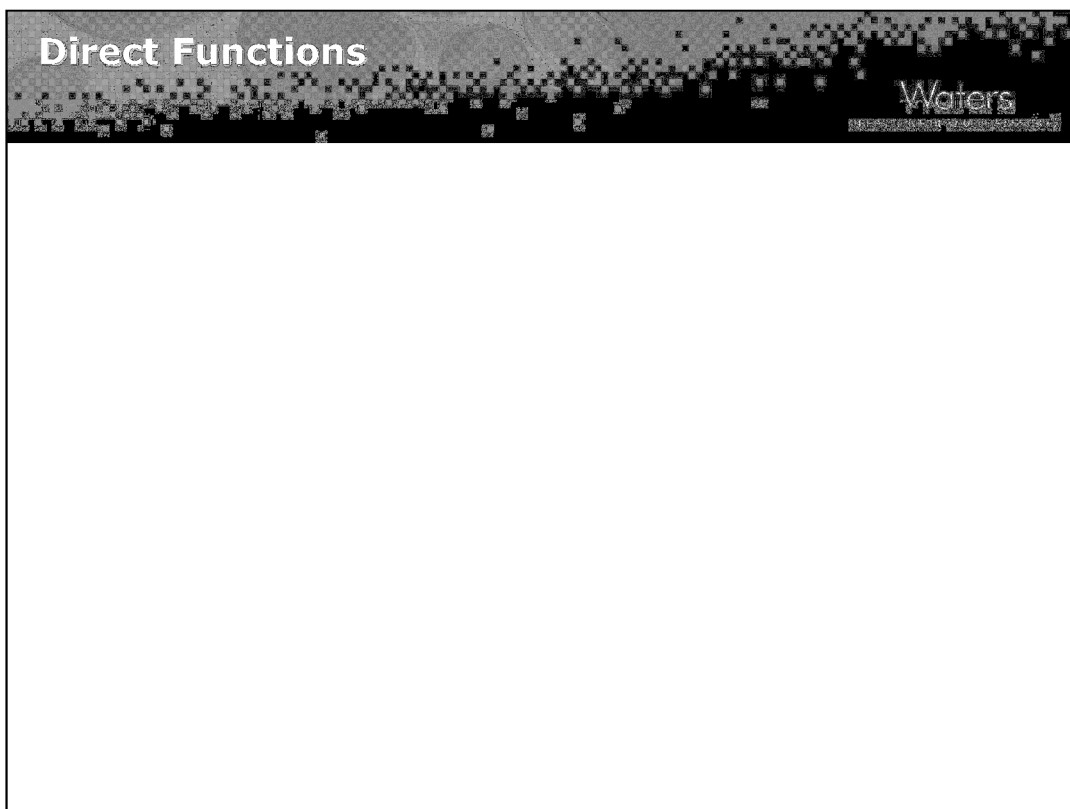




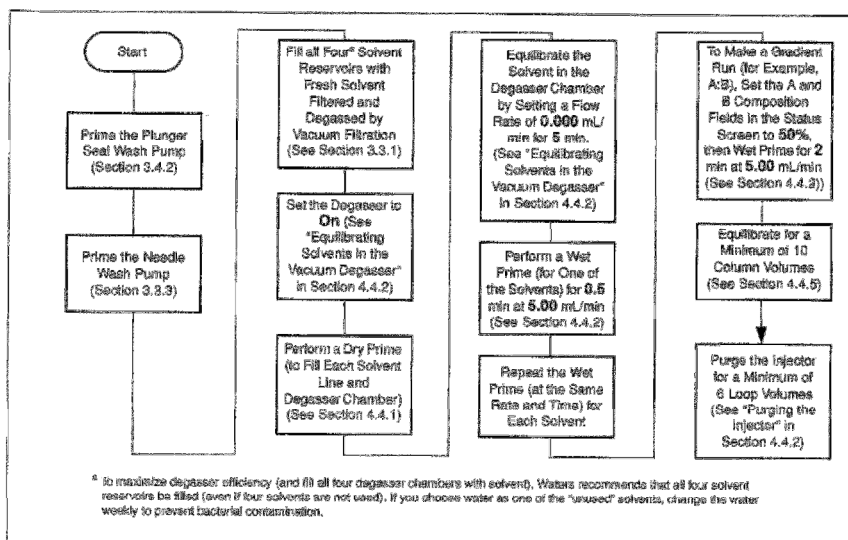
Direct Functions

- Dry Prime
- System Prep
- Wet Prime
- Purge Injector
- Equilibrate
- Condition Column
- Inject Samples

- In this section we cover Dry Prime, system Prime, Wet Prime, and Purge Injector in detail.
- Equilibrate - Brings the Separations Module to the initial conditions of a specified separations method.
- Condition Column - Runs the gradient in a specified separations method without making an injection.
- Inject Samples - Makes a series of injections from a specified vial range.

Performance Plus Dry Prime

Preparing a New or Dry Separations Module for Operation
(PerformancePLUS Degasser-Based Unit)



i Status (1)

