

Tosoh India Pvt. Ltd.,

Tosoh HLC-723GX

Automated Glycohemoglobin Analyzer

INSTALLATION QUALIFICATION

For

LUPIN DIAGNOSTICS, Bhopal.

MARKETED BY:

Tosoh India Pvt. Ltd.

GEBI Industrial Park, Building No. "C", Bhiwandi, Thane- 421302



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Validation Protocol: Installation Qualification

System/Instrument: HLC-723GX Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Validation Protocol : **Installation Qualification**

System / Instrument : **HLC-723GX**

Protocol Written By : **Tosoh India Pvt. Ltd.**

Laboratory : **Lupin Diagnostics, Arera Colony, Bhopal.**

Engineering Approval By : **Tosoh India Pvt. Ltd.**

Laboratory Approval By : **Lupin Diagnostics, Arera Colony, Bhopal.**

QA Approval By : **Mr. Manish Kumar Patel**

Objective

To ensure that the system / Instrument installed confirms to the purchase specifications and the manufacturers literature, and to document the information that the equipment meets the specifications.

Scope

To be performed at time of installation, modification or relocation.

Responsibility

Person overseeing the installation from Tosoh India Pvt. Ltd. will perform the qualification and record the information. He will verify the records and write the IQ Report.

Engineering Department at Lupin Diagnostics, Arera Colony, Bhopal Site will review the IQ Results.

Quality Assurance Department at Lupin Diagnostics, Arera Colony, Bhopal Site will approve the IQ Protocol and Report.

System / Equipment: HLC-723GX

Instrument ID: Sr. No. 12030510

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Validation Protocol: Installation Qualification

System/Instrument: HLC-723GX Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

a) Description of the System / Instrument being installed:

The HLC-723GX is intended to assay A1c (%) out of the total hemoglobin in blood for in vitro diagnostic use based on High Performance Liquid Chromatography principle with the cationic non-porous ion exchanger using the ionic difference. To use the analyzer, simply place the cap-pierced primary tube on the rack of the sample loader, and the analyzer will assay for A1c every 2.2 minutes with sampling and dilution

Analyzer Characteristics:

1. Operation Panel

The operation panel is a monochrome LCD with touch keys. The operation is controlled with the touch keys on the screen. Various settings can be made on the screen. Individual basic function keys such as POWER, START, STOP, HOME and ERROR RESET are provided on the right side of the display. Routine operations are executed with these keys.

2. LED Panel

Three kinds of Light Emitting Diodes (LEDs) indicate the analyzer status: Power, Run, and ERROR

3. Printer

The printer paper roll is thermal-sensitive. It prints out assay results, error messages and parameter status. The assay results can be printed out in two different formats. A roll can handle about 350 sample results depending upon the format.

4. Storage Device

The analyzer is equipped with an internal USB socket. It is used to store assay results, update and backup program versions. A maximum of 12,000 sets of assay results (approximately 500 days) can be stored on one card (32 MB) formatted by the analyzer. The last 800 sets of assay results are also automatically saved in the analyzer's internal memory.

5. Line Filter

The line filter prevents impurities (such as dust from a broken valve seal) from entering the assay line. The filter element can easily be replaced by hand without any tools.

6. Column Oven

The column oven contains the column, a critical component in assaying. The column must be kept at a constant temperature always to prevent temperature fluctuations that can have an effect on the test results. The column oven maintains a constant temperature so that no wait time is required, unless the main power switch (left side) is turned off. The column can be manually connected and can be easily replaced without any special tools.



Validation Protocol: Installation Qualification

System/Instrument: HLC-723GX Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

7. Drain Valve

If air enters the pump, open this valve and perform a drain flush in order to remove all air out of the instrument. Do not open this valve during assay.

8. Injection Valve

This valve is used to inject a sample into the assay line after it is diluted. The sample loop volume is 6 μ L.

9. Rotary Valve

The rotary valve is used to switch flow paths during sampling and elution buffer priming.

10. Sampling Mechanism

By means of detectors the instrument can make a difference between sample cups and whole blood samples. In case of whole blood, the sample is automatically diluted and injected into the assay line. When the sample is injected into the column, the sample holder is rotated and will continue till last sample arranged on turn table.

