

# Instructions For Use

## Hemoglobin A1c Calibrator Set



Revised in November, 2019

CAUTION : US federal law restricts this device to sale by or on the order of a licensed healthcare practitioner.

### 1. Intended Use

The Hemoglobin A1c Calibrator Set is a reference agent specifically designed for calibrating Tosoh Automated Glycohemoglobin Analyzers (HLC-723<sup>®</sup>G7, HLC-723G8, HLC-723GX and HLC-723G11) which use stable A<sub>1c</sub> (S-A<sub>1c</sub>) when performing assay operations. For detailed description of procedures for using the Hemoglobin A1c Calibrator Set, refer to the Operator's Manuals for the Tosoh Automated Glycohemoglobin Analyzers (HLC-723G7, HLC-723G8, HLC-723GX<sup>(\*)</sup> or HLC-723G11<sup>(\*)</sup>).

(\*) CAUTION : The HLC-723GX and HLC-723G11 analyzers are not for sale in the US.

### 2. Prior to Use

Inspect the packaging and the exterior of the vial for any signs of damage prior to use. If any damage is visible, contact your local Tosoh sales representative.

Confirm that the following document is included in the package.

- Instructions For Use 1 copy
- Barcode Sheets 1 copy

### 3. Warnings and Precautions

- 1) This product is intended for *in vitro* diagnostic use only.
- 2) The analyzer must be recalibrated, using fresh Calibrators if a peak is detected between s-A<sub>1c</sub> and A<sub>0</sub>.
- 3) Each human blood used in the preparation of the Hemoglobin A1c Calibrator Set has been tested by standard, approved methods and found to be negative for the presence of HBsAg and antibodies to HIV and HCV. Since no test method can give complete assurance that products derived from human blood will not transmit infectious agents, it is recommended that this product be handled with the same precautions as those used for patient samples.

### 4. Content

Catalogue No.	Description	Package content
0018767	Hemoglobin A1c Calibrator Set	10 × 4 mL (5 each of 2 levels)

### 5. Related Components

Hemoglobin A1c Control Set  
Catalogue No. 0021974

### 6. Storage and Stability

- 1) The Hemoglobin A1c Calibrator Set should be stored at 2 to 8 °C while unopened. It will remain stable for use up to the expiration date indicated on the vial.
- 2) After being opened and reconstituted, the Hemoglobin A1c Calibrator Set will remain stable for use for up to one week at 2 to 8 °C.
- 3) The expiration date for the Hemoglobin A1c Calibrator Set is shown below.

Expiration date: \*\*\*\*-\*\*-\*\* (YYYY-MM-DD)

### 7. Assigned Values

Hemoglobin A1c Calibrator Set

Lot No. \*\*\*\*\*

IFCC<sup>(\*)</sup> Aligned Value

	Calibrator (1)	Calibrator (2)
IFCC Aligned Value	**.* mmol/mol	**.* mmol/mol

(\*) IFCC: International Federation of Clinical Chemistry and Laboratory Medicine

The assigned values are traceable to IFCC HbA1c Calibrator Set provided from IFCC Working Group on Standardization of HbA<sub>1c</sub>.

NGSP<sup>(\*)</sup> Aligned Value

NGSP Aligned Value	Calibrator (1)	Calibrator (2)
HLC-723G11 <sup>(*)</sup>	**.* %	**.* %
HLC-723G8		
HLC-723GX <sup>(*)</sup>		
HLC-723G7 (Ver. 3.00 ~) <sup>(*)</sup>	*.* %	*.* %

(\*) NGSP : National Glycohemoglobin Standardization Program

(\*) The HLC-723GX and HLC-723G11 analyzers are not for sale in the US.

(\*) HLC-723G7 can set two decimal places after the system version 3.00.

