EXC2X Series Chemistry Analyzer Quick Guide

1. Pre-startup Check

- Check the water source, confirm that there is no abnormality in the external water container, water pipe connection, and drainage tube to ensure continuous and normal water supply.
- Check the power supply to ensure it works and can provide correct voltage.
- Check the reagent-sample probe and stirring rod to make sure they are free of dirt and bending.
- Check the remaining amount of acid-base detergent. If it is insufficient, please add or replace it.
- Check the remaining amount of concentrated detergent. If it is insufficient, please add or replace it.
- Check whether the waste container is empty and make sure that the waste pipe is not bent and the drain outlet of the sewer is not higher than 12CM.
- The movement of moving parts such as reagent-sample probe, stirring rod, cleaning mechanism, reaction tray, reagent-sample tray, syringe, etc. have no other interference and can operate smoothly and locate accurately smooth operation and accurate positioning.

2. Start-up

- Power on: Before plugging in the power cord, make sure the main power switch of the instrument is in the "off" status. After powering on, switch the main power switch to the “on” status, the indicator lamp will light up after pressing the analysis switch.
- Login: Enter the user name and password in the **Login** dialog box, and click **OK**. Please start the test operation 30 minutes after start-up to ensure stable light source and temperature control.

3. Status Check

After the start-up is completed, please check the status of the instrument. If the status of the instrument is abnormal, refer to "Maintenance and Service" and "Alarm and Treatment" for system maintenance and troubleshooting.

Click **Status-Reagent Tray**, open the covers of all reagents, and click **Residual Detection** on the software to select the corresponding reagent positions for detection.

If the reagent is deficient or exhausted, the corresponding reagent position is rosy.

Replace or replenish reagent according to the reagent state, and then refresh it.

Check the maintenance status of the instrument to confirm whether any assays have expired. If it expires, maintenance needs to be performed immediately to ensure the normal operation of the instrument.

Click **Maintenance-Daily Maintenance-Periodic Maintenance** to confirm whether any assays have expired.

4. Reagent Preparation

Prepare the reagents used for the very day. Assays that are not loaded with reagents can be applied for, but cannot participate in the test. The instrument must be woken up before loading reagents if it is in standby mode.

4.1 Reagent Preparation

- Place the reagent into the corresponding cup of the reagent tray.

4.2 Concentrated Detergent Preparation

- Open the detergent and move the float sensor. Install the cap and sensor in the newly opened concentrated detergent.

4.3 Probe Detergent Preparation

- Only be loaded manually. When the detergent exceeds the validity period or the volume is insufficient, please add or replace the detergent immediately.

4.4 Diluent Preparation

- Only be loaded manually. Set the dilution ratio according to the dilution factor when testing.

5. Calibration

Calibration tests are used to calculate calibration parameters. Conduct calibration when needed.

5.1 Calibrator Preparation

- Only be loaded manually. Make sure the calibrator is within the validity period.

5.2 Calibration Application

Click **Calibration-Calibration Setting** to enter the setting interface. Set the information such as the location, concentration, validity period and batch number of the calibrator.

Click **Calibration-Calibration Application** to enter calibration application interface and conduct calibration application, reagent blank test and so on.

Click **Calibration-Calibration Result** to enter the calibration result interface. Calibration result and curve can be viewed in this interface.

6. Quality Control

As the quality control results can ensure the accuracy of the test, it is recommended to carry out quality control every day.

6.1 Quality Control Preparation

- Only be loaded manually. Make sure the quality control is within the validity period.

6.2 Quality Control Application

Click **QC-QC Setting** to enter the setting interface. Set the information such as the location, validity period and batch number of the quality control.

Click **QC-QC Application** to enter quality control application interface and conduct quality control application.

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Click **QC-QC Data** to enter the control data interface. Control data and reaction curve can be viewed in this interface.

7. Routine Test

Sample application

Click **Sample** to enter the sample application. You can choose test applications for functions such as emergency samples, batch sample applications, and repeated tests according to actual needs; the application list and patient information can also be viewed.

8. Start

Start to test the applied samples/assays, Operation as follows:

Select the type and position of the sample, and click **Start**.

Choose samples/assays to be tested.

Click **OK**.

9. Pause

- Suspend the tests that have not been added with R1 in all ongoing tests, and the tests that have been added with R1 will continue to complete the actions of adding S (samples) and R2, and continue the tests.
- When sample addition is suspended, the reaction tray will continue to work. After all the application assays that have started testing have finished adding samples or R2 reagent(in case of dual reagent assays)and the reagent-sample tray and reagent-sample probe stop rotating, the operations of adding samples and adding reagents can be performed.

Click **Pause**, the analyzer will stop sample loading status.

After the suspension of sample addition, click the **Start** to resume the test.

10. Stop

Stop all ongoing tests without adding S (single reagent assays) or R2 (dual reagent assays).

Click **Stop-OK**, only the single reagent assay added with S and the dual reagent assay added with R2 will continue, and other tests will stop immediately.

11. View Testing Status and Result

11.1 View Testing Status

Click **Status-Sample Tray**, select the sample position to be viewed on the sample tray status interface.

Click **Status-Reaction Tray**, you can view the current status of each cuvette on the reaction tray status interface; click **Reaction Curve** on the reaction tray interface to observe the effective test (sample, calibration, quality control, sample blank, reagent blank).

11.2 View Testing Results

Click **Results - Current Results / Historical Results** on the homepage, and view the current sample test results or previous sample test results on the results interface.

12. Daily Maintenance

After the test is finished every day, the instrument shall be maintained according to the maintenance items in the daily maintenance list and the yellow maintenance items displayed. The daily maintenance items include:

- Check deionized water connection.
- Check waste connection.
- Check the remaining amount of concentrated detergent.
- Check if the reagent-sample probe syringe leaks.
- Check the balance of acid-base detergent.
- Check whether the probe outlet water is normal (verify whether the probe inner wall is blocked).
- Check and clean the cleaning basin.

13. Shutdown

Confirm that the system is in a non-test state.

Select **Shutdown - OK**.

Turn off the power supply of the instrument after the software is turned off.

14. Emergency Shutdown

Perform this function when the analyzer fails during operation and cannot exit normally. The analyzer does not execute any shutdown process and exits directly.

Click **Emergency Shutdown - OK.**

15. Operation After Shutdown

- Open the reagent-sample tray and take out the calibrator, QC, etc.
- Check the analyzer table for stains. If so, please wipe the stain clean with a clean soft cloth.
- Check the high-concentration waste container. If there is any waste liquid, please empty the waste container.
- Cover the reagent-sample tray and close the upper cover.

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