

MISPA Ace Fully Automated Calibration Certificate.

This is to certify that installed at Dr. Raju's Blooms Diagnostic Centre. MISPA Ace Fully Automated Serial number **WK-76105427** has been duly calibrated on 17/11/2021 and the same was verified with the following tests.

System Tests results:

	Passed	Failed	Comments
• Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PASS
• Stray light	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PASS
• Noise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PASS
• Stability	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PASS
• Tip pump	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PASS
• Level detection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PASS
• Washer hydraulics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PASS
• Washer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PASS
• Clot detector	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PASS
	<input type="checkbox"/>	<input type="checkbox"/>	SATISFACTORY

Verified the Calibrations and alignment visually.

Performed Tests , all are passed.

Calibration of the instrument was carried out as per the recommendation.

Next Calibration will be performed on 16/11/2022

Name/Address of Lab: DR Rajus Blooms Diagnostic, Chikkaballapur	
Phone#:9751740908	Contact Person: Prasad
MAIL: alwinjoy@agappe.in	Contact Email: drvgovindaraju@gmail.com
Instrument Model: MISPA Ace Fully Automated Clinical Chemistry	Instrument Serial #: WK-76105427
Installation Date: 17.01.2018	Software Revision #: 1.5
Install Technician Name: Alwin Joy	Signature:


Alwin Joy

17/11/2021

Service Engineer, Bangalore

Date	Control Id	Lot Number	Test	Low limit	Result	High Limit	Units	Out
11-17 10:21	BIORAD L2	26472 2023-02	BUN	43.9	47.2	51.3	mg/dL	
11-17 10:22	BIORAD L2	26472 2023-02	ALB	2.20	2.77	3.10	g/dL	
11-17 10:23	BIORAD L2	26472 2023-02	GOT	177.0	195.9	221.0	U/L	
11-17 10:23	BIORAD L2	26472 2023-02	GPT	88.2	94.1	117.0	U/L	
11-17 10:24	BIORAD L2	26472 2023-02	Ca	11.2	12.2	12.6	mg/dL	
11-17 10:24	BIORAD L2	26472 2023-02	CHOL	95	105	114	mg/dL	
11-17 10:24	BIORAD L2	26472 2023-02	CRE	5.24	5.41	5.92	mg/dL	
11-17 10:25	BIORAD L2	26472 2023-02	PHOS	6.29	6.66	8.10	mg/dL	
11-17 10:25	BIORAD L2	26472 2023-02	UrA	8.94	9.43	10.00	mg/dL	
11-17 10:27	BIORAD L2	26472 2023-02	ALPA	340.0	416.9	600.0	U/L	
11-17 10:29	BIORAD L2	26472 2023-02	GLU	248.0	266.2	308.0	mg/dL	
11-17 10:30	BIORAD L2	26472 2023-02	HDL	25.8	28.5	35.0	mg/dL	
11-17 10:30	BIORAD L2	26472 2023-02	TRIG	84.0	103.1	116.8	mg/dL	
11-17 10:31	BIORAD L2	26472 2023-02	BILI D	0.78	1.05	1.48	mg/dL	
11-17 10:31	BIORAD L2	26472 2023-02	BILI T	3.58	5.00	5.09	mg/dL	
11-17 10:31	BIORAD L2	26472 2023-02	TP	3.60	4.32	5.30	g/dL	
11-17 12:13	BIORAD L1	26470 2023-02	BUN	12.8	14.8	17.5	mg/dL	
11-17 12:14	BIORAD L1	26470 2023-02	ALB	3.20	3.91	4.90	g/dL	
11-17 12:15	BIORAD L1	26470 2023-02	GOT	33.0	41.7	49.4	U/L	
11-17 12:16	BIORAD L1	26470 2023-02	GPT	26.3	28.7	39.1	U/L	
11-17 12:16	BIORAD L1	26470 2023-02	CRE	2.13	2.19	2.56	mg/dL	
11-17 12:17	BIORAD L1	26470 2023-02	Ca	9.1	9.4	9.7	mg/dL	
11-17 12:17	BIORAD L1	26470 2023-02	CHOL	242	265	290	mg/dL	
11-17 12:17	BIORAD L1	26470 2023-02	PHOS	3.34	3.43	4.60	mg/dL	
11-17 12:17	BIORAD L1	26470 2023-02	UrA	4.09	5.09	5.48	mg/dL	
11-17 12:20	BIORAD L1	26470 2023-02	ALP	80.0	97.2	160.0	U/L	
11-17 12:21	BIORAD L1	26470 2023-02	GLU	77.0	80.0	94.5	mg/dL	
11-17 12:22	BIORAD L1	26470 2023-02	HDL	87.6	101.5	110.0	mg/dL	
11-17 12:22	BIORAD L1	26470 2023-02	TRIG	170.6	193.3	201.8	mg/dL	
11-17 12:23	BIORAD L1	26470 2023-02	BILI D	0.12	0.28	0.52	mg/dL	
11-17 12:23	BIORAD L1	26470 2023-02	TP	6.20	6.29	8.40	g/dL	
11-17 12:37	BIORAD L1	26470 2023-02	BUN	12.8	14.7	17.5	mg/dL	
11-17 12:39	BIORAD L1	26470 2023-02	BILI T	0.88	0.99	1.15	mg/dL	

