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 **BLUE-RAY**
B I O T E C H

EzDrop 1000C



Микрообъемный/кюветный спектрофотометр

Краткое руководство по эксплуатации

Вер. 1.0

000 «Диаэм»

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Instrument Exterior Components



Figure 1. Front View



Figure 2. Back View

EzDrop 1000C, Quick Operation Guide, Power Adapter, Power Cord, USB-B Cable, Calibration Report and Accessory Box (10 mm Quartz Cuvette w/ cover, stirrer bar) are included in EzDrop 1000C package.

Starting the Instrument

- Turn on **EzDrop 1000C** by pressing the power switch on the back of the instrument.
- A tap on the **EzDrop** icon will start the self-test process after which the main menu will be displayed. Please **DO NOT** open the detection arm until system diagnosis has completed.

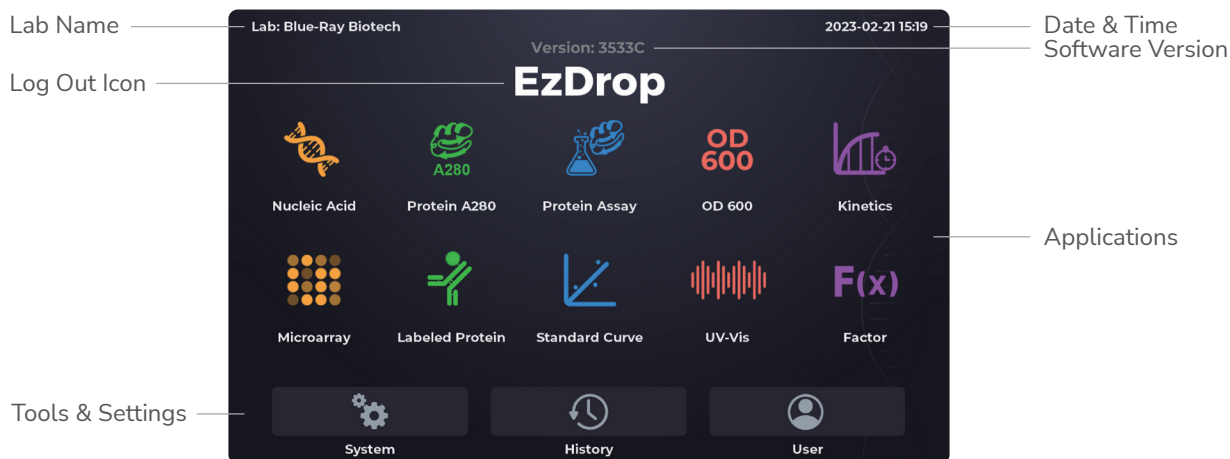
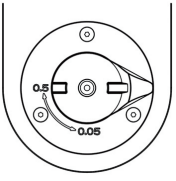
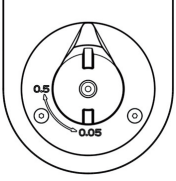
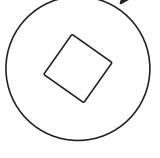


Figure 3. Main Menu

Measuring a Sample

- Choose an application.
- Lift the detection arm and switch the path length selector to **0.5 mm** for measuring an unknown sample. If the sample absorbance is predicted to be 20 – 400 A, it can be switched to 0.05 mm.

Note: A path length of 0.5 mm should be selected for cuvette mode.

Path Length Operation Guide			
Path Length	Micro-Volume 0.5 mm	Micro-Volume 0.05 mm	Cuvette 10, 5, 2, 1, 0.5, 0.2, 0.125, 0.1 mm
Position			
Absorbance Range	0.04 - 30 A	20 - 400 A	0.002 - 1.5 A



 **Nucleic Acid** /  **Protein A280** /  **OD600**



Figure 4. Nucleic Acid – Data Tab Page

- Select the correct **Method / Path Length / Baseline Correction** based on the experiment protocol.
- Use lint-free paper to clean the sample window/cover.
- For Micro-Volume mode detection, pipette a 1-2 μL blanking solution onto the sample window and check that there is no cuvette in the cuvette holder. For cuvette mode detection, insert the blanking cuvette into the cuvette holder.

Note: The liquid level in the cuvette should be higher than the instrument optical path, the beam height of which is 8.5 mm. The light-transmitting surface of the cuvette should be in the direction of the arrow on the cuvette holder.

- Lower the detection arm and tap  **Blank**.
- Lift the detection arm, then clean the sample window/cover with lint-free paper.
- Enter the sample name (optional) or use the auto-numbering system. Then, pipette 1-2 μL of the sample solution onto the sample window, or insert a sample in a cuvette into the cuvette holder.
- Lower the detection arm and tap  **Measure**.

