



Best Practices

PCR TUBES

Neptune offers a collection of high quality 0.2 to 0.6ml thin walled tubes specifically manufactured for PCR applications. The rigorous quality standards of this product line ensure peak performance in even the most sensitive of PCR assays. To ensure that these products perform as well in your hands as they do in ours, we've outlined some best practices for using PCR tubes in the lab.

Compatibility

The uniform thin-wall dimensions of Neptune PCR tubes make them compatible with thermocycler blocks on the market that accept industry standard tubes. Good block-tube contact is important for efficient thermocycling reactions, so it is always recommended to verify fit and contact of the tubes with your particular system. Also, be sure to check the heated lid of your system. Many thermocyclers come with heated lids with adjustable heights, so make sure that yours is set to optimize the seal and avoid the effects of condensation within the tube cap.

Product Handling

Neptune PCR tubes are made of virgin polypropylene and have a long shelf life when properly stored. Maintaining room temperature storage, away from prolonged sun exposure, will help prevent the tubes from becoming brittle and yellow over time. Maintain a First In, First Out (FIFO) process for tube inventory.

When assembling your PCR, do so in a separated area. Always use aerosol barrier pipette tips and be sure to use a new tip every time you touch your stock solution and reagents to avoid cross-contamination.

Avoiding Contamination

Neptune PCR tubes are manufactured and tested to ensure the highest level of purity. Because they are certified as RNase, DNase, DNA, and endotoxin-free, it is not necessary to autoclave the tubes before use. In fact, there have been several published reports where autoclaves have introduced contamination to products, particularly in busy labs that share the same autoclave.

Always wear gloves when handling products to set up a PCR reaction. When removing PCR tubes from the product bag, never reach into the bag with your hands. Instead, pour the tubes out from the bag. This avoids contamination and the ziplock seal of the bag preserves the remaining tubes for future use.

If autoclaving is required by your lab protocol, please adhere to the following guidelines

- Pour PCR tubes into a sterile beaker
- Cover the beaker with aluminum foil and use a piece of autoclave indicator tape to secure the foil to the beaker
- Set autoclave for 121 °C, 15 PSI (1 atm) for 15 minutes
- Unlike glassware, do not use a "dry cycle" as this may distort the plastic of the tubes
- Keep tube sealed in beaker until use