



## Calibration Certificate

Name & Address of Customer: Department of Central Pathology  
Government Medical College and Hospital

City: Purnia State: Bihar PIN: -----

Phone -----

E-mail -----

Name of Instrument: Astira (**240/400**)

Type: Random Access Fully Automatic Biochemistry Analyser

Serial No: 23ST240PCS0401

Calibration Date: 11/09/2024

Next Calibration Due: 10/09/2025

This is to certify that above said instrument has been validated of hardware calibration for Filters, Aspiration, and Temperature & Lamp according to the procedures provided by Q-line Biotech India

This calibration is carried out by using Standard Operating Procedures (S.O.P.) provided by Q-line Biotech India, shown in the attachment.

These instruments conform to CE-IVD & EU directives of use. Calibration carried out on site by: - **Mr Pradyuman Nath Gupta**

### Signature & Stamp

Name of Engineer/ Application Specialist: -Ajit Mohan Dubey

Asst. Sr. Manager Application

POCT Services

Encls. - SOP of Validation/Calibration along with data.



## Validation / Calibration - SOP

### Astira

- ❖ Power Supply Measure Input power Supply Voltage: 229 V (230 V AC  $\pm$  10 V)  
Check Earthling: 2.2 V (0 - 5 V)
- ❖ Ambient temperature: 26° C (10 - 35 ° C )

### Cuvette blank Check

- ❖  $\rho$  340nm  $\rho$  405nm  $\rho$  505nm  $\rho$  546 nm  $\rho$  578 nm  $\rho$  620 nm  $\rho$  660 nm  $\rho$  700 nm
- ❖ The light check value shall be less than or equal to 18000.

Filter	Cuvette blank Check (8000-Range 18000)	Status
340	15003	Pass
380	14190	Pass
405	14384	Pass
450	13134	Pass
480	12883	Pass
505	12674	Pass
546	12472	Pass
570	12339	Pass
600	12231	Pass
660	12031	Pass
700	11930	Pass
800	11757	Pass



## Light Intensity Check

The light check value shall be less than or equal to 18000.

Filter	Light Intensity check (< 18000)	Status
340	15334	Pass
380	14531	Pass
405	14700	Pass
450	13398	Pass
480	13123	Pass
505	12856	Pass
546	12649	Pass
570	12495	Pass
600	12365	Pass
660	12136	Pass
700	11990	Pass
800	11729	Pass



### Reagent Calibration of the Instrument

Customer is advised to verify the hardware calibration by reagent calibration. Use Calibrator for the calibration of all parameters.

User can do the same & attach the results in separate sheet with factors after verifying the same with Level 1 & level 2 controls. All control values should fall within acceptable range.

Data sheets of the same should be attached along with this document.

- Switch Off the instrument.
- Ensure all the Recommended Spares / Consumables have been replaced. (if not done during PM and required)
- Clean the instrument.
- Close the cover.

Test Name	QC Range Level 1	Obtained Value	QC Range Level 2	Obtained Value
Albumin	3.06(2.53-3.63)	3.03	4.68(3.84-5.52)	4.9
ALP	158(130-189)	162.8	271(222-320)	273.8
ALT	47.4(38.9-55.9)	46	134(109.9-158.1)	135.9
AMY	82(67-97)	88	239(196-282)	243.3
AST	47.4(38.9-55.9)	47.2	129.5(106.2-152.8)	136.9
CALCIUM	8.68(7.63-9.71)	8.9	11.76(10.35-13.17)	11.79
CHOLESTROL	116(99-133)	116.8	157(133-181)	164.7
CREATININE	0.72(0.58-0.85)	0.8	2.72(2.23-3.21)	2.5
TRIG.	101(85-117)	79.2	188(158-218)	189.2

Recommended Spares for replacement: NIL

We hereby certify that Validation have been carried out under the MOU. Hardware Calibration of Lamp, Filters & Temperature has been done successfully.

10/09/2025



# POCT SERVICES

**Complete Medical Solution**

29B-2B1, Transport Nagar, Kanpur Road, Adjacent  
Transport Nagar Metro Station, Lucknow-226 023, UP, INDIA  
Tel.: 0522-2433023

E-mail: [pocliko@poclservices.com](mailto:pocliko@poclservices.com) [www.poclservices.com](http://www.poclservices.com)

Please perform the standardization / Calibration and verify by evaluating controls before processing patient samples.