Tip: If there are many samples, turn on **Auto Run**   , measurements will be made automatically after the detection arm has been lowered and sample naming will be sequential.

- At the end of experiment, wipe away the sample with lint-free paper and clean the sample window/cover with ddH₂O, or remove the sample cuvette.

Protein Assay / Standard Curve

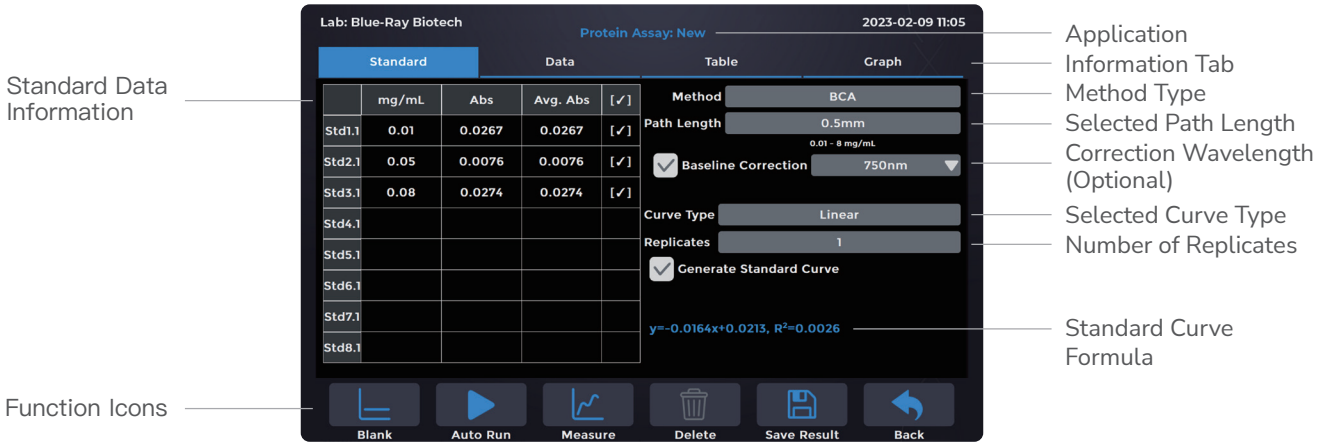


Figure 5. Protein Assay – Standard Curve Tab Page

Generate a standard curve with a minimum of 2 standard samples before measuring unknown samples.

Kinetics (cuvette mode only)

