

SURANA SPECIALITY LABORATORY

(Department of Pathology)

Root cause analysis of outlier parameter for EQAS performance

Format No: SSL/FM/90

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

Name of Parameter (s): <u>Glucose (SDI 3.65)</u> <u>Uric acid (SDI 4.1)</u>	Month: <u>April</u>
--	---------------------

Cycle No / Sample No / Distribution No: <u>April, 2023</u>	Year: <u>2023</u>
--	-------------------

CLERICAL ERRORS Date of testing 19/04/2023

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 -

METHODOLOGICAL PROBLEM

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.	- NA -
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 -



SURAHA SPECIALITY LABORATORY

(Department of Pathology)

Root cause analysis of outlier parameter for EQAS performance

Format No: SSL/FM/90

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 11/04/23 the control value glucose, Uric acid got out side range.
22.	QC data within acceptable limits but showed trend suggestive of problem with the assay.	- NIL -
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-haemtoology program samples.	- NIL -

PROBLEM WITH EVALUATION OF RESULTS BY THE PT PROVIDER

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



SURAHA SPECIALITY LABORATORY

(Department of Pathology)

Root cause analysis of outlier parameter for EQAS performance

Format No: SSL/EM/90

SL No

Check Points

Observations

32

Incorrect data entry by PT provider

- NA -



SURAHA SPECIALITY LABORATORY

(Department of Pathology)

Root cause analysis of outlier parameter for EQAS performance

Format No: SSL/FM/90

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

CONCLUSION:

No major cause of error was detected. The error may be random. The parameter shall be send for ILL to NABL accredited lab and Both parameters shall be strictly monitor in the next eqas cycle.

Root Cause Analysis done by: Saswati Sengupta

Remarks: Parameter monitored in next eqas.

Reviewed By: Saswati Sengupta



SURAHA SPECIALITY LABORATORY
(Department of Pathology)
EQAS Corrective Action Details

Format No: SSL/FM/91

Sl. No	EQAS Agency	Sample Testing Date	Cycle No/ Sample No	Parameter Outlier	Remarks & Corrective Action Taken	Reviewed By
1	CMC Vellore	17/04/2023	April, 2023	Glucose	ILC has been done, After corrective action z-score found 0.70 and the parameter will be monitored in next cycle.	Saswati Sengupta
2.	CMC Vellore	17/04/2023	April, 2023	Uric Acid	ILC has been done, After corrective action z-score found 0.70 and the parameter will be monitored in the next cycle.	Saswati Sengupta
3.	CMC Vellore	17/04/2023	April, 2023	Urea (warning)	RCA done and it has been observed as Random error. Parameter will be monitored next cycle. Sample has been taken.	Saswati Sengupta
4.	CMC Vellore	17/04/2023	April, 2023	T. Bilirubin (warning)	RCA done and it has been observed as Random error. Parameter will be monitored next cycle. Sample has been taken.	Saswati Sengupta
5.	CMC Vellore	17/04/2023	April, 2023	T. Protein (warning)	RCA done and it has been observed as Random error. Parameters will be monitored next cycle. Sample has been taken.	Saswati Sengupta
6.	CMC Vellore	17/04/2023	April, 2023	Triglyceride (warning)	RCA done and it has been observed as Random error. Parameter will be monitored next cycle. Sample has been taken.	Saswati Sengupta

Lab Name SURAHA SPECIALITY LABORATORY

[Details About Robust Analysis](#)

Lab No 16610

[Detail About Monthly Summary](#)

Month April

[Detail about SDI](#)

Year 2023

Constituent Group Chemistry II

[Click on the analyte to view Graphical Data](#)

[All Analyser Result](#)

[Print](#)

Date of Result Entered : 18/04/2023

Date of Report Published : 06/05/2023

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	Agape	524	149.18	8.49	12.67	195.4 mg/dL	3.65	1.11
2	UREA II	Urease UV / GLDH II	Agape	479	37.53	11.09	4.16	46.7 mg/dL	2.20	0.38
3	CREATININE II	Jaffes Kinetic- Alkaline Picrate II	Agape	394	2.48	9.40	0.23	2.61 mg/dL	0.56	0.02
4	T.BILIRUBIN II	Diazonium Salt (Colorimetric) / Jendrassik II	Agape	480	3.12	16.43	0.51	4.49 mg/dL	2.68	0.05
5	T-PROTEIN II	Biuret - Colorimetric II	Agape	371	5.54	8.14	0.45	6.69 g/dL	2.55	0.05
6	ALBUMIN II	BCG - Colorimetric II	Agape	367	3.38	9.46	0.32	3.15 g/dL	-0.72	0.03
7	URIC ACID II	Enzymatic / Uricase Colorimetric II	Agape	449	5.54	14.33	0.79	8.78 mg/dL	4.1	0.07
8	CHOLESTROL II	CHOD-PAP II	Agape	523	117.23	11.15	13.08	135.2 mg/dL	1.37	1.14
9	TRIGLYCERIDE II	GPO-PAP / Enzymatic Colorimetric / End Point II	Agape	386	103.22	12.42	12.82	131.6 mg/dL	2.21	1.30

