



# CHRISTIAN MEDICAL COLLEGE

DEPARTMENT OF CLINICAL BIOCHEMISTRY  
CMC EXTERNAL QUALITY ASSURANCE SCHEME  
MONTHLY SUMMARY REPORT - AUGUST 2023



PC-1024

Lab Name **MEDITRUST DIAGNOSTIC CENTRE** Lab No **18608**  
Constituent Group **Chemistry II** Date of Result Entered : **20/08/2023**  
PT item **Lyophilized human serum based** Date of Report Published : **01/09/2023**

| Sl.No | Analyte         | Method / Principle Name                         | Analyzer Name                               | No of Participants | DV     | Participants |       | Your Value   | SDI   | U    |
|-------|-----------------|---|---|--------------------|--------|--------------|-------|--------------|-------|------|
|       |                 |   |   |                    |        | CV           | SD    |              |       |      |
| 1     | GLUCOSE II      | GOD-POD II                                      | Any Analyser (Automation / Semi Automation) | 1614               | 179.75 | 10.04        | 18.05 | 132.9 mg/dL  | -2.60 | 0.90 |
| 2     | UREA II         | Urease UV / GLDH II                             | Any Analyser (Automation / Semi Automation) | 986                | 22.83  | 14.72        | 3.36  | 60.94 mg/dL  | 11.34 | 0.21 |
| 3     | CREATININE II   | Jaffes Kinetic-Alkaline Picrate II              | Any Analyser (Automation / Semi Automation) | 1202               | 6.39   | 12.07        | 0.77  | 5.74 mg/dL   | -0.84 | 0.04 |
| 4     | T.BILIRUBIN II  | Diazonium Salt (Colorimetric) / Jendrassik II   | Any Analyser (Automation / Semi Automation) | 1330               | 2.21   | 19.85        | 0.44  | 1.83 mg/dL   | -0.87 | 0.02 |
| 5     | T-PROTEIN II    | Biuret - Colorimetric II                        | Any Analyser (Automation / Semi Automation) | 1298               | 5.71   | 10.24        | 0.58  | 5.67 g/dL    | -0.07 | 0.03 |
| 6     | ALBUMIN II      | BCG - Colorimetric II                           | Any Analyser (Automation / Semi Automation) | 1236               | 3.41   | 9.09         | 0.31  | 3.71 g/dL    | 0.97  | 0.02 |
| 7     | URIC ACID II    | Enzymatic / Uricase Colorimetric II             | Any Analyser (Automation / Semi Automation) | 1383               | 6.64   | 13.75        | 0.91  | 6.55 mg/dL   | -0.10 | 0.05 |
| 8     | CHOLESTROL II   | CHOD-PAP II                                     | Any Analyser (Automation / Semi Automation) | 1501               | 121.44 | 9.98         | 12.12 | 96.22 mg/dL  | -2.08 | 0.63 |
| 9     | TRIGLYCERIDE II | GPO-PAP / Enzymatic Colorimetric / End Point II | Any Analyser (Automation / Semi Automation) | 1321               | 134.70 | 12.22        | 16.46 | 120.51 mg/dL | -0.86 | 0.91 |

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

## LAB ADDRESS :

**MEDITRUST DIAGNOSTIC CENTRE**  
**439, ANUKUL CHANDRA ROAD**  
**GARIA**  
**WEST BENGAL 700084**

Coordinator Contact Details:  
Email: [clinqc@cmcvellore.ac.in](mailto:clinqc@cmcvellore.ac.in)  
Contact Number: 0416-2283102

*Pamela Christudoss*

Dr. Pamela Christudoss  
CMC EQAS Coordinator  
Christian Medical College, Vellore

Homogeneity and Stability of the sample is passed.

Data in CMC EQAS reports is confidential

CMC EQAS does not sub contract any components

\*\*\*\*\* End of Report \*\*\*\*\*

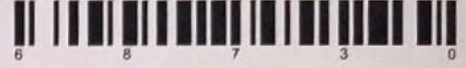


# Meditrust Diagnostic Centre

Health is the first step to prosperity.

INV. No. MTR-INV-L-536/2023(22663)  
Patient Name **Mr. RAHUL DEB**  
Age/Gen 40 Years | Male  
Referred By **Dr. RAHUL SARKAR**  
Source HOIP

Barcode No 68730  
Invoice Generated 18/09/2023 01:02 PM  
Sample Received 18/09/2023 01:02 PM  
Report Generated 18/09/2023 02:43 PM




