Polypropylene Vial Sterilization Considerations - Tech Information

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Sterilization of polypropylene autosampler vials depends on the method used and the temperature involved.

Autoclaving (Steam Sterilization)

We do not recommend autoclaving our clear polypropylene autosampler vials (9502S-PP-Clear) or amber variants. Although polypropylene has a relatively high melting point (~130–171°C), these vials may warp or deform under the high heat and pressure of autoclaving (typically 121°C or higher). This can compromise vial integrity and dimensional accuracy, which is critical for autosampler compatibility.

Ethylene Oxide (EtO) Sterilization

Yes, ethylene oxide gas is a suitable method for sterilizing polypropylene vials, as long as the temperature does not exceed 120°C. EtO sterilization is a low-temperature process that is widely used for heat-sensitive plastics and is effective at eliminating microbial contamination without damaging the vial structure.

✅Summary

Sterilization Method	Suitable for Polypropylene Vials?	Notes
Autoclaving	❌ Not Recommended	May cause warping or deformation
Ethylene Oxide (EtO)	✅ Yes, if ≤ 120°C	Safe and effective for sterilization

Additional Tips

- Always verify sterilization compatibility with your lab's SOPs and regulatory requirements.
- If sterility is critical, consider pre-sterilized vials or sterile packaging options.
- Avoid dry heat sterilization, which can exceed safe temperature thresholds for polypropylene.

Click ***HERE*** for More Information and Images of Polypropylene Vials

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