



Title: Exploris GC PM Checklist

Number: ULS-DRS-PMC-0309

Revision: 001

**It is ultimately the responsibility of the Service Representatives to confirm this document is current prior to use. After 90 days, this copy is not to be used unless confirmed that it has not been superseded, or otherwise gaining written approval (pre-approval form or email) from the customer that this document remains suitable for execution.**

Effective Date: 27 May 2021

## Quick Guide – How to complete the PM Check List (example for HPLC pumps):

Complete as appropriate.  
Procedures utilized is the PMI document,  
e.g., for the UltiMate System this would be ULS-  
DRS-PMI-0007.  
Add any other special procedure applied (e.g.  
decontamination document, etc.).

Complete as appropriate.

Confirm here replacement of  
'Parts INCLUDED in PM'  
– if applicable for this  
module.

**Note: 'Parts INCLUDED in PM'  
are those parts intended  
to be exchanged during  
PM, regardless of  
condition.**

Document here the status  
of the 'OPTIONAL Spare  
Parts' and actions done.

**Note:  
Replace 'OPTIONAL Spare  
Parts' only when  
necessary! Consider  
whether a replaced part is  
billable.**

Company:		Equipment Manufacturer:	
Customer Contact Name:		Model:	
Engineer Name:		Serial #:	
SAP Notification/Job #:		System Reference ID:	
Procedure(s) utilized:		Decontamination: (cb) Yes (cb) Not required	
<b>Pre-PM Checks</b>		<b>Functional Checks</b>	
Instrument Operational		Proportioning / solvent selection valve(s)	
LEDs / Display / Indicators functional		Peristaltic / wash pump	
Review error log / failure list		Pressure sensor(s)	
Visual check for corrosion / salt deposits		Leak sensor	
<b>Component Checks</b>		Low pressure fluidic connections	
Solvent Filter/filter frit(s)		High pressure fluidic connections	
Piston Seals (High pressure)		Pump pressure test	
Piston Seals (Rear seals)		Degasser operation	
Piston seal support rings (PEEK)		Pump drive / Cam	
Pump head ring seals		Cooling fan	
Purge valve cap seal(s)		Electronics / power supply	
Peristaltic pump tubing		Drain tubing	
Filter frit, inline filter		<b>Operational Information</b>	
U-tube (working/equals head)		Recorded Value	
Mixing chamber gasket		Operating Hours (L)	
Mixing chamber stirrer		Operating Hours (R)	
Pistons		Workload (L) (MJ)	
Check valves		Workload (R) (MJ)	
Piston seal support rings (Ceramic)		Installed piston seal type	
Rear seal wash tubing		<b>Actions</b>	
Purge valve screw (UltiMate 2G)		Executed	
Wash body <del>o-ring</del> (UltiMate 1G)		N/A	
Pump head <del>tubings</del>		Cam lubricated	
Mixer unit(s)		Pump diagnostics run	
Purge valve unit(s)		Reset piston stroke counter	
Pulse Dispenser		"Service Done" via CM	
Pump heads		Firmware updated	
		Current version	
		Original version (if updated)	
<b>Measurement &amp; Test Equipment</b>			
Calibration Date:		Next Due Date:	
Make/Model:		Identification #:	
Comments:			
Field Service Representative Signature:		Customer Signature:	
Date:		Date:	
Date not required if using Digital Signature		Date not required if using Digital Signature	

Complete as appropriate.

Use 'N/A' if option  
is not present or  
available.

Update these  
counters as  
stated in  
Chromeleon.

Perform actions  
as required

Make certain to  
add an electronic  
copy of the  
calibration  
certificates.

Check and comply with  
customer's date format  
when signing.

**Note: The cover page and this Quick Guide are intentionally left without page numbers, and they are not considered to be printed**

Company:				Equipment Manufacturer:		Thermo Scientific				
Customer Contact Name:				Model:						
Engineer Name:				Serial #:						
SAP Notification/Job #:				System Reference ID:						
Procedure(s) utilized:				Decontamination:		<input type="checkbox"/> Yes <input type="checkbox"/> Not required				
				Date Performed:						
Check			Yes	No	N/A	Equipment Checks Before and After PM		Before PM	After PM	N/A
Open Rotary Pump Ballast to empty Mist Filter			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fore Vacuum		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check all Vacuum hoses			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	HCD Cell Pressure		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check that Helium is above 115 psi (8 bar)			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ultra High Vacuum		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check that Nitrogen is around 87 psi (6 bar)			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Mass Calibration (EI)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check for external gas line leaks			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Leak Check (EI)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instrument PM			Yes	No		Auto Tune (Pos)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<div style="writing-mode: vertical-rl; transform: rotate(180deg);">Parts INCLUDED in PM</div>			<input type="radio"/>	<input type="radio"/>		Tune Report (EI)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
						System Check (Pos)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
						System Check (Neg)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
						Mass Calibration (Neg)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
						Auto Tune (Neg)		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
						Readback and Voltage Check		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<div style="writing-mode: vertical-rl; transform: rotate(180deg);">Optional Spare Parts (CHARGEABLE)</div>			<input type="radio"/>	<input type="radio"/>		Lens Connection Test		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
						Data System		Recorded Value		
						Computer S/N				
						Operating System				
						Software Version (Xcalibur)				
						Software Version (Chromleon)				
Clean source, Check ion volume (Replace as required)			<input type="radio"/>	<input type="radio"/>		Software Version (TraceFinder)				
Check L1 and L3 lenses (Replace as required)			<input type="radio"/>	<input type="radio"/>		Driver Version (Exploris)				
Clean Injection Flatapole if required			<input type="radio"/>	<input type="radio"/>						
Charge Cal Gas Vial (FC43)			<input type="radio"/>	<input type="radio"/>						
Clean dust filters (Replace as required)			<input type="radio"/>	<input type="radio"/>						
Update software Instrument Driver if required			<input type="radio"/>	<input type="radio"/>						
Measurement & Test Equipment										
Calibration Date:		Next Due Date:		Make/Model:			Identification #:			
Comments:										
Field Service Representative Signature:					Customer Signature:					
Date: <input type="text"/>					Date: <input type="text"/>					
Date not required if using Digital Signature					Date not required if using Digital Signature					