



Metropolis Healthcare Ltd., EQAS

VYAS SUPER SPECIALITY HOSPITAL (1067)

Outlier And Analyte Summary Report

Outlier Details For Cycle No 230310 and Sample No 01

Report Date : 19/12/2023

Analyte	Instrument	Result Value	Standard Unit	Z-Score
X GGT	Erba Chem 7	4.40	U/L	-6.7
! Magnesium	Erba Chem 7	0.72	mg/dl	-2.66
! CK	Erba Chem 7	18.16	U/L	-2.65

Legend @ : z score \leq 2.0 - Acceptable
! : 2.0 < z score < 3.0 - Warning
X : z score \geq 3 - Unacceptable
: Not Evaluated
⊙ : Delayed Result Entry
* : Not considered for evaluation.

Problem Classification: _____

Corrective Action: _____

Reviewed by: _____

Dated: _____

Instrument : Erba Chem 7

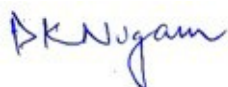
Analyte	Standard Unit	Result Value	Mean	Z-Score	RMZ
X GGT	U/L	4.40		-6.70	-4.27
@ Phosphorous Inorganic	mg/dl	5.17	4.72	1.61	1.48
! Magnesium	mg/dl	0.72	1.45	-2.66	-2.78
@ Cholesterol	mg/dl	122.50	134.32	-0.23	-0.08
! CK	U/L	18.16	36.42	-2.65	-2.68
@ Amylase	U/L	41.98	43.55	-0.62	-1.09

Instrument : Roche cobas c 111

Analyte	Standard Unit	Result Value	Mean	Z-Score	RMZ
@ Urea	mg/dl	19.23	19.18	-0.18	-0.13
@ Creatinine	mg/dl	0.70	0.72	-0.58	-0.67
@ Bilirubin Total	mg/dl	0.10	0.16	-1.03	-0.72
@ Total Protein	g/dL	5.10	5.49	-1.13	-1.09
@ Albumin	g/dL	3.32	3.36	0.10	-0.01
@ Uric Acid	mg/dl	3.40	3.73	-0.87	-0.68
@ Calcium	mg/dl	6.44	6.95	-1.42	-0.94
@ Triglycerides	mg/dl	135.00	134.15	0.52	0.40
@ HDL	mg/dl	25.27	27.35	-0.61	-0.23
@ ALT	U/L	14.80	15.43	-0.68	-0.34
@ AST	U/L	24.60	27.06	-0.62	-0.31
@ ALP	U/L	41.50	42.65	-0.45	-0.35

Legend @ : Acceptable
! : 2.0 < z score < 3.0 - Warning
X : z score ≥ 3 - Unacceptable
: Not Evaluated
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* : Not considered for evaluation.

Total Parameters	18
Not Evaluated Parameters	0
Evaluated Parameters	18
Outlier Parameters (X)	1
EQAS Score Biochemistry	94.44 %



Dr Puneet Kumar Nigam
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CORRECTIVE & PREVENTIVE ACTIONS FORM



ROOT CAUSE ANALYSIS, CORRECTIVE AND PREVENTIVE ACTION (CAPA)

Non Compliance Reference

No. Samp-1 Dated 4/12/2023

Dept: Biochemistry [GGT]

Date: 21/12/23

Incident: EGAS Sample for GGT (Bio-chemistry). showed unacceptable results.

Root cause analysis/Investigation: All internal controls were under acceptable limits. Calibration is in o place. There was a difference of The EGA provider distributed by accident an inappropriate sample.

Done By: Shrawan

Date & Sign: [Signature] 21/12/23

Tool Used/ Risk Assessment: Brainstorming.

Immediate Correction: :- Couldn't correct as it was already passed next step.

Corrective Action: No issue was identified as far as calibration. internal control and machine are concerns. we have kept the parameter under observation as GGT is calculating factor and it doesn't affect patient directly.

Done By: Shrawan

Date & Sign: [Signature] 21/12/23

Preventive Action: Daily monitoring will be done on daily basis and internal control of both high & low level will be checked until we received another EGA sample. Training given to lab technician.

