

Frequently Asked Questions

How can I dissolve my peptides?

This is a common problem. Below are some tips for achieving this successfully:

- You should experiment on a small amount of material.
- Initially, use volatile solvents such as aqueous acetic acid and ammonia solutions. If the solvent does not work then you can remove them by lyophilisation.
- Warming and sonicating the solution can help dissolution.
- For acidic peptides (more Asp and Glu than His, Lys or Arg residues) try 0.1M aqueous ammonium carbonate (basic buffers). However, avoid this if your peptide has disulphide bridges, since the high pH can break these bonds.
- For basic peptides (more His, Lys and Arg than Asp and Glu residues) try 5% aqueous acetic acid (acidic buffers).
- Dimethylsulfoxide (DMSO) is an excellent solvent; however, it is difficult to remove by lyophilisation (boiling point = 189 °C). Add high purity DMSO to the peptide until it has all dissolved. Then add water / buffer solution slowly to dilute. Stop addition if precipitate appears. Avoid using DMSO for peptides with Cys, as it promotes disulfide formation.

What is the counterion of my peptide?

Your peptide will be purified by HPLC using acetonitrile / water gradients with a small amount of trifluoroacetic acid (TFA) as moderator; therefore, your peptide will be a TFA salt. This is not a problem usually, but TFA can be toxic to cells at high concentration. To avoid this complication, then you can specify your peptide to be either an acetate or a chloride salt.

How do I store my synthetic peptide?

Designer Bioscience supplies your peptides as freeze-dried materials and these can be regarded as stable for shipping purposes. However, for long-term storage we recommend you store them in a freezer at -20°C . In order to avoid condensation of atmospheric water on your peptide when you want to use it, remember to let your peptide container warm up to room temperature before opening. Note that peptides in solution can degrade more rapidly compared to freeze-dried peptides. This is largely due to oxidation of Cys, Met and Trp residues, or deamination of Gln and Asn residues, but microbes can also attack them. Therefore, you should store peptide solutions at -20°C when not in use. The precise storage life of your peptide is difficult to predict since it is very dependent on amino acid content and sequence.