7 & 12 mm Omni Tip™ Plastic Homogenizing Probes

PRODUCT INFORMATION

While Omni Tip™ Plastic Homogenizing Probes can be autoclaved up to seven times for repeated use, they are not recommended for extended use with phenol or guanidine-based reagents. Disposal may be required when used in conjunction with these reagents. However, for many applications the probe can be cleaned and/or sterilized for reuse by the procedures described below:

	Recommended	Not Recommended
Sterilization Techniques	Autoclave up to 250°F/ 121°C	UV Irradiation
	Ethylene Oxide	
	Formaldehyde	
	Glutaraldehyde (2%)	
	Gamma irradiation up to 5 Mrad	
Biological Disinfection	Alcohol (70%)	Phenolic Derivatives
	Hypochlorite (5%) (chlorine bleach)	Exposure to Guanidine
	Formaldehyde (40%)	Dichloromethane

Chemical Resistance

The Omni Tip™ Plastic Homogenizing Probe is made of polycarbonate and an amorphous thermoplastic polytherimide. The plastics used in the probe have good chemical resistance to weak acids, chlorides, hypochlorides, NaOH, and many other chemicals, allowing for reuse. However, phenol or guanidine based reagents commonly used with PCR kits are not recommended for extended use with plastic probes. Exposure to these chemicals shortens the life of the probes and usually results in disposal after each use. Therefore reuse is not guaranteed in such circumstances. If any cracking or brittleness is detected, it is recommended that they be discarded. Probes should be considered worn and should be discarded if particles from the shaft appear in the sample or if discoloration occurs within the tube. Due to the many different chemicals and environments in which processing takes place, it is the responsibility of the user to set sterilization guidelines and protocols to optimize probe life and performance.

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Autoclaving Plastic Probes

The probe can be autoclaved up to seven times and retain its mechanical properties. Due to different combinations of chemicals and environments, it is suggested that the autoclaving recommendations be followed as a guideline only, and the user should decide how to best alter the procedure for their specific application. The probe tube and shaft can be autoclaved up to a maximum of 250°F/ 121°C for 45 minutes. This includes a 15-minute ramp up, 15-minute hold, and a 15-minute ramp down of the temperature cycle. If the tube or shaft begins to warp as a result of autoclaving, discard the damaged tube or shaft. Lower the cycle time or temperature level for the remaining probes that require autoclaving.

Cleaning the Probe Adapter

The probe adapter is constructed of Aluminum. For general cleaning, it is recommended that the adapter be wiped down with a lint free cloth and alcohol solution. Adequate decontamination can be accomplished by scrubbing with soap and hot water, followed by brief rinsing with 1% SDS, and then with DEPC treated water. Autoclaving, baking, or submersion in cleaning agents is not recommended; this will shorten the life of the adapter housing and bearings. Do not use NaOH to clean adapters.

Installing Probes

Depending on the motor type, an adapter may be necessary to mount plastic homogenizing probes to the motor drive. Review the motor manual for compatibility with probes. The adapter and probes use a quarter-turn bayonet mount. Simply push the adapter into the motor housing as far as possible, turn clockwise, and release. Use the same method to mount the probe to the adapter.

The following factors may affect processing efficiency

- The size and type of material being processed: Solid particles, in any dimension, should be no more than half the diameter of the probe for optimal processing.
- Container geometry and size: Round vessels encourage swirling, while fluted or cornered vessels disrupt flow patterns, allowing for more effective mixing or processing.

NOTE: Plastic disposable generator probes are NOT factory pre-sterilized or disinfected. If this is a requirement, please use one of the recommended methods described above.
CAUTION: Omni Tip™ Plastic Probes should NOT be immersed above the cone leading to the adapter during processing, since liquid may otherwise be drawn up the shaft and contaminate the coupling.
CAUTION: Large solid particles, such as frozen tissue, may cause damage to the Omni Tip™ Plastic Probes.
CAUTION: Omni Tip™ Plastic Probes must be submerged in liquid during processing to avoid breakage.
WARNING: Safety glasses are recommended when using the Omni Tip™ Plastic Homogenizing Probes. It is possible for plastics to shatter or break after exposure to certain chemicals, or after repeated autoclaving.

To order parts or obtain technical assistance, please contact your authorized sales representative. Contact information is listed in the instruction manual supplied with your homogenizer.

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