

Date: 04/02/2024

CURRENT CALIBRATION CERTIFICATE OF A15C

CUSTOMER NAME – ALVAS DIAGNOSTIC CENTER - MOODBIDRI

A15C Parameters Values

Serial Number = 83105C0578

Firmware = 6.19

Firmware integrity checksum value = 0xD13D

Firmware integrity checksum size = 442472

A15 Configuration checksum value = 0xEC31

A15 Configuration checksum size = 988

Rotor Temperature = 37.43

Prove Temperature = 38.9

Fridge Temperature = 0

System liquid scale sensivity = 148

Waste scale sensivity = 158

Metal filled Racks (grey color) = 1

Sensitivity: (Tube Rack) = 47

Sensitivity: (Pediatric Rack) = 82

Sensitivity: (Out fridge reagents) = 12

Sensitivity: (Fridge reagents) = 41

X - Origin = 54

Y - Origin = 251

Z - Origin = 430

X - Washing Station = 380

Y - Washing Station = 86

Z - Washing Station = 540

X - Reactions Rotor = 118

Y - Reactions Rotor = 1039

Z - Reactions Rotor = 600

XYZ Tray - Pediatric Rack

X1 (Rack3, 4) = 1633, 1081

X2 (Rack3, 4) = 1634, 1079

Y1 (Rack3, 4) = 92, 92

Y2 (Rack3, 4) = 1437, 1438

Z1 (Rack3, 4) = 733, 733

Z2 (Rack3, 4) = 696, 699

Z relationship Pediatric - Tube = 461

XYZ Tray - Reagent Rack

X1 (Rack3, 4) = 1387, 835

X2 (Rack3, 4) = 1394, 846

Y1 (Rack3, 4) = 110, 110

Y2 (Rack3, 4) = 1441, 1441

A blue ink signature is written over a circular stamp. The stamp contains the text "BIO SYSTEMS" and "MOODBIDRI" around the perimeter. The signature appears to be "Srinivas" or similar.

Z1 (Rack3, 4) = 1202, 1203

Z2 (Rack3, 4) = 1170, 1169

XYZ Tray - Fridge

X1 (Rack1, 2) = 2539, 2050

X2 (Rack1, 2) = 2550, 2061

Y1 (Rack1, 2) = 52, 52

Y2 (Rack1, 2) = 1398, 1398

Z1 (Rack1, 2) = 1227, 1227

Z2 (Rack1, 2) = 1227, 1227

Rotor Position correction regarding to the dispensation point = 100

Rotor Position correction regarding to the optical system = -3

Filters wheel correction = 4

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

Filter 1 = 340 (nm) IT = 500.2 (ms) Ref. IT = 500.2 (ms)

Filter 2 = 405 (nm) IT = 135.2 (ms) Ref. IT = 120.3 (ms)

Filter 3 = 505 (nm) IT = 138.8 (ms) Ref. IT = 130.6 (ms)

Filter 4 = 535 (nm) IT = 126.5 (ms) Ref. IT = 120.8 (ms)

Filter 5 = 560 (nm) IT = 129 (ms) Ref. IT = 124.4 (ms)

Filter 6 = 600 (nm) IT = 132.6 (ms) Ref. IT = 128.5 (ms)

Filter 7 = 635 (nm) IT = 131.1 (ms) Ref. IT = 128 (ms)

Filter 8 = 670 (nm) IT = 160.8 (ms) Ref. IT = 159.2 (ms)

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

X - axis = 636007 (x1000 steps)

Y - axis = 390226 (x1000 steps)

Z - axis = 844881 (x1000 steps)

Reaction Rotor = 45820 (x10000 steps)

Filter Wheel = 1709107 (x100 steps)

Dispensing Pump = 801835 (x10000 steps)

Membrane pumps = 159681 (Commutation)

3-way electrovalve = 643033 (Commutation)

Lamp = 2125 (Hours)

Biochemical preparation = 70803 (Cycles)

Turbidimetry preparation = 28 (Cycles)

Bi-reagent Biochemical preparation = 10499 (Cycles)

Bi-reagent Turbidimetry preparation = 0 (Cycles)

Next Calibration due on – 03/02/2025

For BIOSYSTEMS DIAGNOSTICS PVT. LTD.