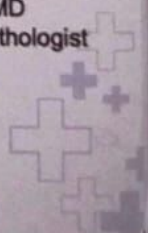
## Report Of Biochemistry Examination

| Investigation                                     | Result | Unit(s) | Reference Range |
|---|--------|---------|-----------------|
| <b>UREA</b><br>Serum Urea<br>Method (Urease-GLDH) | 22     | mg/dL   | 15 - 40         |

~~~~~ End of report ~~~~~



  
Dr. Aniruddha Saha  
MBBS, MD  
Consultant Pathologist



|               |                  |                     |                       |
|---------------|------------------|---------------------|-----------------------|
| NAME:         | Mr. RAHUL DEB    | UHID No.:           | 436418                |
| Patient ID:   | 012309180551     | Collection DATE:    | 18/Sep/2023 07:58 PM  |
| Referred BY:  | Dr. RAHUL SARKAR | Received DATE/TIME: | 18/Sep/2023 07:58 PM  |
| Age/Gender:   | 40 Y/Male        | Approved DATE/TIME: | 18/Sep/2023 08:22 PM  |
| LabID:        | 1396457          | CLIENT Grp.:        | MEDITRUST DIAGNOSTICS |
| SpecimenType: | Serum            | Report STATUS:      | Final Report          |

### DEPARTMENT OF BIOCHEMISTRY

| Test Description | Observed Value | Unit  | Method | Biological Ref. Interval |
|------------------|----------------|-------|--------|--------------------------|
| UREA             | 23.07          | mg/dL | Urease | 10-50                    |

\*\*\* End Of Report \*\*\*

*Amrita Ghosh*

**Dr. Amrita Ghosh**  
MBBS,MD(Biochem)  
Consultant Biochemist  
Reg.No. 55704



*Soumick Sarkar*

**Dr. Soumick Sarkar**  
MBBS,MD(PATH)  
Consultant pathologist  
Reg.No. 60092





**MEDITRUST DIAGNOSTIC CENTRE**  
**(Department of Pathology)**

Root cause analysis of outlier parameter for EQAS performance

Format No: MDC/FM/92

| SL No                                               | Check Points                                                                                                                                   | Observations  |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Name of Parameter (s): Urea [SDI(11.34)]            |                                                                                                                                                | Month: August |
| Cycle No / Sample No/ Distribution No: August, 2023 |                                                                                                                                                | Year: 2023    |
| CLERICAL ERRORS 19/08/2023                          |                                                                                                                                                |               |
| 1.                                                  | Transcription error (may be pre- or post-analytical factors)                                                                                   | - NIL -       |
| 2.                                                  | Wrong method has been registered for analysis or method change not updated                                                                     | - NIL -       |
| <b>METHODOLOGICAL PROBLEM</b>                       |                                                                                                                                                |               |
| 3.                                                  | Instrument function checks (e.g., temperatures, blank readings, pressures) not performed as necessary, or results not within acceptable range. | - NIL -       |
| 4.                                                  | Scheduled instrument maintenance not performed appropriately.                                                                                  | - NA -        |
| 5.                                                  | Incorrect instrument calibration.                                                                                                              | - NA -        |
| 6.                                                  | Standards or reagents improperly reconstituted and stored, or inadvertently used beyond expiration date.                                       | - NA -        |
| 7.                                                  | Instrument probes misaligned.                                                                                                                  | - NIL -       |
| 8.                                                  | Problem with instrument data processing functions. The laboratory may need to contact the manufacturer to evaluate such problems.              | - NIL -       |
| 9.                                                  | Problem in manufacture of reagents / standards, or with instrument settings specified by manufacturer                                          | - NIL -       |
| 10.                                                 | Carry-over from previous specimen.                                                                                                             | - NIL -       |
| 11.                                                 | Automatic pipettor not calibrated to acceptable precision and accuracy.                                                                        | - NIL -       |
| 12.                                                 | Imprecision from result being close to detection limit of method.                                                                              | - NIL -       |
| 13.                                                 | QC material not run within expiration date, or improperly stored                                                                               | - NIL -       |
| 14.                                                 | QC material not run at relevant analyte concentration                                                                                          | - NIL -       |
| 15.                                                 | Result not within reportable range (linearity) for instrument / reagent system.                                                                | - NIL -       |



**MEDITRUST DIAGNOSTIC CENTRE**  
(Department of Pathology)

Root cause analysis of outlier parameter for EQAS performance

Format No: MDC/FM/92

| SL No | Check Points | Observations |
|-------|--------------|--------------|
|-------|--------------|--------------|

|     |                                                                |         |
|-----|----------------------------------------------------------------|---------|
| 16. | Obstruction of instrument tubing / orifice by clot or protein. | - NIL - |
| 17. | Incorrect incubation times.                                    | - NIL - |

