Date: 23/02/2022

CURRENT CALIBRATION CERTIFICATOFA15C

CUSTOMER NAME –Srividhya Diagnostics-Chennai

Serial Number = 83105C1062

Firmware = 5.5

A15 Configuration checksum value = 0x499D

A15 Configuration checksum size = 988

Rotor Temperature = 36.73

Prove Temperature = 37.5

System Liquid Scale Sensivity = 141

Waste Scale Sensivity = 166

Level Detection Improved Rack = 1

Sensitivity: (Tube Rack) = 41

Sensitivity: (Pediatric Rack) = 70

Sensitivity: (Out Fridge Reagent Rack) = 18

Sensitivity: (Fridge Reagent Rack) = 41

X - Origin = 55

Y - Origin = 267

Z - Origin = 430

X - Washing Station = 385

Y - Washing Station = 92

Z - Washing Station = 540

X - Reactions Rotor = 122

Y - Reactions Rotor = 1044

Z - Reactions Rotor = 600

Tray XYZ- Pediatric Rack

X1 (Rack3, 4) = 1633, 1081

X2 (Rack3, 4) = 1625, 1073

Y1 (Rack3, 4) = 106, 105

Registered office:
BioSystems Diagnostics Pvt. Ltd.,
A4, SIPCOT Industrial Park, Irungattukottai,
Tamil Nadu – 602105. India
Ph: +91 –44 – 30341911 / 12/ 13/14
Email: support@biosystems.in
CIN – U29297TN2003PTC051492

Y2 (Rack3, 4) = 1456, 1455

Z1 (Rack3, 4) = 743, 743

Z2 (Rack3, 4) = 730, 728

Z Relation Pediatric-Tube = 473

Tray XYZ- Reagent Rack

X1 (Rack3, 4) = 1368, 817

X2 (Rack3, 4) = 1368, 813

Y1 (Rack3, 4) = 117, 118

Y2 (Rack3, 4) = 1450, 1451

Z1 (Rack3, 4) = 1213, 1213

Z2 (Rack3, 4) = 1200, 1196

Tray XYZ- Fridge

X1 (Rack1, 2) = 2548, 2043

X2 (Rack1, 2) = 2554, 2051

Y1 (Rack1, 2) = 55, 54

Y2 (Rack1, 2) = 1397, 1403

Z1 (Rack1, 2) = 1242, 1242

Z2 (Rack1, 2) = 1239, 1239

Rotor Position correction regarding to the dispensation point = 107

Rotor Position correction regarding to the optical system = -9

Filters wheel correction = 1

Filter 0 = 0 (nm)   IT = 10.2 (ms)   Ref. IT = 9.7 (ms)

Filter 1 = 340 (nm) IT = 363 (ms) Ref. IT = 362.5 (ms)

Filter 2 = 405 (nm) IT = 82.9 (ms)   Ref. IT = 82.4 (ms)

Filter 3 = 505 (nm) IT = 89.1 (ms)   Ref. IT = 89.1 (ms)

Filter 4 = 535 (nm) IT = 69.1 (ms)   Ref. IT = 68.6 (ms)

Filter 5 = 560 (nm) IT = 76.3 (ms)   Ref. IT = 76.3 (ms)

Filter 6 = 600 (nm) IT = 96.3 (ms)   Ref. IT = 96.3 (ms)

Filter 7 = 635 (nm) IT = 87 (ms)   Ref. IT = 86.5 (ms)

Filter 8 = 670 (nm) IT = 97.3 (ms)   Ref. IT = 97.3 (ms)

Filter 9 = 0 (nm)   IT = 10.2 (ms)   Ref. IT = 9.7 (ms)

X - axis = 637624 (x1000 steps)

Y - axis = 574606 (x1000 steps)

BioSystems S.A.
Costa Brava 30,
08030 Barcelona (Spain)
t. +34 933 110 000

www.biosystems.in
www.biosystems.global

Z - axis = 1266755 (x1000 steps)

Reaction Rotor = 51020 (x10000 steps)

Filter Wheel = 2258980 (x100 steps)

Dispensing Pump = 1099790 (x10000 steps)

Membrane pumps = 217033 (Commutation)

3-way electrovalve = 892424 (Commutation)