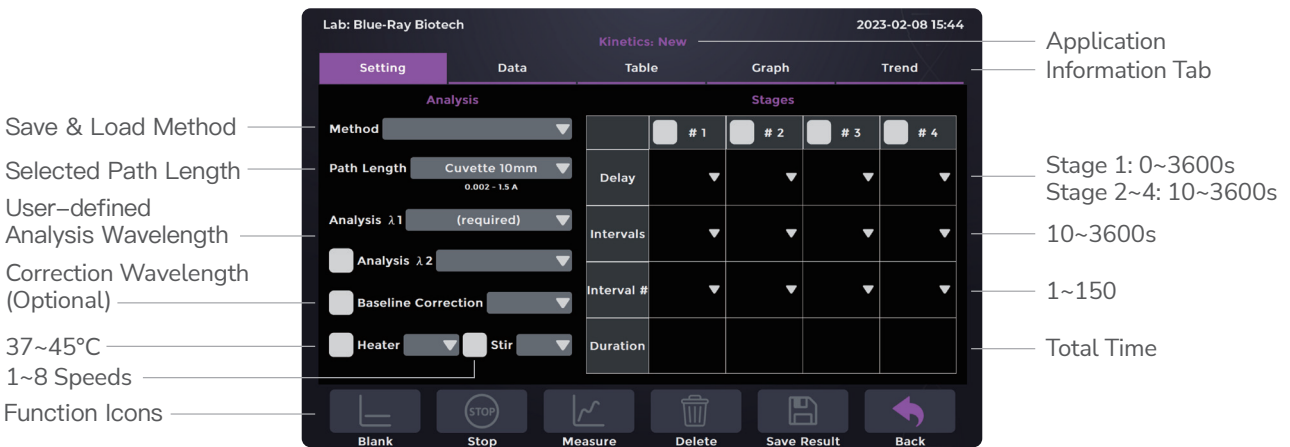


Figure 6. Kinetics – Setting Tab Page

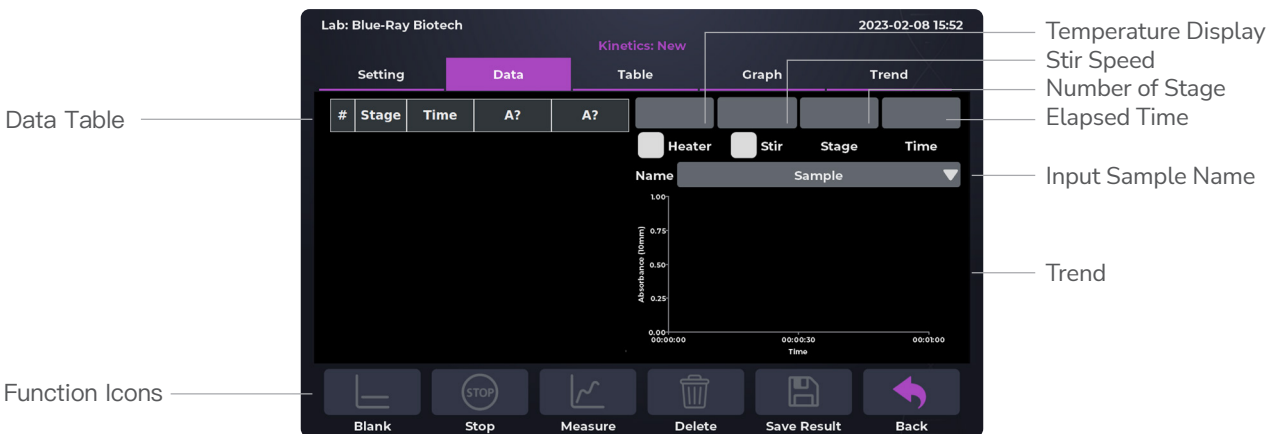


Figure 7. Kinetics – Data Tab Page

In the Kinetics application, the heater (37~45°C) and stirring (1~8 speed corresponding to 150~850 rpm) function can be optionally matched, up to 2 analysis wavelengths can be selected, and up to 4 stages can be set.

UV-Vis / F(x) Factor



Figure 8. UV-Vis – Setting Tab Page

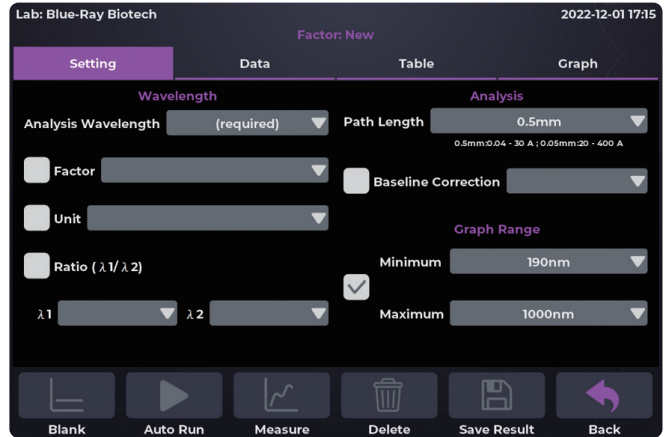


Figure 9. Factor – Setting Tab Page

Enter the required information based on the experiment and **Blank** will become functional.

