



# CHRISTIAN MEDICAL COLLEGE

DEPARTMENT OF CLINICAL BIOCHEMISTRY

CMC EXTERNAL QUALITY ASSURANCE SCHEME

MONTHLY SUMMARY REPORT - JULY 2022



PC-1024

Lab Name **SDC DIAGNOSTIC CENTRE LLP** Lab No **4113**  
 Constituent Group **Chemistry I** Date of Result Entered : **12/07/2022**  
 PT item **Lyophilized Serum** Date of Report Published : **05/08/2022**

Sl.No	Analyte	Method / Principle Name	Analyzer Name	No of Participants	DV	Participants		Your Value	SDI	U
						CV	SD			
1	GLUCOSE	GOD-POD	CPC ( Turbochem 100 / 240 Prime )	80	307.83	8.08	24.87	321.14 mg/dL	0.54	5.56
2	UREA	Urease UV / GLDH	CPC ( Turbochem 100 / 240 Prime )	69	123.29	11.83	14.58	121.4 mg/dL	-0.13	3.51
3	CREATININE	Jaffes Kinetic - Alkaline picrate	CPC ( Turbochem 100 / 240 Prime )	59	4.34	11.39	0.49	4.03 mg/dL	-0.63	0.13
4	T.BILIRUBIN	Diazonium salt ( Colorimetric ) / Jendrassik	CPC ( Turbochem 100 / 240 Prime )	73	0.92	17.43	0.16	0.91 mg/dL	-0.06	0.04
5	T-PROTEIN	Biuret - Colorimetric	CPC ( Turbochem 100 / 240 Prime )	75	5.47	9.72	0.53	5.41 g/dL	-0.11	0.12
6	ALBUMIN	BCG - colorimetric	CPC ( Turbochem 100 / 240 Prime )	73	3.39	5.28	0.18	3.14 g/dL	-1.40	0.04
7	CALCIUM	Arsenazo III	CPC ( Turbochem 100 / 240 Prime )	57	10.13	7.86	0.80	10.3 mg/dL	0.21	0.21
8	PHOSPHORUS	Molybdate UV / Phosphomolybdate complex	CPC ( Turbochem 100 / 240 Prime )	29	6.78	10.94	0.74	7.2 mg/dL	0.57	0.28
9	URIC ACID	Enzymatic / Uricase Colorimetric	CPC ( Turbochem 100 / 240 Prime )	71	3.63	13.83	0.50	5.2 mg/dL	3.14	0.12
10	CHOLESTEROL	CHOD-PAP	CPC ( Turbochem 100 / 240 Prime )	73	113.97	9.84	11.21	101.23 mg/dL	-1.14	2.62
11	TRIGLYCERIDE	GPO-PAP / Enzymatic Colorimetric / End Point	CPC ( Turbochem 100 / 240 Prime )	68	268.14	8.93	23.94	252.3 mg/dL	-0.66	5.81
12	HDL	Direct method / Enzymatic colorimetric	CPC ( Turbochem 100 / 240 Prime )	51	26.37	16.88	4.45	21.46 mg/dL	-1.10	1.25
13	SODIUM	ISE - Direct	Any Analyser (Automation / Semi Automation )	1047	139.31	3.44	4.80	138.21 mmol/L	-0.23	0.30
14	POTASSIUM	ISE - Direct	Any Analyser (Automation / Semi Automation )	1099	5.06	6.41	0.32	4.62 mmol/L	-1.36	0.02
15	CHLORIDE	ISE - Direct	Any Analyser (Automation / Semi Automation )	878	100.12	4.63	4.64	98.04 mmol/L	-0.45	0.31
16	AST	UV kinetic(with & without PLP (P-5-P))	CPC ( Turbochem 100 / 240 Prime )	50	124.38	11.63	14.46	145.7 U/L	1.47	4.09
17	ALT	UV kinetic(with & without PLP (P-5-P))	CPC ( Turbochem 100 / 240 Prime )	54	55.19	12.93	7.14	53.7 U/L	-0.21	1.94
18	ALP	PNP AMP kinetic	CPC ( Turbochem 100 / 240 Prime )	60	221.80	11.91	26.41	231.6 U/L	0.37	6.82
19	AMYLASE	CNPG3	CPC ( Turbochem 100 / 240 Prime )	24	287.55	10.89	31.30	286.3 U/L	-0.04	12.78
20	IRON	Ferro Zine ( No Protein Removal )	Any Analyser (Automation / Semi Automation )	96	122.29	14.04	17.16	50 ug/dL	-4.21	3.50
21	MAGNESIUM	Others ( Any other )	Any Analyser	116	1.64	20.49	0.34	1 mg/dL	-1.88	0.06



