

# Peptide Storage Guide

## LAB-PROTOCOLS

Fridge or freezer? How long do mixed peptides last? Simple storage rules that keep your peptides fresh — in plain English.

## Peptide Storage Guide

Peptides are delicate compounds that require careful handling and storage to maintain their effectiveness. Whether you're a researcher or a hobbyist, understanding how to properly store peptides can significantly extend their shelf life and potency. This guide will walk you through the essentials of peptide storage, covering everything from refrigeration to travel tips.

### 1. Understanding Peptide Stability

Peptides can degrade quickly if not stored correctly. Several factors can influence their stability:

- **Temperature Fluctuations:** Higher temperatures can accelerate degradation.
- **Freeze/Thaw Cycles:** Repeatedly freezing and thawing peptides can diminish their efficacy.
- **Humidity:** Moisture can lead to degradation and crystal formation.
- **Light Exposure:** Bright light can degrade peptide quality.
- **Mechanical Shock:** Dropping vials can cause physical damage to the peptide.

To ensure your peptides remain effective, it's crucial to follow proper storage guidelines.

### 2. Refrigeration vs. Freezing

#### Refrigeration

- **Reconstituted Peptides:** Store in the fridge for **up to 60-90 days**. Keep them in a light-proof, airtight container, avoiding the door of the refrigerator to minimize agitation.
- **Lyophilized (dry) Peptides:** Can be stored in the refrigerator for **up to 1 year**. Ensure they are kept in a moisture- and light-proof container.

#### Freezing

- **Reconstituted Peptides:** If you plan to use them for an extended period (beyond 60 days), consider aliquoting them into a sterile container and using a buffered solution with a pH of 5-6. Store in the freezer, but remember that it should only be frozen **once** to prevent damage.

- **Lyophilized Peptides:** Can be stored in the freezer for **2-3 years**, as long as they are kept away from light and moisture.

### 3. Signs a Vial Has Gone Bad

Knowing when your peptides have degraded is vital. Here are common signs to watch for:

- **Color Changes:** Any significant change in color may indicate degradation.
- **Cloudiness:** A clear solution should not become cloudy.
- **Sediment Formation:** Visible particles can be a sign of contamination or degradation.
- **Unusual Smell:** A change in odor may indicate spoilage.

If you notice any of these signs, it's advisable to dispose of the peptide safely.

### 4. Travel Tips for Peptide Storage

If you need to transport peptides, consider the following:

- Use a **temperature-controlled storage container**. This keeps peptides stable during transport.
- Always pack peptides with **desiccant packets** to absorb moisture.
- Avoid exposing peptides to **direct sunlight** or high temperatures during travel.

### 5. Do's and Don'ts of Peptide Storage

Here's a quick reference table to summarize the key points:

| Do's                                        | Don'ts                                                  |
|---------------------------------------------|---------------------------------------------------------|
| Store reconstituted peptides in the fridge. | Store reconstituted peptides in the door of the fridge. |
| Use a light-proof, airtight container.      | Store peptides in clear containers.                     |
| Use desiccant packets to absorb moisture.   | Ignore moisture control.                                |
| Freeze peptides only once.                  | Subject peptides to multiple freeze/thaw cycles.        |
| Keep peptides away from bright light.       | Expose peptides to direct sunlight.                     |

## Conclusion

Proper peptide storage is crucial to maintaining their potency and effectiveness. By following the guidelines outlined in this guide, you can maximize the shelf life of your peptides and ensure they remain effective for your research needs. Always remember that this information is educational and not intended as medical advice.

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