![avantor delivered by VWR logo]

# Instruction manual

## VWR® 16 SAMPLE PURIFICATION SYSTEM

NA cat. no  77321-876



CE

UK CA

# Legal address of Manufacturer

**United States**

VWR International LLC
100 Matsonford Rd
Radnor, PA 19087 aaaa
+1 800-932-5000
www.vwr.com

# Country of Origin

Singapore

# Table of Contents

# Warning

⚠ Any improper operation may cause injury. Please read this manual carefully and operate safely according to the guidelines.

⚠ The instrument is a normal indoor instrument which conforms to class I of the GB 4793.1 standard.

⚠ This instrument is designed for use in a laboratory environment. The device must be operated by skilled laboratory personnel with appropriate training.

⚠ To prevent injury or voiding the warranty, the operator should not attempt to repair the instrument without explicit guidance from VWR. If service is required, please contact VWR service.

# Safety Information

## Avoiding Electrical Shock

Please follow the guidelines below and read this manual in its entirety to ensure safe operation of the unit.

⚠ Before powering on, confirm that the voltage used meets the electrical requirements of the instrument as stated on the rating plate. If the electric cord is damaged, replace it with the same type of cord. Hold the socket firmly before pulling the plug from an outlet. Do not pull the electric cord.

⚠ The instrument should be installed in an environment of standard room temperature, low dust, low humidity, and away from direct sunlight, electromagnetic interference, and heat sources. Do not block the vents on the instrument.

⚠ Always power off the instrument when you are finished using it. Unplug the power cord and cover the instrument with a cloth or plastic sheet to prevent excessive dust from entering the housing.

⚠ Pull the connector plug from the electrical outlet immediately and contact the vendor in the event of:
• Liquid entering the housing.
• Abnormal operation: such as any abnormal sound or smell.
• The instrument is dropped or there is any damage to the housing.
• Any malfunction.

# Package Contents

| Description | Quantity |
|---|---|
| VWR 16 Sample Purification System | 1 |
| Power Line | 1 |
| Power Adapter | 1 |
| Logitech Mouse | 1 |
| User Manual | 1 |
| Short User Manual | 1 |
| USB Drive | 1 |
| Performance Test Report | 1 |
| Aluminum Sample Rack | 1 |

# Installation

**Required Installation Environment**

Environmental Temperature: 5°C ~ 35°C

Relative Humidity: ≤ 70%

Input Voltage: DC 24V, 2A ( Adapter CSA, UL, CE marked)

# Intended use

For research use only. Not intended for any animal or human therapeutic or diagnostic use.

# Product Specifications

| | |
|---|---|
| **Display** | 4.3-inch color touch screen |
| **Purification Method** | Magnetic bead based purification |
| **Sample Volume** | 50µL – 1000µL |
| **Throughput** | Up to 16 samples |
| **Stability** | CV ≤ 3% |
| **Extraction Time** | 10 ~ 60 minutes |
| **Lysis & Elution Temperature** | Ambient +5°C – 120°C |
| **Temperature Accuracy** | ± 1°C |
| **Programming Control** | Bluetooth-enabled Android device, PC |
| **Program Storage** | Store up to 100 programs in internal memory |
| **Communication Ports** | USB for mouse, flash drive, and PC connection |
| **Data Transfer** | USB flash drive |
| **Consumables** | 96 deep well plates, 8 place tip combs, 6-well sample vessels (SBS) |
| **UV Sterilization** | UV lamp (3W UVC, 253.7 λ) |
| **Magnetic Bead Recovery** | > 95% |
| **Internal Lighting** | LED lamp |
| **Dimensions** | 20.8cm x 25.8cm x 31.5cm / 8.2 x 10.1 x 12.4 in. |
| **Weight** | 7 kg / 15.4 lbs |

