

# **Agilent InfinityLab LC Series Multi-wash Upgrade Kit**

#### **Installation Note**

## **General Information**

The multi-wash upgrade kit is designed for low carry over and can be installed in any Agilent InfinityLab LC Series Multisampler.

With the multi-wash upgrade kit you can minimize carry over for critical samples with the following measures:

- Wash the outer needle surface with the choice of three different wash solvents, or
- ٠ Back flush the needle seat and the rotor seal with the appropriate solvents

This integrated feature reduces the carry over to less than 9 ppm.

NOTE

If the multisampler multi-wash option is installed you will lose the ability to do multi-draw.



Figure 1 Valve in bypass, needle backflush (Multiwash)





from pump (port 1)

Figure 2 Capillary connections (Multiwash)

### **Delivery Checklist**

ltem	#	p/n	Description
1	1	G4267-68708	Drain Management Kit
2	1	G4267-60049	Flush head, 500 µL
3	1	5500-1167	Capillary ST 0.17 mm x 250 mm SL-SL
4	2	G4220-60007	Bottle Head Assembly
5	1	G4267-60008	Hydraulic Multi Wash this is an internal partnumber and not orderable
6	1	G4267-60081	Tubing-Kit-Sampler-Multi-Wash



### Installing the Multi-wash Infinity II Upgrade Kit

The installation of the upgrade kit requires the following procedures:

- "Remove the Hydraulic Box" on page 4,
- "Install the Hydraulic Box" on page 7, and
- "Configuration of the Multi-wash Option" on page 9.

### **Remove the Hydraulic Box**

	Standard	<i>w</i>	Dual Needle	Multiwash
	Figure 3 Varia	nts of the hydrauli	c box	
Tools required	p/n	<b>Description</b> Hexagonal key, 2 Hexagonal key, 4	.5 mm mm (supplied in HPLC Tool-Kit)	
	8710-0510	Wrench open 1/	4 — 5/16 inch	
NOTE	For changing the n in the service posi	netering devices in tion.	n the hydraulic boxes of the mu	ltisampler, the sampler must be
	<b>1</b> In the Instan	t Pilot start the	maintenance mode and sel	ect Change Piston / Change

 In the Instant Pilot start the maintenance mode and select Change Piston / Change Seal. Wait until the metering drive is in the rear position.

OR

In the Agilent Lab Advisor software select **Service & Diagnostics** in the system screen (**Tools**) **Maintenance Positions > Change Piston / Change Seal**, click and wait until the needle assembly is in maintenance position.

**2** Switch off the module.



**3** Remove the capillaries, the tubings, and the leak sensor which are connected to the hydraulic box.



**4** Remove the injection valve and the analytical head from the standard hydraulic box. For further info check the service manual.



**5** Lift the clip and pull the standard hydraulic box out of the mainframe.



#### **Install the Hydraulic Box**

**1** Check the revision of the drain management kit especially the washport tubing. If necessary upgrade the complete drain management kit. For further info check the service manual.







**2** Install the injection valve and the analytical head from the standard hydraulic box into the multiwash hydraulic box.



**3** Slide in the whole new multi-wash hydraulic box.



NOTE

The hydraulic box must be installed correctly. Push from the front against the hydraulic box and check if the lever is locked in place.

**Install the Hydraulic Box** 



**4** Reinstall the capillaries, the tubing and the leak sensor which are connected to the hydraulic box.

**5** Switch on the instrument.

6 Prime the tubing with appropriate wash solvent and run **Prime to Seat** and **Prime to Wash port** for at least 30 s.

Control	Prime Se	e Settings attings	and Start			_0
Injector Program	Step	Solvent	Time [s]	Prime to Seat	Prime to Wash Port	
Identify Device	1	Off	0	-	-	
Home All	2	Off	0			
Reset Injector	3	S1	30	V	V	
Switch Valve to Bypass						
Switch Valve to Mainpass						
Switch on Tray Illumination						
Auto-clean						
Prime Solvents						
Modify +						
Assign Wellplates					Start	Cancel

7 Perform a **pressure test** in LabAdvisor.

### **Configuration of the Multi-wash Option**

The following options for the configuration of the Multi-wash option are available:

- "Configure Multi-wash in OpenLab CDS C.01.06 and above" on page 10
- "Configure Multi-wash in Control Module (G4208A)" on page 12

#### Configure Multi-wash in OpenLab CDS C.01.06 and above

The mulit-wash mode is automatically enabled and the multi-wash icon is shown in the graphical user interface.

