HbA1c Analyzer

Model YR05129

Instruction Manual

Thank you very much for purchasing our Kalstein´s HbA1c Analyzer Model YR05129

Please read the “Operating Instructions” and “Warranty” before operating this unit to assure proper operation. After reading these documents, be sure to store them securely together with the “Warranty” at a hand place for future reference.

 Warning: Before operating the unit, be sure to read carefully and fully understand important warnings in the operating instructions.

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1、 Overview

HbA1c analyzer uses affinity chromatography to determine the content of related proteins through the reaction of reagents and specific proteins in blood. The whole measurement process is completely controlled by a microcomputer, the measurement results are accurate and stable, and the measurement data can be stored, displayed and printed.

A. Features

(1) Portable handset with built-in power supply or external power supply.

(2) Color touch screen display, man-machine dialogue, operation process is very simple.

(3) The measurement speed is fast, and the results are obtained in 2 minutes.

(4) It can store and query the sample measurement results.

(5) It can transmit data to the receiver through Bluetooth wireless data, which is convenient for medical statistics and long-term storage.

B. Working conditions of the instrument

(1) The power supply voltage of the adapter used in the instrument must be in the range of 100-240 V, 50 Hz / 60 Hz.If the power supply voltage exceeds the range required by the instrument, please connect external regulated power supply.

(2) Make sure there is no strong electromagnetic interference source such as centrifuge around the instrument.

(3) Ensure that the ambient temperature of the instrument is in the range of 10 ~ 30 ℃, and the maximum relative humidity is not more than 80%.

2、 Technical characteristics

(1) Accuracy: detection deviation ≤± 8.0%

(2)Repeatability: coefficient of variation (CV) ≤ 5.0%

(3)Stability: the instrument shall be tested after 0.5 h, 1 h, 2 h and 3 h after startup, and the detection deviation shall be less than ± 10%, and the coefficient of variation at each time point shall be ≤ 5%.

(4)Normal working state: after the analyzer is powered on, it should be able to turn on and off normally. After starting up, the display screen will be on. Click the item test button, and the instrument will perform corresponding actions.

(5) Linearity: within the detection range of glycosylated hemoglobin test kit [4.0%, 16.0%], the correlation coefficient is not less than 0.9900

(6)Measurement time: put the chromatography card into the chromatography disk to start timing, until the detection results are displayed, the whole process does not exceed 50 seconds.

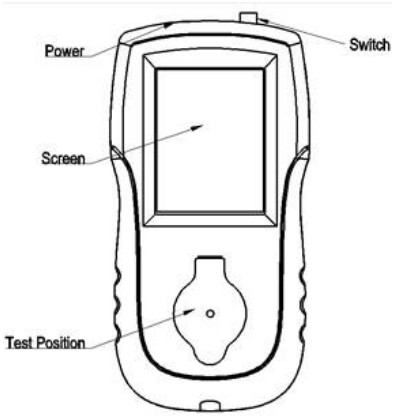
(7)Instrument size: width × length × height: 65mm × 135mm × 25mm

(8) Instrument weight: 125g

(9) Power supply voltage: DC 5V 1000mA

(10) Rated power: 5VA

3、 Brief introduction of the instrument



(1) Power switch: used to turn on and off the power supply.

(2) Power interface: used for external power supply, charging or power supply lamp operation.

(3) Display screen: used to display the operation interface of the instrument and realize human-computer interaction through the touch screen.

(4) Test position: when testing, place the chromatography card in the.

(5) Chromatography card: a part of reagent, which is put into the test position for measurement

4、 Use and operation steps

1. Power on

After the instrument is powered on, the instrument will automatically carry out self-test. If self-test is needed, it must be put into the blank chromatography disk and click the "confirm" button to carry out self-test. Otherwise, click "skip" to skip the self-test. It is recommended that the customer conduct a self-test every time the machine is turned on to ensure that the instrument is in normal state this time.

2. Work main menu

(1) Measurement button, for users to test.

(2) Time button, click the timing button, the instrument starts to time. When the time is 120 seconds, the instrument buzzer will make two short beeps continuously, and when the time is 180 seconds, the instrument buzzer will make three short beeps continuously.

