

INEB Shipping Policy:

New England Biolabs ships its products in plastic foam (polystyrene) containers with gel ice packs and recommends that its distributors do the same. Gel ice packs are kept at -20°C for at least 72 hours prior to shipment and the polystyrene boxes are tightly sealed. Tests have shown that products shipped under these conditions will stay at or below 4°C for more than 24 hours. Testing at NEB has shown that there is no difference in activity and stability between enzymes that are shipped with gel ice packs and enzymes shipped on dry ice.

Shipment Temperature

While New England Biolabs recommends storage of its enzymes at -20°C *, exposure to higher temperatures ($+4$ to $+10^{\circ}\text{C}$) during shipping does not pose any risk to the enzymes. In fact, during the purification process (up to 3 weeks) enzymes are maintained at these temperatures as they are purified away from proteases and other contaminants which might interfere with their stability. Furthermore, each enzyme is shipped in a specific storage buffer which has been optimized for long-term stability.

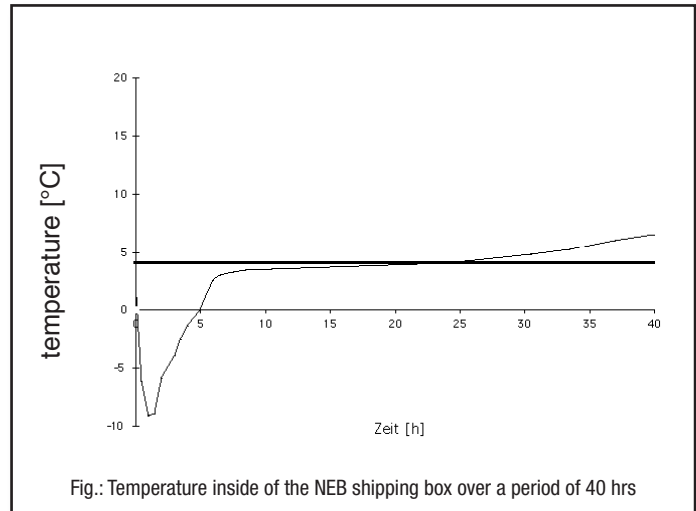
Avoid Repeated Freeze/Thaw Cycles

NEB enzymes are stored in buffered 50% glycerol and remain liquid at temperatures down to -35°C . If these enzymes are shipped at colder temperatures (for example, in the presence of dry ice) the products will freeze. Proteins subjected to repeated freeze/thaw cycles may lose activity.

The enzymes we supply are highly purified and are not at risk from contaminating endonucleases and proteases - it is the activity of these at 4°C that often causes loss of restriction enzyme activity. Recent advances in recombinant enzyme technology allows NEB to produce enzymes of unsurpassed quality and purity. NEB's recombinant enzymes are extremely pure and many have enhanced stability at elevated temperatures, for example Not I will retain 100% of its original activity even after being at 25°C for 16 hours!

Thawed Buffers And Cool Packs

All of our enzymes are provided with tubes of optimum reaction buffer. These buffer solutions and the gel ice packs are frozen to -20°C before they leave our facility, however, they may have thawed upon arrival at their final destination. This is no cause for concern with our overnight gel ice shipments since buffer integrity is maintained!



*Most NEB products are stored at -20°C ! However, some of our products require storage temperatures of $+4^{\circ}\text{C}$ or -70°C or shipment on dry ice! These products are clearly marked on the products' datacard and/or on the delivery receipt, respectively.

To help prevent damage arising from power cuts or freezer breakdowns NEB recommends to store NEB cool packs within your freezers as an additional thermal mass! We are shipping an appropriate amount of cool packs free of charge upon request. This is part of our commitment to excellent customer service.

Do you have additional questions concerning our shipping policy?
Please do not hesitate to contact our German office at:

Tel.: 0800/BIOLABS (246 5227)
info@de.neb.com



In essence:

The best temperature to ship NEB's enzymes is at $+4^{\circ}\text{C}$ on genuine NEB gel ice packs!*