**TECHNICAL PROBLEM**

|     |                                                                                                                                                                                                              |                                                                                  |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 18. | EQA material improperly reconstituted.                                                                                                                                                                       | - NIL -                                                                          |
| 19. | Testing delayed after reconstitution of EQA material (with problem from evaporation or deterioration).                                                                                                       | - NIL -                                                                          |
| 20. | Sample not placed in proper order on instrument.                                                                                                                                                             | - NIL -                                                                          |
| 21. | Result released despite unacceptable QC data.                                                                                                                                                                | On the testing date 18/08/23 the control value for Urea got outside range. (125) |
| 22. | QC data within acceptable limits but showed trend suggestive of problem with the assay.                                                                                                                      | It shows a trend but sample was tested without taking corrective action.         |
| 23. | Inappropriate quality control limits / rules. If the acceptable QC range is too wide, the probability increases that a result will fall within the acceptable QC range yet exceed acceptable limits for EQA. | - NIL -                                                                          |
| 24. | Manual pipetting / diluting performed inaccurately, at an incorrect temperature or with incorrect diluent.                                                                                                   | - NIL -                                                                          |
| 25. | Calculation error or result reported using too few significant digits.                                                                                                                                       | - NIL -                                                                          |
| 26. | Secondary specimen tubes incorrectly labeled.                                                                                                                                                                | - NIL -                                                                          |

**PROBLEM WITH PROFICIENCY TESTING MATERIALS**

|     |                                                                                                               |         |
|-----|---------------------------------------------------------------------------------------------------------------|---------|
| 27. | PT sample with appropriate matrix to that as prescribed by the equipment manufacturer for testing of samples. | - NIL - |
| 28. | Non-homogenous test material                                                                                  | - NIL - |
| 29. | Haemolysis on an immune-haemtology program samples.                                                           | - NIL - |

**PROBLEM WITH EVALUATION OF RESULTS BY THE PT PROVIDER**

|     |                             |        |
|-----|-----------------------------|--------|
| 30. | Peer group not appropriate. | - NA - |
| 31. | Inappropriate target value  | - NA - |



**MEDITRUST DIAGNOSTIC CENTRE**  
**(Department of Pathology)**

Root cause analysis of outlier parameter for EQAS performance

Format No: MDC/FM/92

| SL No | Check Points                        | Observations |
|-------|-------------------------------------|--------------|
| 32.   | Incorrect data entry by PT provider | - NA -       |



**MEDITRUST DIAGNOSTIC CENTRE**  
**(Department of Pathology)**

Root cause analysis of outlier parameter for EQAS performance

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| SL No | Check Points | Observations |
|-------|--------------|--------------|
|-------|--------------|--------------|

**CONCLUSION:**

RCA done after checking all points and it has been observed but the outlier of urea it was due to the result released despite unacceptable QC data (trend) suggested, the parameter shall be send for ILC to NABL accredited lab and parameter shall be strictly monitor in the next ~~cycle~~ eqas cycle.

Root Cause Analysis done by: *[Signature]*

Remarks: Urea will be monitor in next cycle .

Reviewed By: *[Signature]*



**MEDITRUST DIAGNOSTIC CENTRE**  
(Department of Pathology)  
**EQAS Corrective Action Details**

Format No: MDC/FM/93

| Sl. No | EQAS Agency    | Sample Testing Date | Cycle No/ Sample No | Parameter Outlier        | Remarks & Corrective Action Taken                                                                                 | Reviewed By |
|--------|----------------|---------------------|---------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------|-------------|
| 1.     | eme<br>vellore | 19/08/23            | August,<br>2023     | Urea                     | ILE has been done, After corrective action Z-score found 0.70 and the parameter will be monitored in next cycle.  | <i>gms</i>  |
| 2.     | eme<br>vellore | 19/08/23            | August,<br>2023     | Glucose<br>(warning)     | REA done and it has been observed as random error. Parameter will be monitored next cycle. Sample has been rerun. | <i>gms</i>  |
| 3.     | eme<br>vellore | 19/08/23            | August,<br>2023     | cholesterol<br>(warning) | REA done and it has been observed as random error. Parameter will be monitored next cycle. Sample has been rerun. | <i>gms</i>  |




**MEDITRUST DIAGNOSTIC CENTRE**  
**(Department of Pathology)**

Laboratory 1 : DISA  
Laboratory 2 :  
Laboratory` 3 :

| Sl. No | Date of Testing | ID No | Parameter | MDC | Lab 1 | Lab 2 | Lab 3 | Mean   | SD       | Z-Score  |
|--------|-----------------|-------|-----------|-----|-------|-------|-------|--------|----------|----------|
| 1      | 18.09.2023      |       | UREA      | 22  | 23.07 |       |       | 22.535 | 0.756604 | -0.70711 |

$$\text{Z-Score} = \frac{\text{Lab 1} - \text{Mean}}{\text{SD}}$$

| Corrective action<br>( $\geq 2$ Z-score) | Reviewed By                                                                       |
|------------------------------------------|-----------------------------------------------------------------------------------|
| NA                                       |  |