<Default> Idle

Method: <direct> Flow: 0.000 mL/min System: -2 psi

Composition: A 0.0% B 100.0% C 0.0% D 0.0%

Sample: Set OFF °C Current 23.5 °C

S1 OFF S2 OFF S3 OFF S4 OFF

Degasser: Mode On Pressure 0.5 psi

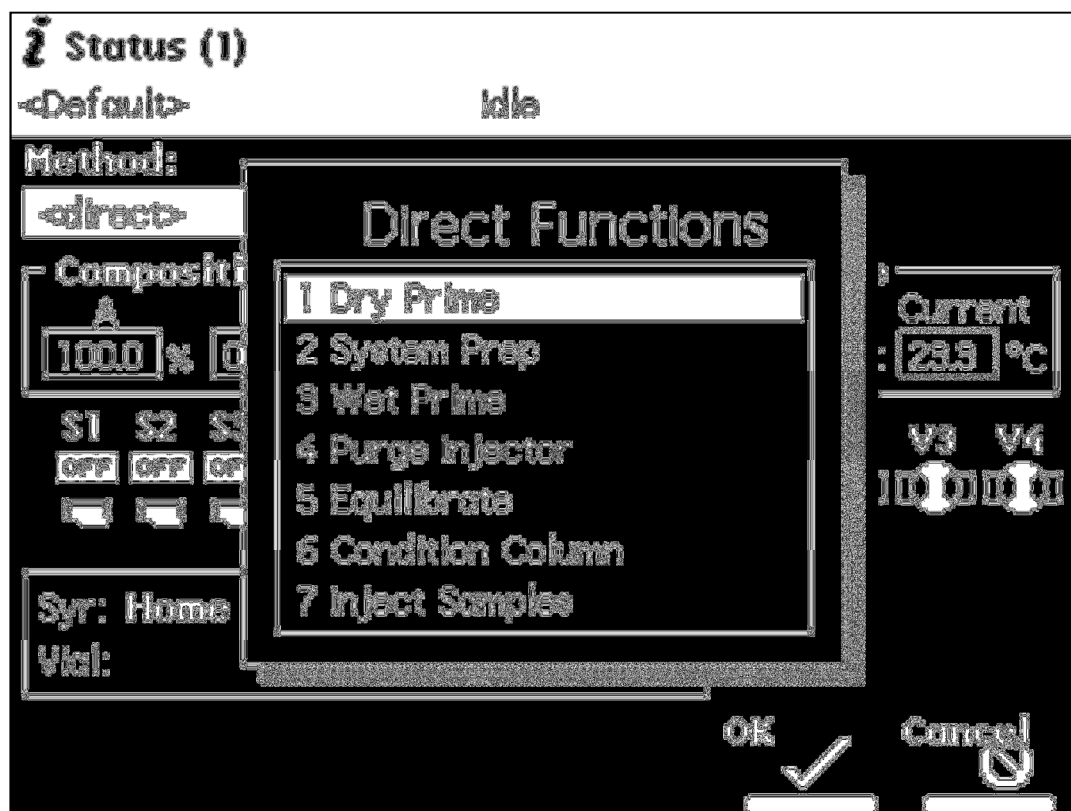
V1 V2 V3 V4

Syr: Home Ndl Wash: Off

Vial: Injector: Stream

Sample Queue Next Page Direct Function

- 2695 Status (1) Page
- Press **Direct Function**



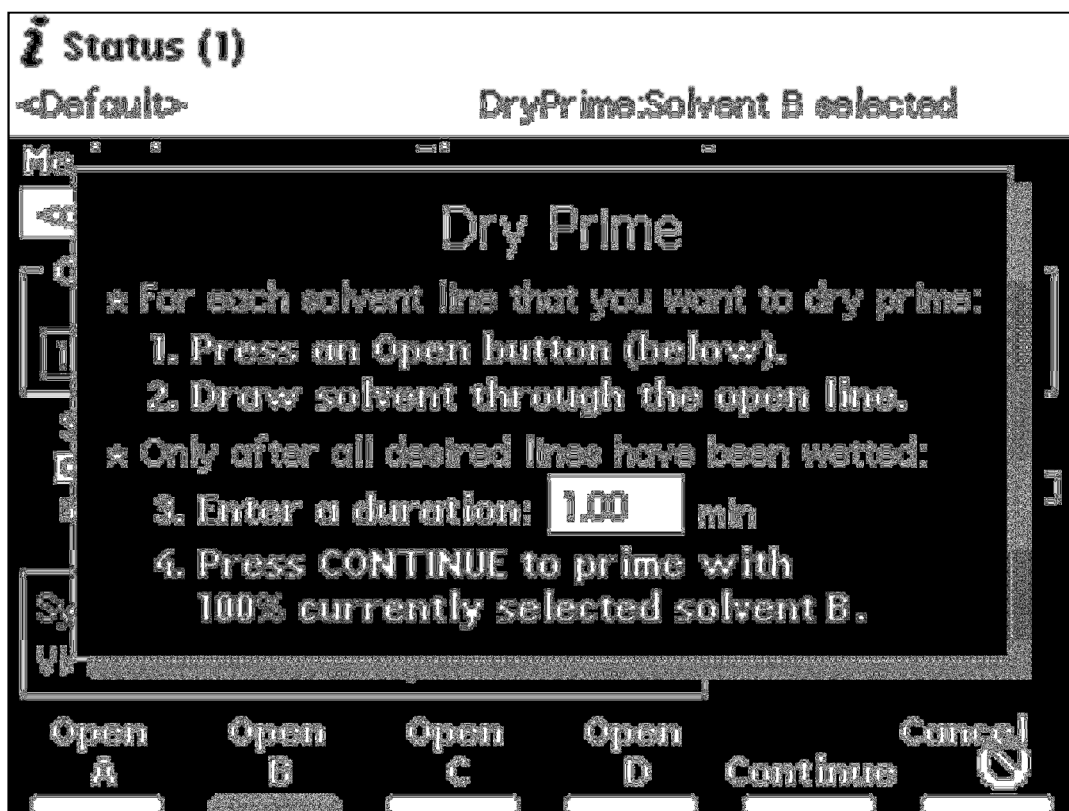
- Select the **Dry Prime function**, then press **OK**.
- The Dry Prime screen allows you to prime each solvent line individually, without delivering solvent. When you press one of the "Prime" keys you should hear a click as the corresponding gradient valve opens.
 1. Open the draw off valve by turning it counter clockwise 1/2 turn and firmly insert the Luer of the syringe into the valve.
 2. While holding the syringe in place with one hand, draw back on the syringe with the other hand to create the vacuum necessary to draw the air out of the line.
 3. Repeat this process until the solvent starts to flow into the syringe.
 4. Repeat these steps to prime all 4 solvent lines.
 5. Press a screen key corresponding to the solvent with which you wish to prime the system.
- Press **Enter**.

Note: You do not enter a flow rate for the dry prime. The module gradually ramps up to a preprogrammed flow rate of 3 mL/min.

Attention: While the solvent is flowing, this is a good time to check all fluid connections at the Gradient Proportioning Valves and the Degasser to make sure there are no solvent leaks.