Lamp = 352 (Hours)

Biochemical preparation = 96219 (Cicles)

Turbidimetry preparation = 2079 (Cicles)

Bireagent Biochemical preparation = 36406 (Cicles)

Bireagent Turbidimetry preparation = 911 (Cicles)

Predilution = 0 (Cicles)

Start/End Washings = 3610 (Cicles)

WS Washings = 20693 (Cicles)

H2O Washings = 16902 (Cicles)

New Rotor = 1186 (Rotors)

Contaminations detected = 7375 Contaminations detected
Next Calibration due on – 22/02/2023

For BIOSYSTEMS DIAGNOSTICS PVT. LTD.

AUTHORISED SIGNATORY

Test GLUCOSE-1

Units mg/dL

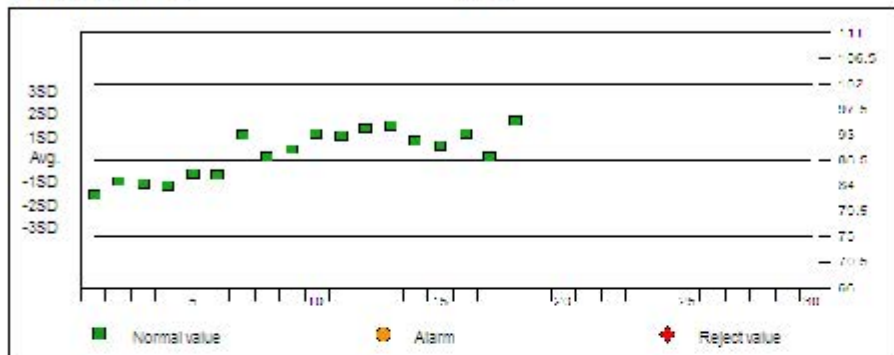Run rejection criterion 3SD

Control 1

First Name BIO CTRL 099

Lot 099

	Normal value		Alarm		Reject value

Average	SD	CV	Minimum to reject	Maximum to reject
89	5	5	75	102

Run	Date	Control 1	Abs. Err.	Rel. Err.	Alarm
1	7/29/2022 5:47:31 PM	82	-6	-1	
2	7/30/2022 6:22:21 PM	85	-4	-1	
3	7/31/2022 2:09:59 PM	84	-4	-1	
4	8/1/2022 4:13:50 PM	84	-4	-1	
5	8/2/2022 4:25:55 PM	86	-2	-1	
6	8/3/2022 4:39:00 PM	86	-3	-1	
7	8/4/2022 5:51:00 PM	93	5	1	
8	8/5/2022 6:51:00 PM	89	1	0	
9	8/6/2022 5:15:43 PM	91	2	0	
10	8/7/2022 3:47:54 PM	93	5	1	
11	8/8/2022 1:48:04 PM	93	4	1	
12	8/9/2022 1:50:14 PM	94	6	1	
13	8/10/2022 5:25:03 PM	95	6	1	
14	8/11/2022 7:20:00 PM	92	4	1	
15	8/12/2022 1:04:19 PM	91	2	1	
16	8/13/2022 2:51:49 PM	93	5	1	
17	8/14/2022 1:27:36 PM	89	1	0	
18	8/15/2022 2:07:44 PM	95	7	2	

Test UREA UV-1   Units mg/dL

Run rejection criterion 3SD

Control 1

First Name BIO CTRL 099   Lot 099

■ Normal value		● Alarm		◆ Reject value
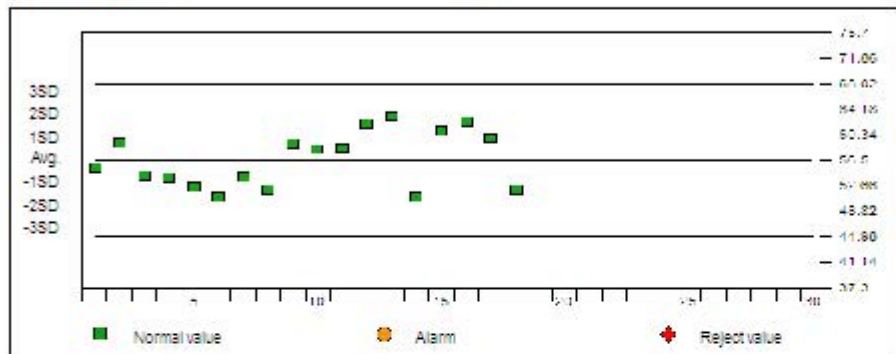
Average	SD	CV	Minimum to reject	Maximum to reject
57	4	7	45	68

