

Planned Maintenance Checklist

433A Peptide Synthesizer Systems

Instrument Location: _____
Serial Number: _____ SO #: _____
Service Engineer: _____ Date: _____

Any deviations from this checklist plus any parts used in addition to the PM kit MUST be noted on an accompanying service report.

It is not necessary to perform ALL of the checks listed below in order to complete a PM visit.

Place a "√" next to each task performed, a "X" next to each task not performed, and N/A if not applicable. Do not leave blank positions.

Preliminary

- • Backflush chemicals and install clean empty bottles in all positions.
- • Run Self-Test and repair any errors before continuing PM

ECO Updates

All the service updates listed below MUST be fitted by the end of this visit:

_____ 433 - Mac cable (SB #150) _____ Vent/waste system update (SB #149)
_____ Poppet valve shield (SB #152) _____ Backup safety valve (SB #112)

Replacement Parts

- • Replace the vortexer belt (4397), the upper bearing (603092), and the RV lines (601371).
- • Replace needle assembly (602995).
- • Replace the gaskets on external bottle caps #9 and #10 (4498).
- • Replace bottle ratchet caps #1 and #5 (3559) and any others found to be damaged or stressed.
- • Replace the TFA Angar vent valve (tBOC only) (600640 – part not supplied in PM kit)
- • Replace activator and reaction vessel bulbs (200591)
- • Replace all in-line filters (401771).

Checks, Tests and Procedures

- • Check Synthassist software is installed correctly and rebuild computer desktop
- • Check operation of instrument front panel display and function switches
- • Check the vent line for low spots where liquid could get trapped. Advise customer of findings.
- • Flush any liquid from the bottle vent lines. Wash the pressure and vent lines of bottle #1 and #8 with Methanol.
- • Verify that vacuum lines are free of any fluid traces. Check vacuum assist activates above 13" Hg.
- • Clean fan filter.
- • Check battery by switching the instrument off then on. Date, barcode reader should be current.
- • Check the vortexer for correct operation.
- • Check for damage to fittings on external bottle caps #9 and #10 – replace as required.
- • Check all bottle inserts, reagent delivery lines, and valve block fittings are free of blockages, wear, damage or leaks.
- • Clean cartridge guide way with IPA or Methanol and check the pusher block spring (224009 - not supplied) and replace if loose, frayed or kinked.
- • Leak test Pressure Relief Valve, all bottle positions, and RV. Repair failures.
- • Leak test needle assembly, check/adjust needle height and verify correct operation.
- • Clean the ejector mechanism with Methanol and verify correct operation.
- • Calibrate barcode reader ensure the average is 2000 +/- 500.
- • Perform flowtests. Repair any flow-related issues.

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Note: Lower regulator must not exceed 11psi during flowtests

433A FLOWTEST

Software Version _____ Lower reg _____ Chemistry _____

FLOWTEST	DESCRIPTION	PERMITTED RANGE (standard cycles not 3ml)	ACTUAL VALUE
1	a	#1 to RV	1.9 - 2.4ml DIEA, 0.8 - 1.3ml Pip
2	b	#2 to RV	1.95 - 2.05ml TFA (tBOC only)
6	f	#6 to RV	1.95 - 2.55ml MeOH
7	g	#7 to RV	Observe liquid in waste line
8	h	#8 to RV	Observe liquid in waste line
9	i	#9 to RV	2.9 - 3.5ml DCM
10	A	#10 to RV	2.45 - 2.55 (2.75) ml NMP
11	B	#10 to cart	1.95 - 2.35g NMP
12	C	#9 to cart	3.4 - 4.1g DCM
16	G	#10 top RV	1.0 - 1.2ml NMP
20	b	conductivity cell	list readings
			MeOH
			Pip
			NMP
			DCM
22	d	1-X	List

All tasks of the planned Maintenance have been successfully completed

Customer Signature

Engineer Signature

Date