



Dionex OnGuard Sample Preparation Workstation

032856 Revision 04 • May 2018

thermoscientific

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Revision History:

Revision 01, November, 1987

Revision 02, April, 1988

Revision 03, August, 1988

Revision 04, May, 2018, Legacy content transcribed into the latest Thermo Scientific template. Updated product illustrations and figures.

Safety and Special Notices

Make sure you follow the precautionary statements presented in this guide. The safety and other special notices appear in boxes.

Safety and special notices include the following:



SAFETY

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in damage to equipment.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. Also used to identify a situation or practice that may seriously damage the instrument, but will not cause injury.



NOTE

Indicates information of general interest.

IMPORTANT

Highlights information necessary to prevent damage to software, loss of data, or invalid test results; or might contain information that is critical for optimal performance of the system.

Tip

Highlights helpful information that can make a task easier.

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1. Assembly

The Dionex OnGuard™ Sample Preparation Workstation (Item # 039599) permits simultaneous pretreatment of up to 12 samples when using Dionex Automated Sampler cassettes with 5 mL Dionex PolyVials™ or up to six samples when using 10 mL volumetric flasks. Use of the Automated Sampler cassettes eliminates possible contamination of samples from excessive handling. Figure 1 below shows a fully assembled Dionex OnGuard Sample Preparation Workstation.

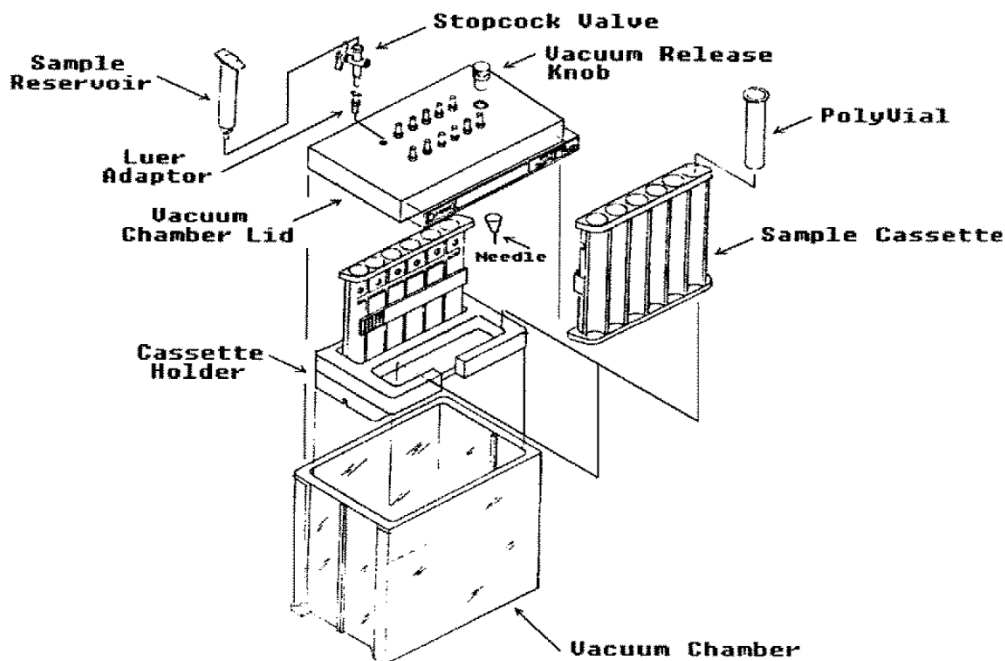
Figure 1 Example of a Fully Assembled Dionex OnGuard Sample Preparation Workstation



1.1 Assembly of the Dionex OnGuard Sample Preparation Workstation

1. Install a Teflon needle (Item # 039996) onto each of the 12 male Luer adaptors (Item # 039995) already installed on the underside of the lid. Refer to Figure 2 on the next page for a diagram of parts mentioned in this step.
2. If you plan to collect samples in 5 mL Dionex PolyVials, push the vials into the slots in the sample cassette (Item # 60-036971). Place the cassette holder in the bottom of the vacuum chamber. Place the sample cassette in the cassette holder. Place the lid on top of the vacuum chamber, verify that each needle extends into the vial below it, and then push the lid firmly into place. Plug any unused ports in the lid with Luer plugs (Item # 039998). Refer to Figure 2 on the next page for a diagram of parts mentioned in this step.
3. If you plan to collect samples in 10 mL volumetric flasks, place six flasks in the cassette holder (Item # 60-040276). Place the lid on top of the vacuum chamber, verify that each needle extends into the flask below it, and then push the lid firmly into place. Plug any unused ports in the lid with Luer plugs (Item # 039998).