Clot Detector Test

17/11/2021 9:47 AM

Software v2.6.0s

CPU Serial Number 01E84E531400007A

Instrument SN

WK-76105427

Noise

Front

Noise: 53 < 500 - Passed

Average: 7844

Minimum: 7806

Maximum: 7859

Clot detector check

Front

Pressure ratio > 0.3 < 2 - Passed. Average: 1.147

Calibration

Front

3 ul

Detection window < 32000 - Passed. Average: 21995

Jump > 3000 - Passed. Average: 4778

Jump CV: 1.1 < 3 % - Passed

ul

Detection window < 32000 - Passed. Average: 21974

Jump > 3000 - Passed. Average: 4762

Jump CV: 1.02 < 3 % - Passed

ul

Detection window < 32000 - Passed. Average: 21891

Jump > 3000 - Passed. Average: 4751

Jump CV: 1.1 < 3 % - Passed

Dilution

Front

Pressure ratio > 0.3 < 2 - Passed. Average: 1.254

Clot detection - Passed. Average: 0.717

Clot detector check

Pressure ratio = (Peak - Base) / (Peak - Valley)

Front

Pressure	Base	Peak	Valley	Plateau	Press.
----------	------	------	--------	---------	--------

AVG	7628	12388	8239	10022	1.15
-----	------	-------	------	-------	------

CV (%)	1.14	1.02	1.33	1.16	0.83
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1	7548	12284	8099	9898	1.13
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2	7572	12358	8168	10010	1.14
---	------	-------	------	-------	------

3	7767	12552	8406	10201	1.15
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4	7712	12523	8310	10105	1.14
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5	7554	12223	8147	9914	1.15
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6	7601	12388	8231	9996	1.15
7	7678	12486	8338	10103	1.16
8	7521	12185	8096	9834	1.14
9	7734	12488	8348	10137	1.15

7592 12396 8250 10021 1.16

Calibration

Max = Maximum (Peak, Valley, Plateau)
Jump = Max - Base

Detection window = 3 * Jump + Base

Front

3 ul

Pressure	Base	Peak	Valley	Plateau	Max	Jump	Detection
AVG	7660	12438	7919	8697	12438	4778	21995
CV (%)	0.93	0.89	11.42	1.12	0.89	1.1	0.95
1	7676	12503	8166	8699	12503	4827	22157
2	7747	12500	8231	8740	12500	4753	22006
3	7751	12570	8319	8791	12570	4819	22208
4	7605	12387	8081	8577	12387	4782	21951
5	7727	12551	8351	8822	12551	4824	22199
6	7526	12187	8024	8507	12187	4661	21509
7	7626	12417	8207	8686	12417	4791	21999
8	7685	12431	5360	8729	12431	4746	21923
9	7641	12469	8264	8767	12469	4828	22125
10	7618	12369	8189	8654	12369	4751	21871

4 ul

Pressure	Base	Peak	Valley	Plateau	Max	Jump	Detection
AVG	7687	12450	8263	9867	12450	4762	21974
CV (%)	0.99	0.79	1.04	0.92	0.79	1.02	0.81
1	7700	12522	8231	9860	12522	4822	22166
2	7681	12499	8245	9807	12499	4818	22135
3	7520	12213	8059	9733	12213	4693	21599
4	7734	12488	8307	9896	12488	4754	21996
5	7752	12503	8344	9966	12503	4751	22005
6	7740	12561	8348	9993	12561	4821	22203
7	7746	12472	8332	9942	12472	4726	21924
8	7642	12377	8220	9774	12377	4735	21847
9	7746	12453	8299	9925	12453	4707	21867
10	7612	12408	8249	9772	12408	4796	22000