Waters

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- Dry Prime Screen
- Press **Continue**.

i Status (1)

<Default> DryPrime:Priming (0.80)

Method: <direct> Flow: 3.000 mL/min System: 87 psi

Composition: A 0.0 % B 100.0 % C 0.0 % D 0.0 %

Sample: Set OFF °C Current 23.5 °C

S1 OFF S2 OFF S3 OFF S4 OFF

Degasser: Mode On Pressure 0.5 psi

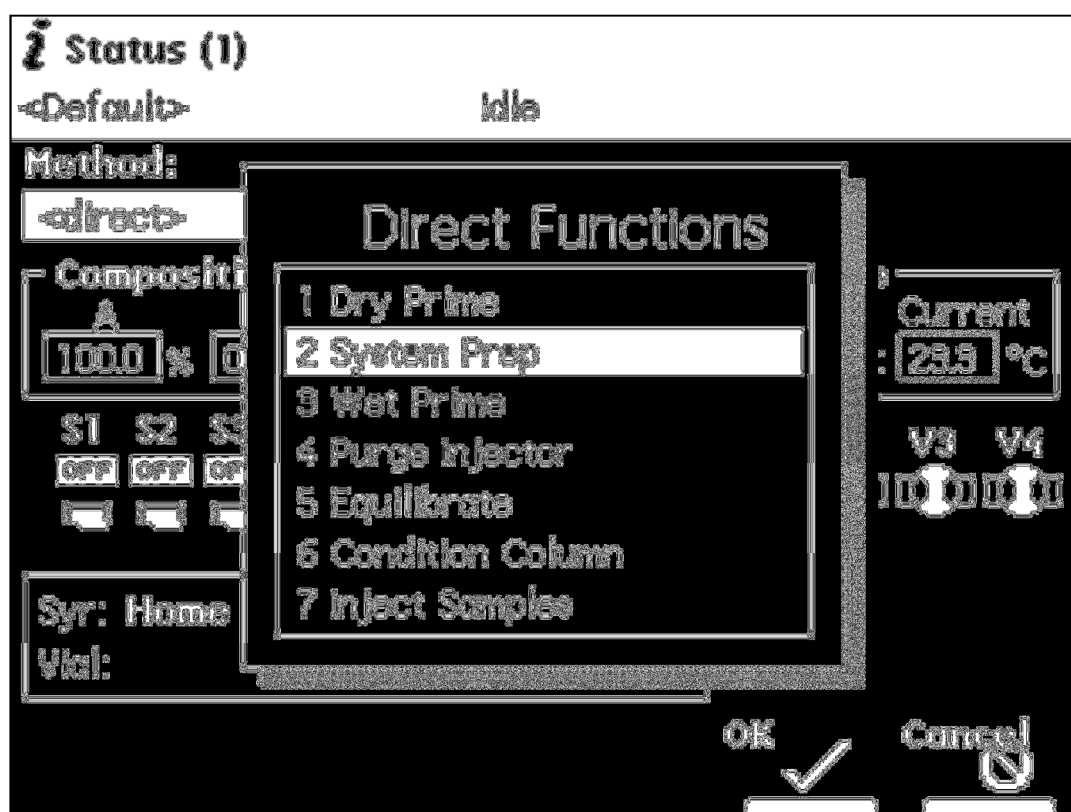
V1 V2 V3 V4

Syr: Home Ndl Wash: Off

Vial: Injector: Stream

Stop Prime Hold Prime Sample Queue Next Page Direct Function

- Status screen (1st Page)
- The timer in the upper right of the window shows the time remaining until the dry prime flow ends.
- The Direct Function is grayed out, indicating that function is not available at this time.



- System Prep Screen
- Press **OK**.

Status (1)
 <Default> Idle

System Prep

Step 1: Specify the initial conditions of the separation methods you will be running.