The assigned values were calculated using the following conversion equation:

$$\text{NGSP (\%)} = 0.09148 \times \text{IFCC (mmol/mol)} + 2.152$$

Ref. : Geistanger A. et al. Statistical Methods for Monitoring the Relationship between IFCC Reference Measuring Procedure for Hemoglobin A1c and the Designed Comparison Methods in the United States, Japan, and Sweden. Clin Chem 54 : 1379-1385, 2008

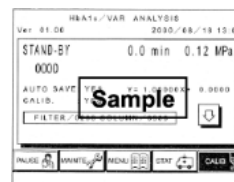
### 8. Reconstitution Procedure

- 1) Remove the cap from the calibrator vial.
- 2) Reconstitute Calibrators (1) and (2) by adding 4 mL of distilled water to each and thoroughly blending using inverted gentle agitation.
- 3) Store the reconstituted calibrators at 2 to 8 °C and use within a period of one week.

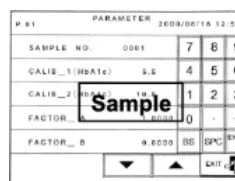
### 9. Calibration Procedure

HLC-723G7

- 1) Dispense 800 μL, respectively, of reconstituted Calibrators (1) and (2) into the designated sample cups.
- 2) Place Calibrators (1) and (2) in positions No. 1 and No. 2 of the first rack.
- 3) Go to Main screen and press the CALIB key so that it is highlighted in reverse. In Main screen confirm that CALIB status is "Yes".



- 4) Go to Main screen, press the MENU key to open MENU screen and PARAMETER key to open PARAMETER screen.



CAUTION : The numbers shown above are just examples. Please enter the numbers shown at "7. Assigned Values".

- 5) Enter the assigned values for Calibrators (1) and (2) (See "7. Assigned Values") at CALIB\_1 and CALIB\_2, respectively.
- 6) Press the START key. Calibrator (1) will be automatically measured three times and Calibrator (2) will be automatically measured two times to calculate calibration coefficients "a" and "b". This will, in turn, calibrate subsequent samples using those calibration coefficients. Note that calibration will have to be performed again if the following results are produced.
  - Difference between the 2<sup>nd</sup> and 3<sup>rd</sup> s-A<sub>1c</sub> (%) value exceeds 0.3 %.
  - Difference between the 4<sup>th</sup> and 5<sup>th</sup> s-A<sub>1c</sub> (%) value exceeds 0.3 %.
  - Any of the four calibrator results differ from its assigned value by 30 % or more.

Refer to the HLC-723G7 Operator's Manual for detailed description.

#### HLC-723G8 / HLC-723GX / HLC-723G11

##### 1) • HLC-723G8

Dispense 400 µL, reconstituted Calibrators (1) and (2), respectively, into the designated sample cups.

- HLC-723GX / HLC-723G11

In the case of HLC-723GX and HLC-723G11 dispense 500 µL, reconstituted Calibrators (1) and (2), respectively, into the designated sample cups.

##### 2) • HLC-723G8 / HLC-723G11

Place Calibrators (1) and (2) in positions No. 1 and No. 2 of the first rack.

- HLC-723GX

Place Calibrators (1) and (2) in each Calibrator holder on the sampler turntable.

##### 3) Press the CALIB key on Main screen (No. 1 screen).

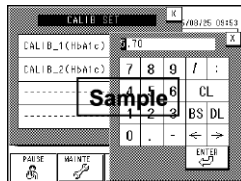
##### 4) The key is highlighted and the Calibrator's assigned value input screen (CALIB SET screen) is displayed.

The lists of assigned values for Calibrators (1) and (2) (See "7. Assigned Values") will be shown.

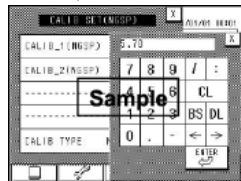
##### 5) Press record for Calibrator (1) to pop up the number input screen.

Enter the assigned value and close the screen.

⟨HLC-723G8⟩



⟨HLC-723GX / HLC-723G11⟩



**CAUTION :** The numbers shown above are just examples. Please enter the numbers shown at "7. Assigned Values".

- 6) Enter the assigned value for Calibrator (2) as well.
- 7) Confirm that the correct values are entered.
- 8) Close CALIB SET screen.
- 9) Press the START key. Calibrator (1) will be automatically measured three times and Calibrator (2) will be automatically measured two times to calculate calibration coefficients "a" and "b". This will, in turn, calibrate subsequent samples using those calibration coefficients. Note that calibration will have to be performed again if the following results are produced.
  - Difference between the 2<sup>nd</sup> and 3<sup>rd</sup> s-A<sub>1c</sub> (%) value exceeds 0.3 %.
  - Difference between the 4<sup>th</sup> and 5<sup>th</sup> s-A<sub>1c</sub> (%) value exceeds 0.3 %.
  - Any of the four calibrator results differ from its assigned value by 30 % or more.