5 ul

Pressure	Base	Peak	Valley	Plateau	Max	Jump	Detection
AVG	7639	12390	8209	10034	12390	4751	21891
CV (%)	1.09	0.72	1.07	0.99	0.72	1.1	0.74
1	7563	12353	8128	9960	12353	4790	21933
2	7541	12349	8141	9966	12349	4808	21965
3	7675	12491	8242	10077	12491	4816	22123
4	7758	12510	8349	10207	12510	4752	22014
5	7610	12376	8160	9964	12376	4766	21908
6	7660	12420	8281	10100	12420	4760	21940
7	7658	12398	8168	10009	12398	4740	21878

restricted

8
9
10

7523	12189	8079	9876	12189	4666	21521
7634	12382	8228	10034	12382	4748	21878
7767	12429	8311	10143	12429	4662	21753

Solution

Max = Maximum (Peak, Valley, Plateau)
 Jump = Max - Base
 Pressure ratio = (Peak - Base) / (Peak - Valley)
 Clot ratio = Jump_Sample / Jump_Calibration

Front

Calibration. Base 7526 Max 12167 Jump 4641
 Clot detected: Clot ratio > 2

Pressure	Base	Peak	Valley	Plateau	Max	Jump	Press.	Clot
AVG	7653	10982	8316	9379	10982	3329	1.25	0.72
CV (%)	1.58	1.92	1.39	1.66	1.92	4.2	5.6	4.26
1	7676	10865	8431	9344	10865	3189	1.31	0.69
2	7460	10476	8354	9074	10476	3016	1.42	0.65
3	7809	11120	8426	9495	11120	3311	1.23	0.71
4	7745	11083	8313	9534	11083	3338	1.21	0.72
5	7648	10964	8423	9435	10964	3316	1.3	0.71
6	7527	10925	8111	9239	10925	3398	1.21	0.73
7	7490	10916	8123	9210	10916	3426	1.23	0.74
8	7691	11195	8310	9480	11195	3504	1.21	0.76
9	7762	11109	8308	9469	11109	3347	1.19	0.72
10	7720	11162	8365	9506	11162	3442	1.23	0.74

Parameters

Sample volume (ul): 10
 Reagent volume (ul): 200

400 796
400 796
400 796
400 795

restricted

restricted

400 796
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400 795

Parameters
Cycles: 3
Initial volume (ul): 400
Final volume (ul): 400
Intervals: 15

Parameters
Cycles: 3
Initial volume (ul): 400
Final volume (ul): 400
Intervals: 15

restricted

Photometer Noise Test

17/11/2021 9:30 AM

Software v2.6.0s

CPU Serial Number 01E84E531400007A

Instrument SN

WK-76105427

Front Photometer

Noise : 0.00027 abs < 0.001 abs - Passed
Estimated derive: 0.00032 abs/min < 0.002 abs/min - Passed

	Minimum	Maximum	Difference	Average	SD
Sample counts 0.103	1,297,379	1,302,285	4,906	1,299,691	1,396
Reference counts 0.147	5,750,991	5,779,446	28,455	5,764,362	8,168
Sample absorbance 0.04185	1.02711	1.02921	0.0021	1.02808	0.00043

Front readings

1,302,285	5,777,807	1.02830
1,302,085	5,779,159	1.02859
1,301,797	5,778,535	1.02867
1,302,254	5,777,114	1.02823
1,301,962	5,779,446	1.02869
1,302,230	5,777,146	1.02825
1,301,901	5,776,725	1.02838
1,301,746	5,777,323	1.02855
1,301,766	5,774,965	1.02824
1,301,764	5,775,452	1.02830
1,301,430	5,776,687	1.02865
1,301,348	5,773,644	1.02831
1,301,334	5,776,983	1.02874
1,301,366	5,774,242	1.02837
1,301,183	5,775,842	1.02868
1,301,040	5,773,622	1.02848
1,300,970	5,773,300	1.02848
1,301,005	5,775,774	1.02877
1,301,002	5,772,082	1.02831
1,301,518	5,772,224	1.02803
1,300,929	5,775,156	1.02874
1,301,055	5,771,986	1.02827
1,301,064	5,772,108	1.02828
1,300,696	5,773,290	1.02863
1,300,713	5,771,230	1.02814
1,300,860	5,772,285	1.02842
1,300,864	5,772,129	1.02839
1,300,510	5,768,980	1.02820
1,300,598	5,772,465	1.02859
1,300,410	5,772,217	1.02810
1,300,067	5,767,479	1.02769

