



# RML – Quality Assurance Program (RML – QAP)



## BIO-CHEMISTRY-01

### ALL METHOD REPORT

Lab Code: 2084

Cycle - 10/2021

Round No - 01

Date: 12/02/2021

Parameters	Units	No.of. Participants	Group Mean	Standard deviation (SD)	Uncertainty of Assign Values	Range (± 2 SD)	Your Value	Standard Deviation Index (SDI)
Albumin	g/dL	111	2.9	0.3	0.04	2.4-3.4	2.6	-1.0
Alkaline Phosphatase	U/L	107	301.0	83.2	10.05	134.6-467.5	204	-1.2
Bilirubin Total	mg/dL	114	4.9	0.5	0.06	3.9-5.9	5.1	0.4
Calcium(Total)	mg/dL	100	11.9	0.9	0.11	10.1-13.7	8.2	-4.1
Cholesterol (Total)	mg/dL	110	270.6	18.8	2.24	233.1-308.1	246	-1.3
Creatinine	mg/dL	112	4.2	0.4	0.05	3.5-4.9	3.8	-1.0
Glucose	mg/dL	113	263.4	19.1	2.25	225.1-301.7	279	0.8
HDL	mg/dL	103	96.2	28.3	3.49	39.7-152.8	102.5	0.2
Potassium	mEq/L	98	5.9	0.3	0.04	5.3-6.5	5.0	-3.0
Protein (Total)	g/dl	108	4.5	0.4	0.05	3.8-5.3	4.3	-0.5
Sodium	mEq/L	98	155.3	5.0	0.63	145.4-165.2	153	-0.5
SGPT/ALT	U/L	113	124.5	16.7	1.96	91.2-157.9	135	0.6
SGOT/AST	U/L	113	133.4	15.9	1.87	101.7-165.1	149	1.0
Triglyceride	mg/dL	108	248.0	17.4	2.09	213.3-282.8	268	1.1
Urea	mg/dL	114	117.1	9.3	1.09	98.5-135.7	114	-0.3
Uric Acid	mg/dl	109	8.9	0.9	0.11	7.2-10.6	9.2	0.3

#### Interpretation of SDI:

SDI Value(+/-)	0 - 0.5	0.6 - 0.9	1.0 - 2.0	2.1 - 2.9	≥ 3
Interpretation	Excellent Performance	Good Performance	Acceptable Performance	Marginal Performance Need Improvement	Unacceptable Performance Needs Urgent action

Legends	(*) Excluded From Group Mean	{.} Not Reported	(#)Late Result Submission	(\$)Reported in other Unit
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Chief Coordinator

Dr.Sanjay Mehrotra

Checked By:

Programme Director

Dr.Bandana Mehrotra

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# RML – Quality Assurance Program (RML – QAP)



## BIO-CHEMISTRY-01

### ALL METHOD REPORT

Lab Code: 2084

Cycle - 10/2021  
Round No - 02

Date: 24/02/2021

Parameters	Units	No.of. Participants	Group Mean	Standard deviation (SD)	Uncertainty of Assign Values	Range (± 2 SD)	Your Value	Standard Deviation Index (SDI)
Albumin	g/dL	114	4.0	0.3	0.04	3.4-4.6	3.7	-1.0
Alkaline Phosphatase	U/L	111	170.5	49.0	5.81	72.4-268.5	150	-0.4
Bilirubin Total	mg/dL	118	1.5	0.2	0.02	1.1-1.9	1.4	-0.5
Calcium(Total)	mg/dL	102	8.8	0.7	0.09	7.5-10.1	10.8	2.9
Cholesterol (Total)	mg/dL	112	179.4	12.3	1.45	154.8-204.1	190	0.9
Creatinine	mg/dL	119	1.3	0.2	0.02	1.0-1.7	1.5	1.0
Glucose	mg/dL	119	109.2	9.4	1.08	90.4-127.9	113	0.4
HDL	mg/dL	105	61.7	14.7	1.79	32.2-91.2	63.1	0.1
Potassium	mEq/L	98	3.8	0.2	0.03	3.5-4.2	3.2	-3.0
Protein (Total)	g/dl	111	5.8	0.5	0.06	4.8-6.7	5.7	-0.2
Sodium	mEq/L	96	137.2	4.2	0.54	129.0-145.6	132	-1.2
SGPT/ALT	U/L	116	31.6	4.7	0.55	22.2-40.9	36	0.9
SGOT/AST	U/L	117	33.0	4.9	0.57	23.1-42.9	41	1.6
Triglyceride	mg/dL	111	87.7	9.9	1.17	68.0-107.4	84	-0.4
Urea	mg/dL	118	43.8	6.2	0.71	31.5-56.1	47	0.5
Uric Acid	mg/dl	113	5.6	0.6	0.07	4.5-6.7	6.1	0.8

