

Exetainer Vial Evacuation

Equipment

- Sealed Exetainer vials
- Evacuation Apparatus / Manifold
- Disposable needles – BD PrecisionGlide, 23Gx1” (Fisher Scientific Part ID: 14826A)
- Safety glasses

Procedure

1. *Safety glasses must be worn while evacuating vials.*
2. Ensure that the valve on the manifold is pointed to “EVACUATE” (i.e. towards the vacuum pump) (see Figure I).
3. Insert needles through septa of Exetainers
4. Turn on the nitrogen tank and set delivery pressure to 10 psi
5. Flip the switch on the power bar to turn on the vacuum pump
6. OPEN the Luer Locks in order from Line 1 to 20 on the manifold (only where a line is connected to a needle and Exetainer vial) by turning the “OFF” tab directly up (Figure II-3). If it is on an angle, no gas will pass through and Exetainers will not evacuate/flush.
 - A particular line is CLOSED when the Luer Lock “OFF” tab is pointed down (Figure II-1) or at a 45° angle to the main line (Figure II-2)
 - A particular line is OPEN when the Luer Lock “OFF” tab is pointed up (Figure II-3) or to the left (Figure II-4).
7. Evacuate using the following sequence:
 - i. **Evacuate** until the vacuum gauge reaches **2.0 Torr**
 - ii. Slowly turn the valve to “FLUSH” (i.e pointing towards the nitrogen tank)
 - iii. **Flush** with nitrogen for **15 seconds**
 - iv. Slowly turn the valve to “EVACUATE” (i.e. towards the vacuum pump)
 - v. **Evacuate** until the vacuum gauge reaches **2.0 Torr**
 - vi. Slowly turn the valve to “FLUSH” (i.e pointing towards the nitrogen tank)
 - vii. **Flush** with nitrogen for **15 seconds**
 - viii. Slowly turn the valve to “EVACUATE” (i.e. towards the vacuum pump)
 - ix. **Evacuate** until the vacuum gauge reaches **0.5 Torr** (500 mTorr)
 - x. Close all Luer Locks *and* the main line in order from Line 20 to 1 (the “off” tabs should be at a 45° angle to the main line; Figure II-2).
8. If more Exetainers need to be evacuated, move the needles to the new Exetainers and then repeat steps 5, 6 and 7. If all Exetainers are evacuated, remove the needles from the Exetainers and turn off the vacuum pump.
9. Once all 100 Exetainer vials in a box are evacuated, label the box with a small piece of *white label tape* with the following information: “EVAC MMM dd / yy”
 - E.g. EVAC Jan 18 / 19
10. Replace needles after 10 uses (i.e. after evacuating two sample boxes)
 - ****Discard used needles in the red sharps container****
11. If you must leave before evacuating an entire sample box, leave a note indicating which rows have been evacuated and how many uses remain for attached needles. Do not leave needles that have been used 10 times on the lines; remove and discard them

****TURN OFF THE NITROGEN TANK BEFORE LEAVING****



Figure I. Evacuation apparatus / manifold (Note the valve is currently set to “Flush”)

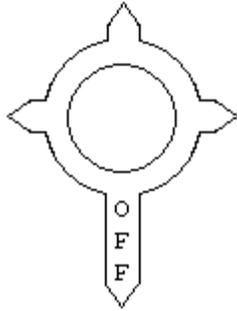


Figure II-1. Luer Lock position to CLOSE that particular line but leave the main line open.

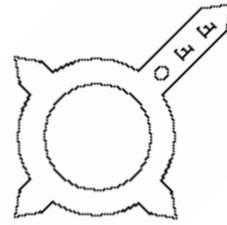


Figure II-2. Luer Lock position to CLOSE that particular line and all “downstream” lines.

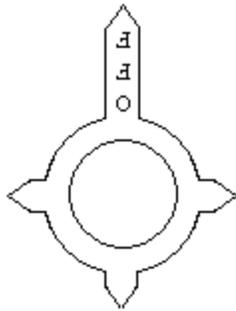


Figure II-3. Luer Lock position to OPEN that particular line and keep the main line open.

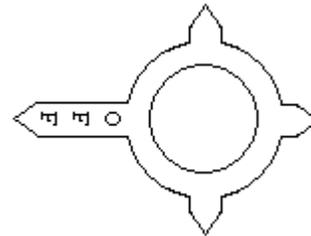


Figure II-4. Luer Lock position to OPEN that particular line but close all “downstream” lines.