

Waters Corporation - Test Record

Part Number: 186015061
 Operator: 246394
 Serial Number: J20BBS001A
 Test System: TE82943-13
 Test Software: 2.4

Product: Acquity Bio BSM
 Start Time: 10/27/2020, 17:58:
 End Time: 10/28/2020, 09:31:
 Order: N/A
 Location: Flextronics, SG

TMD: TMD010882

TMD: V00

Firmware: 1.72.415 (Aug 27 2018 13:51:50)

Name	LSL	Measurement	USL	Unit	Outcome
Test Electrical Safety					PASS
Test Loader Download					PASS
Test Reboot Firmware for Pump B Download					PASS
Test Firmware Version					PASS
Test Serial Number					PASS
Test Alarms at Bootup					PASS
Test Switch2 Output ON					PASS
Test Switch2 Output OFF					PASS
Test Switch3 Output ON					PASS
Test Switch3 Output OFF					PASS
Test Run Stopped Output ON					PASS
Test Run Stopped Output OFF					PASS
Test Switch1 Output ON					PASS
Test Switch1 Output OFF					PASS
Test Gradient Start Input SHORT					PASS
Test Gradient Start Input OPEN					PASS
Test Stop Flow Input SHORT					PASS
Test Stop Flow Input OPEN					PASS
Test Auxiliary1 Input SHORT					PASS
Test Auxiliary1 Input OPEN					PASS
Test Auxiliary2 Input SHORT					PASS
Test Auxiliary2 Input OPEN					PASS
Test Analog Output2 set to 2.0 VDC	1.9	2	2.1	VDC	PASS
Test Analog Output2 set to 0.0 VDC	-0.1	0	0.1	VDC	PASS
Test Analog Output1 set to 2.0 VDC	1.9	2	2.1	VDC	PASS
Test Analog Output1 set to 0.0 VDC	-0.1	0	0.1	VDC	PASS
Test Leak Detect Connected					PASS
Test Leak Detect Disconnected					PASS
Test Leak Detect Input Low					PASS
Test Leak Detect Input High					PASS
Test Alarms Recheck					PASS
Test Seal Wash Pump Prime/Flow	2	3.3	5	ml/min	PASS
Test Pump A Input 2 Prime with IPA	115	161.9	280	PSI	PASS
Test Pump B Input 2 Prime with IPA	115	155.1	280	PSI	PASS
Test Pump A Input 1 Prime with MeOH	15	42.9	85	PSI	PASS
Test Pump B Input 1 Prime with MeOH	15	40.8	85	PSI	PASS
Test Degasser Pressure	0	0.64	1.3	PSI	PASS
Test Degasser Switch Setting					PASS
Test Pump A Dynamic Leak - Accum. Leak Rate	1	47	150	nL/min	PASS
Test Pump A Dynamic Leak - Accum. Percent of Stroke	-10	24	50	%	PASS
Test Pump A Dynamic Leak - Accum. Max Pressure	14000	14167	15000	psi	PASS
Test Pump A Dynamic Leak - Primary Leak Rate	-50	28	150	nL/min	PASS
Test Pump A Dynamic Leak - Primary Percent of Stroke	-10	24	50	%	PASS
Test Pump A Dynamic Leak - Primary Max Pressure	12000	12017	13000	psi	PASS
Test Pump A Dynamic Leak Low PSI - Accum. Leak Rate	1	9	150	nL/min	PASS

Test Pump A Dynamic Leak Low PSI - Accum. Percent of Stroke	-10	9	50	%	PASS
Test Pump A Dynamic Leak Low PSI - Accum. Max Pressure	4000	4287	5000	psi	PASS
Test Pump A Dynamic Leak Low PSI - Primary Leak Rate	-50	10	150	nL/min	PASS
Test Pump A Dynamic Leak Low PSI - Primary Percent of Stroke	-10	5	50	%	PASS
Test Pump A Dynamic Leak Low PSI - Primary Max Pressure	2000	2012	3000	psi	PASS
Test Pump B Dynamic Leak - Accum. Leak Rate	1	103	150	nL/min	PASS
Test Pump B Dynamic Leak - Accum. Percent of Stroke	-10	24	50	%	PASS
Test Pump B Dynamic Leak - Accum. Max Pressure	14000	14099	15000	psi	PASS
Test Pump B Dynamic Leak - Primary Leak Rate	-50	44	150	nL/min	PASS
Test Pump B Dynamic Leak - Primary Percent of Stroke	-10	23	50	%	PASS
Test Pump B Dynamic Leak - Primary Max Pressure	12000	12028	13000	psi	PASS
Test Pump B Dynamic Leak Low PSI - Accum. Leak Rate	1	42	150	nL/min	PASS
Test Pump B Dynamic Leak Low PSI - Accum. Percent of Stroke	-10	8	50	%	PASS
Test Pump B Dynamic Leak Low PSI - Accum. Max Pressure	4000	4131	5000	psi	PASS
Test Pump B Dynamic Leak Low PSI - Primary Leak Rate	-50	-7	150	nL/min	PASS
Test Pump B Dynamic Leak Low PSI - Primary Percent of Stroke	-10	4	50	%	PASS
Test Pump B Dynamic Leak Low PSI - Primary Max Pressure	2000	2025	3000	psi	PASS
Test Flow Rate Accuracy Pump A 2ml/min	1.98	2.001	2.02	ml/min	PASS
Test Pump A Pressure Ripple	0	11	15	PSI	PASS
Test Flow Rate Accuracy Pump A 0.5ml/min	0.495	0.5	0.505	ml/min	PASS
Test Flow Rate Accuracy Pump B 2ml/min	1.98	2.004	2.02	ml/min	PASS
Test Pump B Pressure Ripple	0	11	15	PSI	PASS
Test Flow Rate Accuracy Pump B 0.5ml/min	0.495	0.501	0.505	ml/min	PASS
Test Flow Rate Accuracy Pump A&B 1.0ml+1.0ml/min	1.98	2.003	2.02	ml/min	PASS
Test High Pressure Flow Pump A&B	9000	10644	14500	PSI	PASS
Test Dynamic Leak Manifold to Filter Tube	0	0.124	1	ul/min	PASS
Test Serial Number Re-verification					PASS
Test Fans					PASS
Test LEDs					PASS

Acquity Bio BSM Final Test Overall Result - PASS

Signed:  (246394)

Date: 28 Oct 2020

END OF DATA