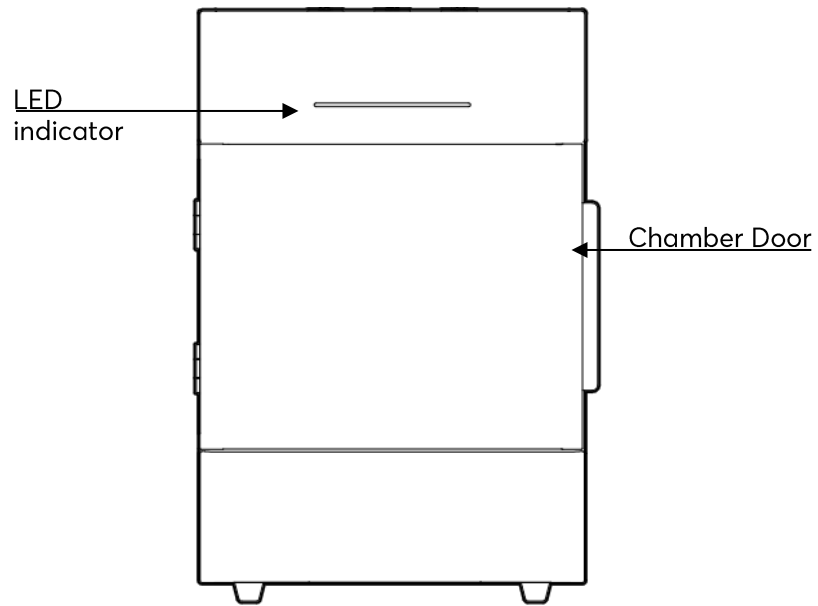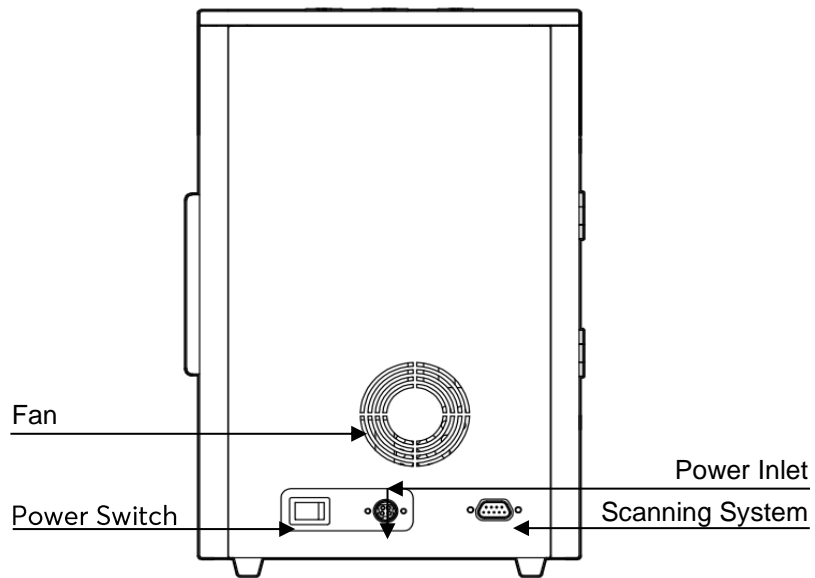# Description of Buttons and Switches

