

PM CHECKLIST, TSQ ALTIS, QUANTIS, FORTIS

Ticket or Job ID Number					
Company Name					
Contact Name					
Contact Phone Number					
Instrument Laboratory Location					
Instrument Model and Serial Number		☐ TSQ Altis	S/N		
		☐ TSQ Quantis	S/N		
		☐ TSQ Fortis	S/N		
Service Engineer					
PM Start Date					
PM Completion Date					
1	Create a PM Service folder			☐ Complete	☐ N/A
2	Backup the Calibration file			☐ Complete	☐ N/A
Instrument Assessment (As found Condition)					
3	Review the most recent data and Instrument logs			☐ Complete	☐ N/A
4	Inject QC samples and collect the data			☐ Complete	☐ N/A
5	Review QC data with the customer			☐ Complete	☐ N/A
6	Source housing X, Y and Z Probe position settings	X:	Y:	Z:	☐ Complete ☐ N/A
7	Achieve a stable Ion Beam			☐ Complete	☐ N/A
8	Acquire EMRS full Scan data for positive and negative ion mode (50 to 1650 amu)			☐ Complete	☐ N/A
9	Check for Disconnected Lenses			☐ Complete	☐ N/A
10	Acquire EMRS full scan data for positive ion mode (50 to 350 amu)			☐ Complete	☐ N/A
11	Dip Ion Funnel RF (TSQ Altis only)			☐ Complete	☐ N/A
12	Dip Ion Guide 1			☐ Complete	☐ N/A
13	Dip Ion Guide 3			☐ Complete	☐ N/A
14	Check for Shorted Lenses			☐ Complete	☐ N/A
15	Calibrate Devices or Calibrate LBP (3.0 & 3.0Sp1)			☐ Complete	☐ N/A
16	Evaluate Electrometer Noise Threshold			☐ Complete	☐ N/A
17	Measure Detector Dark Current Noise			☐ Complete	☐ N/A
18	Measure Detector Broadband Noise			☐ Complete	☐ N/A
19	High Mass Noise Check Q1			☐ Complete	☐ N/A
20	High Mass Noise Check Q3			☐ Complete	☐ N/A
21	Check Q1			☐ Complete	☐ N/A
22	Check Q3			☐ Complete	☐ N/A
Shut Down					
23	Electronics Switch to Service mode			☐ Complete	☐ N/A
24	Main Breaker Switch to Off position			☐ Complete	☐ N/A

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Source Housing Maintenance		
25	Clean Source Housing	☐ Complete ☐ N/A
26	Clean Drain Adapter and Exhaust Insert.	☐ Complete ☐ N/A
Clean		
27	Spray Shield	☐ Complete ☐ N/A
28	L0	☐ Complete ☐ N/A
29	MP00	☐ Complete ☐ N/A
30	Exit Lens	☐ Complete ☐ N/A
31	SRIG, Ion Funnel or Skimmer/Tube Lens Assembly	☐ Complete ☐ N/A
32	Fan Filter	☐ Complete ☐ N/A
Replace		
33	Metal Needle Insert	☐ Complete ☐ N/A
34	Ion Transfer Tube	☐ Complete ☐ N/A
35	Ion Transfer Tube O-ring	☐ Complete ☐ N/A
36	Sweep Gas O-ring	☐ Complete ☐ N/A
37	Divert Valve Rotor Seal	☐ Complete ☐ N/A
Sogevac SV65 pump		
38	Drain and replace the pump oil.	☐ Complete ☐ N/A
39	Replace the Exhaust Filter	☐ Complete ☐ N/A
Start-up		
40	Pump down overnight	☐ Complete ☐ N/A
41	Ballast the Sogevac SV65 pump(s)	☐ Complete ☐ N/A
Vacuum Specifications		Results
42	Source Pressure (Ion transfer tube installed)	☐ Complete ☐ N/A
43	Analyzer Pressure (Ion transfer tube installed)	☐ Complete ☐ N/A
44	Source Pressure (Ion transfer tube removed)	☐ Complete ☐ N/A
45	Analyzer Pressure (Ion transfer tube removed)	☐ Complete ☐ N/A
Diagnostics (No Ion beam required)		
46	Dip Ion funnel RF (TSQ Altis only)	☐ Complete ☐ N/A
47	Dip Ion Guide 1	☐ Complete ☐ N/A
48	Dip Ion Guide 3	☐ Complete ☐ N/A
49	Check for Shorted Lenses	☐ Complete ☐ N/A
50	Calibrate Devices or Calibrate LBP (3.0 & 3.0Sp1)	☐ Complete ☐ N/A
51	Evaluate Electrometer Noise Threshold	☐ Complete ☐ N/A
52	Measure Detector Dark Current Noise	☐ Complete ☐ N/A
53	Measure Detector Broadband Noise	☐ Complete ☐ N/A
54	High Mass Noise Check Q1	☐ Complete ☐ N/A