11. Pump

The pump uses the plunger method to deliver the elution buffer required for the assay. The pump operates continuously to deliver the elution buffer during the assay and feeds three different concentration elution buffers in 2.2 minutes cycles by switching the solenoid valves. It also forms a gradient (concentration control), and the hemoglobin fractions are separated by the column.

12. Degassing unit

The degassing unit removes air bubbles in the elution buffer. The vacuum pump runs intermittently to keep a constant vacuum pressure in the chamber.

13. Turn Table

The Turn table has 10 sample holders for setting samples. Primary tubes and sample cups can be set in the sample holders. Detection of the presence of samples and identification of primary tubes and sample cups take place automatically and the samples are aspirated into the sampling mechanism. Whole blood samples are automatically diluted, and taken to the assay line.



Validation Protocol: Installation Qualification

System/Instrument: HLC-723GX Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

b) List of the main components

Main Unit (HLC-723GX) 1

- Power Cord for the Main Unit 2 m 1
- Waste Eluent Bottle 5 L 1
- Waste Tank Container 1
- Screw Driver (+) 100 mm 1
- Sample Vial 50
- Flared Type Union 1
- Printer Paper (Thermal paper roll) 1
- System USB Stick (Smart Media) 1
- Holder for Reagent pack 1
- 5 L Bottle Cap 1
- Accessory box 1

c) Additional Accessories

*Accessory list included with the instrument

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Validation Protocol: Installation Qualification

System/Instrument: HLC-723GX Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Checklist:

System / Equipment: HLC-723GX

Instrument ID: Sr. No. 12030510

	Required / Ordered	Actual	Deviations
Model	HLC-723GX	HLC-723GX	Nil
System Description	Glycohemoglobin Analyzer	Glycohemoglobin Analyzer	Nil
Dimensions of Analyzer Unit -			
Width	370mm	370mm	Nil
Depth	525mm	525mm	Nil
Height	482mm	482mm	Nil
Weight	25Kg	25Kg	Nil
Electrical Power Requirements -			
Line Voltage	100 – 240 VAC	100 – 240 VAC	Nil
Frequency	50/60HZ	50/60HZ	Nil
Power Consumption	180VA	180VA	Nil
Environmental Conditions -			
Temperature	15° C – 30° C	15° C – 30° C	Nil
Humidity	40% – 80%, (No condensation)	40% – 80%, (No condensation)	Nil
Dust	Typical office level	Typical office level	Nil

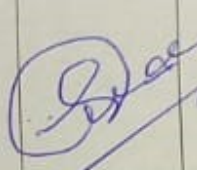
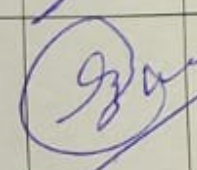
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Validation Protocol: Installation Qualification

System/Instrument: HLC-723GXLaboratory: Lupin Diagnostics, Arera Colony, Bhopal.

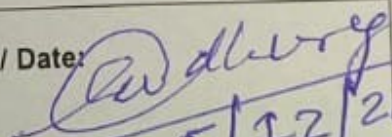
Water Requirements	Nil	Nil	Nil
Liquid Waste -			
Liquid Waste Container	5Litres	5Litres	Nil
Throughput Rate -			
Assay Measurement	2.2 Samples/min	2.2 Samples/min	Nil
Sampling System -			
Sample Pipette Principle	Cap Piercing	Cap Piercing	Nil
Sample Volume per Test	3ul Whole Blood, 120ul Diluted Sample	3ul Whole Blood, 120ul Diluted Sample	Nil
Tube / Sample Cup Detection	Possible	Possible	Nil
Sample Loading Capacity Continuous Loading	Maximum 10 Possible	Maximum 10 Possible	Nil
Reagent System -			
Reagents	Buffer 1, Buffer 2, Buffer 3 and Hemolysis/wash solution	Buffer 1, Buffer 2, Buffer 3 and Hemolysis/wash solution	Nil
No Extra Wash Solution	Yes	Yes	Nil

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Installation Procedure	Protocol Location	Performed		Sign	Date
		Yes	No		
Installation of Hardware	See Chapter 2 - Installation of the Operators Manual	Yes			29/12/22
Installation Checks	See Chapter 2 - Installation of the Operators Manual	Yes			29/12/22

Performed By: Engineering Dept – Tosoh India Pvt. Ltd.