#### Interpretation of SDI:

SDI Value(+/-)	0 - 0.5	0.6 - 0.9	1.0 - 2.0	2.1 - 2.9	≥ 3
Interpretation	Excellent Performance	Good Performance	Acceptable Performance	Marginal Performance Need Improvement	Unacceptable Performance Needs Urgent action

Legends	(*) Excluded From Group Mean	{ } Not Reported	(#)Late Result Submission	(\$)Reported in other Unit
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Chief Coordinator

Dr.Sanjay Mehrotra

Checked By:

Programme Director

Dr.Bandana Mehrotra

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# RML – Quality Assurance Program (RML – QAP)



## BIO-CHEMISTRY-01

### ALL METHOD REPORT

Lab Code: 2084

Cycle - 10/2021  
Round No - 03

Date: 30/03/2021

Parameters	Units	No.of. Parti- cipants	Group Mean	Standard deviation (SD)	Uncertain ty of Assign Values	Range (± 2 SD)	Your Value	Standard Deviation Index (SDI)
Albumin	g/dL	134	4.1	0.3	0.03	3.4-4.7	3.8	-1.0
Alkaline Phosphatase	U/L	128	185.2	55.4	6.12	74.3-296.1	131	-1.0
Bilirubin Total	mg/dL	137	1.5	0.2	0.02	1.0-1.9	1.0	-2.5
Calcium(Total)	mg/dL	111	8.9	0.7	0.08	7.5-10.2	6.5	-3.4
Cholesterol (Total)	mg/dL	128	182.5	13.5	1.49	155.5-209.4	192	0.7
Creatinine	mg/dL	137	1.3	0.2	0.02	1.0-1.7	1.3	0.0
Glucose	mg/dL	138	111.6	8.7	0.93	94.2-129.0	112	0.0
HDL	mg/dL	120	62.1	15.6	1.78	30.9-93.2	49.2	-0.8
Potassium	mEq/L	105	3.9	0.2	0.02	3.5-4.2	3.0	-4.5
Protein (Total)	g/dl	130	5.8	0.5	0.05	4.9-6.7	5.5	-0.6
Sodium	mEq/L	107	138.7	4.0	0.48	130.7-146.7	125	-3.4
SGPT/ALT	U/L	135	31.1	4.3	0.46	22.6-39.6	42	2.5
SGOT/AST	U/L	135	33.5	5.5	0.59	22.5-44.5	36	0.5
Triglyceride	mg/dL	127	89.7	9.0	1.00	71.7-107.7	74	-1.7
Urea	mg/dL	137	44.6	4.2	0.45	36.1-53.0	47	0.6
Uric Acid	mg/dl	133	5.6	0.6	0.07	4.5-6.8	5.3	-0.5

#### Interpretation of SDI:

SDI Value(+/-)	0 - 0.5	0.6 - 0.9	1.0 - 2.0	2.1 - 2.9	≥ 3
Interpretation	Excellent Performance	Good Performance	Acceptable Performance	Marginal Performance Need Improvement	Unacceptable Performance Needs Urgent action

Legends	(*) Excluded From Group Mean	{,} Not Reported	(#)Late Result Submission	(\$)Reported in other Unit
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Chief Coordinator

Dr.Sanjay Mehrotra

Checked By:

Programme Director

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**CAPA FOR THE OUTLINERS IN EQUAS OF BIOCHEMISTRY FOR PT  
RESULT 1-3**

**For your kind attention :**

The results of round 1& 2 were delivered together in first week of March and by that time we had already dispatched the results of round 3, therefore the CAPA for the round 1-3 were done together.