Figure 2 Assembly of the Dionex OnGuard Sample Preparation Workstation



2. Operation

- Operation of the workstation requires a vacuum source capable of at least 25 in. Hg. Thermo Fisher Scientific recommends the single-head vacuum pump (Item # UN726FTP by KNF Neuberger, Inc., 2 Black Forest Rd, Trenton, New Jersey 08691 (<http://knfusa.com>)). A double-head pump is also available. KNF's UN726FTP series of contamination-free diaphragm pumps feature solid PTFE heads and are capable of pumping 15-25 inches Hg. Other laboratory vacuum pumps can also be used.
- Thermo Fisher Scientific recommends connecting a trap between the vacuum pump and the workstation to collect siphoned liquids. A thick-walled filter flask will serve this purpose.
- For greater flow control, a stopcock may be used; twelve stopcocks are included in the Dionex OnGuard Workstation Ship Kit. Insert the non-threaded end of a stopcock valve (Item # 040896) into a female Luer taper on the vacuum chamber lid. Connect the Dionex OnGuard Cartridge to the top of the stopcock valve and screw a sample reservoir (Item # 039999) onto the inlet Luer fitting of the cartridge.



NOTE

The stopcock bodies are made from natural nylon with a high-density polyethylene (HDPE) diverter valve. Nylon is generally incompatible with acid concentrations greater than 10% for extended periods of time.

- When conditioning Dionex OnGuard cartridges or applying the first 3 mL of sample, the cassettes and cassette holder do not need to be installed on the workstation. The liquids will be pulled into the trap between the workstation and vacuum pump. Refer to the Dionex OnGuard II Cartridges Manual (Document No. 031688), available online at <http://www.thermofisher.com>, for further instructions on the use of the cartridges.
1. While the vacuum is off, connect the vacuum source to the valve stem.
 2. Fill the sample reservoirs (Item # 039999) with either wash solution or sample. Refer to the Dionex OnGuard II Cartridges Manual (Document No. 031688) for the correct procedure.
 3. Apply a vacuum. The sample will flow through the cartridges, where impurities will be trapped. The purified sample will then flow into the vials or flasks below.



NOTE

Adjust the optional stopcock valves as required to increase or decrease the sample flow rate. Once samples have been collected, close the stopcock valves to allow slower samples to flow more efficiently.

4. When all samples have been collected, turn off the vacuum source and break the vacuum by slowly turning the vacuum release knob on the lid.



CAUTION

Samples may be cross-contaminated if the vacuum is broken too rapidly.

2 – Operation

5. Disconnect the vacuum source, sample reservoirs, and cartridges from the workstation. Dispose of the expended cartridges. Remove the workstation lid and set it aside.
6. If you are using Dionex PolyVials, install a filter cap (Item # 60-037986) in each vial and then install the cassette in a Dionex AS40 autosampler or transfer the vials to a Dionex AS-DV autosampler. Refer to the Dionex AS40 Autosampler Operator's Manual (Document No. 034970) or the Dionex AS-DV Autosampler Operator's Manual (Document No. 065259) for more information about the autosamplers.
7. If you are using 10 mL volumetric flasks, remove them from the cassette and dilute to volume with deionized water or eluent.

3. Consumables

The following parts are available for the Dionex OnGuard Workstation. Contact your nearest Thermo Fisher Scientific office for current prices and ordering information.

Item #	Description
040645	Block, Dionex OnGuard Workstation, glass
039995	Luer adaptor
039998	Luer plug
041232	Needles, pack of 50
038141	5 mL Dionex PolyVials, pack of 250 with caps with filters
039532	5 mL Dionex PolyVials, pack of 250 with caps without filters
038008	5 mL Dionex PolyVials, pack of 250 without caps
041233	Sample reservoirs, pack of 250
040896	Dionex OnGuard Valve, Stopcock Luer 2-way