Next Calibration is due on: 10/09/2025

Signature of Application Specialist

Place

Date











ELITROL I

LOT 01-1200



2025-03

## FOR SELECTRA PRO ANALYZERS

CODE	REAGENT NAME	METHOD	UNIT	TARGET	NAME	UNIT	TARGET	NAME
ALB-000X	ALBUMIN	Densometric green (B/C)	g/dL	3.00	2.63	3.63	g/L	37.8
ALP-000X	ALP (CKA) BL	DOCK	U/L	150	130	160	UkatL	2.63
ALP-000X	ALP (PC)	IFCC	U/L	102	64	120	UkatL	1.70
ALSI-000X	ALT / GOT 4+1 BL	IFCC without pyridoxal-phosphate	U/L	48.2	30.5	56.8	UkatL	0.80
ALSI-000X	AVL / GPT 4+1 BL	IFCC / Standardization against IFCC method	U/L	82	67	97	UkatL	1.37
ASSI-000X	AST / GOT 4+1 BL	IFCC without pyridoxal-phosphate	U/L	47.4	38.8	55.8	UkatL	0.78
BIL-000X	TOTAL BILIRUBIN 4+1	Modified Malloy-Evly	mg/dL	1.75	1.43	2.07	umol/L	29.8
BIL-000X	DIRECT BILIRUBIN 4+1	Modified Malloy-Evly	mg/dL	1.38	1.03	1.69	umol/L	23.3
CAL-000X	CALCIUM (ARSENazo)	Arsenazo III	mg/dL	8.67	7.63	8.71	mmol/L	2.16
CHL-000X	CHLORIDE	Mercuric thiocyanate	meq/L	99.3	89.4	109.2	mmol/L	99.3
CHL-000X	CHLORIDE	I.S.E. Indirect Potentiometry	meq/L	87.2	87.5	87.5	mmol/L	87.5
CHOL-000X	CHOLESTEROL BL	Accelerator Solution Detriment / PAP	mg/dL	118	99	133	mmol/L	3.00
CHOL-000X	CHOLESTEROL HDL BL 2G	Accelerator Solution Detriment / PAP	mg/dL	37	31	43	mmol/L	0.82
CHOL-000X	CHOLESTEROL HDL BL 2G	Phosphatase complex inhibitor / PAP	mg/dL	29	24	34	mmol/L	0.75
CHOL-000X	CHOLESTEROL HDL BL 2G	Phosphatase complex inhibitor / PAP	mg/dL	58	48	64	mmol/L	1.45
CHOL-000X	CHOLESTEROL LDL BL 2G	Selective Detriment / PAP	mg/dL	83	48	72	mmol/L	1.23
CHOL-000X	CHOLESTEROL LDL BL 2G	Phosphatase complex inhibitor / PAP	mg/dL	54.23	44.47	63.99	umol/L	80.38
CK-000X	CK (IAC) BL	IFCC	U/L	133	109	157	UkatL	2.22
CK-000X	CK (IAC) BL	I.S.E. Indirect Potentiometry	meq/L	15.5	12.4	18.8	mmol/L	15.5
CO2	CO2	Jaffe	na	na	na	na	umol/L	na
CRE-000X	CREATININE JAFFE	Jaffe	mg/dL	0.72	0.59	0.85	umol/L	64
CRE-000X	CREATININE JAFFE	Jaffe	mg/dL	0.64	0.77	1.11	umol/L	63
CRE-000X	IMPROVED APPLICATION	Enzymatic / PAP	mg/dL	186	153	219	umol/L	33.3
CRE-000X	IMPROVED APPLICATION	Chromozim B	U/L	45.2	37.1	53.3	umol/L	0.75
DIAG-100X	DIAG-100C	IFCC	U/L	81.5	77.8	105.2	mmol/L	5.08