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DEPARTMENT OF CLINICAL BIOCHEMISTRY

CMC EXTERNAL QUALITY ASSURANCE SCHEME

MONTHLY SUMMARY REPORT - JUNE 2022



PG-1024

Lab Name SDC DIAGNOSTIC CENTRE LLP Lab No 4113  
 Constituent Group Chemistry I Date of Result Entered : 11/06/2022  
 PT item Lyophilized Serum Date of Report Published : 07/07/2022

Sl.No	Analyte	Method / Principle Name	Analyzer Name	No of Participants	DV	Participants		Your Value	SDI	U
						CV	SD			
1	GLUCOSE	GOD-POD	CPC ( Turbochem 100 / 240 Prime )	79	139.93	6.52	9.12	137.11 mg/dL	-0.31	2.05
2	UREA	Urease UV / GLDH	CPC ( Turbochem 100 / 240 Prime )	63	87.14	8.15	7.10	82.59 mg/dL	-0.64	1.79
3	CREATININE	Jaffes Kinetic - Alkaline picrate	CPC ( Turbochem 100 / 240 Prime )	57	7.97	10.17	0.81	7.56 mg/dL	-0.51	0.21
4	T.BILIRUBIN	Diazonium salt ( Colorimetric ) / Jendrassik	CPC ( Turbochem 100 / 240 Prime )	71	5.75	10.75	0.62	5.54 mg/dL	-0.34	0.15
5	T-PROTEIN	Biuret - Colorimetric	CPC ( Turbochem 100 / 240 Prime )	75	4.48	11.80	0.53	4.72 g/dL	0.45	0.12
6	ALBUMIN	BCG - colorimetric	CPC ( Turbochem 100 / 240 Prime )	76	2.77	9.43	0.26	2.91 g/dL	0.54	0.06
7	CALCIUM	Arsenazo III	CPC ( Turbochem 100 / 240 Prime )	49	8.61	11.51	0.99	8.3 mg/dL	-0.31	0.28
8	PHOSPHORUS	Molybdate UV / Phosphomolybdate complex	CPC ( Turbochem 100 / 240 Prime )	34	3.20	14.82	0.47	4 mg/dL	1.69	0.16
9	URIC ACID	Enzymatic / Uricase Colorimetric	CPC ( Turbochem 100 / 240 Prime )	71	9.56	7.93	0.76	11.5 mg/dL	2.56	0.18
10	CHOLESTEROL	CHOD-PAP	CPC ( Turbochem 100 / 240 Prime )	72	90.78	9.51	8.63	89.24 mg/dL	-0.18	2.03
11	TRIGLYCERIDE	GPO-PAP / Enzymatic Colorimetric / End Point	CPC ( Turbochem 100 / 240 Prime )	67	132.68	8.34	11.06	135.37 mg/dL	0.24	2.70
12	HDL	Direct method / Enzymatic colorimetric	CPC ( Turbochem 100 / 240 Prime )	42	22.08	16.93	3.74	14.12 mg/dL	-2.13	1.15
13	AST	UV kinetic(with & without PLP (P-5-P))	CPC ( Turbochem 100 / 240 Prime )	55	49.68	14.78	7.34	42.1 U/L	-1.03	1.98
14	ALT	UV kinetic(with & without PLP (P-5-P))	CPC ( Turbochem 100 / 240 Prime )	49	89.51	15.07	13.49	83.6 U/L	-0.44	3.85
15	ALP	PNP AMP kinetic	CPC ( Turbochem 100 / 240 Prime )	49	376.16	9.22	34.70	274.3 U/L	-2.94	9.91
16	AMYLASE	CNPG3	CPC ( Turbochem 100 / 240 Prime )	32	34.36	12.89	4.43	38 U/L	0.82	1.57
17	IRON	Ferro Zine ( No Protein Removal )	Any Analyser (Automation / Semi Automation )	87	175.85	13.81	24.28	71 ug/dL	-4.32	5.21
18	MAGNESIUM	Others ( Any other principles / Methods )	Any Analyser (Automation / Semi Automation )	120	2.98	17.65	0.53	2 mg/dL	-1.85	0.10

SDI Range	Interpretation
Within -1.00 to +1.00	Excellent.
Within $\pm 1.01$ to $\pm 2.00$	Good.
Within $\pm 2.01$ to $\pm 2.99$	Accept with caution. Warning Signal.
Beyond $\pm 3.0$	Unacceptable performance. Action Signal.