S
SENTHIL

Digitally signed by S SENTHIL
DN: cn=S SENTHIL, c=IN,
o=PERSONAL,
email=SENTHIL@BIOSYSTEMS.IN
Date: 2024.02.21 13:41:11 +0530'

AUTHORISED SIGNATORY

Verified
Senthil

Current Results Report by Test

23/02/2024 14:22:21

ALBUMIN					Units	g/dL		
Class	Code	Type	Replicate	Abs	Conc.	Factor	Date	
Calibrator 1		SER	Mean	0.2257	3.50	24.7435	23/02/2024 14:34:08	
			1	0.2257			23/02/2024 14:34:08	

ALP-AMP					Units	U/L		
Class	Code	Type	Replicate	Abs	Conc.	Factor	Date	
Calibrator 1		SER	Mean	0.0574	202.00	3583.3771	23/02/2024 14:35:20	
			1	0.0574			23/02/2024 14:35:20	

ALT					Units	U/L		
Class	Code	Type	Replicate	Abs	Conc.	Factor	Date	
Calibrator 1		SER	Mean	0.0285	84.30	2990.1792	23/02/2024 14:35:44	
			1	0.0285			23/02/2024 14:35:44	

SGOT					Units	U/L		
Class	Code	Type	Replicate	Abs	Conc.	Factor	Date	
Calibrator 1		SER	Mean	0.0481	107.00	2234.7277	23/02/2024 14:35:20	
			1	0.0481			23/02/2024 14:35:20	

BILIRUBIN TOTAL					Units	mg/dL		
Class	Code	Type	Replicate	Abs	Conc.	Factor	Date	
Calibrator 1		SER	Mean	0.1451	3.47	24.4959	23/02/2024 14:38:08	
			1	0.1451			23/02/2024 14:38:08	

CHOLESTEROL					Units	mg/dL		
Class	Code	Type	Replicate	Abs	Conc.	Factor	Date	
Calibrator 1		SER	Mean	0.3817	208.00	722.8841	23/02/2024 14:34:56	
			1	0.3817			23/02/2024 14:34:56	

CREATININE					Units	mg/dL		
Class	Code	Type	Replicate	Abs	Conc.	Factor	Date	

Calibrator 1	SER	Mean	0.0189	3.69	240.0731	23/02/2024 14:34:08
		1	0.0189			23/02/2024 14:34:08

1/2

Current Results Report by Test

23/02/2024 14:22:21

GLUCOSE

Units mg/dL

Class	Code	Type	Replicate	Abs	Conc.	Factor	Date
Calibrator 1		SER	Mean	0.5461	174.00	386.7988	23/02/2024 14:37:44
			1	0.5461			23/02/2024 14:37:44

PROTEIN TOTAL

Units g/dL

Class	Code	Type	Replicate	Abs	Conc.	Factor	Date
Calibrator 1		SER	Mean	0.1018	6.15	35.5570	23/02/2024 14:35:44
			1	0.1018			23/02/2024 14:35:44

TRIGLYCERIDES

Units mg/dL

Class	Code	Type	Replicate	Abs	Conc.	Factor	Date
Calibrator 1		SER	Mean	0.2647	128.00	619.2246	23/02/2024 14:35:20
			1	0.2647			23/02/2024 14:35:20

UREA UV

Units mg/dL

Class	Code	Type	Replicate	Abs	Conc.	Factor	Date
Calibrator 1		SER	Mean	0.1371	80.80	644.3132	23/02/2024 14:34:08
			1	0.1371			23/02/2024 14:34:08

URIC ACID

Units mg/dL

Class	Code	Type	Replicate	Abs	Conc.	Factor	Date
Calibrator 1		SER	Mean	0.2604	7.61	40.2321	23/02/2024 14:52:08
			1	0.2604			23/02/2024 14:52:08

A handwritten signature in blue ink is written over a circular stamp. The signature appears to be 'Vanpriet' followed by 'Shultz'. The stamp is partially obscured by the signature.

