

- 1. Start:** Turn on the power switch on the left of the main unit.
- 2. Warm up (For better performance):** After the initialization of the main unit, if all the items are OK it will go to the main menu, press “Autozero” on the keypad, let the main unit warm up for about 30 min
- 3. Dark Current Correction:** After warm up, press “0%T”、 “Enter” for dark current correction
- 4. Sample and reference cuvette:** Prepare two clean cuvettes
- 5. Sample Measurement:** Press “Main Menu” to go to the top menu, select the test mode and perform the test as follow:

→**Photometry (get the sample Abs or %T directly):**

- (1) Set parameter:** Press “Main Menu” to main menu, select **1** “Photometry”→ **1** Parameter Setup→ **1** Data Mode(select Abs or %T) → press **2** WL(nm) (set the wavelength) → press “Clear Return” to Photometry menu→ press **0** “Forward” to the test interface;
- (2) Blank sample measurement:** Put blank sample solution to two cuvettes (one is reference cuvette and the other is sample cuvette) → put the cuvettes to the cell holder→ press “Autozero”.
- (3) Sample measurement:** take the sample cuvette out and put the sample solution to it→ put the cuvette to cell holder→ press “START” to perform sample measurement;
- (4) Report:** print or write down the test result.

→ **Photometry (get the concentration of unknown sample)**

- (1) Set parameter:** Press “Main Menu” to main menu, select **1** “Photometry”→ **1** Parameter Setup→ **1** Data Mode (select Conc) → **2** WL(nm) (set the wavelength) → press “Clear Return” to Photometry menu → press **3** “Curve Setup” (set the parameter of standard samples such as the concentration of standard samples, the mode of standard curve) → press **0** “Forward” to the test interface;
- (2) Blank sample measurement:** Put blank sample solution to two cuvettes (one is reference cuvette and the other is sample cuvette) → put the cuvettes to the cell holder→ press “Autozero”.
- (3) Standard samples measurement:** take the sample cuvette out and put the standard sample solution(from low to high in turn) to it→ put the cuvette to cell holder→ press “START” to sample measurement. After all the standard samples measurement, it will appear every standard sample dates, standard curve and curve parameter.
- (4) Unknown concentration sample measurement:** After the standard sample measurement, press **1** “Measure” to the test interface→ take the sample cuvette out and put the sample solution to it→ put the cuvette to cell holder→ press “START” to do sample measurement;

(5) **Report:** print or write down the test result.

→ Wavelength Scan (get the peak or valley of the sample)

- (1) **Set parameter:** Press “Main Menu” to main menu, select **2** “Wavelength Scan” → **1** Parameter Setup (set parameter such as scan scale and scan speed) → press “Clear Return” to “Wavelength Scan” menu.
- (2) **Baseline measurement (blank sample calibration):** On “Wavelength Scan” menu, press **6** “User Baseline” → select baseline mode (Recommended for use **2** “User1”) → Put blank sample solution to two cuvettes (one is reference cuvette and the other is sample cuvette) → put the cuvettes to the cell holder → press “Autozero” to calibrate the baseline;
- (3) **Sample measurement:** Press **0** “Forward” to test interface → take the sample cuvette out and put the sample solution to it → put the cuvette to cell holder → press “START” to do sample measurement;
- (4) **Data processing and report:** Several kinds of computational processing can be performed for the spectrum. Print or write down the test result.

→ Time Scan (Suitable for dynamic analysis and samples stability test)

- (1) **Set parameter:** Press “Main Menu” to main menu, select **3** “Time Scan” → **1** Parameter Setup (set parameter such as wavelength and scan time) → press “Clear Return” to “Time Scan” menu → press **0** “Forward” to test interface;
- (2) **Blank sample measurement:** Put blank sample solution to two cuvettes (one is reference cuvette and the other is sample cuvette) → put the cuvettes to the cell holder → press “Autozero”.
- (3) **Sample measurement:** take the sample cuvette out and put the sample solution to it → put the cuvette to cell holder → press “START” to do sample measurement;
- (4) **Data processing and report:** Several kinds of computational processing can be performed for the spectrum. Print or write down the test result.

6. Finish: After the test, power off the main unit and clean the cuvettes.

NOTE

- ◆ Before use this quick manual, please read the HALO DB-20 Series UV-Vis Spectrophotometer instruction manual carefully
- ◆ Detailed operation and other measuring function can refer to < HALO DB-20 Series UV-Vis Spectrophotometer instruction manual>;
- ◆ The quick instruction manual only suitable for the DB-20 series instrument with standard configuration.