

## Fast

- First results become available after start-up in 2.0 min
- Analysis time is only 1.0 min/sample
- Throughput is 60 samples/hr<sup>\*1</sup>

## Simple Operation

- Easy to exchange the column & filter
- Guide screen to support operator's handling

## Reliability

- Handy barcode scanner (Option)
- Flag function
- User account management
- Reagent & Maintenance management

## High Precision

- Good reproducibility below 1.0 % CV
- NGSP certification / IFCC certification

## Expandability

- Sample Loaders (90SL or 290SL)



**HLC-723G11 90SL**

Up to 9 sample racks  
(90 Samples) at a time

## Expandability

Two types of sample  
loaders to choose

**HLC-723G11 290SL**

Up to 29 sample racks  
(290 Samples) at a time



### SPECIFICATIONS

Analytes	HbA1c (s-A1c), HbF
Applicable samples	Whole blood and diluted samples
Assay principle	Ion exchange high performance liquid chromatography
Detection method	2-wavelength absorbance (detection wavelength: 415 nm)
Processing throughput	1.0 min/sample

Main unit	
Column connection	Finger-tight-type
Sampling volume	3 µL for whole blood and 150 µL for diluted samples
Sample aspiration	by Nozzle
Pump unit	Single plunger pump

System control / Data processing	
Display	320 × 240 dot matrix color LCD
Input	Pressure-sensitive touch panel / operation keys
Output	Thermal printer
Storage	USB stick
Data processing unit	RS-232C serial communication port (bi-directional) Data storage by internal memory (for up to 800 samples) Recalculation (reprinting) of achieved result Automatic startup by timer Error flag function for abnormal results
Calibration	2-point calibration by calibrators
Data extraction	Extract by date or sample type (max 800 samples)
Control for quality control	Distinguished by barcode ID (max 4 controls)

Sampling unit	
Sample loading capacity	90 samples or 290 samples
Sample rack	10 primary tubes or cups per rack
Sample dilution	Dilution by Hemolysis & Wash Solution in the dilution port
Sample tubes or cups	12 - 15 mm diameter × 75 - 100 mm primary tubes / Sample cups
Sample ID recognition	Barcode with maximum of 20 digits
Barcode specifications	NW-7 (Codabar), CODE39, ITF and CODE128 (initial setting), or JAN (UPC/EAN), Industrial 2 of 5 and COOP 2 of 5 (requires setting change)

Temperature	15 - 30 °C
Power requirement	AC100 - 240 V, 50 / 60 Hz, 200 VA
Dimensions / weight	90SL model : 530 (W) × 515 (D) × 482 (H) mm / 37 kg 290SL model : 1120 (W) × 530 (D) × 482 (H) mm / 54 kg



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### PART NUMBERS / DESCRIPTION

0023850	HLC-723G11 (Main Unit)
0023851	HLC-723G11LA (Main Unit)*
0023852	G11-90SL (90 Sample Loader)
0023853	G11-290SL (290 Sample Loader)

\* Possible to connect with Laboratory Automation Belt line

Variant Analysis Mode	
0023478	TSKgel G11 Variant (Analysis Column)
0023479	G11 Variant Elution Buffer No. 1 (S)
0028480	G11 Variant Elution Buffer No. 2 (S)
0028481	G11 Variant Elution Buffer No. 3 (S)
0018431	HSi Hemolysis & Wash Solution (L)
0019550	HSi Hemolysis & Wash Solution (LL)
0018767	Hemoglobin A1c Calibrator Set
0021974	Hemoglobin A1c Control Set

Analysis Column	Elution Buffers and Hemolysis & Wash Solutions

Hemoglobin A1c Calibrator Set

Hemoglobin A1c Control Set



### OPTIONS

0022944	Handy Barcode scanner
0023294	Base for Handy Barcode scanner

\* "HLC-723" and "TSKgel" are the registered trademarks of Tosoh Corporation in Japan, etc.  
"G11" is the registered trademark of Tosoh Corporation in Japan.  
\* Specifications and design may be changed without prior notice.



## Variant Analysis Mode



Have a long evolutionary history  
with high reliability





Have a long evolutionary history with high reliability

Tosoh Automated Glycohemoglobin Analyzer **HLC-723 G11**

Fast but precise and accurate HbA1c measurement by HPLC method

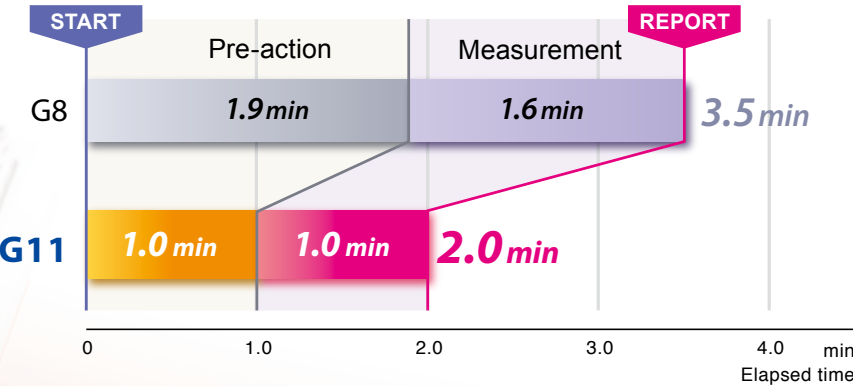
Contributing to prevention of complications by monitoring and control of diabetes



Fast

Variant Analysis Mode

High speed 1.0 min/sample & First report 2.0 min<sup>\*1</sup>



Simple Operation

Simplified replacement of filter element

Filter element can be easily replaced by newly-applied filter handle.