## Front View



**Fig. 1 Front View**

LED indicator

Chamber Door

## Rear View



**Fig. 2 Rear View**

Fan

Power Switch

Power Inlet

Scanning System

**Side View**



USB Port
PC Port
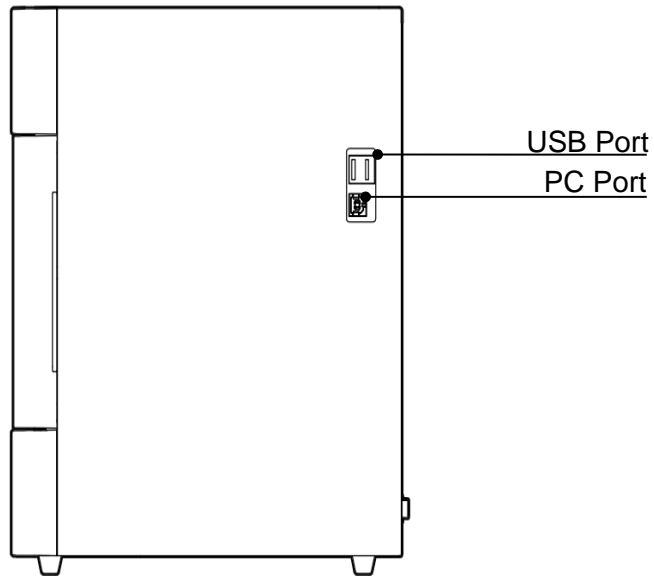
Fig. 3 Side View

**Sample Processing Chamber**



UV lamp

LED lamp (top of processing chamber)

Magnetic rod assembly housing

Tip Combs

Cooling fan (underneath heating block)

Tip Comb holder

96 deep well plate

**Control Panel**



4.3-inch touch screen

TAB    RUN    STOP
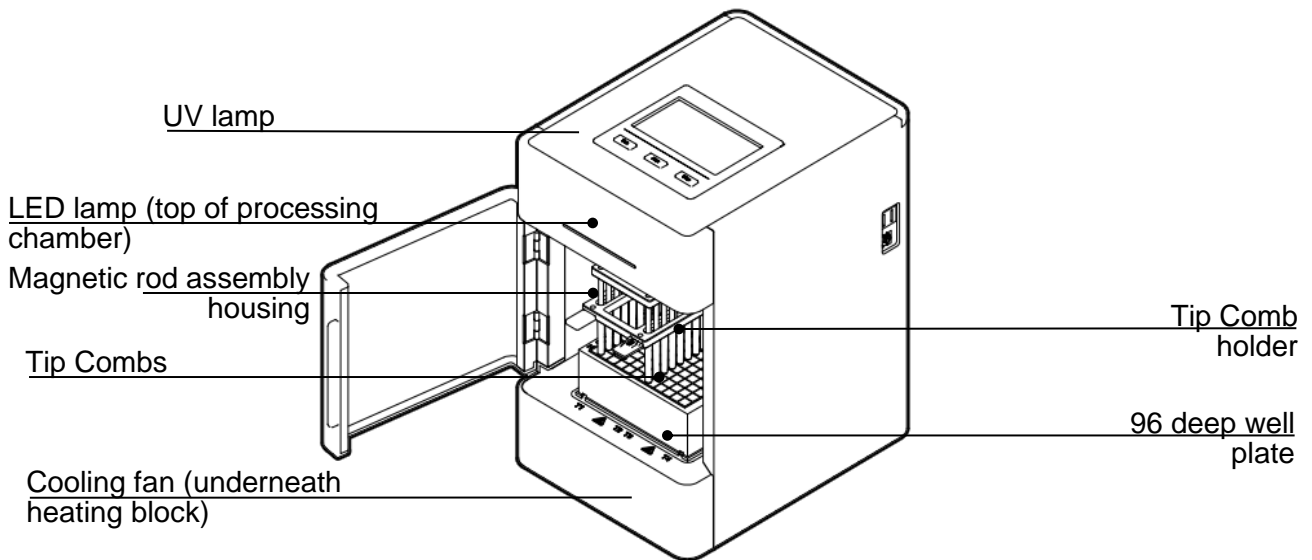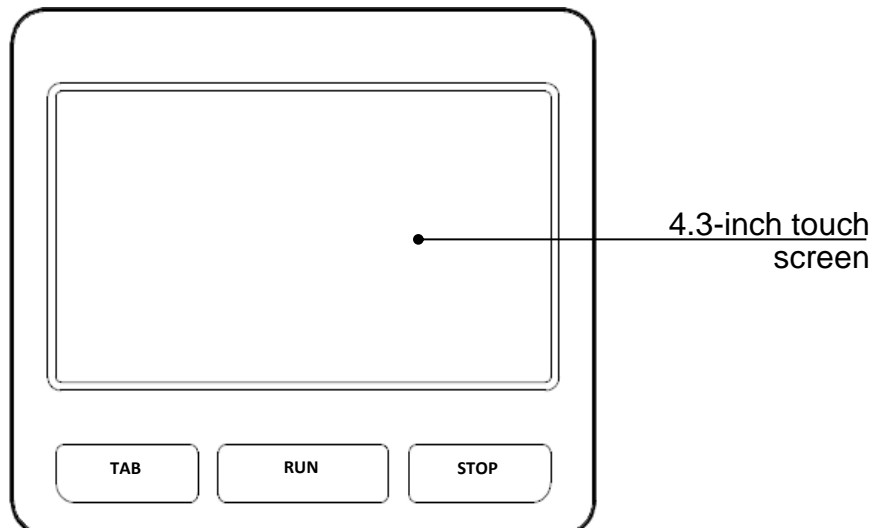
Fig. 4 Control Panel View

