

Mobile Phase Delivery Bottle Caps for HPLC Bottles Benefits - Tech Information

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Overview

Mobile phase delivery bottle caps play a crucial role in maintaining solvent integrity throughout HPLC workflows. Standard bottle closures can allow dust, airborne contaminants, and atmospheric gases to enter the reservoir, causing changes to solvent composition or pH, especially during long analytical runs.

MICROSOLV bottle caps are designed to protect solvents, reduce environmental exposure, and support safe, consistent mobile phase delivery.



- Inert, Medical Grade PTFE
- Prevents Contamination
- Allows Proper Venting



Benefits of MICROSOLV Mobile Phase Delivery Bottle Caps

1. Maintain Mobile Phase Cleanliness

These caps help keep out:

- Dust and particulates
- Environmental debris
- Airborne contaminants

By keeping tubing inserted through a controlled opening, the solvent reservoir remains protected from external contamination throughout operation.

2. Preserve Mobile Phase Composition

MICROSOLV caps help minimize:

- **Outgassing** of volatile solvents
- **Absorption of CO₂** from the atmosphere

CO₂ absorption can alter pH and buffer balance, especially in aqueous mobile phases. Preventing this helps ensure that your mobile phase remains as originally prepared, leading to more reproducible chromatographic results.

3. Improve Laboratory Safety

These caps reduce the amount of volatile organic solvents that evaporate into the laboratory air, supporting a safer work environment and minimizing unnecessary solvent exposure.

Important Usage Notes

Not for Sterile Applications

Because the caps do not fully seal, they are not intended for sterility-required workflows. They protect from particulates but do not create a sterile barrier.

Do Not Use with Pressurized Bottles

The caps are engineered to prevent vacuum formation and prevent dangerous over-pressurization. Mobile phase bottles should never be pressurized; these caps ensure proper venting and safe solvent delivery under gravity-driven flow.

Note: these caps are not designed for applications which require sterility of the bottle's contents since they do not fully seal on mobile phase bottles. They will not allow a vacuum to be created in the bottle nor will they allow the bottles to be over pressurized which should always be avoided for safety reasons.

Click [HERE](#) for Bottle Ordering Information.

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