BIOCHEMISTRY CALIBRATOR

LOT: 077

ENGLISH

COMPONENT	METHOD	VALUE	E.U.	RANGE	TRACEABILITY
ACE	FAPGG	.	.	U/L	BMC
		.	.	µkat/L	
ACID PHOSPHATASE	Naphthyl phosphate/pentanediol	15,6	0,6	U/L	BMC
		0,259	0,009	µkat/L	
		35,0	1,3	g/L	
ALBUMIN	Bromocresol green	202	5	U/L	C-RSE/IFCC
ALKALINE PHOSPHATASE	2-Amino-2-methyl-1-propanol buffer	3,35	0,08	µkat/L	BMC
		263	5	U/L	
		4,37	0,08	µkat/L	
ALT/GPT	IFCC without pyridoxal phosphate	84,3	1,4	U/L	BMC
		1,40	0,02	µkat/L	
		86,7	2,1	U/L	
α-AMYLASE	IFCC	1,44	0,03	µkat/L	C-RSE/IFCC ERM-AD454/IFCC (IRMM)
		164	4	U/L	
		2,73	0,06	µkat/L	
α-AMYLASE PANCREATIC	Direct substrate	219	5	U/L	BMC
		3,64	0,08	µkat/L	
		.	.	U/L	
AST/GOT	IFCC without pyridoxal phosphate	.	.	µkat/L	C-RSE/IFCC ERM-AD457/IFCC (IRMM)
		107	2	U/L	
		1,78	0,03	µkat/L	
BILIRUBIN (DIRECT)	IFCC with pyridoxal phosphate	118	4	U/L	BMC
		1,96	0,06	µkat/L	
		0,963	0,050	mg/dL	
BILIRUBIN (TOTAL)	Diazotized sulfanilic / Dichlorophenyl diazonium	16,5	0,8	µmol/L	BMC
		1,30	0,07	mg/dL	
		22,2	1,1	µmol/L	
		0,770	0,040	mg/dL	
		13,2	0,7	µmol/L	
CALCIUM	Diazotized sulfanilic / Dichlorophenyl diazonium	3,47	0,07	mg/dL	SRM 916 (NIST)
		59,3	1,2	µmol/L	
		10,4	0,2	mg/dL	
		2,61	0,04	mmol/L	
CHLORIDE	Arsenazo III	10,6	0,2	mg/dL	SRM 956 (NIST)
		2,65	0,05	mmol/L	
		11,1	0,2	mg/dL	
		2,77	0,04	mmol/L	
CHOLESTEROL	Selective electrode	110	1	mmol/L	SRM 956 (NIST)
		208	5	mg/dL	
CHOLESTEROL HDL	Cholesterol oxidase/peroxidase	5,38	0,14	mmol/L	SRM 909 (NIST)
		.	.	mg/dL	
		.	.	mmol/L	
		.	.	mg/dL	
		.	.	mmol/L	
CHOLESTEROL LDL	Direct detergent	.	.	mg/dL	CDC Reference Method BMC
		.	.	mmol/L	
		.	.	mg/dL	
		.	.	mmol/L	
CHOLINESTERASE	Direct TOOS	.	.	mg/dL	CDC Reference Method BMC
		.	.	mmol/L	
		.	.	mmol/L	
CK	Phosphotungstate/Mg - Cholesterol oxidase/peroxidase	.	.	mg/dL	SRM 909 (NIST)
		.	.	mmol/L	
		.	.	mmol/L	
CHOLESTEROL HDL	Direct detergent	.	.	mg/dL	CDC Reference Method BMC
		.	.	mmol/L	
CHOLESTEROL LDL	Direct TOOS	.	.	mg/dL	CDC Reference Method BMC
		.	.	mmol/L	
CHOLINESTERASE	Butyrylthiocholine	.	.	U/L	BMC
		.	.	µkat/L	
CK	IFCC	307	8	U/L	C-RSE/IFCC ERM-AD455/IFCC (IRMM)
		5,09	0,13	µkat/L	



