

Handling and Storage of Synthetic Peptides

Storage of Lyophilized Peptide

When peptides are received, ensure they are kept in a cool, dark place. For best preservation, store them under refrigeration at 4°C or colder, away from bright light. Dry peptides are stable at room temperature for a few weeks, but for long-term storage, -20°C is preferred.

Contamination with moisture will greatly decrease long term stability of solid peptides. Each time you use some of the peptide, remove the container from cold storage and allow it to equilibrate to room temperature or slightly warmer before opening it. This will reduce the uptake of moisture from the air onto the cold surface of the solid peptide or the inside of the container. After removing the required quantity, re-seal the container, preferably under an atmosphere of dry nitrogen. This can be achieved by blowing a gentle stream of dry nitrogen into a plastic bag housing the container, taking great care to avoid blowing the peptide powder right out of the container. After the air is displaced, quickly cap the container, and then return it to cold storage. This procedure will minimize the oxidation of air-sensitive peptides as discussed later.

Redissolving Peptides

There is no universal solvent for solubilizing all lyophilized peptides, while also maintaining their integrity and compatibility in biological assays. Different solvents have been tested for all the peptides produced by Novell.

Choice of Container

An ideal container for peptide manipulation would be scrupulously clean, chemically resistant, optically clear, strong, and available sterile in a size suitable for the amount of peptide you have. Glass containers are generally satisfactory for this purpose. If a plastic is used, the choice is generally between plastics which are crystal clear but not solvent resistant (e.g. polystyrene) and those which are chemically resistant but translucent (e.g. polypropylene). We ship peptides in polypropylene tubes, mainly because of their resistance to breakage. Being solvent-resistant, they can be used as a vessel for redissolving peptides, but if best visibility is required the peptide should be transferred to a clear (preferably glass) container.

Conclusion

The most effective way to prevent or minimize peptide degradation is to store the peptide in lyophilized form at -20°C or preferably at -80°C (if available). If the peptide is in solution, freeze-thaw cycles should be avoided by freezing individual aliquots. Exposure to pH>8 should be avoided. However, if it is necessary to dissolve peptides at pH>8, the solutions should be chilled. Finally, prolonged exposure of lyophilized peptides and solutions (especially at high pH) to atmospheric should be minimized.

CERTIFICATE OF ANALYSIS

Product Name	Short neuropeptide F, Cat.#: 317818
Lot No.	GT30375-2-0228
Sequence	SDPHLSILSKPMSAIPSYKFDD
Dissolution condition	15%ACN+85%H2O
Length	22AA
Modification	N/A
Molecular Weight (MW)	2448.72
Storage	-20°C

This is a demonstration, not actual data.

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