Front readed

1,300,489	5,769,092	1.02822
1,300,552	5,767,683	1.02801
1,301,313	5,769,256	1.02778
1,300,292	5,769,562	1.02839

11/11/1950

revised

1,300,516	5,768,577	1.02814
1,300,133	5,765,604	1.02799
1,300,302	5,767,489	1.02813
1,300,144	5,768,753	1.02838
1,300,099	5,767,456	1.02824
1,299,715	5,764,531	1.02809
1,300,479	5,766,867	1.02795
1,299,755	5,766,433	1.02830
1,299,900	5,763,681	1.02788
1,299,993	5,763,882	1.02785
1,299,384	5,768,697	1.02880
1,299,195	5,762,741	1.02816
1,299,571	5,763,420	1.02803
1,300,384	5,763,056	1.02752
1,298,909	5,760,390	1.02802
1,298,979	5,761,445	1.02812
1,299,346	5,760,512	1.02779
1,299,198	5,760,153	1.02783
1,299,407	5,764,400	1.02825
1,299,057	5,762,289	1.02818
1,298,939	5,764,434	1.02852
1,299,248	5,762,294	1.02807
1,298,578	5,758,757	1.02800
1,298,222	5,758,012	1.02754
1,298,739	5,761,731	1.02829
1,298,676	5,761,826	1.02834
1,299,218	5,760,614	1.02788
1,299,791	5,757,449	1.02715
1,299,232	5,759,620	1.02771
1,299,178	5,760,138	1.02784
1,299,474	5,756,010	1.02715
1,298,441	5,760,530	1.02831
1,298,097	5,757,985	1.02818
1,298,919	5,756,597	1.02754
1,299,230	5,757,272	1.02745
1,299,069	5,754,435	1.02718
1,298,151	5,762,674	1.02874
1,299,319	5,756,185	1.02726
1,298,298	5,755,086	1.02770
1,298,487	5,757,278	1.02787
1,298,137	5,757,714	1.02812
1,297,815	5,757,088	1.02823
1,298,772	5,754,476	1.02735
1,297,861	5,760,684	1.02865
1,298,279	5,754,321	1.02761
1,299,295	5,754,934	1.02711
1,297,857	5,765,238	1.02921
1,297,777	5,757,324	1.02828
1,298,681	5,754,771	1.02744
1,297,545	5,756,086	1.02825
1,298,061	5,756,453	1.02801
1,297,783	5,756,054	1.02811

1,299,505	5,755,975	1.02713
1,298,221	5,756,385	1.02791
1,297,763	5,754,960	1.02799
1,298,085	5,754,685	1.02777

1,297,586	5,754,901	1.02785
1,297,885	5,750,991	1.02742
1,297,600	5,752,173	1.02773
1,297,433	5,751,121	1.02769
1,297,681	5,752,987	1.02779
1,298,383	5,753,216	1.02742
1,297,379	5,753,494	1.02802
1,298,260	5,754,362	1.02763
1,297,434	5,753,560	1.02800

Parameters

Filter: 1
 Number of measurements: 100
 Time interval between readings (sec): 1
 Water absorbance. Front: 0.061546
 Sample channel 0. Front: 23717
 Ref. channel 0. Front: 446930

1.02785
 1.02742
 1.02773
 1.02769
 1.02779
 1.02742
 1.02802
 1.02763
 1.02800

17/11/2021 9:39 AM

Photometer Stability Test

Software v2.6.0s

CPU Serial Number 01E84E531400007A

Instrument SN WK-76105427

Photometer

Difference: 0.00349 abs < 0.01 abs - Passed

	Minimum	Maximum	Difference	Average	SD	CV
Sample absorbance	1.0230	1.0264	0.0035	1.0245	0.0007	0.0705

Percent readings:

1,304,616	23,683	5,746,713	23,683	1.0231
1,304,900	23,683	5,761,902	23,683	1.0237
1,306,048	23,683	5,759,337	23,683	1.0238
1,303,529	23,683	5,732,167	23,683	1.0230
1,299,630	23,683	5,731,734	23,683	1.0240
1,278,560	23,683	5,633,386	23,683	1.0234
1,299,048	23,683	5,733,347	23,683	1.0245
1,309,567	23,683	5,756,990	23,683	1.0238
1,310,332	23,683	5,781,498	23,683	1.0242
1,310,453	23,683	5,779,043	23,683	1.0238
1,310,945	23,683	5,784,053	23,683	1.0242
1,311,260	23,683	5,785,260	23,683	1.0242
1,311,227	23,683	5,786,759	23,683	1.0244
1,311,758	23,683	5,786,936	23,683	1.0241
1,304,352	23,683	5,756,151	23,683	1.0244
1,239,856	23,683	5,738,624	23,683	1.0247
1,230,091	23,683	5,737,482	23,683	1.0244
1,234,466	23,683	5,714,083	23,683	1.0247
1,289,821	23,683	5,692,006	23,683	1.0245
1,299,925	23,683	5,726,840	23,683	1.0232
1,305,370	23,683	5,760,963	23,683	1.0244
1,308,108	23,683	5,756,824	23,683	1.0240
1,305,498	23,683	5,761,117	23,683	1.0244
1,305,711	23,683	5,763,437	23,683	1.0245
1,309,826	23,683	5,762,919	23,683	1.0244
1,303,750	23,683	5,743,128	23,683	1.0231
1,301,838	23,683	5,746,148	23,683	1.0245
1,292,452	23,683	5,698,545	23,683	1.0238
1,298,979	23,683	5,732,634	23,683	1.0245
1,301,912	23,683	5,746,527	23,683	1.0246
1,296,755	23,683	5,724,911	23,683	1.0247
1,233,026	23,683	5,708,267	23,683	1.0247
1,286,995	23,683	5,681,219	23,683	1.0247
1,238,576	23,683	5,728,740	23,683	1.0242
1,302,443	23,683	5,750,206	23,683	1.0247
1,301,360	23,683	5,764,255	23,683	1.0248
1,306,096	23,683	5,767,693	23,683	1.0249
1,304,908	23,683	5,765,490	23,683	1.0252
1,303,635	23,683	5,761,010	23,683	1.0254

Printed

1,296,885	23,683	5,727,770	23,683	1.0250
1,293,701	23,683	5,710,181	23,683	1.0246
1,290,550	23,683	5,692,724	23,683	1.0242
1,297,342	23,683	5,729,794	23,683	1.0250

1-29-73

restricted

1,301,417	23,683	5,748,975	23,683	1.0251
1,300,161	23,683	5,743,811	23,683	1.0252
1,295,590	23,683	5,722,058	23,683	1.0250
1,290,465	23,683	5,706,188	23,683	1.0259
1,293,627	23,683	5,718,136	23,683	1.0257
1,285,673	23,683	5,669,640	23,683	1.0240
1,292,143	23,683	5,707,643	23,683	1.0252
1,294,612	23,683	5,719,098	23,683	1.0252
1,292,770	23,683	5,720,428	23,683	1.0264
1,295,176	23,683	5,722,486	23,683	1.0253
1,290,696	23,683	5,697,179	23,683	1.0247
1,294,017	23,683	5,714,555	23,683	1.0250
1,290,976	23,683	5,710,069	23,683	1.0261

Parameters

Filter: 1

Total time of measurement (min): 10

Time interval between readings (sec): 10

Water absorbance. Front: 0.061546

Sample channel 0. Front: 23683

Ref. channel 0. Front: 446930

Photometer Stray Light Test

17/11/2021 9 27 AM

Software v2.6.0s

CPU Serial Number: 01E84E531400007A

Instrument SN

WK-76105427

Front Photometer

Blue Light: 50g/L: 0 %T < 0.04 %T - Passed

	Minimum	Maximum	Difference	Average	SD
Sample channel	23689	23796	107	23739	23
Sample channel 0	23717	23717	0	23717	0
Ref. channel	5792913	5797253	4340	5794316	951
Ref. channel 0	23717	23717	0	23717	0

Visible Light: 50g/L: 0 %T < 0.04 %T - Passed

	Minimum	Maximum	Difference	Average	SD
Sample channel	23681	23757	76	23727	20
Sample channel 0	23717	23717	0	23717	0
Ref. channel	5791929	5795756	3827	5792973	1035
Ref. channel 0	23717	23717	0	23717	0

Front readings White Light

23767	23717	5770576	23717
23715	23717	5770748	23717
23746	23717	5770699	23717
23745	23717	5770082	23717
23750	23717	5773536	23717
23755	23717	5770145	23717
23776	23717	5769840	23717
23741	23717	5770246	23717
23725	23717	5770144	23717
23781	23717	5770315	23717
23748	23717	5773086	23717
23791	23717	5770253	23717
23728	23717	5770318	23717
23735	23717	5771293	23717
23741	23717	5771164	23717
23736	23717	5770976	23717
23689	23717	5770454	23717
23750	23717	5769993	23717
23740	23717	5770553	23717
23724	23717	5771050	23717
23703	23717	5770169	23717
23734	23717	5769621	23717
23735	23717	5770738	23717
23726	23717	5771951	23717
23689	23717	5769737	23717
23738	23717	5770305	23717
23767	23717	5771409	23717