1.000 mL/min

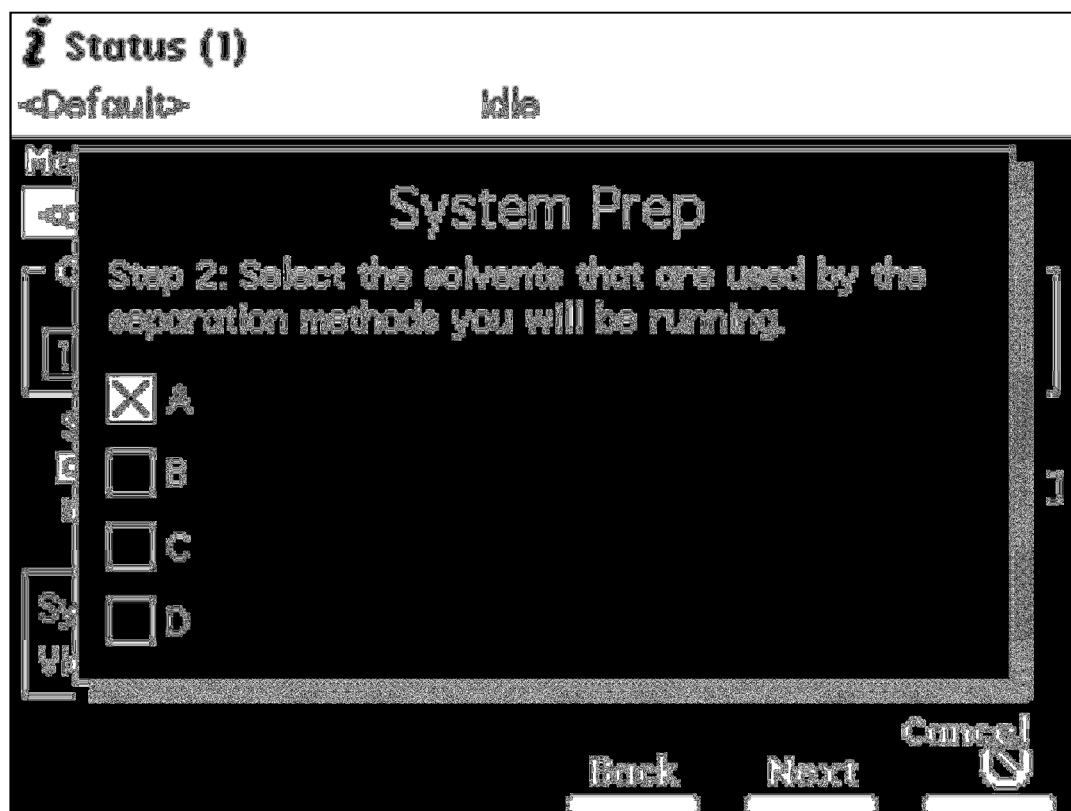
100.0 %A 0.0 %B 0.0 %C 0.0 %D

Sample Temp.: OFF °C Column Temp.: °C

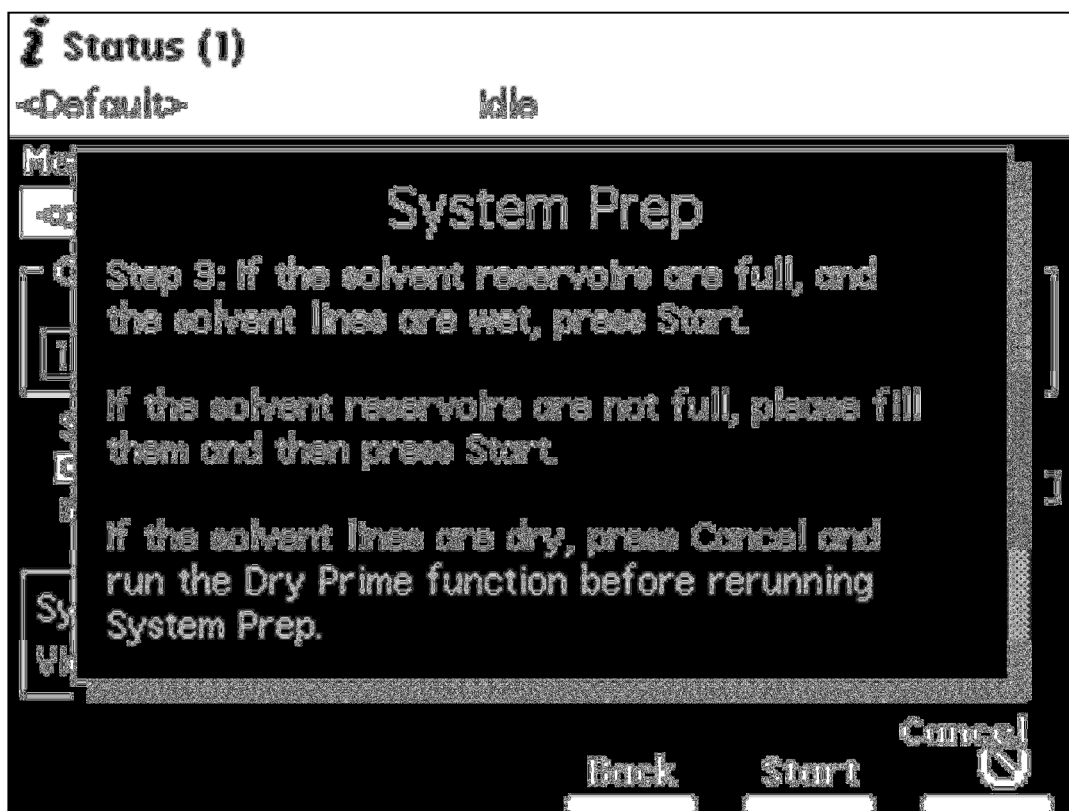
Next Cancel

Select an appropriate

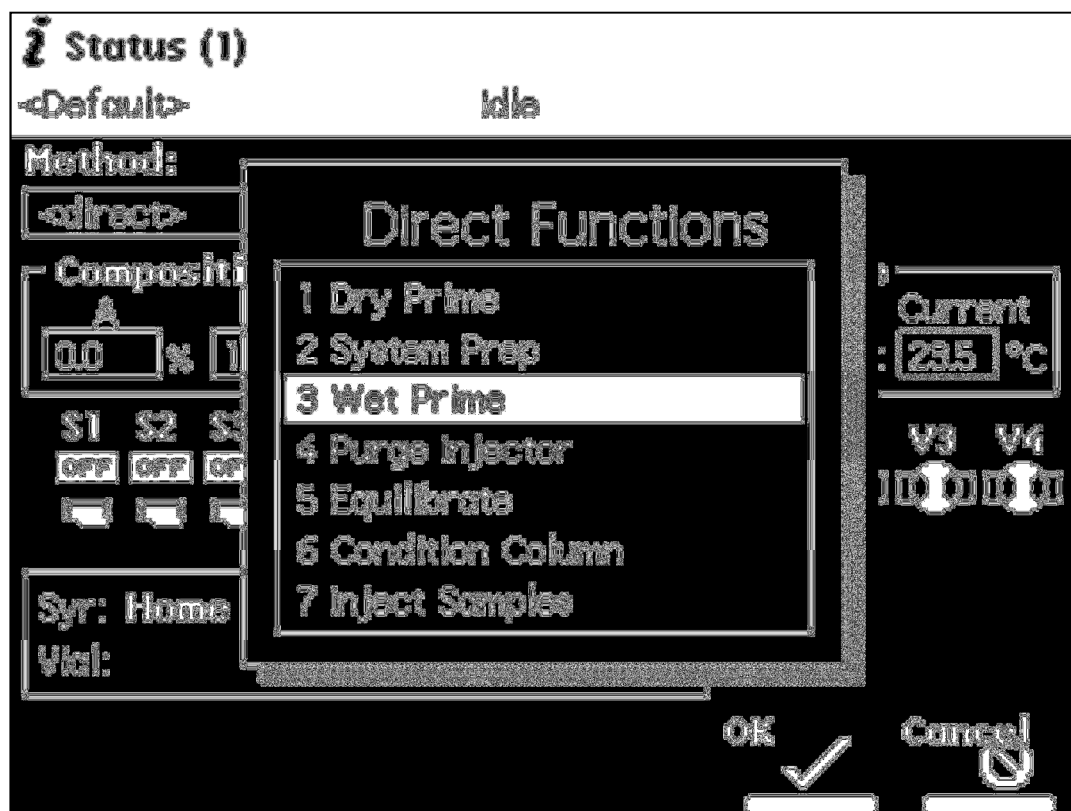
- Flow rate
- % composition of mobile phase(s)
- Press **Next**



- Select the desired solvents
- Press **Next**



- Read the information on the screen to continue
- Press **Start** (or **cancel** to return to main screen)



- Wet Prime screen
- Press **OK**.
- Wet Prime after dry priming the instrument. It is important to perform a wet prime to remove any air bubbles that may be potentially caught in either the vacuum degasser chamber or sparge tubing. A wet prime is also performed when the fluidic path in the solvent management system contains fluid and you want to change reservoirs or solvents. The wet prime replaces fluid in the path from the reservoirs to V1 and then to waste.