Sr.No	Parameter	Findings	CAPA taken
<b>Month January</b>			<ol style="list-style-type: none"> <li>The main outliers are the electrolytes which are being run on NULYTE equipment.</li> <li>The machine was recalibrated during the month of March to rule out any problem with the equipment.</li> <li>The reagents were analyzed by the vendor.</li> <li>Controls were run regularly to keep accuracy of the tests.</li> </ol>
1.	Calcium (Total)	SDI = - 4.1	
2.	Potassium	SDI = - 3.0	
<b>Month February</b>			
1.	Calcium (Total)	SDI = 2.9	
2.	Potassium	SDI = - 3.0	
<b>Month March</b>			
1.	Calcium (Total)	SDI = - 3.4	
2.	Potassium	SDI = - 4.5	
3.	Sodium	SDI = - 3.4	

*(Prof.) Dr. Uma Singh*  
M.B.B.S., D.G.O., M.D., F.I.A.M.S. Pathology  
Ex. Prof. PG.I.M.S., ROHTAK-124001 (Hry.)  
Regn. No. M.B.B.S., (M.N.C.)-1874  
M.D. (M.C.I.)-1627

CAPA advised by : .....

CAPA done by : .....  
**DR. RUBY**  
BAMS, PGDHA  
Hospital Administrator  
Nirvana Diagnostic Centre



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16 Slice CT Scan - Digital X-Ray - 3D/4D Ultra Sound - Colour Doppler - Well Equipped Lab - Interventions



# RML – Quality Assurance Program (RML – QAP)



## BIO-CHEMISTRY-01

### ALL METHOD REPORT

Lab Code: 2084

Cycle - 10/2021  
Round No - 04

Date: 22/04/2021


Parameters	Units	No.of. Participants	Group Mean	Standard deviation (SD)	Uncertainty of Assign Values	Range ( $\pm 2$ SD)	Your Value	Standard Deviation Index (SDI)
Albumin	g/dL	135	4.0	0.3	0.03	3.4-4.6	3.8	-0.7
Alkaline Phosphatase	U/L	131	189.4	56.4	6.16	76.6-302.3	158	-0.6
Bilirubin Total	mg/dL	136	1.4	0.3	0.03	0.9-1.9	1.5	0.2
Calcium(Total)	mg/dL	112	8.9	0.7	0.08	7.5-10.3	6.3	-3.7
Cholesterol (Total)	mg/dL	128	181.4	13.2	1.46	155.0-207.8	182	0.0
Creatinine	mg/dL	138	1.3	0.2	0.02	1.0-1.6	1.4	0.5
Glucose	mg/dL	136	110.9	8.4	0.90	94.1-127.7	106	-0.6
HDL	mg/dL	117	62.4	14.6	1.69	33.1-91.6	56.8	-0.4
Potassium	mEq/L	106	3.9	0.2	0.02	3.5-4.2	3.1	-4.2
Protein (Total)	g/dl	128	5.7	0.5	0.05	4.8-6.7	4.5	-2.6
Sodium	mEq/L	106	138.3	4.4	0.53	129.6-147.0	130	-1.9
SGPT/ALT	U/L	137	31.2	4.8	0.51	21.7-40.8	47	3.3
SGOT/AST	U/L	137	32.6	5.9	0.63	20.8-44.5	33	0.1
Triglyceride	mg/dL	125	90.0	10.5	1.18	68.9-111.1	87	-0.3
Urea	mg/dL	137	44.4	4.9	0.53	34.5-54.3	47	0.5
Uric Acid	mg/dl	133	5.7	0.7	0.08	4.3-7.1	5.2	-0.7


#### Interpretation of SDI:

SDI Value(+/-)	0 - 0.5	0.6 - 0.9	1.0 - 2.0	2.1 - 2.9	$\geq 3$
Interpretation	Excellent Performance	Good Performance	Acceptable Performance	Marginal Performance Need Improvement	Unacceptable Performance Needs Urgent action


Legends	(*) Excluded From Group Mean	{,} Not Reported	(#)Late Result Submission	(\$)Reported in other Unit
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Chief Coordinator

  
Dr.Sanjay Mehrotra

Checked By: 

Programme Director

  
Dr.Bandana Mehrotra

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**CAPA FOR THE OUTLINERS IN EQUAS OF BIOCHEMISTRY FOR PT  
RESULT 4**

Sr.No	Parameter	Findings	CAPA taken
Month April			<ol style="list-style-type: none"> <li>As we can see the parameter of sodium has become within consensus by the measures taken previously.</li> <li>There is marginal decrease in Calcium (total) also.</li> <li>For rest of the parameters the cleaner of the equipment was changed to see if any variation was there and it was found to be abnormal. Therefore it was changed so that results can be within standards.</li> <li>The rest of the measures were being taken.</li> </ol>
1.	Calcium (Total)	SDI = - 3.7	
2.	Potassium	SDI = - 4.2	
3.	SGPT	SDI = 3.3	

CAPA advised by : .....