Replacement of the printer paper

Replacement of the printer paper is easily done in one-step.



Guide Screen

“Column Replacement”, “Elution Buffer Replacement”, “Filter Replacement”, “Printer Paper Replacement”, “Drain Valve Open/Close” can be checked on Guide.

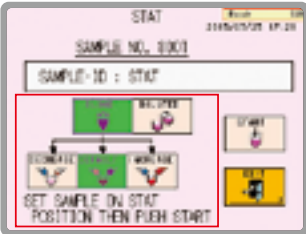
(Example) Column Replacement



STAT Assay

Blood tube or sample cup is automatically recognized on STAT port.

- Dilution ratio can be selected from DEFAULT (by 201 times), DECREASE (by 401 times) or INCREASE (by 101 times), for small quantity sample or low Hb sample.



Reliability

Handy Barcode Scanner<sup>\*2</sup>

Reading barcode ID for STAT measurement, Calibration value, Reagent lot No. and expiration date can be input by handy barcode scanner.



Management of Reagent Information

REAGENT INFO screen displays lot number, start date being used and expiration date of the elution buffers/column.



Management of User Account

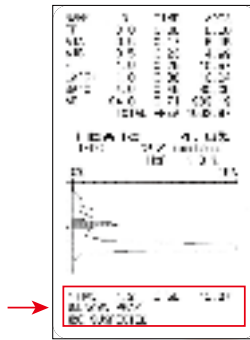
You can input user name. User name is also printed on the results.



Detection of abnormal chromatogram by Flag setting

Supporting the judgment of the result by Flag setting.

- Effective for detecting abnormal Hb.



High Precision

Best-in-class measurement precision

HPLC method is the gold standard for HbA1c measurement. G11 acquires good within-run reproducibility and between-run reproducibility.

Within-run reproducibility (n=10) s-A1c (%)

Sample	Mean(%)	SD(%)	CV(%)
Low level sample	4.99	0.03	0.63
High level sample	9.80	0.00	0.00

Between-run reproducibility (n=10) s-A1c (%)

Sample	Mean(%)	SD(%)	CV(%)
Low level sample	4.90	0.05	0.96
High level sample	9.83	0.05	0.49

In house data

NGSP and IFCC certifications

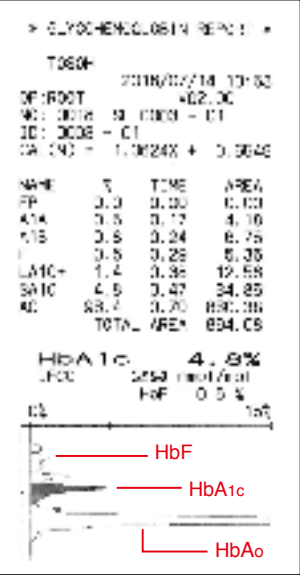
HLC-723 series have been and are NGSP<sup>\*3</sup> and IFCC<sup>\*4</sup> certified.



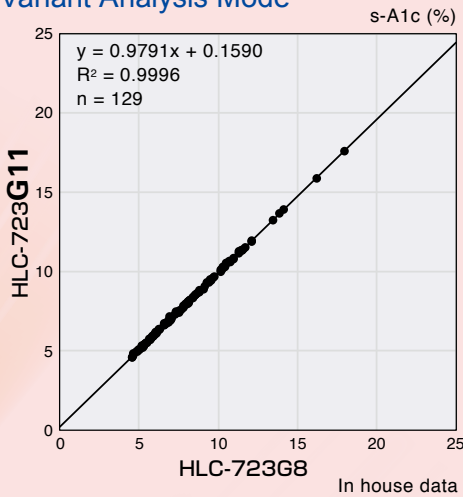
Tosoh Automated Glycohemoglobin Analyzer **HLC-723 G11**

Performance Data

Sample Chromatogram



Correlation (vs. G8) Variant Analysis Mode



Effects of Coexisting Substances

No interference from coexisting substances up to the concentrations below.

Glucose	~ 1000 mg/dL
Sodium cyanate (Kidney disorder)	~ 25 mg/dL
Acetaldehyde (alcohol drinking)	~ 25 mg/dL
Acetylsalicylic acid (Aspirin)	~ 50 mg/dL
Free bilirubin	~ 20 mg/dL
Conjugated bilirubin	~ 20 mg/dL
Triglyceride	~ 500 mg/dL
Ascorbic acid	~ 250 mg/dL

<sup>\*1</sup>) The time lapse after sampling and before printing the results. <sup>\*2</sup>) Handy Barcode Scanner is an option (0022944) <sup>\*3</sup>) NGSP (National Glycohemoglobin Standardization Program) <sup>\*4</sup>) IFCC (International Federation of Clinical Chemistry and Laboratory Medicine)

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