Run	Date	Control 1	Abs. Err.	Rel. Err.	Alarm
1	7/29/2022 5:43:55 PM	55	-1	0	
2	7/30/2022 6:18:44 PM	59	3	1	
3	7/31/2022 2:06:22 PM	54	-2	-1	
4	8/1/2022 4:25:37 PM	54	-3	-1	
5	8/2/2022 4:22:19 PM	53	-4	-1	
6	8/3/2022 4:39:00 PM	51	-6	-1	
7	8/4/2022 5:51:00 PM	54	-3	-1	
8	8/5/2022 6:51:00 PM	52	-5	-1	
9	8/6/2022 5:12:07 PM	59	2	1	
10	8/7/2022 3:44:42 PM	58	2	0	
11	8/8/2022 1:44:28 PM	58	2	0	
12	8/9/2022 1:46:38 PM	62	6	1	
13	8/10/2022 5:21:27 PM	63	7	2	
14	8/11/2022 7:20:00 PM	51	-6	-1	
15	8/12/2022 1:00:42 PM	61	5	1	
16	8/13/2022 2:48:13 PM	62	6	2	
17	8/14/2022 1:23:59 PM	60	3	1	
18	8/15/2022 11:24:00 AM	52	-5	-1	

Test CREATININE-1

Units mg/dL

Run rejection criterion 3SD

Control 1

First Name BIO CTRL 099

Lot 099

| Normal value | Alarm | Reject value |
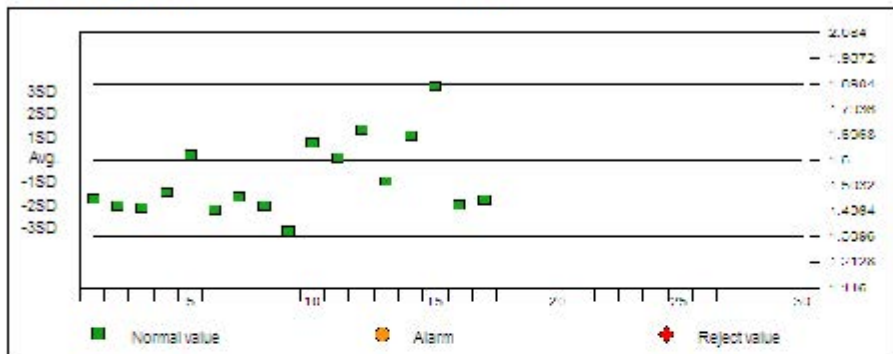
	Average	SD	CV	Minimum to reject	Maximum to reject
	1.60	0.10	6.04	1.31	1.89

Run	Date	Control 1	Abs. Err.	Rel. Err.	Alarm
1	7/30/2022 6:18:44 PM	1.45	-0.15	-1.52	
2	7/31/2022 2:06:22 PM	1.43	-0.17	-1.76	
3	8/1/2022 4:38:00 PM	1.42	-0.18	-1.86	
4	8/2/2022 4:22:19 PM	1.48	-0.12	-1.25	
5	8/3/2022 4:44:00 PM	1.62	0.02	0.21	
6	8/4/2022 5:51:00 PM	1.41	-0.19	-1.96	
7	8/5/2022 6:51:00 PM	1.46	-0.14	-1.45	
8	8/6/2022 6:39:00 PM	1.43	-0.17	-1.76	
9	8/7/2022 1:16:00 PM	1.33	-0.27	-2.79	
10	8/8/2022 1:44:28 PM	1.67	0.07	0.70	
11	8/9/2022 1:46:38 PM	1.61	0.01	0.09	
12	8/10/2022 5:21:27 PM	1.72	0.12	1.22	
13	8/11/2022 7:20:00 PM	1.52	-0.08	-0.83	
14	8/12/2022 1:00:42 PM	1.69	0.09	0.96	
15	8/13/2022 2:48:13 PM	1.88	0.28	2.89	
16	8/14/2022 1:23:59 PM	1.43	-0.17	-1.75	
17	8/15/2022 2:03:43 PM	1.45	-0.15	-1.54	