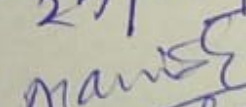
Signature / Date:


25/12/2022

Deviation: Nil

Reviewed By: Lupin Diagnostics, Arera Colony, Bhopal.

Signature / Date:


25/12/22

LUPIN DIAGNOSTICS LTD.

Ground Floor, SRP Arcade,
E-5/48, Opp. Ajwani Eye Care Center,
Arera Colony, Vitthal Market,
Bhopal, Madhya Pradesh- 462016.

Tosoh India Pvt. Ltd.,

Tosoh HLC-723GX

Automated Glycohemoglobin Analyzer

OPERATIONAL QUALIFICATION

For

LUPIN DIAGNOSTICS, Bhopal.

MARKETED BY:

Tosoh India Pvt. Ltd.

GEBI Industrial Park, Building No. "C", Bhiwandi, Thane- 421302



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Validation Protocol : Operational Qualification

System/ Instrument: HLC-723GX Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Validation Protocol : Operational Qualification

System / Instrument : HLC-723GX

Protocol Written By :Tosoh India Pvt. Ltd.

Laboratory : Lupin Diagnostics, Arera Colony, Bhopal.

Engineering Approval By : Tosoh India Pvt. Ltd.

Laboratory Approval By : Lupin Diagnostics, Arera Colony, Bhopal.

Q.A. Approval By : Mr. Manish Kumar Patel

Objective

To determine that the system/ instrument operates according to specifications and to record all relevant information and data to demonstrate its functions as expected.

Scope

To be performed after installation, modification, or relocation has been completed.

Responsibility

Person responsible for operating the system/ instrument from Tosoh India Pvt. Ltd will perform the qualification and record the information.

He will supervise the study, verify the completion of the records, and write the deviation report and the operational qualification report.

Customer quality assurance department will review and approve the OQ protocol and report.



Validation Protocol : Operational Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Materials, SOP's, Documents:

Following are the topics course needed to perform the operation qualification -

- Daily operating procedures – Operator's Manual - Chapter 3.0
- Maintenance procedures – Operator's Manual - Chapter 5.0
- Special operation – Operator's Manual - Chapter Appendix

Procedure:

- Provide SOP's and data sheets for normal operation of the system
- Provide basic operation training and documenting the operators has been trained.
- Ensure adequate practice with general maintenance and some tips to trouble shooting.
- Test and record calibration data with QC report.
- Test and record outputs.
- Record any deviations to the procedures performed
- Prepare a deviation report including the justification of acceptance and impact on the operation.

Prepare an Operational Qualification Report:

- This should include data study initiated, data completed, observations made, problems encountered, completeness of information collected, results of control/ alarm tests, sample data if appropriate, other information relevant to the study, and conclusions on the validity of the instrument/ system operations.
- Submit the reports to QA for review and approval.

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Validation Protocol : Operational Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Preparation: Document check

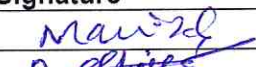
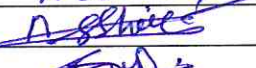
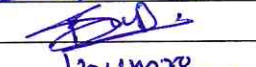
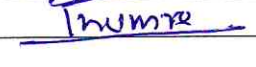
SOP Title and number File Location QA/QC approval date

Daily Operation

Maintenance

Special operations

Training Records:

Name	Signature
Mr. Manish Kumar Patel	
Mr. Salman Sheikh	
Ms. Pooja Sursuje	
Mr. Laxmi Narayan Umre	

For training certificates contact local Support team members

Equipment make and model

Tosoh HLC 723GX

Manual available

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Validation Protocol : Operational Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Results

Calibration and Control data:

Calibration data

Test	Date performed	Results	Acceptable Y/N
HbA1c	25/12/2022	4.8	Y
HbA1c	25/12/2022	4.8	Y
HbA1c	25/12/2022	4.8	Y
HbA1c	25/12/2022	9.3	Y
HbA1c	25/12/2022	9.3	Y

QC Data: Tosoh HbA1c Control AB6050

Test	Control	Results	Acceptable Y/N
HbA1c Level 1 control	5.2 +/- 1.04	5.4	Y
HbA1c Level 2 control	10.8 +/- 2.18	10.9	Y

Deviation Report

- **Deviation(s)** : NIL
- **Justification for Acceptance:** All operational requirements qualified.
- **Impact on Operation** : Instrument ready for its performance qualification & routine operation.