**Test Information**

Request: 7/9/2022 11:08:12 AM

Date: 7/9/2022 - 7/9/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Position
R-EQAS	Glucose ichem 100	0.776 Abs				
R-EQAS	AST (SGOT) i-chem	-0.0233 dAbs/min	321.14 mg/dL	HIGH	75.00 - 115.00	RK1:01->A0
R-EQAS	ALT (SGPT) i-chem	-0.0195 dAbs/min	145.7 IU/L	HIGH	0.0 - 37.0	RK1:01->B0
R-EQAS	Alk Phos i-chem	0.0453 dAbs/min	53.7 IU/L	HIGH	0.0 - 40.0	RK1:01->B0
R-EQAS	Albumin ichem100	0.387 Abs	231.6 IU/L	HIGH	42.0 - 141.0	RK1:01->B0
R-EQAS	Ichem100 Total Protein V2	0.027 Abs	3.14 g/dL	LOW	3.50 - 5.00	RK1:01->B0
R-EQAS	Calcium V2 i-chem	0.513 Abs	5.41 g/dL	LOW	6.60 - 8.70	RK1:01->CC
R-EQAS	Cholesterol ichem100	0.142 Abs	10.3 mg/dL		8.5 - 10.5	RK1:01->CC
R-EQAS	TGL ichem 100	0.252 Abs	101.23 mg/dL		0.00 - 200.00	RK1:01->A0
R-EQAS	Direct HDL NF	0.056 Abs	252.30 mg/dL	HIGH	0.00 - 150.00	RK1:01->A0
R-EQAS	Uric Acid i-chem	0.096 Abs	21.4614 mg/dL	LOW	30.0000 - 85.00	RK1:01->A0
R-EQAS	Urea_ V2 Aug18	-0.1758 dAbs/70sec	5.2 mg/dL		2.5 - 7.0	RK1:01->A0
R-EQAS	Creatinine SR	0.0541 dAbs/60sec	121.4690 mg/dL	HIGH	10.0000 - 50.00	RK1:01->B0
R-EQAS	Total blank ichem 100	0.043 Abs	4.03 mg/dL	HIGH	0.50 - 1.20	RK1:01->CC
R-EQAS	Total test ichem 100	0.091 Abs	0.0430 Abs			RK1:01->CC
R-EQAS	Total Bilirubin ichem 100		0.0910 Abs			RK1:01->CC
			0.91		0.00 - 1.10	RK0:0

**Test Information**

Request: 7/9/2022 11:59:49 AM

Date: 7/9/2022 - 7/9/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Position
R-EQAS	Amylase (CNPG3)	0.0705 dAbs/min	286.3 IU/L	HIGH	23.0 - 88.0	RK1:01->E0

**Test Information**

Request: 7/9/2022 9:51:25 AM  
Date: 7/9/2022 - 7/9/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Position
Normal Control	Glucose ichem 100	0.248 Abs	102.63 mg/dL		111, 94.4 - 128	RK1:01->A0
Normal Control	AST (SGOT) i-chem	-0.0058 dAbs/min	36.3 IU/L		36, 29 - 43	RK1:01->B0
Normal Control	ALT (SGPT) i-chem	-0.0142 dAbs/min	39.1 IU/L		45, 36 - 54	RK1:01->B0
Normal Control	Alk Phos i-chem	0.0366 dAbs/min	161.8 IU/L	FAILED LOW	203, 173 - 233	RK1:01->B0
Normal Control	Albumin ichem100	0.506 Abs	4.11 g/dL		4.06, 3.45 - 4.6	RK1:01->C0
Normal Control	Ichem100 Total Protein V2	0.022 Abs	4.06 g/dL	FAILED LOW	5.74, 4.59 - 6.8	RK1:01->C0
Normal Control	Calcium V2 i-chem	0.419 Abs	8.4 mg/dL		8.74, 7.90 - 9.5	RK1:01->D0
Normal Control	Cholesterol ichem100	0.199 Abs	141.86 mg/dL		157, 137 - 177	RK1:01->A0
Normal Control	TGL ichem 100	0.088 Abs	88.11 mg/dL		96.5, 81.3 - 112	RK1:01->A0
Normal Control	Direct HDL NF	0.120 Abs	44.7756 mg/dL	FAILED LOW	54.4, 46.3 - 62.5	RK1:01->A0
Normal Control	Uric Acid i-chem	0.113 Abs	6.1 mg/dL		5.83, 5.07 - 6.5	RK1:01->A0
Normal Control	Urea_ V2 Aug18	-0.0612 dAbs/70sec	42.2861 mg/dL		43.9, 37.3 - 50.4	RK1:01->B0
Normal Control	Urea_ V2 Aug18	-0.0612 dAbs/70sec	42.2861 mg/dL		4.02	RK1:02->C0
Chemistry Calibrator	Creatinine SR	0.0490 dAbs/60sec	4.02 mg/dL		1.47, 1.18 - 1.7	RK1:01->D0
Normal Control	Creatinine SR	0.0206 dAbs/60sec	1.69 mg/dL			RK1:01->D0
Normal Control	Total blank ichem 100	0.011 Abs	0.0110 Abs			RK1:01->D0
Normal Control	Total test ichem 100	0.108 Abs	0.1080 Abs		1.89, 1.49 - 2.2	RK0:0
Normal Control	Total Bilirubin ichem 100		1.83			RK1:01->C0
Normal Control	Direct test ichem 100	0.072 Abs	0.0720 Abs			RK1:01->C0
Normal Control	Direct blank ichem 100	0.013 Abs	0.0130 Abs			RK1:01->C0
Normal Control	Direct Bilirubin ichem 100		1.20	FAILED HIGH	0.85, 0.67 - 1.0	RK0:0