Test BILIRUBIN TOTAL-1   Units mg/dL

Run rejection criterion 3SD

Control 1

First Name BIO CTRL 099   Lot 099

| ■ Normal value | ● Alarm | ✦ Reject value |
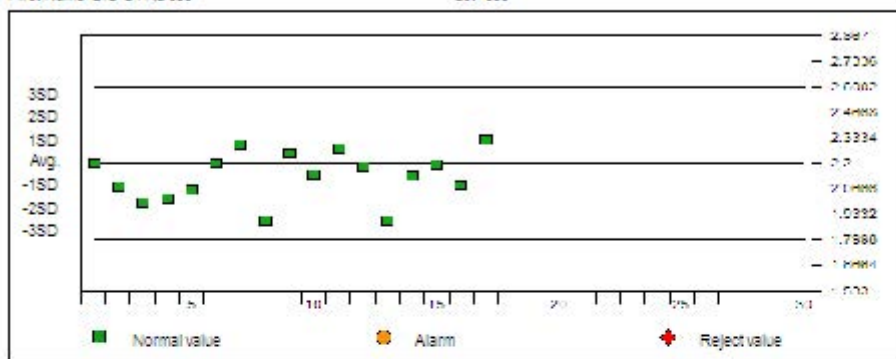
	Average	SD	CV	Minimum to reject	Maximum to reject
	2.2	0.1	6.1	1.8	2.6

Run	Date	Control 1	Abs. Err.	Rel. Err.	Alarm
1	7/29/2022 7:02:00 PM	2.2	0.0	0.0	
2	7/30/2022 6:17:56 PM	2.1	-0.1	-0.9	
3	7/31/2022 2:05:34 PM	2.0	-0.2	-1.5	
4	8/1/2022 4:09:25 PM	2.0	-0.2	-1.4	
5	8/2/2022 4:21:31 PM	2.1	-0.1	-1.0	
6	8/3/2022 4:40:00 PM	2.2	0.0	0.0	
7	8/4/2022 5:51:00 PM	2.3	0.1	0.8	
8	8/5/2022 6:52:00 PM	1.9	-0.3	-2.3	
9	8/6/2022 5:11:18 PM	2.3	0.1	0.4	
10	8/8/2022 1:43:40 PM	2.1	-0.1	-0.4	
11	8/9/2022 1:45:49 PM	2.3	0.1	0.5	
12	8/10/2022 5:20:39 PM	2.2	0.0	-0.1	
13	8/11/2022 7:20:00 PM	1.9	-0.3	-2.3	
14	8/12/2022 12:59:54 PM	2.1	-0.1	-0.5	
15	8/13/2022 2:47:24 PM	2.2	0.0	0.0	
16	8/14/2022 1:23:11 PM	2.1	-0.1	-0.9	
17	8/15/2022 2:03:19 PM	2.3	0.1	0.9	

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Quality control

Test PROTEIN TOTAL-1   Units g/dL

Run rejection criterion 3SD

Control 1

First Name BIO CTRL 099   Lot 099

| | | Normal value | | Alarm | | Reject value |
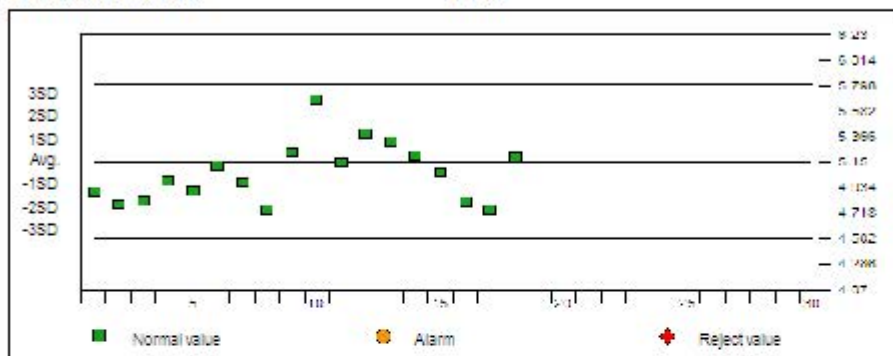
	Average	SD	CV	Minimum to reject	Maximum to reject
	5.15	0.22	4.21	4.50	5.80