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Validation Protocol : Operational Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Operation Qualification Report

- **Date Study Initiated** : 25-12-2022
- **Date Study Completed** : 26-12-2022
- **Observations Made** : Performance qualification complies as per manufacturer Recommendations
- **Problems encountered** : Nil
- **Completeness of Information Collected** : All information found to be complete
- **Results of the Tests** : Acceptable results.
For Calibration and QC results refer to the attachment

Conclusions on the validity of the system operations:

- Study data has determined that the system described in this document meets/ ~~does not meet~~ all the criteria outlined in this operational qualification protocol.
- Operation qualification completed/ ~~not completed~~ successfully
- The system is ready for its performance qualification.

Performed By: Tosoh India Pvt. Ltd.

Signature / Date:

[Handwritten Signature]
26/12/2022

Deviations: Nil

Verified By: Lupin Diagnostics, Arera Colony, Bhopal

Signature / Date:

[Handwritten Signature]
25/12/22
LUPIN DIAGNOSTICS LTD.
Ground Floor, SRP Arcade,
E-5/48, Opp. Ajwani Eye Care Center,
Arera Colony, Vitthal Market,
Bhopal, Madhya Pradesh- 462016.

Tosoh India Pvt. Ltd.,

Tosoh HLC-723GX

Automated Glycohemoglobin Analyzer

PERFORMANCE QUALIFICATION

For

LUPIN DIAGNOSTICS, Bhopal.

MARKETED BY:

Tosoh India Pvt. Ltd.

GEBI Industrial Park, Building No. "C", Bhiwandi, Thane- 421302



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Validation Protocol : Performance Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

System / Instrument : HLC-723GX

Protocol Written By : Tosoh India Pvt. Ltd.

Laboratory : Lupin Diagnostics, Arera Colony, Bhopal.

Laboratory Approval By : Lupin Diagnostics, Arera Colony, Bhopal.

QA Approval By : Mr. Manish Kumar Patel.

Objective

To determine that the system/ instrument operates according to specifications and to record all relevant information and data to demonstrate it functions as expected.

Scope

To be performed after installation, modification, or relocation, after the installation qualification and Operational qualification has been completed

Responsibility

Person responsible for operating the system/ instrument from Tosoh India Pvt. Ltd. will perform the Performance qualification report and record the information.

He will supervise the study, verify the completion of the records, and write the deviation report, assay validation and the Performance qualification report.

Customer quality assurance department will review and approve the PQ protocol and report.

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Validation Protocol : Performance Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

a) Description of the System / Instrument being installed:

HLC-723GX works on the principle of High Performance Liquid Chromatography (HPLC).

The analyzer uses the Cation exchange column to separate hemoglobin components by different ionic charge.

- a. Variant Analysis Mode
- b. Instrument interfaced with 10 samples Turn Table (Sample loader).

Procedure:

- Provide SOP's and data sheets for normal operation of the system.
- Provide basic operation training and documenting the operators have been trained.
- Ensure adequate practice with general maintenance and some tips to trouble shooting.
- Test and record calibration data with QC report.
- Test and record outputs.
- Record any deviations to the procedures performed.
- Prepare a deviation report including the justification of acceptance and impact on the operation.

