

Storage of lyophilized peptides:

Peptides are shipped at room temperature as a lyophilized powder. Store at -20°C or below on receipt. Peptides should be allowed to warm to room temperature before the vial is opened. This will prevent the condensation of atmospheric moisture onto the peptide, thus making it easier to handle and weigh. Peptides should be stored tightly sealed to prevent deliquescence. It is recommended that only the required amount is dissolved into a buffer. The remainder of the stock should be stored dry at -20°C . Storage in buffer is not recommended. Most peptides will remain stable for at least a year if stored under these conditions. For research use only. Not for use in therapeutic or diagnostic procedures.

Technical Information: Cys/Met/Trp peptides

Buffers used to dissolve these peptides should be degassed either by bubbling argon or nitrogen through the solution for 10 minutes, or by subjecting the solution to high vacuum for 10 minutes (using a common ultrafiltration capsule).

Hydroscopic peptides

Peptides containing several charged residues (Asp, Glu, Lys, Arg, His) might take up water when exposed to air at room temperature. Argon or nitrogen should be used to prevent this. If inert gases are unavailable, then storage in a desiccator is a viable alternative.

Dissolving peptides:**Water-soluble peptides**

Most peptides should be soluble in sterile, distilled water. When first solubilizing the peptide ensure that the initial concentration is greater than the desired final concentration. This will allow for the addition of other solubilizing agents should the peptide have limited solubility. For peptides that are not water-soluble or have limited solubility, one of the following strategies should be employed:

Acidic peptides (containing Asp and/or Glu residues)

Acidic peptides with net charge of -1 or greater should be dissolved in a small amount of basic solvent such as 0.1% ammonium hydroxide or ammonium bicarbonate and diluted to the required stock concentration with water. The exception is peptides containing Cys, as disulphide bonds may form at alkaline pH.

Basic peptides (containing Arg, His and/or Lys residues)

Add a small amount of 5-10 % acetic acid.

Neutral or hydrophobic peptides (containing Ile, Leu, Phe and/or Val)

Add a small amount of chaotropic agent, such as dimethylsulphoxide (DMSO), dropwise.

Note: chaotropic agents may interfere with some biological assays.

Visit www.thinkpeptides.com/peptidesolubility.html for more detailed information

Storage of peptides in solution:

Peptides in solution are much less stable than in lyophilized form and have limited storage life. To maximize stability, store below -20°C in solutions buffered at pH 5-7 and use within 1 week. Repeated freeze-thaw cycles should be avoided. To overcome potential bacterial degradation, peptides can be dissolved in sterile solutions or sterile filtered using a $0.2\ \mu\text{m}$ filter. *Note:* peptides susceptible to oxidation (those containing Cys, Met and/or Trp residues) as well as Glu and Asp-containing peptides have very limited storage life.