# Operation

Protocol programming is done using the Android App software which is saved on the included USB flash drive. Protocols are then transferred to the instrument where they are saved in the internal memory and can be selected for operation. For users that do not have an Android device, PC software can also be used for protocol programming. The PC software is also saved on the included USB flash drive.

## Android App Installation

Connect the included USB flash drive and the Android device to a computer. On the Android device: Please make sure that downloading from unknown sources is allowed on your "Files" app setting (**Setting s→ Apps & notifications → Advanced → Special App Access→ Install Unknown Apps → Files → Grant permission),** and that "File Transfer" is selected under "USB Preferences" in the device's settings (**Settings → Connected Devices → USB → Use USB for "File Transfer").** Copy the .APK file from the USB flash drive and transfer it into the downloads folder under the internal storage of the Android device. On the Android device, find the .APK file in the "Files" app under "Downloads", and click the .APK file to install (**Fig. 5**).
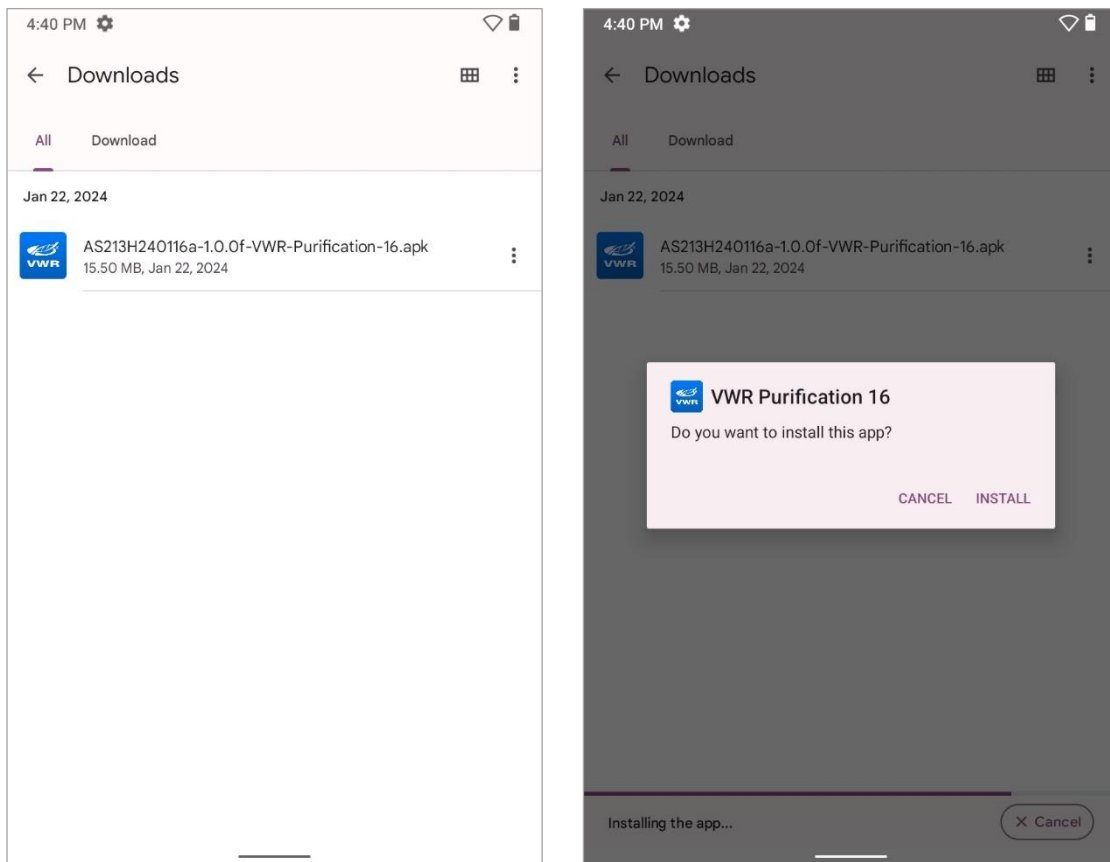


