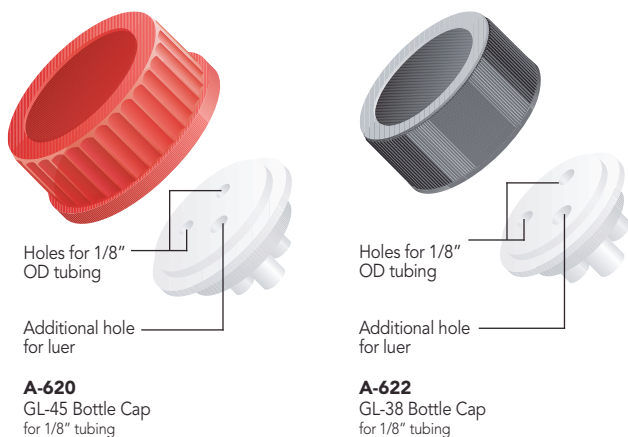


## Bottle Caps

- ▶ Extremely simple — no threaded ports or fittings
- ▶ Manufactured from ETFE and Polypropylene

If you are looking for a bottle cap that is quick and easy to use, but still allows many connection options, we have just what you need! The Bottle Caps fit standard GL-45 (1 L) or smaller-neck GL-38 (4 L) glass bottles.

Each cap has three holes. With two of the holes you simply push your tubing straight through. The third hole, with a luer taper, can be used for a number of options. Any male luer (such as a luer-lock syringe) will fit snugly in this hole, or you can use the A-626 or A-627 Plug. Exceptions are the A-610 and A-610B Bottle Caps. Please see the note below.



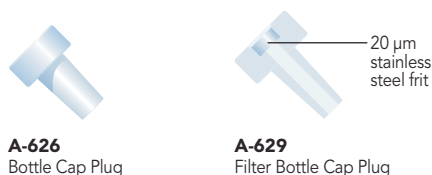
## APPLICATION NOTE

- ▶ A self-regulating sparging system can help reduce helium consumption and improve pump performance. Set this up by pressing your tubing through the appropriate holes in your bottle cap and attaching each line to a filter. Sparge your mobile phase with an inert gas (preferably helium) for 15–20 minutes. Then reduce the outlet pressure of the sparging gas to a maximum of 5 psi (0.34 bar) and insert a plug (A-626 or A-628) into the remaining port of the cap. The sparging gas will shut off once the incoming pressure equals the pressure inside the reservoir. As the mobile phase is consumed and the internal pressure lowers, sparging gas will enter to keep the system pressurized and degassed. Please Note: If gas leaks while pressurizing the bottle, try removing the sealing ring from the bottle, as it sometimes interferes with the sealing of these bottle caps.
- ▶ One concern with sparging systems is the possibility of solvent backing up the sparging inlet line. This can occur if the gas tank completely evacuates with the regulating valves open, creating a vacuum in the tubing. Solvent backup may damage sparging system components and cause cross-contamination of mobile phase reservoirs. To help prevent solvent backup, install the CV-3010 Inline Check Valve (page 151) along the tubing line that runs between the gas supply and the solvent bottle.
- ▶ For a more efficient degassing system, please see the Systec® HPLC Vacuum Degassing Systems on page 178.
- ▶ Please see the Quick-Stop Luer Check Valve on page 151 for another solvent inlet Application Note.

## Bottle Cap Plugs & Adapters

Use the A-626 Bottle Cap Plug to seal the third “tapered” luer hole found in most Upchurch Scientific® Bottle Caps. Or, use the A-628 Plug to seal any unused 1/16” or 1/8” bottle cap holes.

Alternatively, try the A-627 or A-629 Filter Bottle Cap Plug to cap an unused hole in your bottle cap. The 20 µm stainless steel frit in these products prevents foreign matter from contaminating your solvent while leaving the bottle open to the atmosphere, thus allowing fluid to be pulled out without creating a vacuum (generally not used with sparging applications). All plug bodies are manufactured from ultra-high molecular weight polyethylene (UHMWPE).



## NOTE

The A-610 and A-610B Bottle Caps have a slightly different configuration than the other caps. One hole accepts 3/16” OD tubing, the typical size used with some Waters® systems. The remaining two holes accept 1/8” OD tubing. Unlike the other caps, the A-610 does not have a tapered luer hole. If desired, use our A-628 Plug or A-629 Filter Plug for one of the 1/8” holes.

## RELATED PRODUCTS

To ensure a tight seal, use Upchurch Scientific fluoropolymer tubing with these bottle caps (pages 70–73).

Part No.	Description
<b>BOTTLE CAPS FOR GL-45, 1 L BOTTLES</b>	
A-610	for 3/16" OD tubing, Red
A-610B	for 3/16" OD tubing, Blue
★ A-620	for 1/8" OD tubing, Red
★ A-620B	for 1/8" OD tubing, Blue
A-630	for 1/16" OD tubing, Red
A-630B	for 1/16" OD tubing, Blue
<b>BOTTLE CAPS FOR GL-38, 4 L BOTTLES</b>	
★ A-622	for 1/8" OD tubing, Black
<b>BOTTLE CAP PLUGS AND ADAPTER</b>	
★ A-626	Bottle Cap Plug for luer hole, UHMWPE
A-627	Filter Bottle Cap Plug for luer hole, UHMWPE with 20 µm stainless steel frit
★ A-628	Bottle Cap Plug for 1/16", 1/8" or 3/16" hole, UHMWPE
A-629	Filter Bottle Cap Plug for 1/16", 1/8" or 3/16" hole, UHMWPE with 20 µm stainless steel frit