23717	23717	5769686	23717
23730	23717	5769196	23717
23744	23717	5769645	23717

Front readings Visible Light

23724	23717	5769519	23717
23760	23717	5770435	23717
23693	23717	5768363	23717
23757	23717	5769526	23717
23737	23717	5772039	23717
23781	23717	5768640	23717
23781	23717	5768212	23717
23786	23717	5768372	23717
23741	23717	5768770	23717
23752	23717	5771547	23717
23729	23717	5768272	23717
23703	23717	5768825	23717
23733	23717	5768666	23717
23736	23717	5770463	23717
23719	23717	5769127	23717
23707	23717	5769253	23717
23731	23717	5768464	23717
23736	23717	5768869	23717
23698	23717	5770224	23717
23745	23717	5768287	23717
23730	23717	5770944	23717
23723	23717	5768785	23717
23713	23717	5768336	23717
23757	23717	5768542	23717
23731	23717	5770083	23717
23730	23717	5768976	23717
23698	23717	5768301	23717
23736	23717	5769603	23717
23723	23717	5768348	23717
23714	23717	5769912	23717

Parameters

Filter: 1
Number of measurements: 30
Time interval between readings (ms): 0
Volume (ul): 300
Air volume (ul): 0
Water absorbance. Front: 0.061546
Sample channel 0. Front: 23717
Ref. channel 0. Front: 446930

Collected

Temperature Test

17/11/2021 09:30 AM

Software v2.6.0s

PU Serial Number 01E84E531400007A

Instrument SN

WK-76105427

Front Arm
 Reaction room to 40°C: 0 min <= 1.5 min - Passed
 Reaction room to 40°C: 0 min <= 3.5 min - Passed
 Stability: 0 min <= 6 min - Passed
 Final temperature: 40°C Tolerance 0.3°C - Passed
 Final ripple: 0.19°C <= 0.35 °C - Passed

Back Arm Reaction Trays
 Reaction room to 28°C: 0 min <= 10 min - Passed
 Reaction room to 39°C: 0 min <= 30 min - Passed
 Stability: 1.4 min <= 45 min - Passed
 Final temperature: 38.9°C Tolerance 0.3°C - Passed
 Final ripple: 0.25°C <= 0.35 °C - Passed

Reagent Tray
 Reagent temp: 7°C <= 6.5 °C - Passed
 Reagent temp: 7°C <= Max(8.5; T - 18) - Passed
 Temperature time: 0 min <= 20 min - Passed
 Room temperature: 27°C

Time (sec.)	Front Arm	Back Arm Reaction Trays	Reagent Tray	
0.0	40.000	-	39.250	8.100
1.1	40.000	-	39.250	8.100
2.2	39.938	-	39.250	8.100
3.4	39.938	-	39.250	8.100
4.5	39.938	-	39.312	8.000
5.6	39.938	-	39.312	8.000
6.7	39.938	-	39.312	8.000
7.9	39.938	-	39.312	8.000
9.0	39.938	-	39.312	8.000
10.1	39.938	-	39.312	8.000
11.3	39.938	-	39.312	7.900
12.4	39.938	-	39.312	7.900
13.5	39.938	-	39.312	7.900
14.6	39.938	-	39.312	7.900
15.7	39.938	-	39.312	7.900
16.8	39.938	-	39.312	7.900
18.0	39.938	-	39.312	7.900
19.1	39.938	-	39.312	7.900
20.2	39.938	-	39.312	7.800
21.4	39.938	-	39.312	7.800
22.5	39.938	-	39.312	7.800
23.6	39.938	-	39.312	7.800
24.8	39.938	-	39.312	7.800
25.9	39.938	-	39.312	7.800
27.0	39.938	-	39.312	7.800
28.1	40.000	-	39.312	7.800
29.2	40.000	-	39.312	7.700
30.3	40.000	-	39.312	7.700
31.4	40.000	-	39.312	7.700