**Test Information**

Request: 7/9/2022 10:11:25 AM  
Date: 7/9/2022 - 7/9/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Position
Normal Control	Direct test ichem 100	0.067 Abs	0.0670 Abs			RK1:01->E0
Normal Control	Direct blank ichem 100	0.016 Abs	0.0160 Abs			RK1:01->F0
Normal Control	Direct Bilirubin ichem 100		1.04		0.85, 0.67 - 1.0	RK0:0
Normal Control	Direct Bilirubin ichem 100		1.04		362	RK1:02->E0
Chemistry Calibrator	Alk Phos i-chem	0.0708 dAbs/min	362.0 IU/L		203, 173 - 233	RK1:01->E0
Normal Control	Alk Phos i-chem	0.0360 dAbs/min	184.1 IU/L		4.61	RK1:02->F0
Chemistry Calibrator	Ichem100 Total Protein V2	0.023 Abs	4.61 g/dL		5.74, 4.59 - 6.8	RK1:01->F0
Normal Control	Ichem100 Total Protein V2	0.023 Abs	4.61 g/dL			RK0:0->D05
Blank	Direct HDL NF	0.005 Abs			75	RK1:02->E0
Chemistry Calibrator	Direct HDL NF	0.206 Abs	75.0005 mg/dL		54.4, 46.3 - 62.5	RK1:01->E0
Normal Control	Direct HDL NF	0.132 Abs	48.0586 mg/dL			

**Test Information**

Request: 7/9/2022 11:40:17 AM  
Date: 7/9/2022 - 7/9/2022

Name/ID	Assay	Absorbance	Concentration	Interpretation	Reference	Position
Normal Control	Amylase (CNP3)	0.0207 dAbs/min	84.1 IU/L		84, 71 - 97	RK1:06->D0

SDC Diagnostic Centre LLP Shirwal	<b>CORRECTIVE ACTION FORM</b>	Format No: SDC/23/21-22	
		Date: August 2022	Page: 1 of 1
		Date:	08/08/2022

**Process: EQAS report of CMC Vellore July 2022 . Result received on 05.08.22**

**Date of Meeting: 08/08/2022**

**Participants: Dr. Aditi Shukla  
Mrs Savita Suryawanshi  
Mrs. Varsharani Raut**

**Problem Statement: Control values for Uric acid found out of range.**

**Correction: Done at Biochemistry section- SDC Diagnostic Centre LLP Shirwal**

**Root Cause Analysis:**

- i) Internal run on day of running EQAS sample 09.07.22 was satisfactory for Uric acid.
- ii) Instrument engineer of CPC Diagnostics has been called for visit to check instrument and he will visit within next 3-4 days.

**Corrective Action Planned:**

- i) Internal control and external control stored as per manufacturer's stability and storage instructions.
- ii) EQAS sample to be run after proper reconstitution as per manufacturers instructions.
- iii) EQAs sample to be run on the same day of reconstitution.
- iv) Uric acid different manufacturer reagent has been ordered and it will be validated for use after satisfactory internal control results
- v) EQAs will be run on this new reagent if internal control is satisfactory.

**Planning approved by: Technical manager (awareness created amongst technicians)**

**Test Conducted: Internal Quality Control on 6.8.22 for uric acid was found satisfactory.**

**Responsibility: Mrs. Savita Suryawanshi and hematology technicians.**

**Document Changes: Nil**

**Revision: Nil**

**Date: -**

**For Effectiveness of Corrective Action:**

	H-11151	iChem100 Total Protein Y2 0.030 Abs	5.32 g/dL	LOW	8.60-8.70	AK1.02->E1
[-	8/6/2022 3:54:43 PM					
[-	Normal Control	Uric Acid i-chem	0.121 Abs	6.1 mg/dL	5.83, 5.07-6.59	AK1.01->BCE
[-	8/6/2022 3:56:10 PM					