Microarray / Labeled Protein

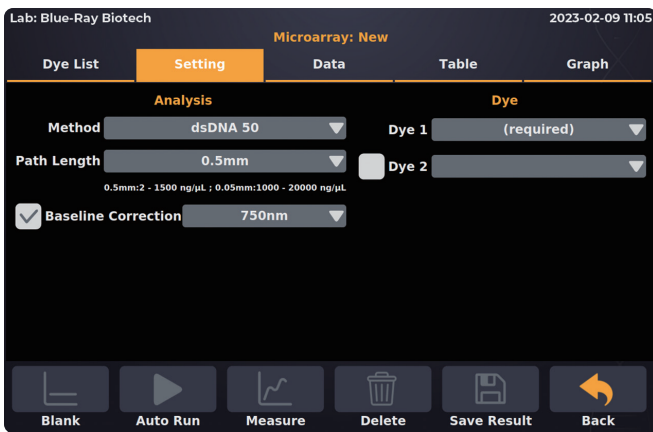


Figure 10. Microarray – Setting Tab Page

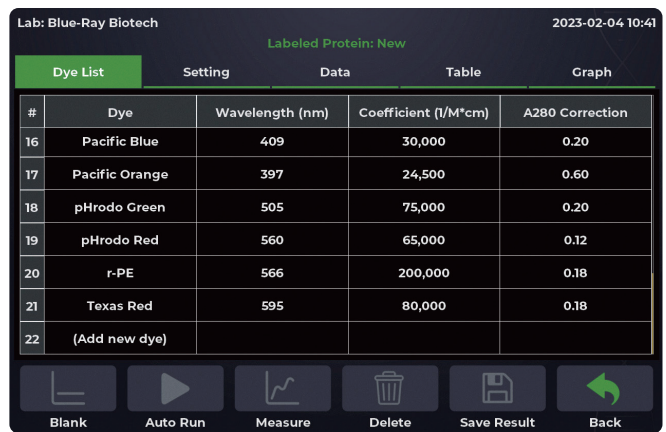


Figure 11. Labeled Protein – Dye List Tab Page

Choose at least **1** dye and **Blank** will become functional (Figure 10). If the dye to be analyzed is not in the dye list, please tap “Add new dye” and enter the required information (Figure 11).

Edit Sample Name

Tap the sample column you want to edit on the **Table Tab Page**.

Delete Data

Tap the [x] column on the **Table Tab Page**, and **Delete** will become functional.

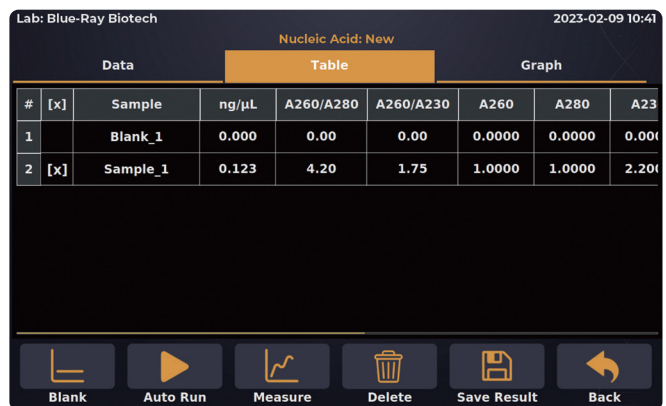


Figure 12. Table Tab Page Operation

View Sample Data Graph

- Select more than **1** sample datum in [✓] column of the **Graph Tab Page** to overlay the graph.
- The graph can be zoomed in or out by spreading two fingers or bringing them together on the screen.

Tip: Go back to the default by a long touch on the coordinate origin.

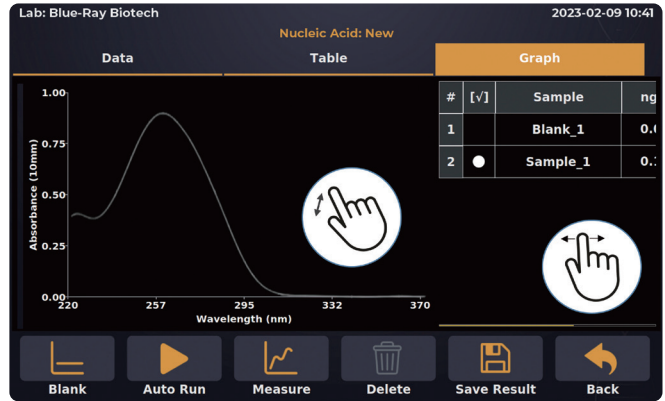





Figure 13. Graph Tab Page Operation

Save Result

- Tap  to **Save Result**.
- Choose an existing user folder, create a  **New User**, or insert a flash drive to save as a .csv file. The flash drive icon  only shows up when one has been inserted.

Note: The flash drive must be FAT/ FAT32 formatted.

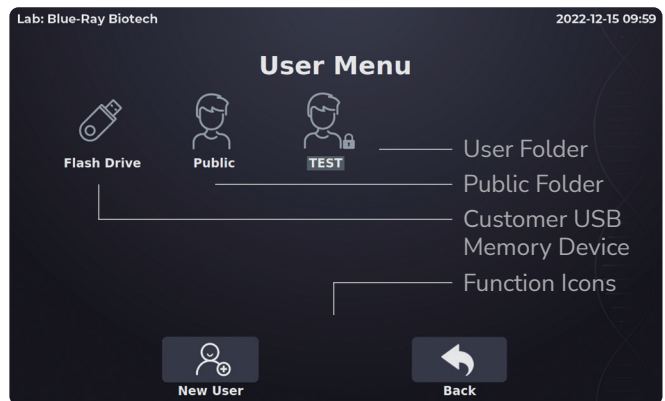






Figure 14. Save Result Operation

User Folder Management

-  **New User:** Create a new user folder. Enter user folder name, choose a head shot, and set the password (optional).
-  **Delete User:** Delete selected user folder.
-  **Edit:** Modify user folder name & password.
-  **Open:** Open a user folder.