*(Prof) Dr. Uma Singh*  
M.B.B.S., D.G.O., M.D., F.I.A.M.S. Pathology  
Ex. Post. P.G.I.M.S., ROHTAK-124001 (Hry.)  
Regn. No. M.B.B.S., (M.N.C.)-1874  
M.D. (M.C.I.)-1677

CAPA done by : .....

**Dr. RUBY**  
BAMS, PGDHA  
Hospital Administrator  
Nirvana Diagnostic Centre



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16 Slice CT Scan - Digital X-Ray - 3D/4D Ultra Sound - Colour Doppler - Well Equipped Lab - Interventions



# RML – Quality Assurance Program (RML – QAP)



## BIO-CHEMISTRY-01

### ALL METHOD REPORT

Lab Code: 2084

Cycle - 10/2021  
Round No - 05

Date: 31/05/2021

Parameters	Units	No.of. Parti- cipants	Group Mean	Standard deviation (SD)	Uncertain ty of Assign Values	Range (± 2 SD)	Your Value	Standard Deviation Index (SDI)
Albumin	g/dL	122	3.0	0.3	0.03	2.4-3.6	2.6	-1.3
Alkaline Phosphatase	U/L	114	311.5	86.1	10.08	139.4-483.7	254	-0.7
Bilirubin Total	mg/dL	124	4.8	0.7	0.08	3.5-6.1	5.5	1.0
Calcium(Total)	mg/dL	103	12.0	1.1	0.14	9.8-14.3	7.0	-4.5
Cholesterol (Total)	mg/dL	117	273.0	16.3	1.88	240.5-305.6	237	-2.2
Creatinine	mg/dL	126	4.1	0.5	0.06	3.1-5.2	4.0	-0.2
Glucose	mg/dL	125	256.2	22.2	2.48	211.8-300.6	233	-1.0
HDL	mg/dL	106	94.0	30.7	3.73	32.5-155.4	105.7	0.4
Potassium	mEq/L	103	5.9	0.4	0.05	5.2-6.6	5.2	-1.8
Protein (Total)	g/dl	116	4.7	0.5	0.06	3.7-5.6	3.7	-2.0
Sodium	mEq/L	103	155.4	7.0	0.86	141.5-169.3	153	-0.3
SGPT/ALT	U/L	123	120.3	16.9	1.90	86.5-154.2	110	-0.6
SGOT/AST	U/L	123	131.2	18.5	2.09	94.3-168.1	117	-0.8
Triglyceride	mg/dL	114	250.5	21.7	2.54	207.1-293.8	231	-0.9
Urea	mg/dL	125	117.1	12.6	1.41	91.8-142.2	101	-1.3
Uric Acid	mg/dl	122	8.8	0.9	0.10	7.0-10.6	7.9	-1.0

#### Interpretation of SDI:

SDI Value(+/-)	0 - 0.5	0.6 - 0.9	1.0 - 2.0	2.1 - 2.9	≥ 3
Interpretation	Excellent Performance	Good Performance	Acceptable Performance	Marginal Performance Need Improvement	Unacceptable Performance Needs Urgent action

Legends	(*) Excluded From Group Mean	{ } Not Reported	(#) Late Result Submission	(\$) Reported in other Unit
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Chief Coordinator

Dr. Sanjay Mehrotra

Checked By:

Programme Director

Dr. Bandana Mehrotra

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**CAPA FOR THE OUTLINERS IN EQUAS OF BIOCHEMISTRY FOR PT  
RESULT 5**

Sr.No	Parameter	Findings	CAPA taken
Month May			<ol style="list-style-type: none"> <li>As we can see the parameter of potassium and SGPT has become within consensus by the measures taken previously.</li> <li>There is marginal increase in Calcium (total).</li> <li>The reagent lot of Calcium(total) was changed to improve the results.</li> <li>The rest of the measures were being taken.</li> </ol>
1.	Calcium (Total)	SDI = - 4.5	

CAPA advised by : .....