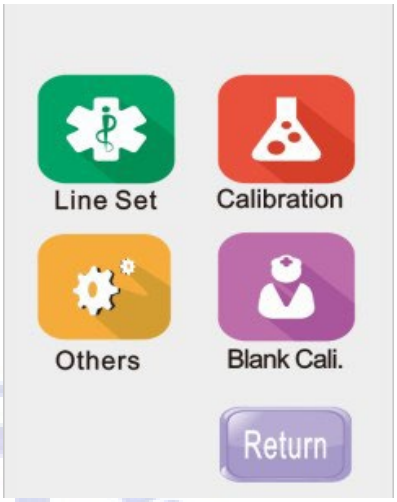
(3) ID modification button: click this button to enter the modification interface to modify the current measurement ID number.

(4) Query button: click this button to query the test results.

(5) Setting button: click this button to enter the setting interface, which is used to set the relevant parameters of the instrument.

3. description of submenu

3.1 setting interface



Click the "setting button" in the main interface to enter the setting interface.

(1) Line set button: set the measuring curve of the instrument. It is not recommended to modify it by the customer.

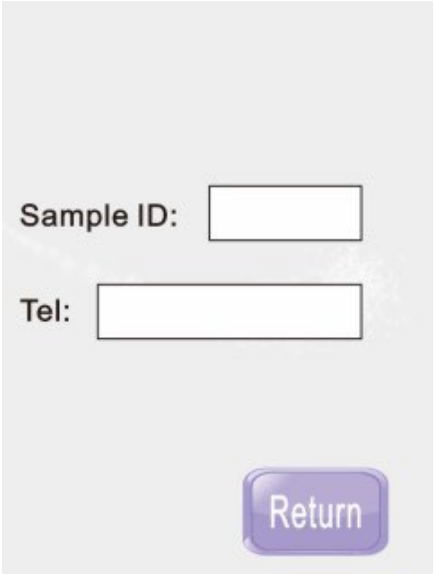
(2) Calibration: calibrate the instrument. If necessary, please conduct calibration under the guidance of professionals.

(3) Others: used to set the time and date of the instrument and automatic measurement.

(4) Blank Cali.: used to measure and calibrate the blank of the instrument.

(5) Return: click the return button to exit the interface.

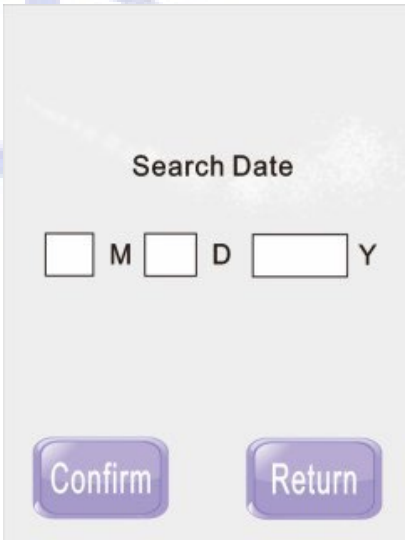
3.2 sample ID modification interface



(1) Sample ID button: the sample ID will start from 1 every day after startup, and the ID will increase by 1 for each measurement. For special needs, you can modify the sample ID here, and the sample ID will increase upward from the newly modified value.

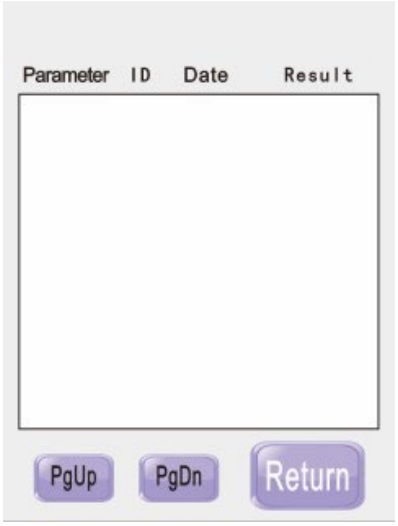
(2) Tel button: reserved for future function expansion and has no effect at present.

3.3 data query interface



You can query all the survey data in a certain day in the past. Before query, please input the date to be queried in the input box and click this button to query.