**Fig. 5 App Installation**

# Android App Interface



| Icon | Name | Definition |
|------|------|------------|
| | **Protocol select and transmit** | Quickly select a protocol for viewing or transmitting to the instrument |
| | **Create new protocol** | Create and edit a new protocol |
| | **Acquire protocol from instrument** | Download protocols from  instrument to the app |
| | **Instrument Bluetooth connection** | Connect the Android device to the instrument via Bluetooth |

After the app has been installed and the startup has completed, the main interface will be displayed. Four main functions are available: **Protocol select and transmit, Create new protocol, Acquire protocol from instrument, and Instrument Bluetooth Connection**.

## Transmitting Programs

Click the "Protocol select and transmit" button on the main interface. This interface offers options for local creation and instrument acquisition (**Fig. 6**).
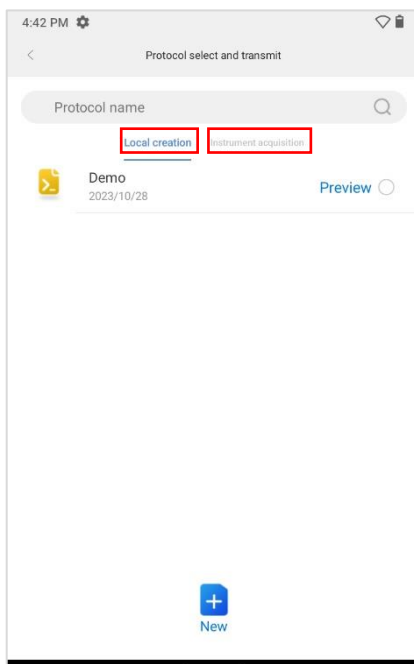


Fig. 6: Protocol Select and Transmit Interface

**Local Creation**: Shows a list of protocols saved in the memory on the Android device. Or click the "  " icon to create and edit a new protocol.  Protocols can be selected for modification.

**Local Creation:**
Select a protocol or multiple protocols (**Fig. 7, Fig. 8**). 4 buttons will appear at the bottom of the screen: Transmit, Delete, Display QR Code, and Save as.
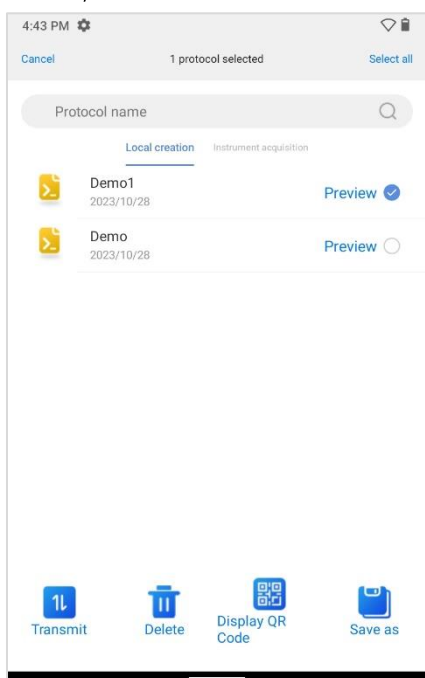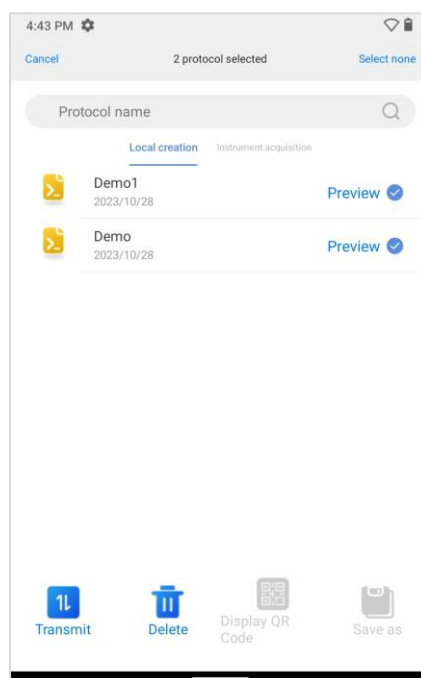