*(Prof) Dr. Uma Singh*  
M.B.B.S., D.O., M.D., F.I.A.M.S. Pathology  
Ex. Prof. P.G.I. S. ROHTAK-124001 (Hry.)  
Regd. No. M.B.B.S. (H.N.C.)-1976  
M.D. (M.C.I.)-1677

CAPA done by : .....

**Dr. RUBY**  
BAMS, PGDHA  
Hospital Administrator  
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16 Slice CT Scan - Digital X-Ray - 3D/4D Ultra Sound - Colour Doppler - Well Equipped Lab - Interventions





# RML – Quality Assurance Program (RML – QAP)



## BIO-CHEMISTRY-01

### ALL METHOD REPORT

Lab Code: 2084

Cycle - 10/2021  
Round No - 06

Date: 22/06/2021

Parameters	Units	No.of. Participants	Group Mean	Standard deviation (SD)	Uncertainty of Assign Values	Range ( $\pm 2$ SD)	Your Value	Standard Deviation Index (SDI)
Albumin	g/dL	147	4.0	0.3	0.03	3.5-4.6	3.5	-1.7
Alkaline Phosphatase	U/L	142	183.2	56.7	5.95	69.7-296.6	137	-0.8
Bilirubin Total	mg/dL	151	1.5	0.3	0.03	0.9-2.0	1.5	0.0
Calcium(Total)	mg/dL	125	8.9	0.7	0.08	7.6-10.2	6.1	-4.0
Cholesterol (Total)	mg/dL	143	180.3	11.5	1.20	157.2-203.3	154	-2.3
Creatinine	mg/dL	151	1.3	0.2	0.02	0.9-1.7	1.3	0.0
Glucose	mg/dL	151	110.9	10.0	1.02	90.9-130.9	125	1.4
HDL	mg/dL	133	59.4	14.2	1.54	31.1-87.7	75.0	1.1
Potassium	mEq/L	117	3.9	0.2	0.02	3.5-4.2	3.6	-1.5
Protein (Total)	g/dl	143	5.8	0.5	0.05	4.9-6.7	5.0	-1.6
Sodium	mEq/L	118	138.0	4.2	0.48	129.7-146.3	134	-1.0
SGPT/ALT	U/L	151	30.6	5.3	0.54	20.1-41.1	43	2.3
SGOT/AST	U/L	150	31.7	5.2	0.53	21.4-42.0	35	0.6
Triglyceride	mg/dL	142	88.8	8.3	0.87	72.2-105.4	92	0.4
Urea	mg/dL	151	44.3	4.6	0.47	35.2-53.4	39	-1.2
Uric Acid	mg/dl	146	5.6	0.7	0.07	4.2-6.9	4.8	-1.1

#### Interpretation of SDI:

SDI Value(+/-)	0 - 0.5	0.6 - 0.9	1.0 - 2.0	2.1 - 2.9	$\geq 3$
Interpretation	Excellent Performance	Good Performance	Acceptable Performance	Marginal Performance Need Improvement	Unacceptable Performance Needs Urgent action

Legends	(*) Excluded From Group Mean	[ ] Not Reported	(#) Late Result Submission	(\$) Reported in other Unit
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Chief Coordinator

Dr. Sanjay Mehrotra

Checked By:

Programme Director

Dr. Bandana Mehrotra

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**CAPA FOR THE OUTLINERS IN EQUAS OF BIOCHEMISTRY FOR PT  
RESULT 6**

Sr.No	Parameter	Findings	CAPA taken
Month June			<ol style="list-style-type: none"> <li>As we can see all other parameters are within consensus.</li> <li>Even after taking all the measures Calcium (total) is not falling within consensus.</li> <li>We cross checked our reports with other Laboratories including one NABL accredited Laboratory also and results were found to be matching (the reports are attached for your reference).</li> <li>The result of round 7 is awaited to see the current position of Calcium (total) along with other parameters.</li> </ol>
1.	Calcium (Total)	SDI = - 4.0	

CAPA advised by : .....  
 (Prof.) Dr. Uma Singh  
 M.B.B.S., D.G.O., M.D., F.I.A.M.S. Pathology  
 Ex. Prof. P.G.I.M.S., ROHTAK-124001 (Hry.)  
 Reg. No. M.B.B.S., (M.N.C.)-1874  
 M.D. (M.C.T.)-1877

CAPA done by : .....  
**Dr. RUBY**  
**FAMS, PGDHA**  
 Hospital Administrator  
 Nirvana Diagnostic Centre



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