Note: To avoid damage to the plunger seals, perform a wet prime only when there is solvent in the solvent management system fluidic path.

- Enter the flow rate and duration to prime (using the composition entered in the Status screen), then press OK. The solvent management system begins to operate. The duration of the prime depends on the option installed in the Separations Module:

Option:	Flow Rate (mL/min)	Duration (min)
Performance Plus Degasser	7.5	2
Degasser Option	7.5	6
Sparge option	7.5	2

- At the end of the specified time the flow stops and the unit returns to the idle mode.
- Allow the degasser to run for 5 - 10 minutes with no solvent flow.

Waters

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Status (1)
 <Default> Idle

Method: <direct> Flow: 0.000 mL/min System: -2 psi

Compositi
 A 0.0 % 10

Flow Rate: 7.500 mL/min Time: 1.00 min

Current: 29.5 °C

S1 OFF S2 OFF S3 OFF V3 V4

Syr: Home Ndl Wash: Off
 Vial: Injector: Stream

OK Cancel

Waters

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 Status (1)				
<Default>		WetPrime:Priming (0.82)		
Method: <direct>		Flow: 5.000 mL/min		System: 130 psi
Composition				Sample
A 0.0 %	B 100.0 %	C 0.0 %	D 0.0 %	Set OFF °C
				Current 23.5 °C
S1 OFF	S2 OFF	S3 OFF	S4 OFF	Degasser
				Mode On
				Pressure 0.5 psi
V1 V2 V3 V4 				
Syr: Home		Ndl Wash: Off		
Vial:		Injector: Stream		
Stop Prime	Hold Prime	Sample Queue	Next Page	Direct Function

Waters

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i Status (1)				
<Default>		WetPrime:Suspended		
Method:		Flow:	System:	
<direct>		0.000 mL/min	-3 psi	
Composition				
A	B	C	D	
0.0 %	100.0 %	0.0 %	0.0 %	
Sample			Set	
OFF °C			23.5 °C	
S1	S2	S3	S4	
OFF	OFF	OFF	OFF	
Degasser		Mode Pressure		
On		0.5 psi		
Syr: Home		Ndl Wash: Off		
Vial:		Injector: Stream		
Resume Prime	Abort Prime	Sample Queue	Next Page	Direct Function

- At this point you can either press the Resume Prime key to continue the Wet Prime or press the Abort Prime key to end the Wet Prime.
- Press **Next Page**, the Status (2) screen is displayed.

i Status (2)

<Default> Idle

Method: Flow: System: Sample:

<direct> 0 0.000 mL/min -2 pol 1 pol

Pressure Ripple (past minute)

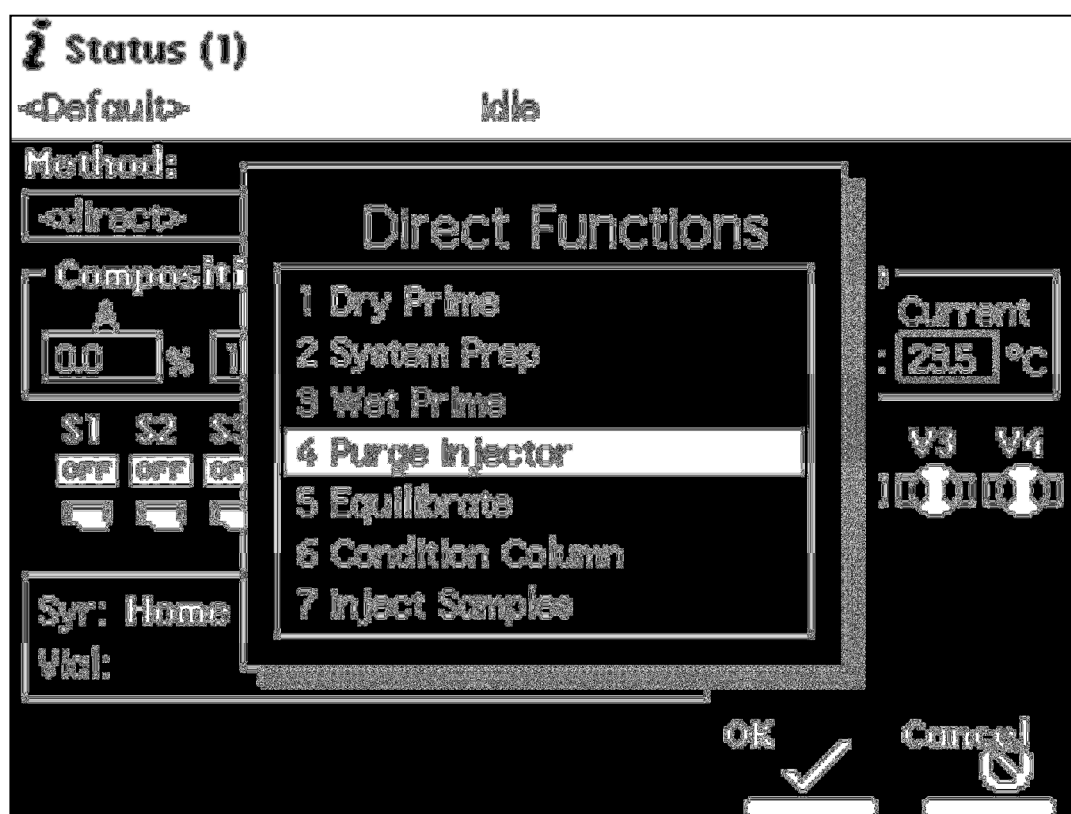
Max pol	-2	Min pol	-9	Delta pol	1
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Sample Queue Next Page Direct Function