32.6	40.000	-	39.312	7.700
33.7	40.000	-	39.312	7.700
34.8	40.000	-	39.312	7.700
36.0	40.000	-	39.312	7.600
37.1	40.000	-	39.312	7.600
38.2	40.000	-	39.312	7.600
39.3	40.000	-	39.312	7.600
40.5	40.000	-	39.312	7.600
41.6	40.000	-	39.312	7.600
42.7	40.000	-	39.312	7.600
43.8	40.000	-	39.312	7.600
45.0	40.000	-	39.312	7.600
46.1	40.000	-	39.312	7.600
47.2	40.000	-	39.312	7.600
48.3	40.000	-	39.312	7.600
49.5	40.000	-	39.312	7.600
50.6	40.000	-	39.312	7.500
51.7	40.000	-	39.312	7.500
52.8	40.000	-	39.312	7.500
54.0	40.000	-	39.312	7.500
55.1	39.938	-	39.312	7.500
56.2	39.938	-	39.312	7.400
57.3	39.938	-	39.312	7.400
58.5	39.938	-	39.312	7.400
59.6	39.938	-	39.312	7.400
60.7	39.938	-	39.312	7.400
61.8	39.938	-	39.312	7.400
63.0	39.938	-	39.312	7.400
64.1	39.938	-	39.312	7.400
65.2	39.938	-	39.312	7.400
66.3	39.938	-	39.312	7.400
67.5	39.938	-	39.312	7.400
68.6	39.938	-	39.312	7.400
69.7	39.938	-	39.312	7.400
70.8	39.938	-	39.312	7.400
72.0	39.938	-	39.312	7.400
73.1	39.938	-	39.312	7.400
74.2	39.938	-	39.312	7.400
75.3	39.938	-	39.312	7.300
76.5	39.938	-	39.312	7.300
77.6	39.938	-	39.312	7.300
78.7	39.938	-	39.312	7.300
79.8	39.938	-	39.312	7.300
81.0	39.938	-	39.312	7.200
82.1	39.938	-	39.312	7.300
83.2	39.938	-	39.250	7.200
84.3	39.938	-	39.250	7.200
85.5	39.938	-	39.250	7.200
86.6	40.000	-	39.250	7.200
87.7	40.000	-	39.250	7.200
88.8	40.000	-	39.250	7.200
90.0	40.000	-	39.250	7.200
91.1	40.000	-	39.250	7.200
92.2	40.000	-	39.250	7.200
93.3	40.000	-	39.250	7.200
94.5	40.000	-	39.250	7.200

158.4	39.938	-	39.188	7.900
159.5	39.938	-	39.188	7.900
160.6	39.938	-	39.188	7.900
161.7	39.938	-	39.188	7.800
162.9	39.938	-	39.125	7.800
164.0	39.938	-	39.125	7.800
165.1	39.938	-	39.125	7.800
166.2	39.938	-	39.125	7.800
167.4	39.938	-	39.125	7.800
168.5	39.938	-	39.125	7.800
169.6	39.938	-	39.125	7.700
170.7	39.938	-	39.125	7.700
171.9	39.938	-	39.125	7.700
172.0	39.938	-	39.125	7.700
174.1	39.938	-	39.125	7.700
175.2	39.938	-	39.188	7.600
176.4	39.938	-	39.188	7.600
177.5	39.938	-	39.125	7.600
178.6	39.938	-	39.188	7.600
179.7	39.938	-	39.188	7.600
180.9	39.938	-	39.125	7.600
182.0	39.938	-	39.125	7.600
183.1	40.000	-	39.125	7.600
184.2	40.000	-	39.125	7.600
185.3	40.000	-	39.125	7.600
186.5	40.000	-	39.125	7.600
187.6	40.000	-	39.125	7.600
188.7	40.000	-	39.125	7.600
189.8	40.000	-	39.125	7.600
191.0	40.000	-	39.125	7.500
192.1	40.000	-	39.125	7.500
193.2	40.000	-	39.125	7.500
194.3	40.000	-	39.125	7.500
195.5	40.000	-	39.125	7.400
196.6	40.000	-	39.125	7.400
197.7	40.000	-	39.125	7.400
198.8	40.000	-	39.125	7.400
199.9	40.000	-	39.125	7.400
201.1	40.000	-	39.188	7.400
202.2	40.000	-	39.188	7.400
203.3	40.062	-	39.188	7.400
204.4	40.062	-	39.188	7.400
205.6	40.062	-	39.188	7.400
206.7	40.062	-	39.188	7.300
207.8	40.062	-	39.188	7.300
208.9	40.062	-	39.125	7.300
210.1	40.062	-	39.125	7.300
211.2	40.062	-	39.125	7.300
212.3	40.062	-	39.125	7.300
213.4	40.062	-	39.125	7.300
214.6	40.062	-	39.125	7.300
215.7	40.062	-	39.125	7.300
216.8	40.062	-	39.125	7.300
217.9	40.000	-	39.125	7.300
219.1	40.000	-	39.125	7.300
220.2	40.000	-	39.125	7.200

