

CHAPTER 4 OPERATION INTRODUCTION

1. Software Structure

1.1 Main Interface



After 20 minutes' warm-up, the system goes into main interface. (Fig.4-1) Press the key of **MODE** to change the functions.

1.2 Firmware Functions

The firmware consists of 5 functions: T,A,C,F and system functions

1. T

To measure the Transmittance of a sampel in a fixed wavelenght point. The test result can be stored in the RAM, total 200 groups of data can be stored.

2. A

To measure the Absorbance of a sampel in a fixed wavelength point. The test result can be stored in the RAM, total 200 groups of data can be stored.

3. C- Standard Curve Method

Set up standard curve by standard sampel; use the new curve to measure the unknown sampel' s concentration. The curves and the test result can be stored in the RAM. Total 200 curves can be stored.

4. Coefficient Method

Input the values of the curve equation' s coefficient, and then measure the unknown sampel' s concentration.

5. Stup-System Functions

Press the key of SET on the keypad to go into system function (Only available in **T MODE** and **A MODE**). Light source management; Get Dark Current; Calibrate Wavelenght and Load default, etc.

2. Basic Operation

2.1 Set Wavelength

In the measurement Interface, press  to go into wavelength setting Interface.

Use Arrow Key to increase or decrease the value of wavelength, then press  to confirm. When arriving at the setting wavelength point, it sets 100%T/0Abs automatically.

2.2 Delete the test result and stored data

In the measurement Interface, press  to delete the test result and stored data.

2.3 Calibrate 100%T/0Abs

Put the Reference in the light path, press  to calibrate 100%T/0Abs.

2.4 Measure the samples

Put the samples in the light path and press  to measure.

2.5 Print the test result

In the Measurement Interface, press  to print the result.

3. Preparation before test

3.1 Switch on the instrument and begin the system self- test (Diagnostic Program)

Make sure to remove all the blocks in the light path; Close the compartment lid and switch on the power; Then the system will begin self- test.

Note: During the course of Diagnostic Program runs, please Don't open the lid of the compartment!

3.2 Pre – warm

When the diagnostic program finished, it goes into pre- warm condition. 20 minutes is required before measure.

3.3 Check the Cuvettes

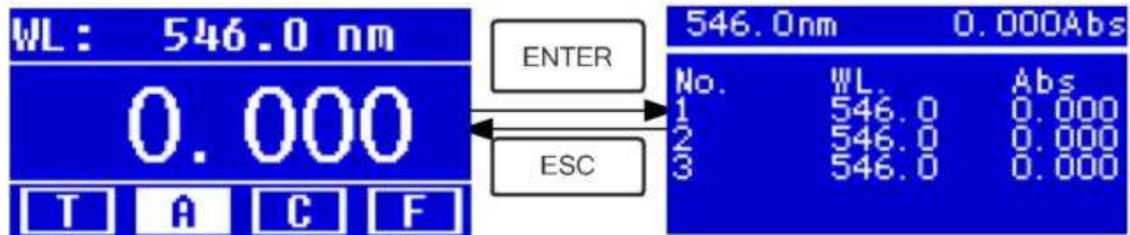
The cuvette should be clear and there' s No. solution remains on the transparent surface. If the wavelength is below 340nm, **Quartz Cuvette is a must.**

4. Measure

4.2 A- MODE

Step 1, Go into A Mode Interface

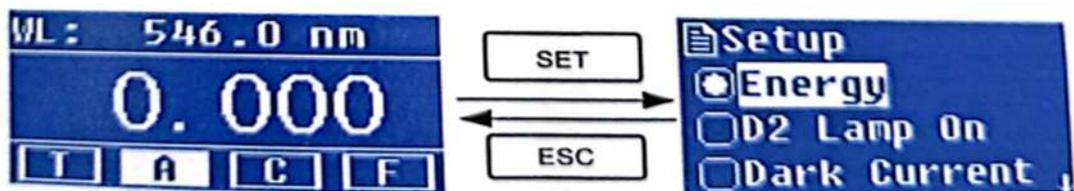
In the Main Interface, press **MODE** Key to move the cursor on “A”, you’ ll see the current sampel’ s Absorbance value. Press **ENTER** to go into Continuous Measurent Interface. (Fig. 4-5)



Step 2-5 is the same as T- mode, please refer to the corresponding operation in 4.1.

5. System Functions

In the T mode or A mode of Main Interface, press (**SET** gambar) Key to go into system functions (Fig. 4- 23)

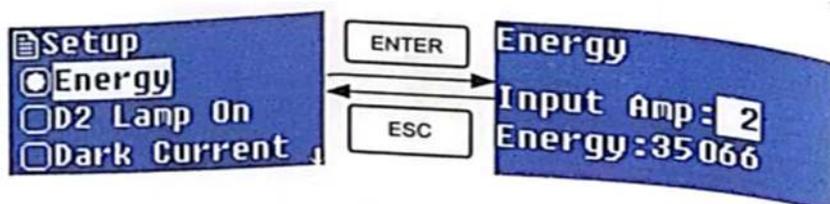


1. Energy

To see the energi of present wavelength.

Move the cursor on “ Energi”, then **ENTER** to confirm. (Fig. 4- 24)

Note: Users seldom use this function. It’s useful for service man to judge the fault.



2. D2 lamp management



When the wavelength point needs is in the range of 340-1100nm, the D2 lamp can be switched off to prolong its life time.