BIOCHEMISTRY CALIBRATOR

LOT: 077

ENGLISH

COMPONENT	METHOD	VALUE	E.U.	RANGE	TRACEABILITY
COPPER-PAESA	3.5-DIBr-PAESA	61.7	2.3	µg/dL	BMC
		9.71	0.36	µmol/L	
CREATININE	Enzymatic	3.36	0.10	mg/dL	SRM 967 (NIST)
		297	9	µmol/L	
	Jaffé compensated	3.69	0.17	mg/dL	SRM 967 (NIST)
		327	15	µmol/L	
	Jaffé non compensated	3.10	0.14	mg/dL	SRM 909 (NIST)
275	12	µmol/L			
GLUCOSE	Glucose oxidase/peroxidase Hexokinase	174	3	mg/dL	SRM 965 (NIST)
		9.65	0.16	mmol/L	
γ-GT	IFCC	93.2	2.1	U/L	C-RSE/IFCC ERM-AD452/IFCC (IRMM)
		1.55	0.04	µkat/L	
β-HYDROXYBUTYRATE	Hydroxybutyrate dehydrogenase/diaphorase	11.5	0.1	mg/dL	BMC
		1.12	0.01	mmol/L	
IRON	Ferrozine	163	2	µg/dL	BMC
		29.2	0.4	µmol/L	
	Chromazurol B	67.4	2.6	µg/dL	BMC
		12.1	0.5	µmol/L	
LACTATE	LOD/POD	74.2	0.6	mg/dL	BMC
		8.25	0.07	mmol/L	
LIPASE	Color	122	3	U/L	BMC
		2.02	0.05	µkat/L	
	DGGR	139	4	U/L	BMC
		2.30	0.07	µkat/L	
LDH	Pyruvate	552	9	U/L	BMC
		9.17	0.15	µkat/L	
	IFCC	260	6	U/L	C-RSE/IFCC ERM-AD453/IFCC (IRMM)
		4.31	0.11	µkat/L	
		2.18	0.05	mg/dL	
MAGNESIUM	Xylydyl Blue	0.893	0.020	mmol/L	SRM 956 (NIST)
		8.20	0.31	mg/dL	
NEFA	Acyl-CoA Oxidase/Peroxidase	0.291	0.011	mmol/L	BMC
		6.79	0.06	mg/dL	
PHOSPHORUS	Phosphomolybdate/UV	2.19	0.02	mmol/L	BMC
		5.02	0.01	mmol/L	
POTASSIUM	Selective electrode	5.02	0.01	mmol/L	SRM 956 (NIST)
PROTEIN (TOTAL)	Biuret	61.5	1.2	g/L	SRM 927 (NIST)
SODIUM	Selective electrode	145	1	mmol/L	SRM 956 (NIST)
TOTAL BILE ACIDS	Cyclic enzymatic	48.2	1.7	µmol/L	BMC
TRIGLYCERIDES	Glycerol phosphate oxydase/peroxydase	128	3	mg/dL	SRM 909 (NIST)
		1.45	0.03	mmol/L	
UIBC	Ferrozine	181	7	µg/dL	BMC
		32.4	1.2	µmol/L	
UREA	Urease (Color / UV)	80.8	2.0	mg/dL	SRM 909 (NIST)
		13.4	0.3	mmol/L	
		7.61	0.21	mg/dL	
URIC ACID	Uricase/peroxidase	453	12	µmol/L	SRM 909 (NIST)
		492	33	µg/dL	
ZINC	Br-PAPS	75.3	5.1	µmol/L	ERM DA-120 (LGC8211)
		75.3	5.1	µmol/L	

NOTES:

The enzymes values (U/L and µkat/L) are for a incubation temperature of 37 °C

BMC BioSystems master calibrator

C-RSE/IFCC: Traceable to the reference system as described by the IFCC Committee on Reference Systems for Enzymes

E.U.: Expanded uncertainty of the assigned value (95% confidence interval)

(*) Use the BIOCHEMISTRY CALIBRATOR (Human) and BIOCHEMISTRY CONTROL SERUM (Human) I, II

(**) Use the BIOCHEMISTRY CONTROL SERUM I