GLUC-000X	GLUCOSE PAP BL	Enzymatic / PAP	mg/dL	80.1	78.8	103.8	mmol/L	5.00
GLUC-000X	GLUCOSE HK BL	Hexokinase	mg/dL	89	81	117	umol/L	17.7
IRON-000X	IRON FERMEN	Ferrous	ug/dL	91	75	107	umol/L	16.3
IRON-000X	IRON FERMEN	Ferrous	mg/dL	18.8	13.8	18.8	mmol/L	1.88
IRON-000X	NEW PRODUCT	Enzymatic / PAP	mg/dL	14.8	12.0	17.2	mmol/L	1.82
LACT-000X	LACTATE	Enzymatic / PAP	mg/dL	181	132	190	umol/L	2.88
LACT-000X	LACTATE	IFCC	U/L	161	120	180	umol/L	2.88
LACT-000X	LACTATE	IFCC	U/L	44	31	57	umol/L	0.73
LACT-000X	LACTATE	IFCC	U/L	44	31	57	umol/L	0.73
LDH-000X	LDH BL	DGGR	U/L	44	31	57	umol/L	0.73
LDH-000X	LDH BL	Xylyl Blue	mg/dL	2.20	1.94	2.48	mmol/L	0.90
LDH-000X	LDH BL	Xylyl Blue	mg/dL	2.20	1.94	2.48	mmol/L	0.90
MAGN-000X	MAGNESIUM XE	Xylyl Blue	mg/dL	2.20	1.94	2.48	mmol/L	0.90
MAGN-000X	MAGNESIUM XE	Phosphomolybdate	mg/dL	3.86	3.28	4.44	mmol/L	1.25
PHOS-000X	PHOSPHORUS	I.S.E. Indirect Potentiometry	meq/L	3.83	3.27	3.99	mmol/L	3.83
PHOS-000X	PHOSPHORUS	I.S.E. Indirect Potentiometry	meq/L	140.8	128.7	154.9	mmol/L	140.8
PROB-000X	BODIUM	I.S.E. Indirect Potentiometry	meq/L	4.81	4.23	5.39	umol/L	48.1
PROB-000X	BODIUM	Burel	g/dL	4.81	4.23	5.39	umol/L	48.1
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	101	85	117	mmol/L	1.14
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	40.2	34.2	48.2	mmol/L	6.68
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	8.09	5.18	7.00	umol/L	382
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	4.87	4.14	5.80	umol/L	290
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	48.8	32.8	60.8	umol/L	48.8
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	89	57	81	umol/L	0.88
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	188	139	198	umol/L	1.68
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	822	510	734	umol/L	8.22
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	89	56	80	umol/L	0.88
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	48	30	57	umol/L	0.48
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	16	13	18	umol/L	0.18
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	161	132	190	umol/L	1.81
PROB-000X	TOTAL PROTEIN PLUS	Enzymatic / PAP	mg/dL	181	132	190	umol/L	1.81

