

Technical Data and Operating Instructions: The Peristaltic Pump Collar



For large volumes of dilute cell culture supernatants, faster sample flow rates than those obtained using the classic ProVac columns (Fig. 1) are now possible using the peristaltic pump collar. The peristaltic pump collar (Fig. 2) locks the ProVac sealing cap securely to the column barrel to ensure that high sample loading flow rates can be used.

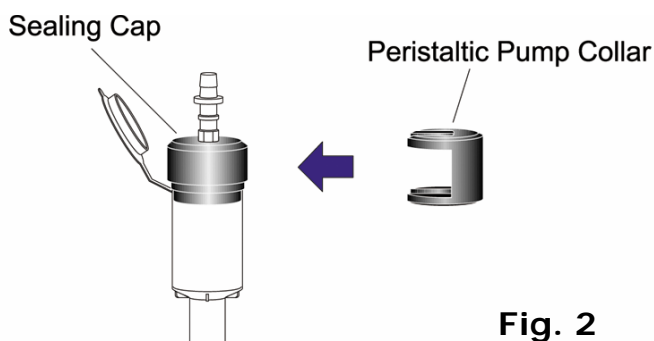


Fig. 2

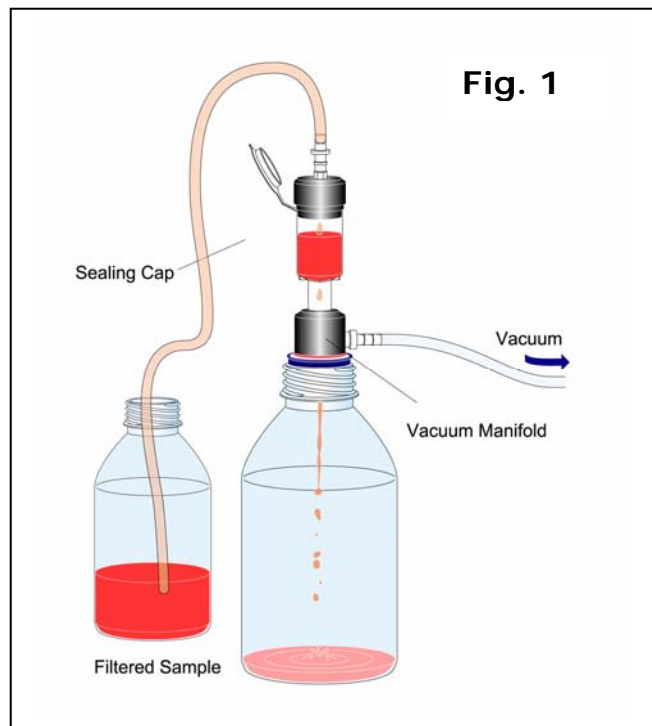


Fig. 1

Materials Included:

Peristaltic Pump Collar: Black Acetal (Cat No. V-PPC).

Peristaltic Pump Tubing: Nalgene 180 tubing (L/S 16, 4 ft). Tubing is configured for 0.8 ml/rev. For example, when taking into account the back pressure exerted by the resin column, 10-20 rpm would provide a flow rate of approximately 5-8 ml/min.

Required equipment:

Peristaltic pump: Variable speed peristaltic pump capable of speeds less than 20 rpm e.g. Masterflex L/S pump.

Peristaltic pump head: Pump head designed for L/S 16 tubing E.g. Masterflex L/S Easy-Load pump head for precision tubing. Pump head can accommodate L/S 13, L/S 14, L/S 16, L/S 25, L/S 17, and L/S 18 precision tubing.

Operation:

Load the correct size tubing in to the peristaltic pump head. (For optimum tubing life, keep the tubing straight where it exits and enters the pump)

Insert the white fittings on to the end of the peristaltic pump tubing. Connect one end of the tubing **tightly** to the barb connector on the sealing cap. Place the other end of the tubing into the filtered sample reservoir.