Verification of CAPA Done

Done By: Dr. Aritha Seeris Date & Sign: [Signature] 21/12/23

Shrawan

Prepared By

[Signature]

Immediate Incharge

[Signature]

HOD



Metropolis Healthcare Ltd., EQAS

VYAS SUPER SPECIALITY HOSPITAL (1067)

Outlier And Analyte Summary Report

Outlier Details For Cycle No 230310 and Sample No 01

Report Date : 19/12/2023

Analyte	Instrument	Result Value	Standard Unit	Z-Score
X GGT	Erba Chem 7	4.40	U/L	-6.7
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Problem Classification: _____

Corrective Action: _____

Reviewed by: _____

Dated: _____

04/12/23 18:04:00

000626 DELTA SMP O.D./m 0.0020

Sample - 01

000626 GGT 4.40 IU/L

LINEAR REACTION

000627 DELTA SMP O.D./m 0.0076

Sample - 02

000627 GGT 16.73 IU/L

ATTENDANCE SHEET



Topic Of Training: Interpretations of the card Tests.	
Name Of The Trainer: Dr. Ashok Kumar Shah.	Date: 25/12/2023
Venue: Central Research Lab VMCH.	Time: 1pm to 2pm

SN	Name	Designation	Department	Sign
1.	Hemant Pandit	Lab. Tech.	Central Lab	Hemant
2.	Jindrajit	Lab Tech.	Central Lab	Jindrajit
3.	Sharwan	SR. Lab Tech.	CENTRAL LAB	Sharwan
4.	Manisha Benival	Lab technician	Central lab	Manisha
5.	Anupam maity	lab tech	Central lab	Anupam
6.	Divya Bhati	lab tech.	Central lab	Divya

ATTENDANCE SHEET



Topic Of Training:	Transcription of reports.		
Name Of The Trainer:	Dr. Anitha Sreekar	Date:	26/12/2023
Venue:	Central Research Lab vmcsh	Time:	1pm to 2pm.

SN	Name	Designation	Department	Sign
1	MANISHA BENIWAL	Lab technician	Central Lab	<u>Manisha</u>
2	Hemant Pandit	Lab Tech.	Central Lab	Hemant
3	INDRAJEET	Lab Techs	Central Lab	<u>Indrajeet</u>
4	SHAWAN GAELOT	SR. Lab Techs	Central Lab	<u>Shawan</u>
5	Divya Bhati	Lab technician	Central Lab	<u>Divya</u>
6	Anupam Maity.	Lab Tel	Central Lab	<u>Anupam</u>

ATTENDANCE SHEET



Topic Of Training:	Standardization, calibration & Internal & External QCAS (EQAS)		
Name Of The Trainer:	Dr. Ashok Kumar Shah	Date:	27/12/2023
Venue:	Central Research Lab Umesh	Time:	1pm to 3pm.

SN	Name	Designation	Department	Sign
1	INDRAJEET	LAB TECHNICIAN	CENTRAL LAB	Indrajeet
2	SHARWAN UCHHOT	SR. LAB TECHNICIAN	CENTRAL LAB	
3	Hemant Pandit	Lab. Tech.	central lab.	Hemant
4	Manisha Beniwal	Lab. technician	Central lab.	Manishg
5	Anupam maity	Lab Tech.	Central lab	Anupam
6	Divya Bhati	Lab Tech.	Central Lab	Divya

CORRECTIVE & PREVENTIVE ACTIONS FORM



ROOT CAUSE ANALYSIS, CORRECTIVE AND PREVENTIVE ACTION (CAPA)

Non Compliance Reference

No. Samp - 5 Dated 10/12/2023
Dept: Haematology (RBC)

Date: 21/12/23

Incident EQAS Sample RBC (Haematology) showed unacceptable results.

Root cause analysis/Investigation All the internal controls were under acceptable limits. Calibration is in a place. The EQA provider distributed by accident an inappropriate sample.

Done By: INDRAJEET Date & Sign: Indrajeet 21-12-23

Tool Used/ Risk Assessment Brain storming.

Immediate Correction couldn't correct as it was already passed next step.

Corrective Action NO issue was identified as far as calibration, internal control and machine are concern.

Done By: INDRAJEET Date & Sign: Indrajeet 21-12-23

Preventive Action daily monitoring will be done on daily basis and internal control of both high & low level will be checked until we receive another EQAS sample. Training given to the technicians.