3.4 query result display interface



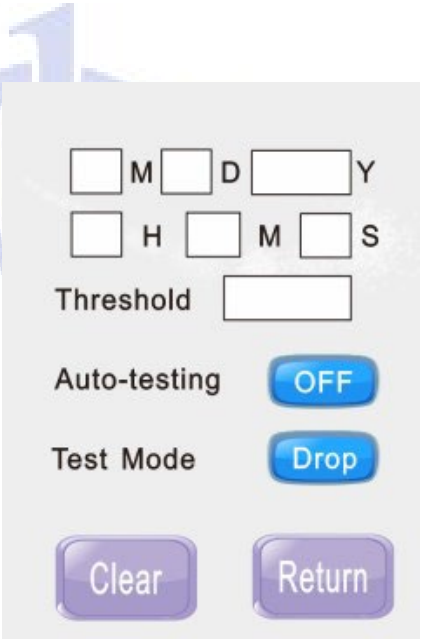
After the results are found, the interface will be displayed, and the measurement results will be displayed in this interface.

(1) Page up button: click this button to view the results of the previous page.

(2) Page up button: click this button to view the results on the next page.

(3) Return button: click this button to return to the main interface.

3.5 Other settings interface



(1) The user can set the date and time of the instrument in this interface.

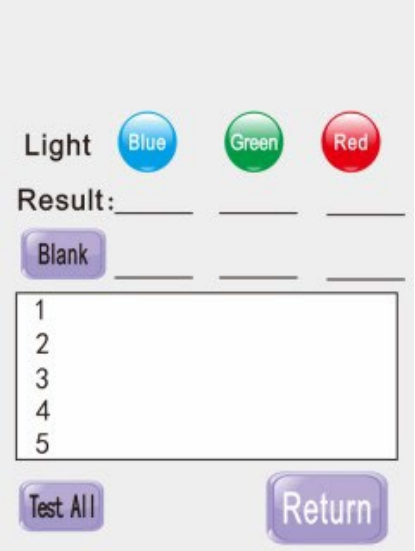
(2) Threshold: automatically measure the threshold. There are two ways to adjust the value. During the self-test, the user will place a blank test disk according to the prompt and click "confirm" for self-test. After the self-test is completed, the threshold value instrument will automatically calculate and save it; the sensitivity of automatic measurement can be adjusted by setting the corresponding number. Customers are advised to use the first method to adjust the threshold.

(3) Automatic measurement switch: select whether to turn on automatic measurement

(4) Test mode: the instrument supports sampling gun mode and emitter mode measurement, using different measurement methods, select different buttons here.

(5) Clear button: click this button to delete the report and other data stored in the instrument. General instruments are used before delivery.

3.6 Blank calibration



(1) Lighting test

Place a blank plate in the measuring position. If you click the "blue" button, you can see that the corresponding result will display a blank value. If you click the "blue" button again, the dark current value will be displayed. Other "green" buttons and "red" buttons have the same function.

(2) "Blank" button: place a blank chromatographic disk in the measurement position, click this button to carry out blank measurement, and wait for about 3 minutes to complete the blank measurement.

(3) "Test all" function: click this button to test all three kinds of light source lamps and present the results.

(4) Click the "return" button to return to the main interface.

4. Data communication

After the machine test is completed, it will automatically transmit data to the receiving end through wireless Bluetooth.

5、 Instrument measurement steps

5.1 sample preparation

HbA1c analyzer supports the test of finger blood and venous blood within 3 days. When the sample is finger blood, the first drop of peripheral blood must be removed and the later sample is appropriate; when the sample is venous blood, the sample must be fully mixed before use.

5.2 Sample measurement

(1) Open the machine and enter the main interface.

(2) According to the requirements of the reagent manual, add the sample and reagent to the chromatographic disk.

(4) Place the chromatographic plate in the measuring position of the instrument. Click the test button to measure.

(5) After the measurement, the measurement results are displayed.

6、 Common fault causes and troubleshooting

6.1 The test results are not accurate

Enter the "blank calibration" interface, click the "test all" button to see whether the light values are normal.

6.2 There is no display when the machine is turned on

(1) Check that the battery is fully charged.

(2) Contact the manufacturer's technical personnel for maintenance.

7、 Appendix

Appendix: complete packing list

Serial number	name	Specification / order number	number	remarks
1	Main unit		1	
2	5V DC adaptor		1	
3	Charging line		1	
4				
5				
7				
8				
9				
10				