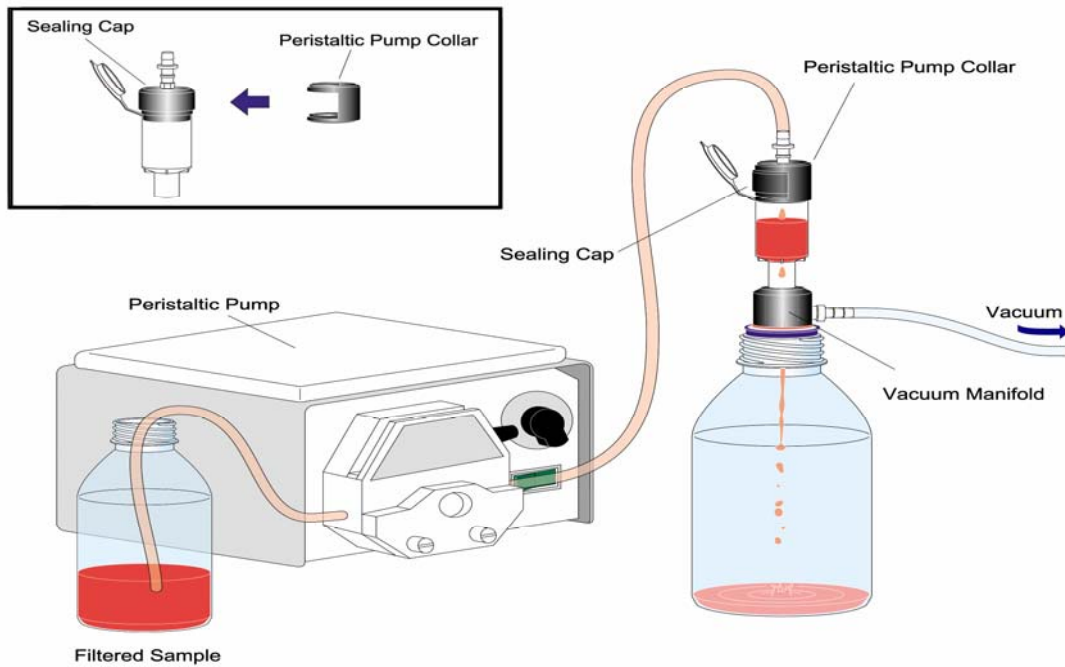
Fill the column barrel with 18 ml filtered sample. Push the sealing cap **fully** into the top of the column barrel and then slide the peristaltic pump collar on to the sealing cap until it locks into place (Fig. 2). Ensure that the collar is positioned over the top rim of the column barrel.

Run the peristaltic pump at the desired flow rates noting that 10-20 rpm (using the Type 16 tubing) is equivalent to flow rates of approximately 5-8 ml/min.

The ProVac columns can be run in 3 different modes: Vacuum only mode (Fig. 1), vacuum and peristaltic pump mode (Fig. 3) or peristaltic pump only mode (Fig. 4). The peristaltic pump collar is only required for either (I) vacuum and peristaltic pump mode or (II) peristaltic pump only mode:

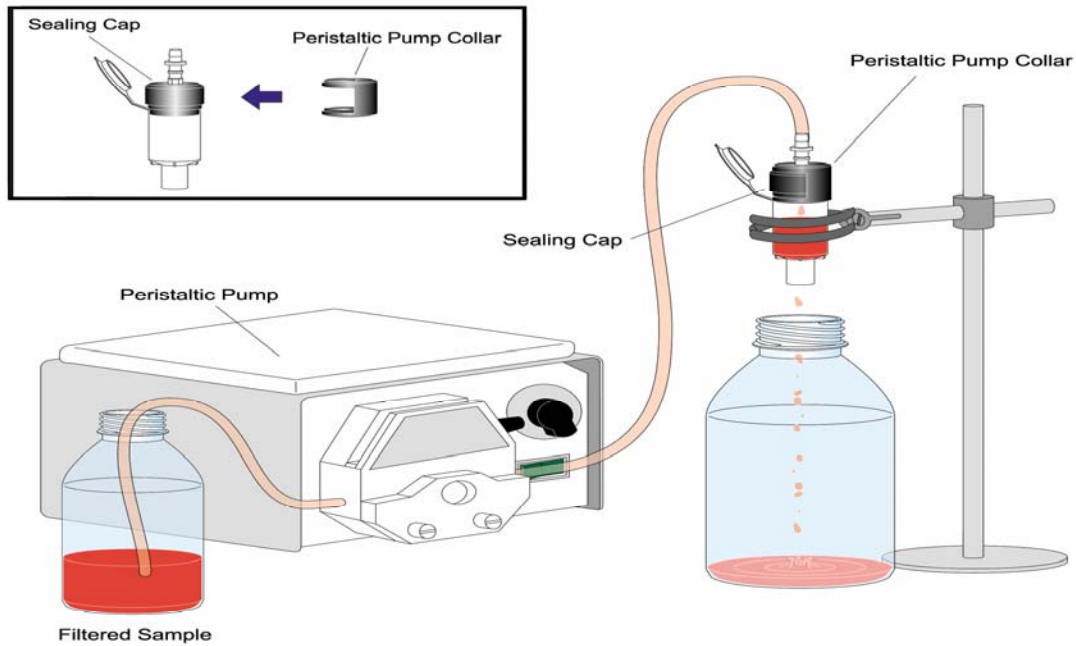
I. Peristaltic pump and vacuum mode:

Fig. 3



II. Peristaltic pump

Fig. 4



Description	Cat No.	Quantity	Contents
Peristaltic Pump Collar	V-PPC	1	Peristaltic Pump Collar, Nalgene 180 (Type 16) PVC tubing