time the box reaches you.

Whether it does anything at all. A vial can be 99.8 percent pure, dead on content, sterile, correctly identified, and still be a compound with no finished human trial behind it. No certificate speaks to whether a thing works. That question lives in the compound's entry at thelongevitydesk.org.

The Desk's take

The useful shift is to stop reading a certificate as reassurance and start reading it as a claim you can check.

Most sourcing advice is really about vendor reputation, which is a proxy, and a weak one, downstream of who posts most and who sponsors the loudest people. The four checks are not a proxy for anything. They are the thing.

What we would not conclude is that everything on the market is fake. The studies do not show that and the samples are small. What they show is that you cannot predict the outcome from the website, the price, or how confident the copy sounds.

If a vendor has ever refused you a batch-specific certificate, we want to know what reason they gave: **hello@thelongevitydesk.org**. The reason is usually more revealing than the refusal.

Questions people ask

What has independent testing found inside grey market peptide vials? Semaglutide bought from three online sellers in 2024 came back 14.37, 8.97 and 7.7 percent pure against 99 percent claimed, held 28.6 to 38.7 percent more drug than the label stated, carried bacterial toxin in all three samples, and failed 13 and 14 of 22 standard pharmacy quality checks (PMID 39509151). A

racing lab tested a batch sold as TB-500 and found most vials held no thymosin beta-4 and no proteins, peptides or amino acids at all, with one sample out of the set containing the molecule on the label (PMID 36482504).

What is the difference between purity and content on a certificate? Purity is what fraction of the powder is peptide. Content, sometimes called assay, is how many milligrams of peptide are actually in the vial. A vendor can pass one while failing the other badly, which is what the semaglutide samples did: mostly filler by purity, and still more drug in the vial than the label claimed.

Why does the lot number matter so much? Because a certificate only describes the batch it was run on. A spotless report for one lot tells you nothing about a vial from another, and reusing an old certificate costs a dishonest vendor nothing. Matching the lot on the document to the lot on the vial is free, takes about a minute, and is the check almost nobody does.

Can a buyer tell whether a vial is sterile? Not at home, not by eye, and not at any price. All three semaglutide samples carried bacterial toxin and looked completely normal.

Can a peptide be pure and still be the wrong molecule? Yes, and that is the swap nobody notices. What is sold as TB-500 weighs about 889; thymosin beta-4, which vendors call the same thing, weighs about 4,963. Comparing the accepted weight against the weight on the report catches it.

Does this mean every vendor is selling fake product? No, and the studies do not show that. The samples are small. What they show is that the spread of outcomes is much wider than people assume, and that you cannot predict the outcome from the website, the price, or how confident the copy sounds.

Where to go from here

- **Every compound, one table:** what a trial gave vs what circulates: thelongevitydesk.org/gap
 - **The reconstitution calculator**, with the arithmetic shown: thelongevitydesk.org/tools/reconstitution
 - **Never heard of any of this?** Five short steps: thelongevitydesk.org/start
 - **One email a week at most**, nothing for sale: thelongevitydesk.org/subscribe
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This content is for educational and informational purposes only and is not medical advice. Peptides discussed are research compounds and may not be approved for human use. Nothing here should be used to diagnose, treat, cure, or prevent any disease. Always consult a qualified healthcare professional before starting any peptide, supplement, or protocol. Individual responses vary. Do not self-administer compounds without proper medical supervision.