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.

Saswati Sengupta

Links

[Modify Address](#)

[Modify Methods](#)

[Submit Lab Results](#)

[View Lab Monthly Summary](#)

[Yearly Summary](#)

[Change Password](#)

[Home](#)

[Sign-out](#)



Associate : SSL09

Sample Type : O.S.S.

Name : MR SAMIR DEY

Age / Gender : 60Y / MALE

Received On : 16/05/2023

ID Number : SSL/8731/E-930/35

Reported On : 16/05/2023

Referred By : DR.K.NANDI

DEPARTMENT OF CLINICAL BIOCHEMISTRY

Test Description	Result	Unit	Bio. Ref. Interval
Glucose Fasting <i>Methodology : GOD POD</i> <i>Specimen : Oxalate - Fluoxide / Oxalate</i>	144	mg/dl	70-110
Uric Acid <i>Methodology : Enzymatic/Uricase</i> <i>Specimen : Serum</i>	5.4	mg/dl	Male: 3.4-7.0 Female: 2.5-6.0 Child 2.0 - 5.0

Comment:

REMARKS : The result may be correlated with clinical findings.

Patients identification not verified and sample is not drawn by us.

End of Report

S. Sengupta

Dr. Saswati Sengupta

MBBS, MD(Path)

Reg. No. : 62563 (WBMC)



ISO 9001:2015



PATIENT NAME : MR SAMIR DEY

REF. DOCTOR : DR. SURAHA SPECIALITY LABORATORY

CODE/NAME & ADDRESS : C000131225
 SRISHTI DIAGNOSTICS
 30, RASH BEHARI AVENUE,KOLKATA
 KOLKATA 700026
 9123818736

ACCESSION NO : **0031WE012852**
 PATIENT ID : 865965370
 CLIENT PATIENT ID:
 ABHA NO :

AGE/SEX : 60 Y Male
 DRAWN : 16/05/2023 16:40:07
 RECEIVED : 16/05/2023 18:22:32
 REPORTED : 17/05/2023 19:09:50

Test Report Status	Final	Results	Biological Reference Interval	Units
--------------------	-------	---------	-------------------------------	-------

BIOCHEMISTRY

URIC ACID, SERUM

URIC ACID	5.2	3.5 - 7.2	mg/dL
METHOD : URICASE			

GLUCOSE FASTING, FLUORIDE PLASMA

FBS (FASTING BLOOD SUGAR)	142 High	50 - 80	mg/dL
METHOD : ENZYMATIC (HEXOKINASE/G-6-PDH)			

Interpretation(s)

URIC ACID, SERUM-**Causes of Increased levels**:-Dietary (High Protein Intake, Prolonged Fasting, Rapid weight loss), Gout, Lesch nyhan syndrome, Type 2 DM, Metabolic syndrome
Causes of decreased levels-Low Zinc intake, OCP, Multiple Sclerosis

GLUCOSE FASTING, FLUORIDE PLASMA-TEST DESCRIPTION

Normally, the glucose concentration in extracellular fluid is closely regulated so that a source of energy is readily available to tissues and so that no glucose is excreted in the urine.

Increased in: Diabetes mellitus, Cushing's syndrome (10 - 15%), chronic pancreatitis (30%). Drugs: corticosteroids, phenytoin, estrogen, thiazides.

Decreased in : Pancreatic islet cell disease with increased insulin, insulinoma, adrenocortical insufficiency, hypopituitarism, diffuse liver disease, malignancy (adrenocortical, stomach, fibrosarcoma), infantile diabetic mother, enzyme deficiency diseases (e.g. galactosemia), Drugs- insulin, ethanol, propranolol, sulfonylureas, tolbutamide, and other oral hypoglycemic agents.

