Biotage[®] VacMaster™ Drying Adaptor

User Manual





Introduction

Prior to elution of extracted aqueous sample with water immiscible solvents, it is often necessary to dry the SPE column sorbent bed. The Biotage[®] VacMaster[®] Drying Adaptor directs a stream of gas efficiently onto the column, significantly improving drying times compared to vacuum aspirated air flow. In addition, the coarse and fine gas flow control allow the drying adaptor to be used for elution solvent evaporation after extraction.

Warning

The drying adaptor flow regulator has been set to a maximum working pressure of 2 bar. All component parts are fully tested to this pressure to ensure safe operation. However, if the flow regulator is reset or tampered with, higher external pressures may enter the drying adaptor, potentially causing parts to become detached from the unit. If this occurs, Biotage cannot be held responsible for any damage to the adaptor, or to the personal safety of the operator.

Features

The drying adaptor has a polypropylene body, to which is attached (from right to left):

- A push fitting inlet that accepts most laboratory gas/ compressed air tubing. This inlet can be adapted for other tubing sizes by attaching the black push-fit fitting, supplied in a separate bag. This fitting can accept 6 mm OD, 4 mm ID tubing. Prior to using the drying adaptor, please affix the push-fit fitting if necessary.
- » A red ON/OFF switch. To switch on, turn the handle to the right. To switch off, turn the handle to the left.
- » A black flow regulator, which restricts the flow of gas or compressed air into the drying adaptor to 2 bar.
- » A pressure gauge.
- » A fine needle control valve, which allows accurate control of gas flow.
- Push-fit ports and polyethylene tubing, which lead to TWO (ten place model) or FOUR (twenty place model) five-position manifold rods.

- The two (or four) manifold rods contain male Luer outlets, which can fit into standard polyethylene or PTFE column adaptors (supplied).
- » Luer sealing caps, to seal off any unused ports (supplied in a bag).
- The column adaptors can then be fitted to the SPE columns to be dried. The SPE columns should be positioned on a vacuum manifold (e.g. VacMaster). If not all the ports are in use, they can be capped using port sealing caps supplied.
- » A 6 mm spanner to aid removal of tubing and other connectors from push-fit fittings.



Installation and Operation

Assembly Instructions

- 1. Place the polypropylene body on the bench top.
- 2. Determine whether the push-fit fitting for 6 mm OD, 4 mm ID tubing is required. If so, push the non-tapered end into the push-fit inlet that is positioned to the right of the body. When this is secure, push the tubing onto the tapered end of the attachment.

If the push-fit fitting is not required, simply push the tubing into the inlet. Pull the tubing to make sure that it is secure.

- 3. Insert the two lengths of polyethylene tubing securely into the push-fit ports at the top left of the body.
- 4. Attach the manifold rods (two or four) to the other end of the polyethylene tubing by pushing the tubing into the manifold rods. Ensure that the tubing is secure.

The drying adaptor is now ready to be used. Please see instructions for use below.

Disassembly Instructions

Following disconnection of the gas/compressed air supply.

- 1. Disconnect the tubing leading from the manifold arms to the main body using the supplied spanner.
- 2. Disconnect the tubing from the push fitting on the compressed air/gas inlet.
- 3. If required, disconnect the tubing from the manifold arms during storage.

Operation

- Position the drying adaptor on the laboratory bench close to the VacMaster unit, on which are positioned the SPE columns to be dried. Ensure that the VacMaster ports (e.g. PTFE stopcocks or stopcock needles) are OPEN (i.e. the handle is vertical).
- 2. With the adaptor ON/OFF switch turned to OFF, connect the laboratory compressed gas or air supply to the appropriate fitting connected to the far right hand side (RHS) of the polypropylene adaptor body (as described above).

- 3. Firmly insert the appropriate size of column adaptor into each SPE column positioned on the VacMaster unit.
- 4. Position the two (or four) manifold rods above the SPE columns and column adaptors, and firmly push the male Luer fittings on the two manifold rods into the column adaptors.
- 5. If fewer than 10 (or 20) SPE columns are to be dried, cap each unused port with a port sealing cap.
- 6. Using the external regulator on the laboratory gas supply, set the pressure of the gas to between 3 and 5 bar. See Table 1 below for information about pressure settings.
- 7. Switch the adaptor ON/OFF switch to ON and adjust the gas pressure to the required level using the fine needle control (see Table 1 below).
- 8. When the SPE columns are dry, turn the switch to OFF and turn off the external gas supply. Then, remove the manifold rods and column adaptors to release the dried SPE columns.

	External Pressure Reading (bar)		
	1	2	3, 4, or 5
Pressure gauge reading with fine needle control fully CLOSED	0.8	1.5	2.0
Pressure gauge reading with fine needle control fully OPEN	0.2	0.5	1.2

Table 1. Recommended external gas pressures and approximate dryingadaptor operating pressures.

Note: The quickest drying times are achieved if an external gas or compressed air pressure of at least 3 bar is applied.

Ordering Information

Part No.	Description	Qty.
124-1001	Biotage [®] VacMaster [®] 10 Drying Adaptor for 1, 3 and 6 mL columns	1
124-2001	Biotage [®] VacMaster [°] 20 Drying Adaptor for 1, 3 and 6 mL columns	1

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