Fig 7. One Protocol selected



Fig 8. Multiple protocols selected

**Transmit**: Transfer the selected protocols from the app to the instrument.

**Delete**: Remove protocols from app memory.

**Display QR Code**: Generate the protocol specific QR code. Use the included handheld scanner to instantly transfer the protocol to the instrument. Press "Save" when the code is displayed to save the code to the photo gallery on the Android device (**Fig. 9**).

**Save as**: The selected protocol can be saved under a new name

**Note**: "Display QR Code" and "Save as" buttons can only be used when only 1 protocol is selected. When multiple protocols are selected, only Transmit and Delete can be performed.



**Fig 9. QR Codes**

**Preview**: Select the blue "Preview" button to the right of a protocol to see the protocol steps with details (**Fig. 10**).

**Fig 10. Preview Protocol**

**New Protocol**

Click the "New" icon on the "Protocol select and transmit" interface to create a new protocol (**Fig. 11**). Set the name of the protocol. The default protocol name is the current time. For example, the current time is 14:46, so the first protocol is 14461; a second protocol created within the same minute would be named 14462.
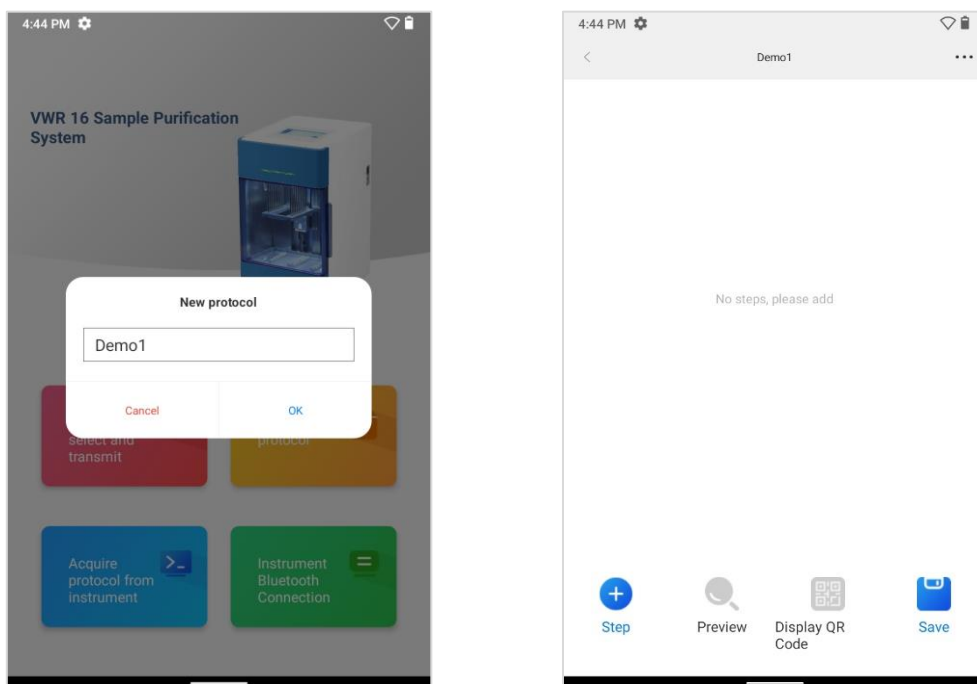


**Fig 11. Create & name a new protocol**

After the new protocol is named, the interface will allow for the addition of new steps (**Fig. 12**).  Users can add, delete, or copy a step. After the protocol steps have been set, users can preview, edit, and rearrange protocol steps.