Verification of CAPA Done

Done By: Dr. Anita Seem Date & Sign: Auto 21/12/23

Prepared By INDRAJEET

Immediate Incharge Ajit

HOD Ajit



Metropolis Healthcare Ltd., EQAS

VYAS SUPER SPECIALITY HOSPITAL (1067)

Outlier And Analyte Summary Report

Outlier Details For Cycle No 230310 and Sample No 05

Report Date : 19/12/2023

Analyte	Instrument	Result Value	Standard Unit	Z-Score
X Erythrocyte (RBC) Count	Sysmex XN 330	1.06	10 ⁶ / μ L	-4.14
X Haemoglobin	Sysmex XN 330	3.10	g/dL	-7.61
! Total Leucocytes (WBC) count	Sysmex XN 330	2230.00	1000/ μ L	-2.04
! MCV (Mean Corpuscular Volume)	Sysmex XN 330	106.60	fL	2.32
! Hematocrit	Sysmex XN 330	11.30	%	-2.54
Legend @ : z score \leq 2.0 - Acceptable ! : 2.0 < z score < 3.0 - Warning X : z score \geq 3 - Unacceptable # : Not Evaluated ⊙ : Delayed Result Entry * : Not considered for evaluation.				

Problem Classification: _____

Corrective Action: _____

Reviewed by: _____

Dated: _____

Name :
 Sample No. : MHL EQAS HCBC 05
 Patient ID :
 Ref.By.Dr. :

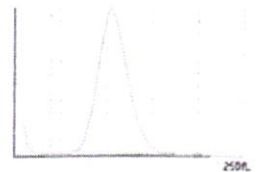
Date : 10/12/2023
 Age/Sex : /
 Report Generation: 10/12/2023
 Ward:

Result Unit Normal Range

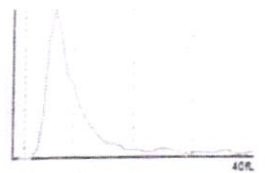
RBC	1.06 - [10 ⁶ /uL]	(2.50 - 5.50)
HGB	3.1 - [g/dL]	(8.0 - 17.0)
HCT	11.3 - [%]	(26.0 - 50.0)
MCV	106.6 [fL]	(86.0 - 110.0)
MCH	29.2 [pg]	(26.0 - 38.0)
MCHC	27.4 - [g/dL]	(31.0 - 37.0)
RDW-SD	55.0 + [fL]	(37.0 - 54.0)
RDW-CV	14.2 [%]	(11.0 - 16.0)
PLT	72 [10 ³ /uL]	(50 - 400)
PDW	8.6 - [fL]	(9.0 - 17.0)
MPV	10.1 [fL]	(9.0 - 13.0)
P-LCR	22.7 [%]	(13.0 - 43.0)
PCT	0.07 - [%]	(0.17 - 0.35)

			Absolute Values	Normal Range
WBC	2.23 - [10 ³ /uL]	(3.00 - 15.00)		
NEUT	46.2 * [%]	(37.0 - 72.0)	1.03 [10 ³ /uL]	(1.78-5.38)
LYMPH	5.4 * [%]	(20.0 - 50.0)	0.12 [10 ³ /uL]	(1.32-3.57)
MONO	46.2 * [%]	(0.0 - 14.0)	1.03 [10 ³ /uL]	(0.30-0.82)
EO	2.2 [%]	(0.0 - 6.0)	0.05 [10 ³ /uL]	(0.04-0.54)
BASO	0.0 [%]	(0.0 - 1.0)	0.00 [10 ³ /uL]	(0.01-0.08)
IG	2.2 * [%]	(0.0 - 72.0)	0.05 [10 ³ /uL]	(0.01-0.06)

RBC



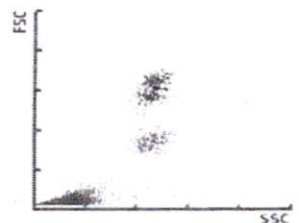
PLT



WDF



WDF-CBC



ESR : _____ mm/hr

Peripheral Smear :

(Technician Sign.)

(Pathologist Sign.)