Run	Date	Control 1	Abs. Err.	Rel. Err.	Alarm
1	7/29/2022 6:57:00 PM	4.90	-0.25	-1.15	
2	7/30/2022 6:19:08 PM	4.80	-0.35	-1.63	
3	7/31/2022 2:06:46 PM	4.82	-0.33	-1.50	
4	8/1/2022 4:10:38 PM	4.99	-0.16	-0.72	
5	8/2/2022 4:22:43 PM	4.91	-0.24	-1.11	
6	8/3/2022 4:41:00 PM	5.12	-0.03	-0.14	
7	8/4/2022 5:53:00 PM	4.98	-0.17	-0.78	
8	8/5/2022 6:54:00 PM	4.75	-0.40	-1.85	
9	8/6/2022 5:12:31 PM	5.23	0.08	0.38	
10	8/7/2022 3:45:06 PM	5.68	0.53	2.45	
11	8/8/2022 1:44:52 PM	5.15	0.00	0.02	
12	8/9/2022 1:47:02 PM	5.39	0.24	1.11	
13	8/10/2022 5:21:51 PM	5.33	0.18	0.82	
14	8/11/2022 7:22:00 PM	5.21	0.06	0.28	
15	8/12/2022 1:01:06 PM	5.07	-0.08	-0.37	
16	8/13/2022 2:48:37 PM	4.82	-0.33	-1.54	
17	8/14/2022 1:24:23 PM	4.75	-0.40	-1.86	
18	8/15/2022 2:04:31 PM	5.19	0.04	0.20	

Test ALBUMIN-1   Units g/dL
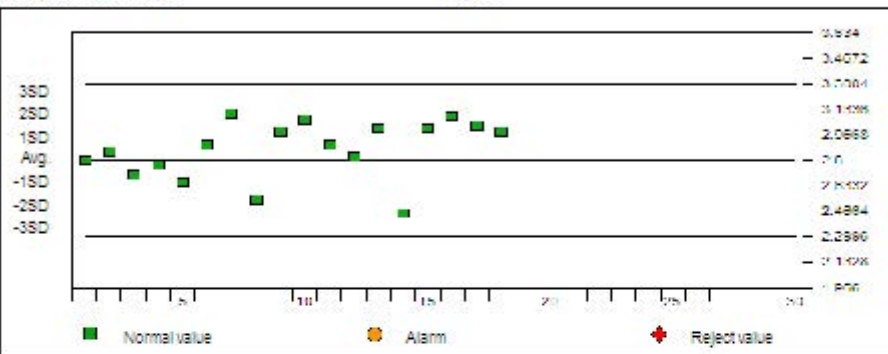
Run rejection criterion 3SD

Control 1

First Name BIO CTRL 099   Lot 099

	Average	SD	CV	Minimum to reject	Maximum to reject
	2.80	0.17	5.95	2.30	3.30

Run	Date	Control 1	Abs. Err.	Rel. Err.	Alarm
1	7/29/2022 6:57:00 PM	2.80	0.00	0.00	
2	7/30/2022 6:18:44 PM	2.86	0.06	0.36	
3	7/31/2022 2:06:22 PM	2.71	-0.09	-0.56	
4	8/1/2022 4:25:37 PM	2.77	-0.03	-0.17	
5	8/2/2022 4:22:19 PM	2.65	-0.15	-0.88	
6	8/3/2022 4:41:00 PM	2.90	0.10	0.60	
7	8/4/2022 5:53:00 PM	3.10	0.30	1.80	
8	8/5/2022 6:53:00 PM	2.54	-0.26	-1.56	
9	8/6/2022 5:12:07 PM	2.99	0.19	1.13	
10	8/7/2022 3:44:42 PM	3.07	0.27	1.60	
11	8/8/2022 1:44:28 PM	2.90	0.10	0.59	
12	8/9/2022 1:46:38 PM	2.82	0.02	0.11	
13	8/10/2022 5:21:27 PM	3.01	0.21	1.27	
14	8/11/2022 7:22:00 PM	2.45	-0.35	-2.10	
15	8/12/2022 1:00:42 PM	3.01	0.21	1.24	
16	8/13/2022 2:48:13 PM	3.09	0.29	1.73	
17	8/14/2022 1:23:59 PM	3.02	0.22	1.32	
18	8/15/2022 2:03:19 PM	2.99	0.19	1.14	