Prepare an PerformanceQualification Report:

- This should include data study initiated; data competed; observations made; problems encountered; completeness of information collected; results of control/ alarm tests; sample data if appropriate; other information relevant to the study; and conclusions on the validity of the instrument/ system operations.
- Submit the reports to QA for review and approval.
- Document the information requested below:
 - Instrument Manufacturer: TOSOH Corporation, Japan
 - Reagent Manufacturer: TOSOH Corporation, Japan



Validation Protocol : Performance Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Reagents Used to Estimate the requested Test:

- TSK gel HLC –723 Variant HSi column
- Variant Elution Buffer HSi No. 1
- Variant Elution Buffer HSi No. 2
- Variant Elution Buffer HSi No. 3
- HSi Hemolysis & Wash Solution
- Filter Element
- Calibrator - 2 levels
- Control Level 1 & Level 2

Accessories:

- Printer Paper

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Validation Protocol : Performance Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Results:

Calibration and Control Data

Calibration Data: 25.12.2022

Test	Date performed	Results (%)	Acceptable Y/N
Tosoh Calibrator 1	25.12.2022	4.8	Y
Tosoh Calibrator 2	25.12.2022	9.3	Y

QC Data:

Test	Control Range	Results (%)	Acceptable Y/N
HbA1c Control Level 1	5.2(+/-)1.04	5.4	Y
HbA1c Control Level 2	10.8(+/-)2.18	10.9	Y

*For Calibration and QC results data refer to attachment

Performed By: Tosoh India Pvt. Ltd.

Signature / Date:

Deviations: Nil

Verified By: Lupin Diagnostics, Arera Colony, Bhopal.

Signature / Date:

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25/12/2022
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LUPIN DIAGNOSTICS LTD.
Ground Floor, SRP Arcade,
E-5/48, Opp. Awaraj Eye Care Center,
Arera Colony, Vithal Market,
Bhopal, Madhya Pradesh- 462016.

Validation Protocol : Performance Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Purpose & Scope : Performance Validation of Tosoh HLC-723GX

Specimen : Whole Blood

Experiments : 1. Accuracy check & Precision check

2. Carry over

3. Sample Dilution

4. Method Comparison

1. Accuracy check & Precision check -

A. External Control:

Name: RANDOX HbA1c Controls.

Level 1: Target Value: 5.2 %(NGSP)

Level 1 range: (+/-) 1.04%

Level 2: Target Value: 10.8 %(NGSP)

Level 2 range: (+/-) 2.18%

ACCURACY & PRECISION STUDY		
S.No	RANDOX L1 Target (5.2)	RANDOX L2 Target (10.8)
1	5.4	10.9
2	5.4	10.9
3	5.5	10.8
4	5.4	10.8
5	5.4	10.9
6	5.4	10.9

TOSOH Control Data Summary			
Level	Mean	SD	CV%
Level 1	5.42	0.10	0.93
Level 2	10.87	0.151	0.87

2. Carry Over Study:

S. No.	Carry Over Study
Sample 1	5.4
Sample 1	5.4
Sample 2	6.5
Sample 2	6.5
Sample 1	5.4
Sample 1	5.4

Inference: No Carryover was observed.

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Validation Protocol : Performance Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

2. Sample Dilution Study:

To evaluate the dilution done by the instrument and manual dilution

S.NO	Auto Dilution (Instrument)	Manual Dilution
1	5.4	5.4
2	6.5	6.5
3	5.5	5.5

Inference: No significant change observed between the dilutions.

3. Method Comparison Study:

S No.	Barcode	Existing Method	Other Method
1	*****	6.0	5.9
2	*****	6.2	6.2
3	*****	6.0	6.1
4	*****	5.7	5.7
5	*****	5.3	5.2
Correlation 0.8774			

Inference: Lupin Diagnostics, Arera Colony, Bhopal. results correlated with existing platform.

Performance Qualification Report:

- Date Study Initiated : 25.12.2022
- Date Study Completed : 26.12.2022
- Observations Made : Performance qualification complies as per manufacturer Recommendations
- Problems encountered : Nil
- Completeness of : All information found to be complete

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Validation Protocol : Performance Qualification

System/ Instrument: HLC-723GX

Laboratory: Lupin Diagnostics, Arera Colony, Bhopal.

Information Collected

- **Results of the Tests** : Acceptable results.
For Calibration and QC results refer to the attachment

Conclusions on the validity of the system operations:

- Study data has determined that the system described in this document ~~does not meet~~ **meets** all the criteria outlined in this operational qualification protocol.
- Performance qualification ~~not completed~~ **completed** successfully
- The system is ready after its performance qualification for routine operations.

