

Peptide Storage & Handling Guide

A plain-English reference for handling lyophilised research peptides in the laboratory. From 4K Peptides · 4k-health-beauty.com

1 BEFORE YOU OPEN ANYTHING

Research peptides are supplied as a **lyophilised (freeze-dried) powder** sealed under vacuum in a glass vial. In this dry state they are at their most stable. The two things that degrade them are **moisture** and **heat**, so the goal at every step is to keep them cold and dry until the moment of use.

- Inspect the vial on arrival: the powder or thin film should be intact and the stopper undisturbed.
- Let a cold-shipped vial come to room temperature **before** opening, so condensation does not form inside.
- Have your labels, solvent and cold storage ready before you break the seal.

2 STORING THE DRY (UNRECONSTITUTED) VIAL

Short term (days–weeks)

Refrigerated at **2–8°C** is fine for most compounds you will use soon. Keep away from the fridge door and light.

Long term (months+)

Freeze at **–20°C** or colder. Lyophilised peptides are typically stable frozen for many months to years depending on the compound.

Avoid freeze–thaw cycles. Repeatedly warming and re-freezing a vial is one of the most common causes of degradation. Store it at one temperature and disturb it as little as possible.

3 TYPICAL STORAGE CONDITIONS AT A GLANCE

STATE	TEMPERATURE	INDICATIVE STABILITY*
Lyophilised powder, sealed	–20°C (or colder)	Months to years
Lyophilised powder, sealed	2–8°C	Weeks
Reconstituted solution	2–8°C	Days to a few weeks
Any state	Room temp / warm	Hours to days — minimise

*Indicative only. Actual stability varies by compound, purity and buffer. Always check the specific compound's profile at 4k-health-beauty.com.

4 RECONSTITUTION — THE GENERAL METHOD

Reconstitution simply means dissolving the dry powder into a liquid (the solvent) so it can be measured and studied. The usual solvent is **bacteriostatic water** for compounds kept over several days, or sterile/distilled water for immediate single-session use. Some poorly soluble compounds need a specific solvent — check the compound's profile.

- 1 **Sanitise.** Wipe both the peptide vial stopper and the solvent vial stopper with an alcohol swab and let them dry.
- 2 **Draw the solvent.** Using a clean syringe, draw the volume of solvent you have calculated for your intended concentration.
- 3 **Add it slowly.** Insert the needle and let the solvent run **down the inside wall** of the vial — never squirt it directly onto the powder, which can damage the peptide and cause foaming.
- 4 **Dissolve gently.** Swirl or roll the vial slowly, or leave it to stand. **Do not shake.** The powder should dissolve into a clear solution within a few minutes.
- 5 **Label & refrigerate.** Mark the vial with the compound, concentration and date, then store the reconstituted solution at 2–8°C.

A note on concentration. The concentration of your solution is set by how much solvent you add to a known amount of powder. A reconstitution calculator that does this arithmetic for you is free to use at 4k-health-beauty.com. This guide does not recommend or endorse any dose — that is a matter for a qualified researcher's protocol, not a supplier.

5 GOOD-PRACTICE DO'S AND DON'TS

Do

- Keep vials cold, dry and out of direct light
- Use clean technique and fresh needles
- Add solvent slowly down the vial wall
- Label every vial with date and concentration
- Check each compound's own storage notes

Don't

- Shake vigorously or spray onto the powder
- Repeatedly freeze and thaw the same vial
- Leave solutions at room temperature
- Reuse needles or draw through a dirty stopper
- Guess — look up the compound's profile

Every compound we supply has a plain-English profile — evidence tier, storage, half-life and handling.

Browse the full peptide library at 4k-health-beauty.com

Restocks & updates on Telegram: t.me/peptides4k

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