Refer to the HLC-723G8, HLC-723GX or HLC-723G11 Operator's Manual for detailed description.

Hemoglobin A1c Calibrator Barcode Sheets  
(For use with HLC-723G11 only.)

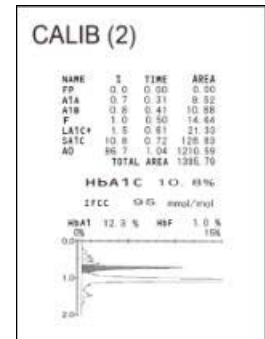
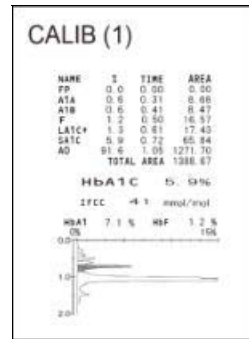
Calibrator's assigned value, Lot. No. and expiration date are automatically entered by scanning Barcode Sheets with an optional handy barcode scanner connected to HLC-723G11.

Refer to the HLC-723G11 Operator's Manual for detailed description.

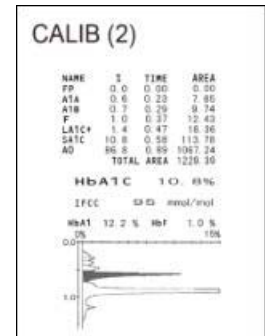
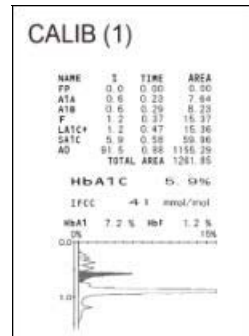
## 10. Sample Measurement

Note that the measured values displayed in the chromatograms for individual measuring procedures may differ from the foregoing assigned values.

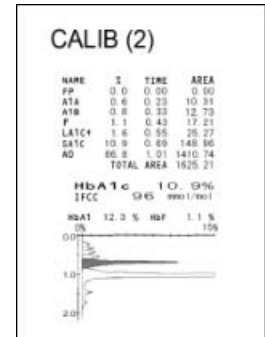
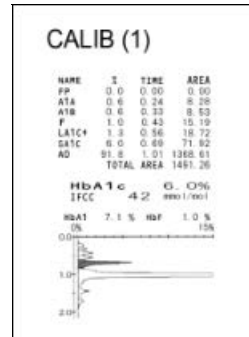
⟨HLC-723G7⟩



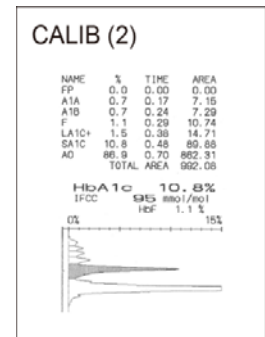
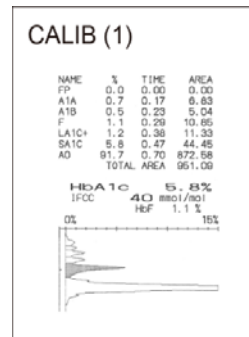
⟨HLC-723G8⟩



⟨HLC-723GX⟩



⟨HLC-723G11⟩



Symbols on the product labels

Table with 2 columns: Language (e.g., bg, cs, da, de, el, en, es, et, fr, hr, hu, it, it, iv, no, pl, pt, ro, sk, sl, sv, tr) and Content (instructions for use in various languages).

Grid of symbols and their meanings: CE (European Conformity), EC REP (Authorized representative in the European Community), REF (Catalogue number / Part number), IVD (In vitro diagnostic medical device), LOT (Batch code / Lot number), NET (Net volume), Supplied by, Mfg. site, Date of manufacture, US: For prescription use only, Imported and Marketed in India by.



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Printed in Japan

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