Use Arrow key to choose “D2 Lamp On” and press to go into D2 lamp setting interface (Fig. 4-25). Use Arrow key to choose “On” or “Off” and press to switch on or switch off the D2 lamp. Press to return.

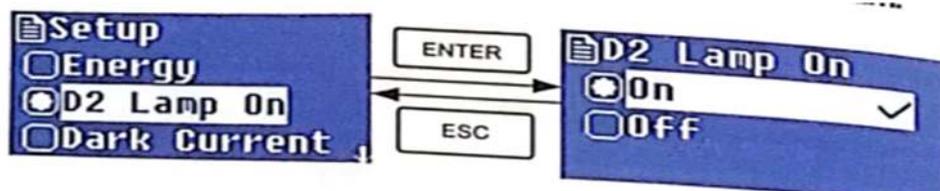


Fig. 4-25

3. Get Dark Current



When the working condition changes, A dark current calibration is required before any measurement.

Use Arrow key to choose “Dark Current” and press to confirm. (Fig. 4- 26)

Note: Remove the cuvettes from the light path before this action, don't open the lid of the compartment during the course of calibration.

Press to return when it finishes.

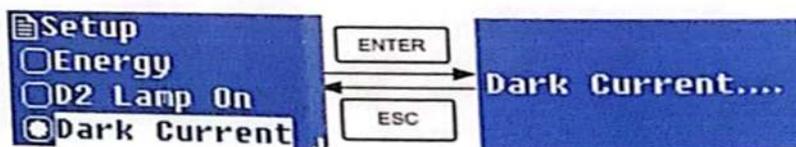


Fig. 4-26

When it finishes, it will display the following words on the screen. (Fig. 4-27) If it displays “ Dark Current Err”, you should check if there's something else in the compartment and repeat this step.

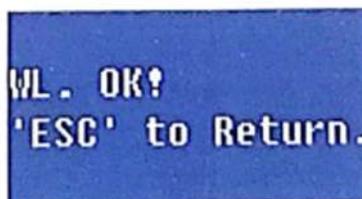


Fig. 4-27

4. Wavelength Calibration



After some time, the energy of lights would drop off and there will be some but slight influence on the test result. In this case, users can reset the wavelength to compensate. We suggest the users to calibrate the wavelength every one or two months.

Remove all the blocks in the light path and close the lid of the compartment, press Arrow Key to choose “ Calibrate WL” and press to begin the calibration (Fig. 4-28). The lid of the compartment should not be opened during the calibration.

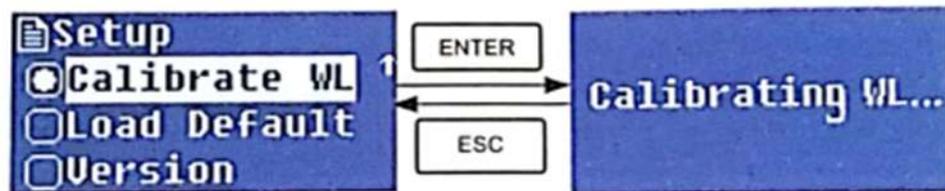


Fig.4.28

When it finishes, it will display the following words on the screen. (Fig. 4-29) If it displays “ Wavelength En”, you should check if there’s something else in the compartment and repeat this step.

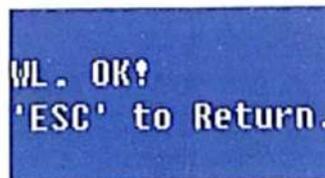


Fig. 4-29

5. Load Default

press Arrow Key to choose "Yes" and press to confirm. (Fig. 4-30), Press Arrow Key to choose "Yes" and press to confirm. Then the system will recover the default setting when leave factory. Choose “No” with pressed to cancel the operation and return.

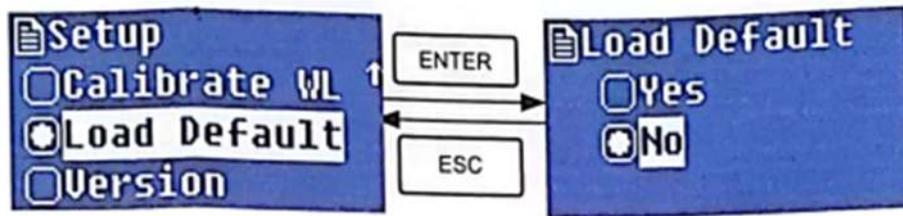


Fig. 4-30

Note: all the saved data and curves would be deleted from the RAM once “Yes” is chosen!

6. Version

Press arrow key to choose “Version” and press to confirm. You’ll see the version of the software and hardware (Fig. 4-31). Press to return.

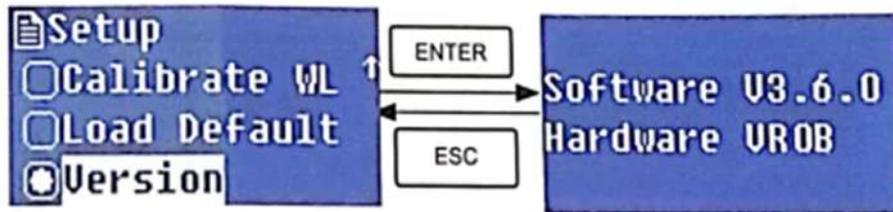


Fig. 4-31

For the reason of updating, the version you see on the instrument screen maybe different from the one showed in the above fig 4-31.