**Prerequisites** For the OpenLab CDS LC driver A.02.11 or higher is required.

**1** Right click on the dashboard and select **Method**.



#### 2 Select Multi-wash.

Method of G7167B (this.is.mt.Serial.Number)						_		×			
				Mul	tisampler	(G7167B)					
Injection	> Advanced										
Fighter Food	▲ Injection Path Cleaning										
	Standard Wasl	h									
Needle Wash			Mode:	Flush Port	-						
Multi Wash 👻			Time:		3 🗘 s						
Off			Locatio	n:							
Stoptime Standard Wash Multi Wash			Repeat		3 ‡						
As Pun p/No Limit     Off	Multi-wash										
O <u>1.00</u> ; min O <u>1.00</u> ; min	Step	Solvent	Time [s]	Seat Back Flush	Needle Wash	Comment					
	1	Off	20								
	2	52 53	30	 ✓	<ul> <li>✓</li> <li>✓</li> </ul>	2-Propanol ACN					
	Start Cond.	S1			✓						
						(G7167B)					
					<u>O</u> k	<u>A</u> pply	<u>C</u> anc	:el			

Method of G7167B (this.is.mt.Serial	I.Number)							-		$\times$
						Mul	tisampler	(G7167B)		
Injection		D A	dvanced							
Injection volume:	5.00 1	🔺 In	jection Path	Cleaning						
Injection volume:       5,00 ; μL         Needle Wash       Multi Wash         Multi Wash       ▼         Stoptime       Posttime         Image: As Pump/No Limit       Image: Off         1.00 ; min       1.00 ; min		Star	ndard Wash	l.						
Needle Wash					Mode:	Flush Port	-			
Multi Wash	•				Time:		3 ‡ s			
Stoptime	Posttime				Location	1:				
					Repeat:		3 ‡			
As Pump/No Limit	Off	Mul	ti-wash							
O <u>1,00</u> , min	O <u>1,00</u> , min	s	Step	Solvent	Time [s]	Seat Back Flush	Needle Wash	Comment		×
	1	1	1	Off						
			2	S2 S3	30	<ul> <li>✓</li> <li>✓</li> </ul>	✓ ✓	2-Propanol ACN		
	ļ	3	Start Cond.	S1		<u> </u>	<u> </u>			
										_
									Cancel flush and	
							<u>O</u> k	Apply	<u>C</u> ano	cel
		<i>с</i> 11								
	akes approximately 30 s t	o fully	exchan	ge one :	solvent	for another	in the flus	h port. Io	flush	and

#### 3 Specify the duration of your solvent S1, S2 and S3 in the multi-wash table.

exchange the solvent in the seat, it takes 18 s. Additionally it is strongly recommended to use the Auto-clean function to flush the multisampler regularly with all installed solvents.

#### Configure Multi-wash in Control Module (G4208A)

Prerequisites

For the Instant Pilot G4208A Firmware B.02.19 or higher is required.

1 Press Control and select Prime/Auto clean the tubing with appropriate wash solvent.



2 Press Method and select the multi-wash and configure your wash method.

Setting	Value		Method - STDGRAD* all		- 44
M	S : DEBAS00102				-
Stoptime	OFF	Setting	Value		
Posttime	OFF	Posttime	OFF	-	Edit
Injection Volume	1.0	Injection Volume	1 μl		4
Injection Mode	Standard	Injection Mode	Standard	1.1	Control
injection mode	Standard	Overlap	Disabled		
Overlap	Disabled	Dalay Vol. Reduction	Disabled		
Sample Flush-Out	5 times	Draw Speed	200 ul/min		Toggle
Delay Vol. Reduction	Disabled	Elect Speed	200 ul/min		-
Draw Speed	200 ul/min	Equilibration Time	1 sec		
Elect Speed	200 ul/min	Bottom Sensing	Disabled		
Equilibration Time	1 sec	Wash Mode	Use Multi Wash		
Bottom Sensing	Disabled	Multi Wash	Press edit to view settings		Exit
Draw Position Offset	0 mm	Allows you to set up a h	luiti Wash wash mode		04.33
Wash Mode	Use Wash Vial 🖨	Filter Comp	are Timetable Properties	T	File

**3** Configure your wash method by selecting the appropriate wash solvents.





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