

Standard Operating Procedure (SOP)

for

Fujifilm NX 600V Automatic Serum Dry Chemistry Analyzer

Purpose: This SOP outlines the proper use and handling of the Fujifilm NX-600V Dry Chemistry serum analyzer for accurate and reliable diagnostic results using dry chemistry techniques.

Scope: This SOP is applicable to all laboratory technicians and personnel trained in using the Fujifilm NX 600V serum analyzer.

1. Machine Overview

The Fujifilm NX 600V is an automatic serum analyzer that uses dry chemistry technology. It allows for high-speed, accurate biochemical testing of serum samples with minimal manual intervention.



Machine Overview

2. Safety Precautions

- Wear protective gloves and lab coat while handling biological samples.
 - Follow standard biohazard handling protocols.
 - Calibrate the machine before use.
 - Handle reagents carefully, and keep them away from direct sunlight.
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3. Materials Required

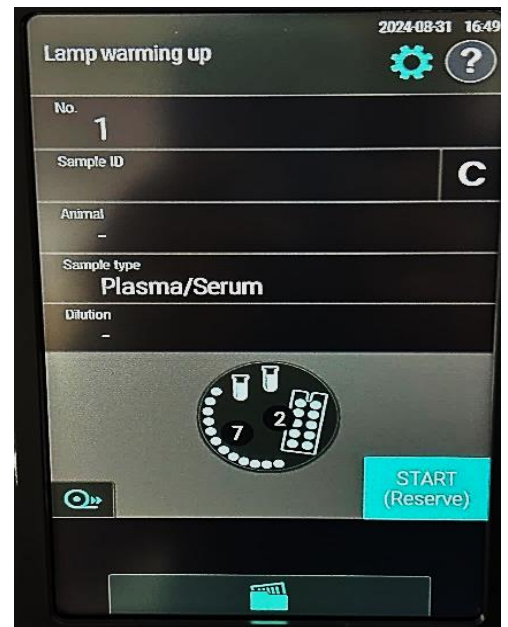
- Fujifilm NX 600V dry chemistry analyzer
- Blood serum samples
- Calibration strip (included in testing kits)
- Dry chemistry reagent slides (specific for tests like ALT, AST, ALP, Bilirubin, etc.)
- Pipettes for Serum collection and transfer and Tips.
- Printer paper (if necessary)

4. Preparation of the Analyzer

- 1) **Power On:** Switch on the machine by pressing the power button located on the lower right side of the unit. **Picture of the machine being powered on.**
- 2) **Loading the Reagents:**
 - a) Open the reagent tray by pressing the tray release button, load the dry chemistry reagent slides according to the tests required (e.g., ALT, AST, BUN, Creatinine), and close the tray.
 - b) **Warm-Up:** Wait for the machine to complete its initial warm-up phase, which takes about 5 minutes. The touchscreen displays a "Ready" status once the analyzer is prepared for operation.



Loading of Kits of different tests



Machine Warming up

3) Calibration

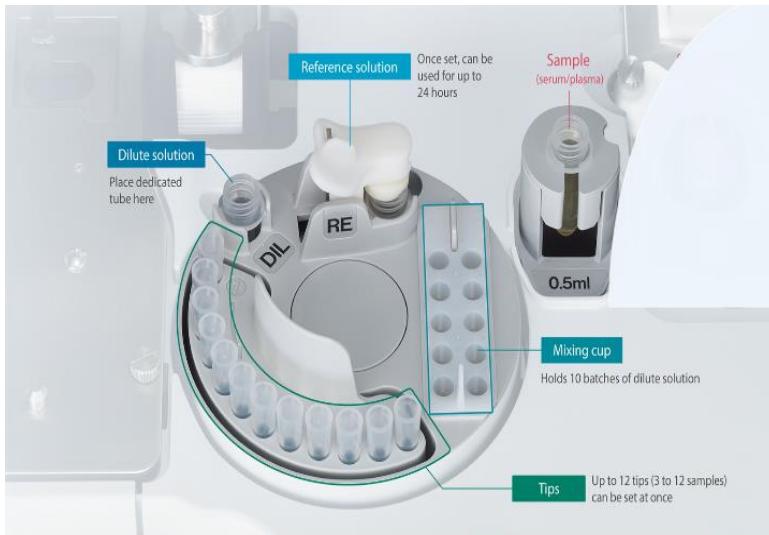
1. **Select Calibration:** Each lot of kits contain QR coded Calibration on strip. Scan them on the machine as shown in the picture.
2. **Complete Calibration:** The system automatically process the calibration. Once completed, the screen displays the Lot number of kit and test name indicating successful calibration.

QC- Card Calibration



6. Sample Preparation and Loading

- 1) **Serum Sample Preparation:** Collect blood in a red-top tube (no anticoagulant), allow it to clot, and then centrifuge to separate the serum. Ensure the serum is free of haemolysis for accurate results.
- 2) **Loading the Sample:**
 - a) Use a disposable pipette to draw 10-20 μL of serum from the centrifuged tube.
 - b) Open the cap of sample tube, and gently dispense the serum into sample tube.
 - c) Place the sample at specified location in the Fujifilm NX-600V.



Placing of Sample

Machine Working Area

7. Running the Test

1. **Select Test Panel:** From the main menu, select the appropriate test panel or individual tests (ALT, AST, ALP, etc.).
2. **Initiate Test:** Press "Start" to begin the analysis. The machine will automatically process the sample through the dry chemistry slides.
3. **Monitoring:** The machine will display the status of the test and show the countdown for results.



Running the Test

8. Retrieving Results

1. Display of Results:

- Once the analysis is complete, the results is displayed on the touchscreen.
- Review the data for accuracy.

2. Printing of Results: Press the "Print" button. The machine prints detailed report including the patient's information, test parameters, and values.



Result Display

9. Post-Test Maintenance

- Removal of Reagent Slides:** Once all tests are completed, remove used reagent slides are removed and disposed as per the laboratory's waste disposal protocol.
- Cleaning the Sample Port:** Wipe the sample loading port with a lint-free cloth moistened with 70% ethanol to avoid cross-contamination.

Shutting down the machine: If no further tests are needed, power down the machine by pressing the "⏻" option on the left side of the touchscreen panel and confirming the shutdown.



Discarding of used Kits

10. Troubleshooting

- Error Messages:** If the analyzer displays an error message, refer to the user manual's troubleshooting section. Common errors include reagent issues, sample application errors, or calibration failures.
- No Response or Power Issues:** Ensure the power connection is secure. If the analyzer does not power on, contact technical support.

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