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Quality control

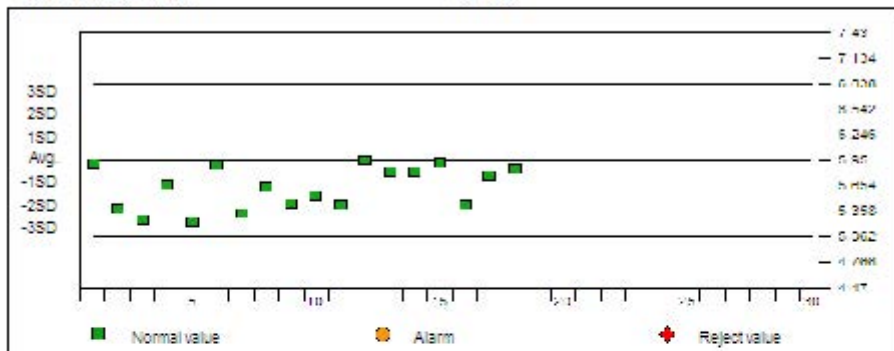Test URIC ACID-1   Units mg/dL

Run rejection criterion 3SD

Control 1

First Name BIO CTRL 099   Lot 099

	Average	SD	CV	Minimum to reject	Maximum to reject
	5.95	0.30	4.99	5.06	6.84

Run	Date	Control 1	Abs. Err.	Rel. Err.	Alarm
1	7/29/2022 6:58:00 PM	5.91	-0.04	-0.13	
2	7/30/2022 6:19:32 PM	5.38	-0.57	-1.91	
3	7/31/2022 2:07:10 PM	5.25	-0.70	-2.35	
4	8/1/2022 4:11:02 PM	5.67	-0.28	-0.94	
5	8/2/2022 4:23:07 PM	5.23	-0.72	-2.43	
6	8/3/2022 4:42:00 PM	5.90	-0.05	-0.17	
7	8/4/2022 5:53:00 PM	5.34	-0.61	-2.06	
8	8/5/2022 6:54:00 PM	5.64	-0.31	-1.04	
9	8/6/2022 5:12:55 PM	5.45	-0.50	-1.68	
10	8/7/2022 1:18:00 PM	5.54	-0.41	-1.38	
11	8/8/2022 6:00:00 PM	5.44	-0.51	-1.72	
12	8/9/2022 1:47:26 PM	5.95	0.00	-0.02	
13	8/10/2022 5:22:15 PM	5.82	-0.13	-0.44	
14	8/11/2022 7:22:00 PM	5.82	-0.13	-0.44	
15	8/12/2022 1:01:30 PM	5.92	-0.03	-0.09	
16	8/13/2022 2:49:01 PM	5.43	-0.52	-1.74	
17	8/14/2022 1:24:47 PM	5.78	-0.17	-0.59	
18	8/15/2022 2:04:55 PM	5.85	-0.10	-0.35	

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Test CHOLESTEROL-1

Units mg/dL

Run rejection criterion 3SD

Control 1

First Name BIO CTRL 099

Lot 099

| | Normal value | | Alarm | | Reject value |
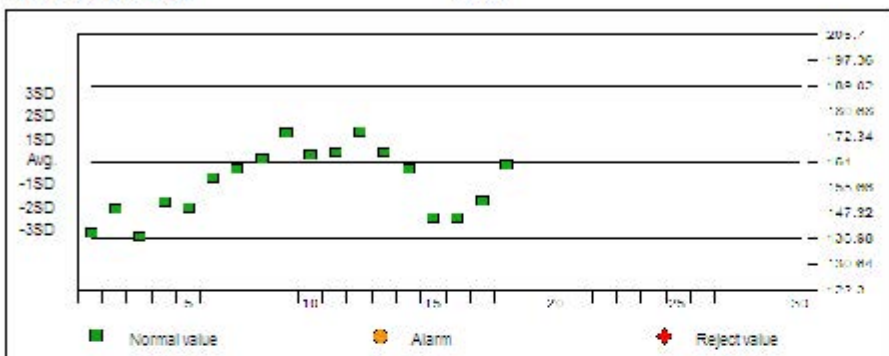
	Average	SD	CV	Minimum to reject	Maximum to reject
	164	8	5	139	189