The values are defined withELITech reagents

# ELITROL II

**LOT** 02-2210



2026-01

## FOR SELECTRA PRO ANALYSERS

CODE	REAGENT NAME	METHOD	UNITS	TARGET	RANGE			UNITS	TARGET	RANGE
					Min	Max	Max			
ALB-0000	ALBUMIN	Bromocresol green (BCG)	g/dL	4.0	1.0	5.0	g/L	4.0	1.0	5.0
PAL-0000	ALP (HEA) SL	POC	U/L	270	20	320	µkat/L	4.5	0.3	5.0
ALP-0000	ALP FCC		U/L	112	15	227	µkat/L	1.8	0.2	3.7
ALT-0000	ALT / GOT 4+1 SL	I/CC without pyridoxal phosphate	U/L	134.0	100.0	150.0	µkat/L	2.2	1.7	2.5
AMYL-0000	AMYLASE SL	GOT (G) / Standardized by normal FCC method	U/L	219	100	252	µkat/L	3.6	1.7	4.2
AST-0000	AST / GOT 4+1 SL	I/CC without pyridoxal phosphate	U/L	129.5	100.0	152.0	µkat/L	2.1	1.7	2.5
BIL-0000	TOTAL BILIRUBIN 4+1	Vanilmandelic acid	mg/dL	8.16	0.30	7.02	µmol/L	110.0	30.0	120.0
DBIL-0000	DIRECT BILIRUBIN 4+1	Vanilmandelic acid	mg/dL	3.78	0.07	4.69	µmol/L	64.7	19.2	80.2
CALA-0000	CALCIUM ARSENATO	Ascorbic acid	mg/dL	11.78	10.35	13.17	mmol/L	2.93	2.58	3.28
CL-0000	CHLORIDE	I.S.E. Indirect Potentiometry	mEq/L	108.4	95.8	117.0	mmol/L	108.4	95.8	117.0
CHOL-0000	CHOLESTEROL BL	Enzymatic / PAP	mg/dL	157	133	181	mmol/L	4.06	3.45	4.47
HDL-0000	CHOLESTEROL HDL SL 20	Accelerator Selective Delipid / PAP	mg/dL	55	47	63	mmol/L	1.42	1.21	1.63
CHOL-0000	HDL CHOLESTEROL	Phosphate complex inhibition / PAP	mg/dL	40	35	45	mmol/L	1.03	0.90	1.14
LDL-0000	CHOLESTEROL LDL SL 20	Selective Delipid / PAP	mg/dL	78	68	90	mmol/L	2.02	1.72	2.32
LDL-0000	LDL CHOLESTEROL	Phosphate complex inhibition / PAP	mg/dL	93	79	107	mmol/L	2.41	2.05	2.77
CHOL-0250	CHOLINESTERASE	PGXC	U/L	7207	5084	8610	µkat/L	121.62	99.73	143.51
CK-NAC-0000	CK NAC SL	I/CC	U/L	323	265	381	µkat/L	5.38	4.41	6.35
CO2-0000	CO2	I.S.E. Indirect Potentiometry	mEq/L	17.2	13.8	20.6	mmol/L	17.2	13.8	20.6
CREA-0000	CREATININE JAFFE IMPROVED APPLICATION	Jaffe	mg/dL	2.72	2.23	3.21	µmol/L	240	197	283
CREA-0000	CREATININE PAP SL	Enzymatic / PAP	mg/dL	3.09	2.53	3.65	µmol/L	273	224	322
TIBC-0000	Direct TIBC	Chromazul B	µg/dL	252	207	297	µmol/L	45.1	37.0	53.2
GAM-0000	GAMMA GT PLUS SL	I/CC	U/L	221.3	181.5	281.1	µkat/L	3.69	3.03	4.35
GLUC-0000	GLUCOSE PAP SL	Enzymatic / PAP	mg/dL	221.2	188.0	254.4	mmol/L	12.28	10.44	14.12
GLUC-0000	GLUCOSE HK SL	Hexokinase	mg/dL	229.4	195.0	263.8	mmol/L	12.73	10.82	14.64
IRON-0000	IRON FERENE	Ferene	µg/dL	269	221	317	µmol/L	48.2	39.5	56.9
IRON-0000	IRON FERENE NEW PRODUCT	Ferene	µg/dL	233	191	275	µmol/L	41.7	34.2	48.2
LACT-0250	LACTATE	Enzymatic / PAP	mg/dL	43.1	35.3	50.9	mmol/L	4.78	3.92	5.64
LDH-L-0000	LDH-L SL	I/CC	U/L	308	253	363	µkat/L	5.13	4.21	6.25
LIP-0000	LIPASE SL	DGGR	U/L	119	83	155	µkat/L	1.98	1.39	2.57
MAGX-0000	MAGNESIUM XYLIDYL	Xylidyl Blue	mg/dL	3.48	3.06	3.90	mmol/L	1.43	1.26	1.60
MAGXB-0000	MAGNESIUM XB	Xylidyl Blue	mg/dL	3.48	3.06	3.90	mmol/L	1.43	1.26	1.60
PHOS-0000	PHOSPHORUS	Phosphomolybdate	mg/dL	7.74	6.58	8.90	mmol/L	2.50	2.12	2.98
3918-005	POTASSIUM	I.S.E. Indirect Potentiometry	mEq/L	6.28	5.65	6.91	mmol/L	6.28	5.65	6.91
3918-004	SODIUM	I.S.E. Indirect Potentiometry	mEq/L	160.6	144.5	178.7	mmol/L	160.6	144.5	178.7
PROB-0000	TOTAL PROTEIN PLUS	Buret	g/dL	7.07	6.22	7.92	g/L	70.7	62.2	79.2
TRIG-0000	TRIGLYCERIDES SL	Enzymatic / PAP	mg/dL	188	158	218	mmol/L	2.12	1.79	2.48
TRIG-0000	TRIGLYCERIDES MONO SL NEW	Enzymatic / PAP	mg/dL	188	158	218	mmol/L	2.12	1.79	2.48
UREA-0000	UREA UV BL	Urease / GDH	mg/dL	114.5	97.3	131.7	mmol/L	19.08	16.20	21.92
AUML-0000	URIC ACID MONO BL	Enzymatic / PAP	mg/dL	10.65	9.05	12.25	µmol/L	634	538	729
AUSL-0000	URIC ACID BL	Enzymatic / PAP	mg/dL	9.42	8.01	10.83	µmol/L	560	476	644

The values are defined with ELITech reagents