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55	High Mass Noise Check Q3	☐ Complete ☐ N/A
56	Check Q1	☐ Complete ☐ N/A
57	Check Q3	☐ Complete ☐ N/A
Diagnostics (Ion beam required)		
58	Achieve stable spray	☐ Complete ☐ N/A
59	Check for Disconnected Lenses	☐ Complete ☐ N/A
60	Lens Charging Test, Standard Options	☐ Complete ☐ N/A
Calibration Positive Ion Mode		
61	EM Calibration or Electron Multiplier Calibration (3.0 & 3.0Sp1)	☐ Complete ☐ N/A
62	EM Voltage Full Scan	☐ Complete ☐ N/A
63	EM Voltage SRM	☐ Complete ☐ N/A
64	Tune and Mass Calibration	☐ Complete ☐ N/A
65	System Tune and Check (3.0 & 3.0Sp1 only)	☐ Complete ☐ N/A
66	Calibrate Mass Position and Resolution (3.0 & 3.0Sp1 only)	☐ Complete ☐ N/A
67	Quad Resolution vs Intensity (LogRes Curve)	☐ Complete ☐ N/A
Calibration Negative Ion Mode		
68	Achieve stable spray	☐ Complete ☐ N/A
69	EM Calibration or Electron Multiplier Calibration (3.0 & 3.0Sp1)	☐ Complete ☐ N/A
70	EM Voltage Full Scan	☐ Complete ☐ N/A
71	EM Voltage SRM	☐ Complete ☐ N/A
72	Tune and Mass Calibration	☐ Complete ☐ N/A
73	System Tune and Check (3.0 & 3.0Sp1 only)	☐ Complete ☐ N/A
74	Calibrate Mass Position and Resolution (3.0 & 3.0Sp1 only)	☐ Complete ☐ N/A
75	Quad Resolution vs Intensity (LogRes Curve)	☐ Complete ☐ N/A
Instrument Assessment (As left Condition)		
76	Return Source Position to Original Settings	☐ Complete ☐ N/A
77	Inject QC samples and collect the data	☐ Complete ☐ N/A
78	Review QC data with the customer	☐ Complete ☐ N/A
Replace Metal Needle Insert		
79	Replace Metal Needle Insert and adjust Needle protrusion	☐ Complete ☐ N/A
80	Verify HESI metal needle alignment	☐ Complete ☐ N/A
81	Return Source Position to Original Settings	☐ Complete ☐ N/A
DELIVERABLES		
<i>These items should be made available to the customer at sign-off.</i>		
82	Certificate of Analysis (EMRS Calibration Standard)	☐ Complete ☐ N/A
83	Tune and Mass Calibration Activity Reports	☐ Complete ☐ N/A
84	Diagnostics Activity Reports	☐ Complete ☐ N/A

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SIGN OFF		
<i>Customer signature represents acknowledgement that the instrument is installed and operating as intended.</i>		
<i>Any exception(s) from a standard PM can be captured here.</i>		
Service Engineer Printed Name		
Service Engineer Signature		Date
Customer Organization		
Customer Contact Number		
Customer Printed Name		
Customer Signature		Date