

# Standard Operating Procedure

## Note

### 1. Power requirement

- A. The analyzer must be used under the properly earth ground condition.
- B. Only use the fuse of specified type and accompanying power cord.
- C. Before turning on the analyzer, make sure the input voltage meets the requirements of the analyzer.

### 2. Environment requirement

- A. Normal work temperature range: 15°C~30°C;
- B. Operating temperature range: 10°C~40°C;
- C. Normal work humidity range: 20%~85%;
- D. Atmospheric pressure: 70 kPa~106 kPa;
- E. The environment shall be free of dust, mechanical vibration, contamination, heavy-noise source or electrical interference.
- F. It's recommended to evaluate the electromagnetic environment of the laboratory before operating the analyzer.
- G. Keep away from the strong electromagnetic field interference source.
- H. Do not place the analyzer near brush-type motors, flickering fluorescent lights, and electrical contacts that regularly open and close.
- I. Do not place the analyzer in direct sunlight or in front of a source of heat or drafts.
- J. The environment shall be well ventilated.
- K. Connect only to a properly earth grounded outlet.
- L. Do not place the analyzer on the slanting workbench. Only use this analyzer indoors.

## Operation Guide

### 1. Checking before powering on

- Check whether the reagent is sufficient, turbidity and deterioration, and the reagent tube is bent.
- Check whether the analyzer is connected to external device correctly.
- Check whether the power connection is correct.

### 2. Startup and Login

If the analyzer connects to printer, turn on the printer switch. Then turn on the power switch at the back of the analyzer. When the User Login dialog box is displayed, input the user name and password to enter main interface.

### 3. Background Checking

The analyzer does background test automatically when turning on. The system enters the “sample analysis” interface by default and displays the background value after the startup procedure ends, check whether the result meets the following requirements:  $WBC \leq 0.2 \times 10^9/L$ ,  $RBC \leq 0.02 \times 10^{12}/L$ ,  $HGB \leq 1g/L$ ,  $PLT \leq 5 \times 10^9/L$ ,  $HCT \leq 0.5\%$

The background count is performed automatically by the analyzer during the startup process. If the first background count does not pass, the background count will be performed again, if the background count does not pass twice, the analyzer will alarm “Abnormal background”, follow the *chapter 11 Troubleshooting* in the operator’s manual to deal it.

### 4. Daily Quality Control

Before running samples, run daily QC analysis on the analyzer to ensure reliable analysis results. (Refer to *Chapter 7 QC* in the operator’s manual for details)

### 5. Select the work mode

- A. Select the “Whole Blood” or “Pre-diluted” mode in the “Sample analysis” interface.
- B. The analyzer provides two methods for inputting the sample information: Enter all information and Enter sample ID.
- C. After completing the setting, click “OK” button to save the settings and return to “Sample analysis” interface.

## **6. Sample Analysis**

### **Whole Blood Mode**

- A. Mix the sample with the EDTAK<sub>2</sub> or EDTAK<sub>3</sub> anticoagulant well, and place the sample under the probe so that the probe can aspirate the sample.
- B. Press the [aspirate] key, the sample probe will aspirate automatically the sample. When you hear the beeps, remove the sample tube, the analyzer will automatically do the sample analysis.

### **Pre-diluted Mode**

- A. Click the “Dilute” button on the Sample analysis screen, follow the screen tips, take a clean tube, remove the tube cap and present it to the sample probe in a manner in which the probe tip is vertically in contact with the bottom of the tube.
- B. Press the [aspirate] key to make the diluent drained from the analyzer flow into the tube along the inner wall, it is noted to avoid liquid spatter or bubbles. When you hear the beeps, remove the centrifuge tube. The operator can also dispense 200µL of diluent by pipette into the tube.
- C. After adding diluent is completed, click “OK” button to exit dispensing the diluent, the dialog box is closed automatically.
- D. Add 20µL of blood sample to the centrifuge tube with the diluent, close the tube cap and shake the tube to mix the sample.
- E. Place the pre-diluted blood for 5 minutes and mix it again. Place the diluted sample under the probe and press [aspirate] key, the analyzer will aspirate automatically sample. When you hear the beeps, remove the sample tube. The analyzer will automatically do the sample analysis.

## **7. Standby**

When the fluidics system stops working for time which is set at the setting screen, the analyzer will enter the standby status automatically. At this time, you can also perform the operations not involving the fluidics.

When the analyzer is on the standby, you can press [aspirate] key to exit the standby mode.

## **8. Shutdown**

After completing the daily work, click “Shutdown” button on the main menu, the analyzer will perform probe cleanser maintenance.

When the screen displays “Confirm”, click “OK” button, and turn off the power supply of the analyzer and other external device.

Empty the waste container and dispose the waste properly.

## **9. Troubleshooting**

If the analyzer occurs error, you can click the error information area at the bottom right of the screen to obtain its help information, refer to *chapter 11 Troubleshooting* in the operator’s manual for details.

## **10. Regular Maintenance**

Every day: perform normal shutdown and do probe cleanser maintenance.

Every month: When the analyzer runs for one month, you should wipe the external surface and probe wipe block (it is recommended to use 75% alcohol).

When the analyzer is not used for more than two weeks, perform Pack-up function and turn off the analyzer.