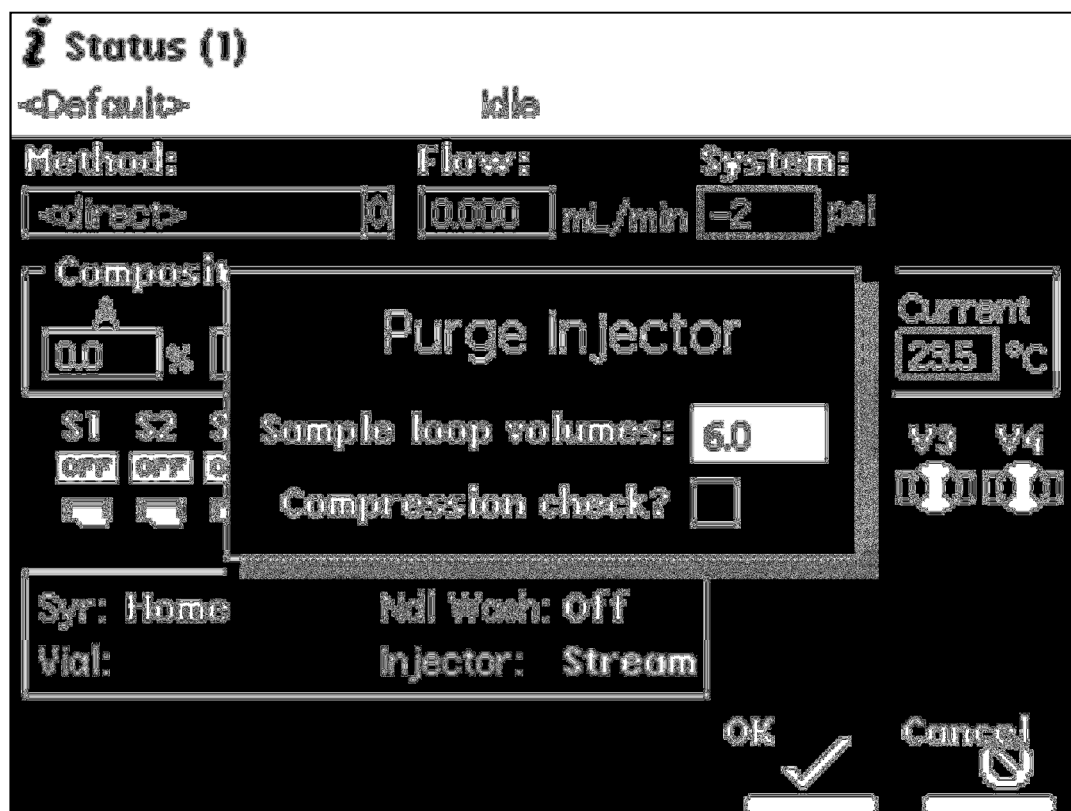
- The Status (2) screen.
- Press **Direct Function**.

i Status (1)			
<Default>		Idle	
Method:	Flow:	System:	
<direct>	0.000 mL/min	-2 psi	
Composition		Sample	
A	B	Set	Current
0.0 %	100.0 %	OFF °C	23.5 °C
C	D		
0.0 %	0.0 %		
S1	S2	Degasser	
OFF	OFF	Mode	Pressure
OFF	OFF	On	0.5 psi
V1	V2	V3	V4
OFF	OFF	OFF	OFF
Syr: Home		Ndl Wash: Off	
Vial:		Injector: Stream	
Sample Queue		Next Page	Direct Function

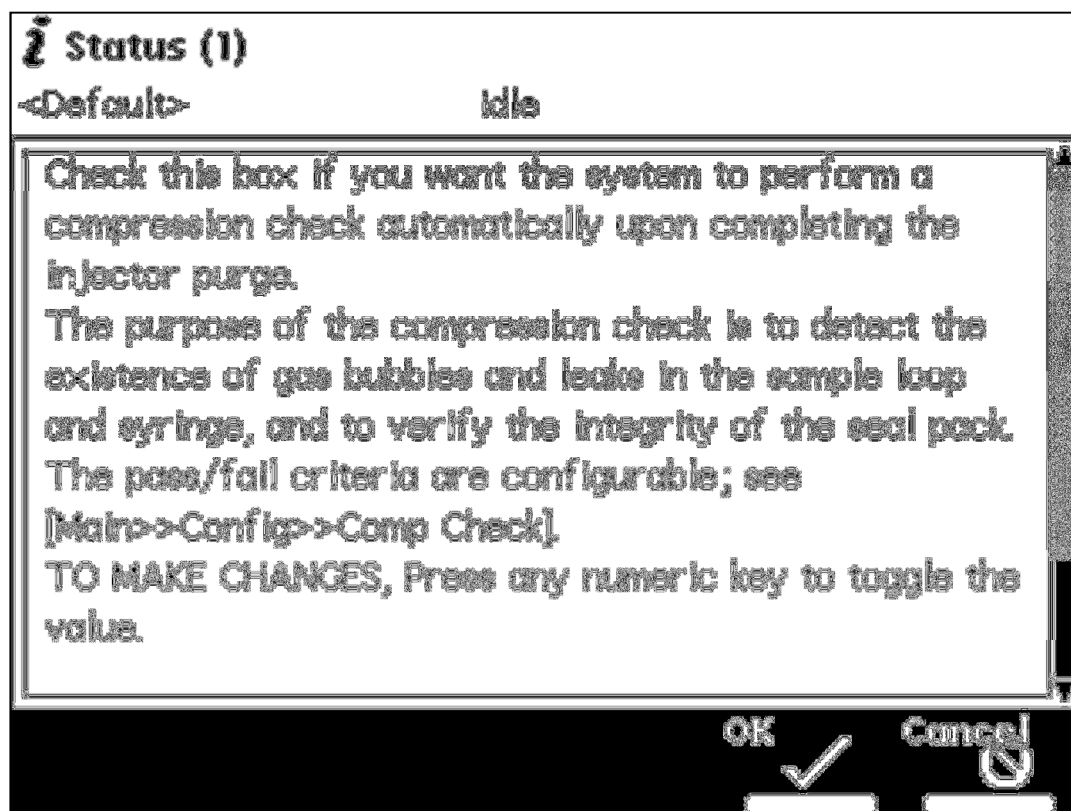
- Once the Fluid Handling Unit has been primed, turn the Degasser **ON**.
- The 2690 degasser modes are Disabled (Off), Normal (timed cycle), and Continuous. A 2690 Separations Module with a Performance+ degasser should be run only in Continuous mode.
- The 2695 (Performance Plus) degasser modes are ON and OFF.
- Leave the degasser ON for 15 minutes with no solvent flow to allow the solvent to become thoroughly degassed.