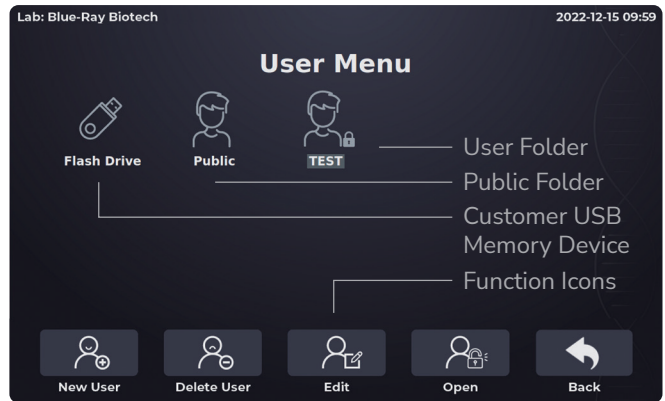



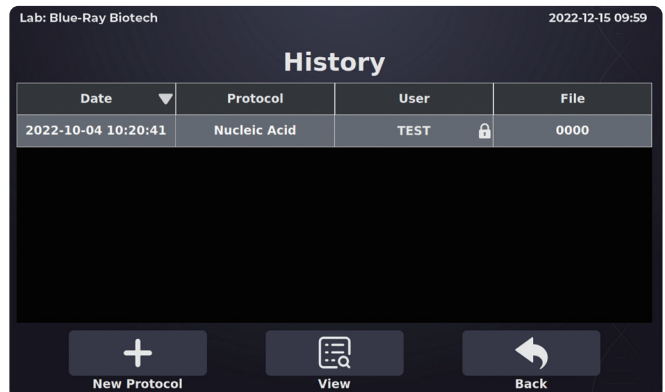


Figure 15. User Menu

Duplicate Protocol Setting / View Previous Result

- On the main menu, select  **History** to access historic files.
- Choose a file to do the following:
 -  **New Protocol:** Duplicate protocol setting and create a new measurement.
 -  **View:** View previous result.



Date	Protocol	User	File
2022-10-04 10:20:41	Nucleic Acid	TEST	0000

Figure 16. History

System 



Figure 17. System Menu

The many functions on the system menu are used to adjust the EzDrop 1000C settings.

Admin 

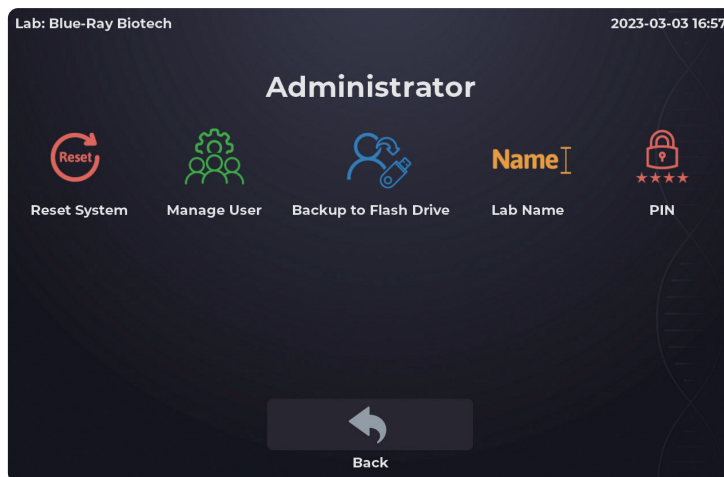


Figure 18. Administrator Menu

This function can only be used by an administrator and has password protection.

Service 

The system service mode is only available to the authorized distributor.

Connecting to a Personal Computer (PC)

Download the PC software from the [Blue-Ray Biotech Website](#).

EzDrop 1000C Micro-Volume / Cuvette Spectrophotometer > Resources > EzDrop 1000C PC Software


- a. Unzip the PC software file and install the following 2 drivers:
 - Generic_USB_Driver_Setup_V1.0.6.exe
 - CP210xVCPInstaller_x64.exe (Windows 64bits) or CP210xVCPInstaller_x86.exe (Windows 32bits)
- b. Connect the EzDrop 1000C to PC via USB-B cable (Figure 2). Turn on the EzDrop 1000C and wait to enter the standby screen.
- c. Open the  EzDrop software.
- d. Click the **EzDrop** icon to connect.



Figure 19. EzDrop 1000C is connecting to the PC

Note: The PC software cannot read any reports of the EzDrop 1000C, including dye lists or Kinetics methods. Both are regarded as independent.

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