ATTENDANCE SHEET



Topic Of Training: Interpretations of the card Tests.	
Name Of The Trainer: Dr. Ashok Kumar Shah.	Date: 25/12/2023
Venue: Central Research Lab VMCH.	Time: 1pm to 2pm

SN	Name	Designation	Department	Sign
1.	Hemant Pandit	Lab. Tech.	Central Lab	Hemant
2.	Indrajit	Lab Tech.	Central Lab	Indrajit
3.	Sharwan	SR. Lab Tech.	CENTRAL LAB	Sharwan
4.	Manisha Benival	Lab technician	Central lab	Manisha
5.	Anupam maity	Lab Tech	Central Lab	Anupam
6.	Divya Bhati	Lab Tech.	Central Lab	Divya

S. No.	Name	Designation	Department	Sign

Signature of Trainer: 

Analyte	Instrument	Result Value	Standard Unit	Z-Score
X Glucose	Erba Chem 7	112.60	mg/dl	4.89
X Bilirubin Direct	Erba Chem 7	0.68	mg/dl	3.56
! Magnesium	Erba Chem 7	0.83	mg/dl	-2.9
! CK	Erba Chem 7	15.68	U/L	-2.71
Legend @ : z score \leq 2.0 - Acceptable ! : 2.0 < z score < 3.0 - Warning X : z score \geq 3 - Unacceptable # : Not Evaluated Ⓞ : Delayed Result Entry * : Not considered for evaluation.				

Problem Classification: _____

Corrective Action: _____

Reviewed by: _____ **Dated:** _____

Instrument : Erba Chem 7

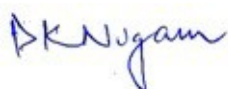
Analyte	Standard Unit	Result Value	Mean	Z-Score	RMZ
X Glucose	mg/dl	112.60	74.86	4.89	2.45
X Bilirubin Direct	mg/dl	0.68	0.26	3.56	3.56
@ Phosphorous Inorganic	mg/dl	4.47	4.54	1.35	1.48
! Magnesium	mg/dl	0.83	1.53	-2.90	-2.78
@ Cholesterol	mg/dl	130.30	142.13	0.07	-0.08
! CK	U/L	15.68	29.92	-2.71	-2.68
@ GGT	U/L	16.73	22.92	-1.83	-4.27
@ Amylase	U/L	37.08	41.97	-1.55	-1.09

Instrument : Roche cobas c 111

Analyte	Standard Unit	Result Value	Mean	Z-Score	RMZ
@ Urea	mg/dl	18.94	18.31	-0.08	-0.13
@ Creatinine	mg/dl	1.40	1.43	-1.43	-0.67
@ Bilirubin Total	mg/dl	3.60	3.82	-0.40	-0.72
@ Total Protein	g/dL	5.10	5.69	-1.05	-1.09
@ Albumin	g/dL	3.38	3.53	-0.12	-0.01
@ Uric Acid	mg/dl	3.40	3.80	-1.17	-0.68
@ Calcium	mg/dl	6.37	6.86	-1.40	-0.94
@ Triglycerides	mg/dl	121.50	120.46	0.27	0.40
@ HDL	mg/dl	12.39	12.50	0.15	-0.23
@ ALP	U/L	42.10	43.36	-0.25	-0.35

Legend @ : Acceptable
! : 2.0 < z score < 3.0 - Warning
X : z score ≥3 - Unacceptable
: Not Evaluated
⊙ : Delayed Result Entry
* : Not considered for evaluation.

Total Parameters	18
Not Evaluated Parameters	0
Evaluated Parameters	18
Outlier Parameters (X)	2
EQAS Score Biochemistry	88.89 %



Dr Puneet Kumar Nigam
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CORRECTIVE & PREVENTIVE ACTIONS FORM



ROOT CAUSE ANALYSIS, CORRECTIVE AND PREVENTIVE ACTION (CAPA)

Non Compliance Reference

No. Samp-2 Dated 4/12/2023
Dept: Biochemistry (Glucose)

Date: 21/12/23

Incident: EQAS Biochemistry Sample for Glucose showed slightly elevated result that was unacceptable

Root cause analysis/Investigation: As the quality control was beyond the upper limit i.e. difference are 6 point (+1SD) we got the raised value.

Done By: Shravan

Date & Sign

Shravan 21/12/23

Tool Used/ Risk Assessment: why-why method, Arithmetic mistake

Immediate Correction: Couldn't correct as it was already done

Corrective Action: Issue was identified as far as calibration, internal control. we kept the parameter under observation as Glucose is calculating factor and it doesn't affect Patient directly.

Done By: Shravan

Date & Sign:

Shravan 21/12/23

Preventive Action: Daily monitoring will be done on daily basis and internal control of both high & low level will be checked until we received another EQAS Sample. Training given to lab technicians.

Verification of CAPA Done

Done By: Dr. Anita Saini

Date & Sign

Anita 21/12/23

Shravan

Prepared By

Arjun

Immediate Incharge

Arjun

HOD