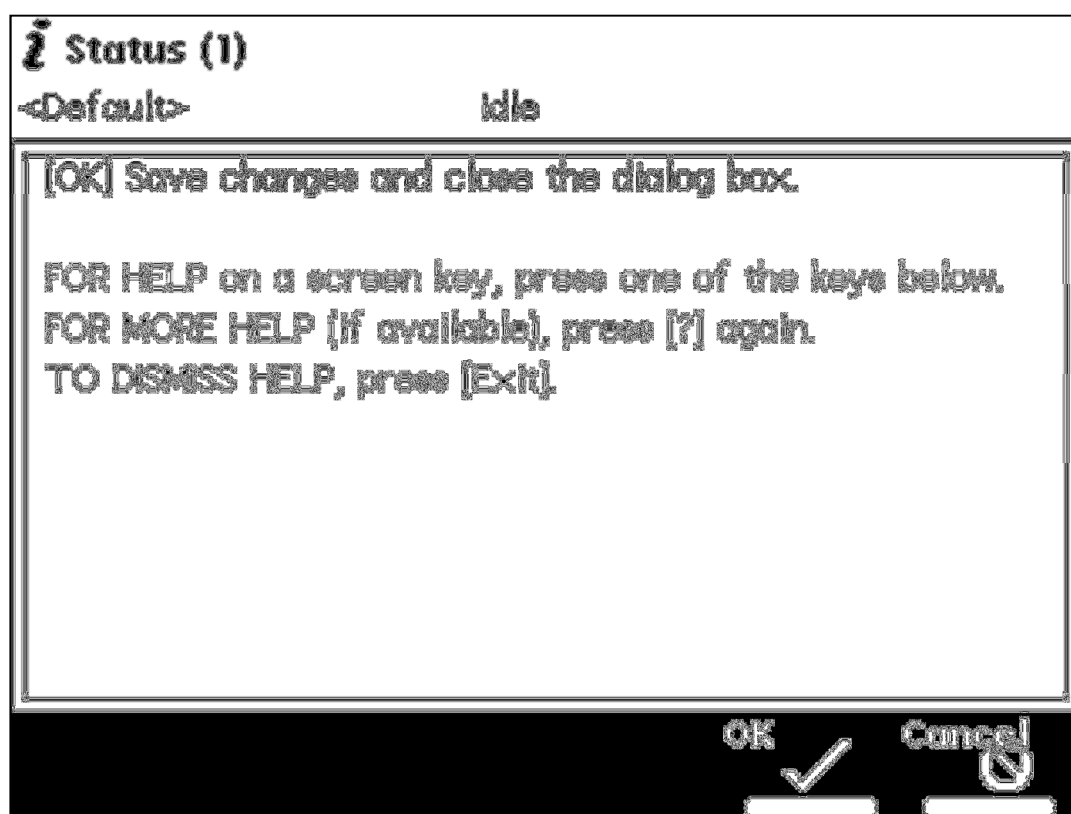
- Direct Functions screen
- Select **Purge Injector**
- Press **OK**.



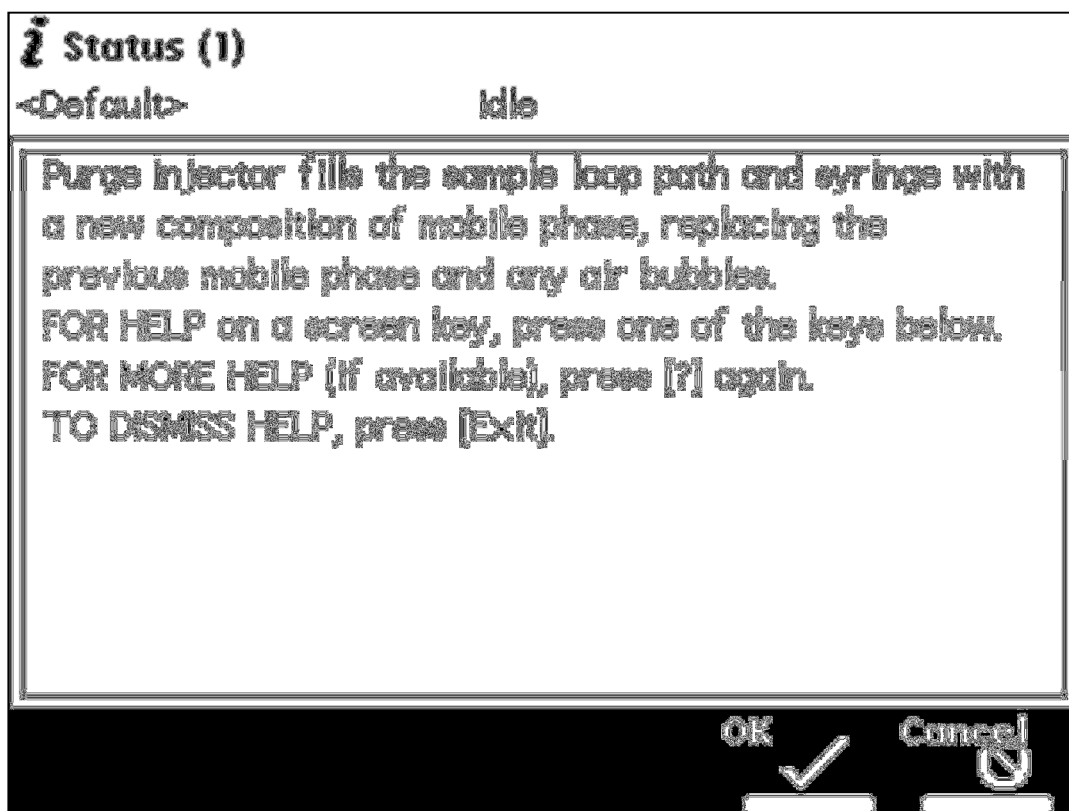
- Purge Injector screen
- Enter a minimum of **6** loop volumes
- Select **Compression check**
- Press **Question Mark** key.