17/11/2021 9:03 AM

Washer Hydraulics Test

Software v2.6.0s

CPU Serial Number 01E84E531400007A

Instrument SN

WK-76105427

Front washer

Priming level check

- 1: 460 ul, 300 ul <= L <= 500 ul - Passed
- 2: 413 ul, 300 ul <= L <= 500 ul - Passed
- 3: 683 ul, 500 ul <= L <= 700 ul - Passed
- 4: 661 ul, 500 ul <= L <= 700 ul - Passed
- 5: 670 ul, 500 ul <= L <= 700 ul - Passed
- 6: 656 ul, 500 ul <= L <= 700 ul - Passed

Aspiration level check

- 1: 0 ul < 60 ul - Passed
- 2: 9 ul < 60 ul - Passed
- 3: 0 ul < 60 ul - Passed
- 4: 6 ul < 60 ul - Passed
- 5: 3 ul < 60 ul - Passed
- 6: 1 ul < 60 ul - Passed
- 7: 0 ul < 60 ul - Passed

Priming level stability

- 1: 1.1854 % < 9 % - Passed
- 2: 0.7523 % < 9 % - Passed
- 3: 1.3181 % < 6 % - Passed
- 4: 1.5206 % < 6 % - Passed
- 5: 0.5362 % < 6 % - Passed
- 6: 1.2314 % < 6 % - Passed

	Minimum	Maximum	Difference	Average	SD	CV
1	413	425	12	419	5	1.185
2	413	421	8	417	3	0.752
3	674	696	22	685	9	1.358
4	648	688	40	664	17	2.521
5	674	683	9	679	4	0.536
6	643	661	18	652	8	1.231

Parameters

- Front washer
- Prime steps: 1500
- Washer steps: 400
- Prime down: 1000

CV
1.185
0.752
1.358
2.521
0.536
1.231

restricted

Washing Test

17/11/2021 9:14 AM

Software v2.6.0s

CPU Serial Number 01E84E531400007A

Instrument SN WK-76105427

Front washer

1: 0.0033 abs. < 0.02 abs. - Passed

Minimum	Maximum	Average
0.0616	0.0688	0.0662
0.0524	0.0795	0.0663
0.0613	0.0689	0.0660
0.0000	0.0148	0.0010
0.0000	0.0033	0.0003

Front washer

0.0643	0.0645	0.0635	-0.0006
0.0656	0.0660	0.0623	-0.0033
0.0653	0.0689	0.0672	-0.0001
0.0656	0.0656	0.0653	-0.0002
0.0636	0.0624	0.0613	-0.0004
0.0660	0.0664	0.0666	0.0006
0.0645	0.0650	0.0645	0.0000
0.0656	0.0660	0.0659	0.0003
0.0657	0.0651	0.0658	0.0001
0.0647	0.0657	0.0648	0.0001
0.0675	0.0685	0.0675	-0.0001
0.0664	0.0669	0.0660	-0.0004
0.0674	0.0679	0.0675	0.0001
0.0652	0.0631	0.0689	0.0005
0.0664	0.0669	0.0665	0.0001
0.0650	0.0658	0.0653	-0.0003
0.0648	0.0634	0.0633	-0.0015
0.0662	0.0524	0.0660	-0.0002
0.0662	0.0665	0.0659	-0.0003
0.0648	0.0649	0.0648	-0.0006
0.0654	0.0658	0.0652	-0.0001
0.0644	0.0646	0.0647	0.0003
0.0653	0.0651	0.0648	-0.0004
0.0651	0.0658	0.0655	0.0000
0.0646	0.0649	0.0647	0.0001
0.0647	0.0795	0.0645	-0.0002
0.0650	0.0657	0.0649	-0.0001
0.0646	0.0634	0.0644	-0.0002
0.0672	0.0672	0.0669	-0.0003
0.0635	0.0631	0.0633	-0.0002
0.0665	0.0634	0.0662	-0.0003
0.0657	0.0646	0.0655	-0.0002
0.0673	0.0638	0.0670	-0.0001
0.0672	0.0670	0.0671	-0.0001
0.0658	0.0648	0.0657	-0.0001

Estimated

0.0668	0.0672	0.0667	-0.0001
0.0658	0.0654	0.0657	-0.0002
0.0668	0.0672	0.0667	-0.0001
0.0688	0.0700	0.0686	-0.0002