Performed By: Tosoh India Pvt. Ltd.

Signature / Date:

[Handwritten Signature]
25/12/2022

Deviations: _____ Nil _____

Verified By: Lupin Diagnostics, Arera Colony, Bhopal.

Signature / Date:

[Handwritten Signature]
25/12/22

LUPIN DIAGNOSTICS LTD.
Ground Floor, S. Arcade,
E-5/40, Opp. Ajwani Eye Care Center,
Arera Colony, Vindhya Market,
Bhopal, Madhya Pradesh- 462016.



TOSOH INDIA PVT. LTD.

HLC-723GX CALIBRATION REPORT

Customer Name : Lupin Diagnostics.
 Customer Address : E-5/48, Azara Colony, Opp. Ajeem Eye care Centre, Bhopal (M.P) 462016.
 Installation Site : Same as Above.

Installation Date : 15/12/2022 Instrument Model : HLC-723GX
 Instrument Serial No. : 12030510 Firmware Version : 1.24
 Calibration Date : 17/12/2023 Calibration Due Date : 16/12/2024
 Sign of Check OK: V Replace: X Adjustment: A
 Repair: ΔR Cleaning: C Grease Up: L

ANALYZER INFORMATION

Instrument : HLC-723GX
 Instrument S/N : 12030510
 Needle type Standard Side-hole
 AUTO SAVE YES NO
 Bar-code YES NO

MEASUREMENT CONDITIONS

SYSTEM Ver. No. 1.24
 Sample Whole blood Centrifuged Mixed
 FLOW 1.00 Z1-SMP: 3026
 Y1-SMP: 3641 Y1-CAL: 4287
 SYR-IN31 11 SYR-IN7: 1319

ALARM SETTING

Paper-end, condition of printing Column oven temperature

F-302 Lotus Corporate Park, Gurgaon (Haryana)
 Western Express Highway, Gurgaon (India)
 Mumbai - 400 063, India
 Tel: +91 22 614 65200
 Contact@tosohindia.com www.tosohindia.com

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TOSOH INDIA PVT. LTD.

SAMPLING UNIT

- Rotor-seal (Injection valve)
- Arm (Injection valve, check if loosened or not)
- Rotor-seal (Rotary valve)
- Packing, check leak and worn or not (Syringe-R)
- Dilution port & needle wash block, clean or not
- Barcode reader, readable without error
- Turn table rotation sensor & sample sensor
- Actions of turn table sampling positions (1 & 10)
- Position Check for sample and calibrator aspiration
- Sample suction positions

- Stator-face (injection valve)
- Sample-loop (Injection valve)
- Round-head screws at the coupling (Rotary valve)
- Actions of Z1 & Y1 axis and SY-R
- Leak from O-ring (F/N:U17092)
- Door latch action & sensor
- Actions of turn table calibrator position
- Position of turn table home sensor
- Needle positions (at sampling, at dilution, at CAL)

Whole blood sample Aspiration check: 8 μ L

Diluted blood sample Aspiration check: 82 μ L

DETECTOR

Column oven Temperature: 25°C Allowed: ± 2

Check noise at buffer changes

Baseline stability Detector adjustment

Lamp Initial Intensity: 100%

Lamp Current Intensity: 100%

REF %: 98%

PUMP

- Check if the pump cam is not dirty
- Leak from plunger-seal
- Check if the diaphragm and plunger are not worn
- Actions & leak of check-valves (Uptake & Purge)
- Leak from drain-valve
- Suction & line filters clogging
- Pressure (MPa) with column
- Vacuum condition
- Drain flush
- Valves actions

0.06 w/o column 8.26 mPA

FLOW FACTOR: 1.00 ml/min

Measured flow: 1.00 ml/min

OTHERS

- Waste Pump Action
- Quality of printed letters
- Parameters settings
- AC voltage L-N: 230
- DC voltage 12.0V (12V)
- Check of USB Drive
- Clean up

N-E: 0 L-E: 230
24.1V (24V) 5.0V (5V)

Manish