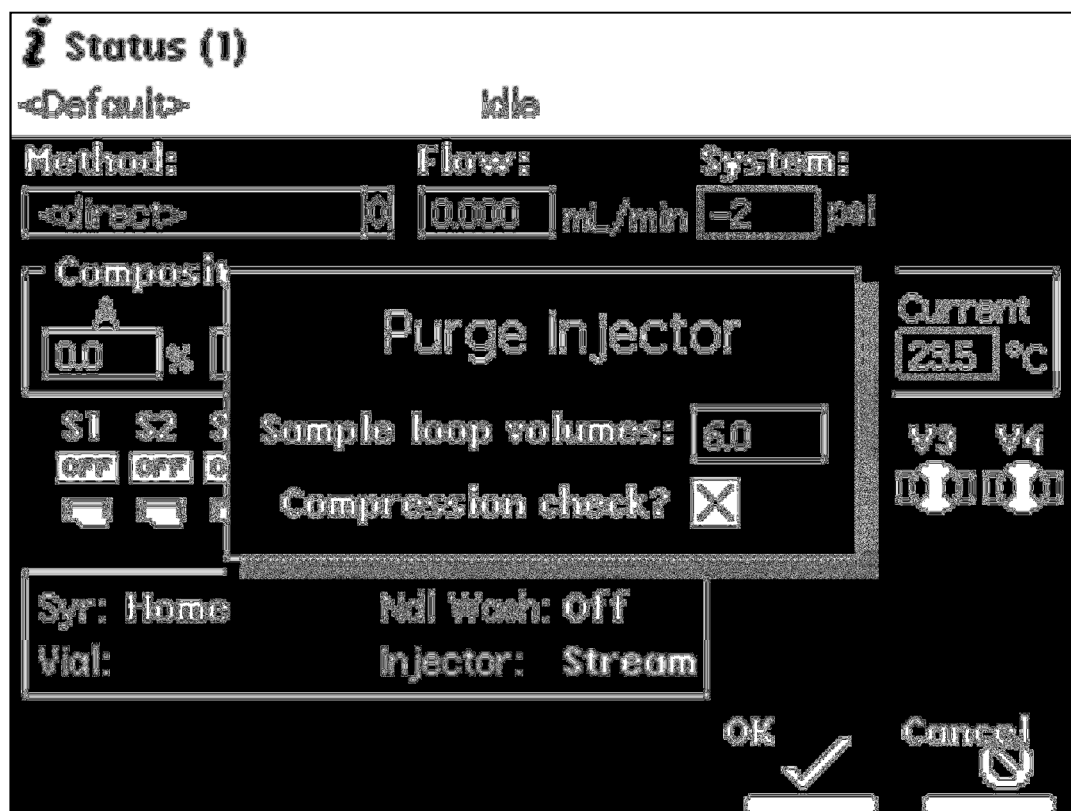
- Help Message displayed for compression check box.
- Press **OK**, the next help screen is displayed.



- Second help screen for "Compression check?"
- Press the **?**, an additional help screen is displayed.



- Additional help screen for "Compression check?" giving as brief definition of a purge.
- Press **Exit** and then press any Numeric Key, an "X" will fill the "Compression check?" box.



- Select **Purge Injector** dialog box with compression check?
- Press **OK**.

i Status (1)
 <Default> Purge: Empty syringe

Method: <direct> Flow: 3.000 mL/min System: 164 psi

Composition: A 0.0 % B 100.0 % C 0.0 % D 0.0 % Sample: Set OFF °C Current 23.6 °C

S1 OFF S2 OFF S3 OFF S4 OFF Degasser: Mode On Pressure 0.5 psi V1 V2 V3 V4

Syr: * * * Ndl Wash: Off Vial: Injector: Stream

Stop Purge Hold Purge Sample Queue Next Page Direct Function

- Status page (1) during Purge Injector.
- This shows the first step of the purge, note the positions of the valves.

i Status (1)

<Default> Purge: Empty syringe

Method: <direct> Flow: 0.450 mL/min System: 3 psi

Composition: A 0.0 % B 100.0 % C 0.0 % D 0.0 %

Sample: Set OFF °C Current 23.6 °C

S1 OFF S2 OFF S3 OFF S4 OFF

Degasser: Mode On Pressure 0.5 psi

V1 V2 V3 V4

Syr: * * * Ndl Wash: Off

Vial: Injector: Stream

Stop Purge Hold Purge Sample Queue Next Page Direct Function

- Status page (1) during Purge Injector.
- This shows the **empty syringe step** of the purge, note the positions of the valves.

i Status (1)

<Default> Purge:Test column resistance

Method: <direct> Flow: 0.300 mL/min System: 17 psi

Composition: A 0.0 % B 100.0 % C 0.0 % D 0.0 %

Sample: Set OFF °C Current 23.6 °C

S1 OFF S2 OFF S3 OFF S4 OFF

Degasser: Mode On Pressure 0.5 psi

V1 V2 V3 V4

Syr: * * * Ndl Wash: Off

Vial: Injector: Seal

Stop Purge Hold Purge Sample Queue Next Page Direct Function

- Status page (1) during Purge Injector.
- The Separations Module is preparing for the compression check by testing the column resistance.

Note: A column needs to be present in order to run the compression check. If there is no column resistance the compression test will fail.

i Status (2)
 <Default> Purge:Compress sample loop

Method:	Flow:	System:	Sample:
<direct>	0.195 mL/min	526 psi	23 psi

Pressure Ripple (past minute)

Max	Min	Delta
psi 824	psi 5	psi 821

Stop Purge **Hold Purge** **Sample Queue** **Next Page** **Direct Function**

- Status page (2) during Compression Check

i Status (2)
<Default> **Idle**

Method:	Flow:	System:	Sample:
<direct>	0.500 mL/min	1953 psi	1929 psi

Pressure Ripple (past minute)

Max	Min	Delta
1955	1944	11
psi	psi	psi

Sample Queue **Next Page** **Direct Function**

- Status page (2) during normal running.