NOTE: While random serum glucose levels correlate with home glucose monitoring results (weekly mean capillary glucose values), there is wide fluctuation within individuals. Thus, glycosylated hemoglobin (HbA1c) levels are favored to monitor glycaemic control.

High fasting glucose level in comparison to post prandial glucose level may be seen due to effect of Oral Hypoglycaemic & Insulin treatment, Renal Glycosuria, Glycaemic index & response to food consumed, Alimentary Hypoglycemia, Increase in insulin response & sensitivity etc.

****End Of Report****Please visit www.srlworld.com for related Test Information for this accession

Dr. Anwesha Chatterjee, MD
 Pathologist

Dr. Chaitali Ray, PHD
 Chief Biochemist cum MRQA

Page 1 Of 2

PERFORMED AT :

SRL Ltd
 P S SRIJAN TECH PARK BUILDING, DN-52, UNIT NO. 2, GROUND FLOOR, SECTOR V, SALT LAKE,
 KOLKATA, 700091
 WEST BENGAL, INDIA
 Tel : 9111591115, Fax : 30203412
 CIN - U74899PB1995PLC045956
 Email : customercare.saltlake@srl.in



PATIENT NAME : MR SAMIR DEY

REF. DOCTOR : DR. SURAHA SPECIALITY LABORATORY

CODE/NAME & ADDRESS : C000131225
 SRISHTI DIAGNOSTICS
 30, RASH BEHARI AVENUE,KOLKATA
 KOLKATA 700026
 9123818736

ACCESSION NO : **0031WE012852**
 PATIENT ID : 865965370
 CLIENT PATIENT ID:
 ABHA NO :

AGE/SEX : 60 Y Male
 DRAWN : 16/05/2023 16:40:07
 RECEIVED : 16/05/2023 18:22:32
 REPORTED : 17/05/2023 19:09:50

Test Report Status	Final	Results	Biological Reference Interval	Units
--------------------	-------	---------	-------------------------------	-------

CONDITIONS OF LABORATORY TESTING & REPORTING

1. It is presumed that the test sample belongs to the patient named or identified in the test requisition form.
2. All tests are performed and reported as per the turnaround time stated in the SRL Directory of Services.
3. Result delays could occur due to unforeseen circumstances such as non-availability of kits / equipment breakdown / natural calamities / technical downtime or any other unforeseen event.
4. A requested test might not be performed if:
 - i. Specimen received is insufficient or inappropriate
 - ii. Specimen quality is unsatisfactory
 - iii. Incorrect specimen type
 - iv. Discrepancy between identification on specimen container label and test requisition form
5. SRL confirms that all tests have been performed or assayed with highest quality standards, clinical safety & technical integrity.
6. Laboratory results should not be interpreted in isolation; it must be correlated with clinical information and be interpreted by registered medical practitioners only to determine final diagnosis.
7. Test results may vary based on time of collection, physiological condition of the patient, current medication or nutritional and dietary changes. Please consult your doctor or call us for any clarification.
8. Test results cannot be used for Medico legal purposes.
9. In case of queries please call customer care (91115 91115) within 48 hours of the report.

SRL Limited

Fortis Hospital, Sector 62, Phase VIII,
 Mohali 160062

Dr. Anwesha Chatterjee, MD
 Pathologist

Dr. Chaitali Ray, PHD
 Chief Biochemist cum MRQA

PERFORMED AT :

SRL Ltd
 P S SRIJAN TECH PARK BUILDING, DN-52, UNIT NO. 2, GROUND FLOOR, SECTOR V, SALT LAKE,
 KOLKATA, 700091
 WEST BENGAL, INDIA
 Tel : 9111591115, Fax : 30203412
 CIN - U74899PB1995PLC045956
 Email : customercare.saltlake@srl.in

**SURAHA SPECIALITY LABORATORY
(DEPARTMENT OF PATHOLOGY)**

Laboratory 1 : SURAHA SPECIALITY LABORATORY
 Laboratory 2 : SRL DIAGNOSTICS
 Laboratory 3 :

Sl. No	Date of Testing	ID No	Parameter	Lab 1	Lab 2	Lab 3	Mean	SD	Z-Score	Corrective action (≥ 2 Z-score)	Reviewed By
1	17-04-2023		uric acid	5.4	5.2		5.3	0.141421	0.707107		Sarwabi Sengupta
2	17-04-2023		glucose	144	142		143	1.414214	0.707107		Sarwabi Sengupta

Z- Score = (Lab 1 - Mean)/SD