Run	Date	Control 1	Abs. Err.	Rel. Err.	Alarm
1	7/29/2022 7:00:00 PM	141	-23	-3	
2	7/30/2022 6:18:20 PM	149	-15	-2	
3	7/31/2022 2:05:58 PM	140	-24	-3	
4	8/1/2022 4:09:49 PM	151	-13	-2	
5	8/2/2022 4:21:55 PM	149	-15	-2	
6	8/3/2022 4:40:00 PM	159	-5	-1	
7	8/4/2022 5:52:00 PM	162	-2	0	
8	8/5/2022 6:52:00 PM	165	1	0	
9	8/6/2022 5:11:42 PM	174	10	1	
10	8/7/2022 3:44:18 PM	167	3	0	
11	8/8/2022 1:44:04 PM	167	3	0	
12	8/9/2022 1:46:13 PM	174	10	1	
13	8/10/2022 5:21:03 PM	167	3	0	
14	8/11/2022 7:21:00 PM	162	-2	0	
15	8/12/2022 1:00:18 PM	146	-18	-2	
16	8/13/2022 2:47:48 PM	146	-18	-2	
17	8/14/2022 1:23:35 PM	151	-13	-2	
18	8/15/2022 2:03:43 PM	163	-1	0	

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Quality control

Test TRIGLYCERIDES-1   Units mg/dL

Run rejection criterion 3SD

Control 1

First Name BIO CTRL 099   Lot 099

| | Normal value | | Alarm | | Reject value |
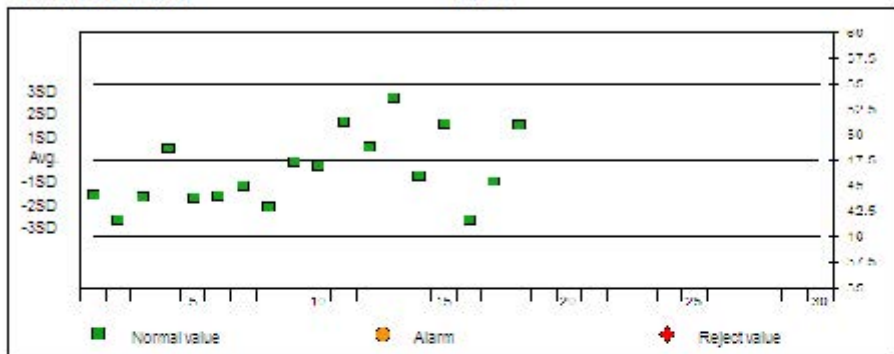
	Average	SD	CV	Minimum to reject	Maximum to reject
	48	3	5	40	55

Run	Date	Control 1	Abs. Err.	Rel. Err.	Alarm
1	7/30/2022 6:36:21 PM	44	-3	-1	
2	7/31/2022 2:06:22 PM	42	-6	-2	
3	7/31/2022 2:19:11 PM	44	-4	-1	
4	8/1/2022 4:10:14 PM	49	1	0	
5	8/2/2022 4:22:19 PM	44	-4	-1	
6	8/3/2022 4:40:00 PM	44	-4	-1	
7	8/4/2022 5:52:00 PM	45	-3	-1	
8	8/5/2022 6:52:00 PM	43	-5	-2	
9	8/6/2022 5:12:06 PM	47	0	0	
10	8/7/2022 1:17:00 PM	47	-1	0	
11	8/8/2022 1:44:28 PM	51	4	2	
12	8/9/2022 1:46:37 PM	49	1	1	
13	8/10/2022 5:21:27 PM	54	6	2	
14	8/11/2022 7:21:00 PM	46	-2	-1	
15	8/12/2022 1:00:42 PM	51	4	1	
16	8/13/2022 3:05:02 PM	42	-6	-2	
17	8/14/2022 1:23:59 PM	45	-2	-1	
18	8/15/2022 2:04:07 PM	51	3	1	