**Note**: A new protocol can also be created from the "Create new protocol" icon on the app main interface.
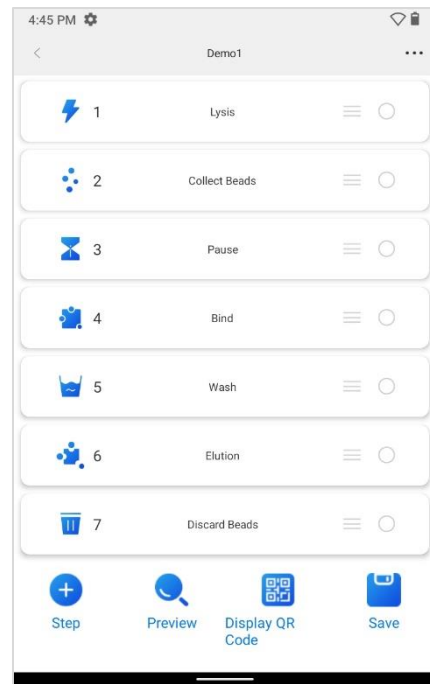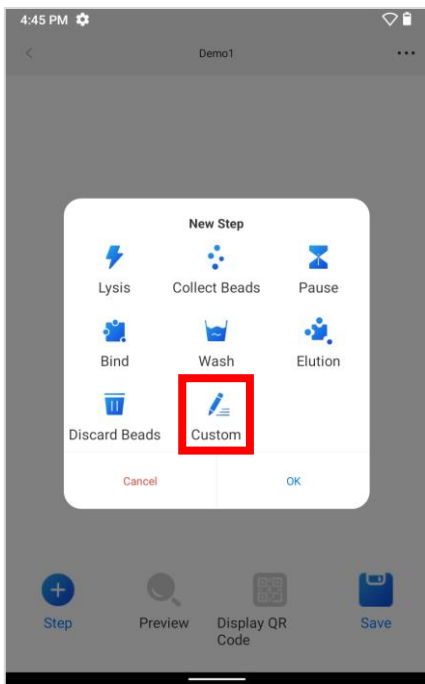
Fig 12. Add a new protocol step

**Add step**: To create a new protocol step, users can choose to either add the preset default steps (Lysis, Collect Beads, Pause, etc.) or add a "Custom" step **(Fig. 12)**.

**Preview**: View details of a protocol after its steps have been set **(Fig. 10).**

**Delete or copy**: Select the circle to the right of a protocol step to delete or copy that step. Users can select single or multiple steps for deleting or copying **(Fig. 13)**. When deleting a step, a prompt box will be displayed to confirm the step deletion.

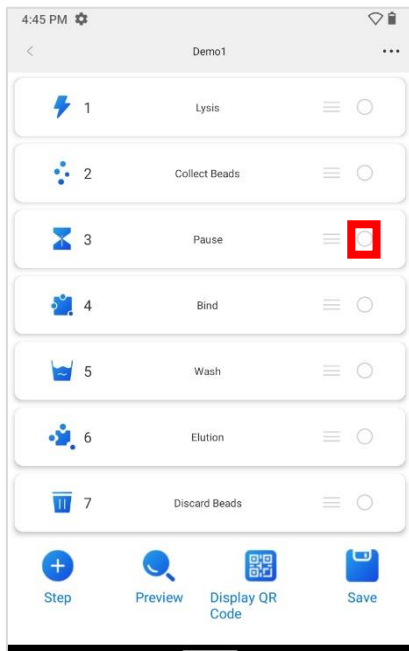**Move**: Adjusts the sequence of steps. Hold and drag the "Move" icon to adjust the sequence of steps **(Fig. 14)**.
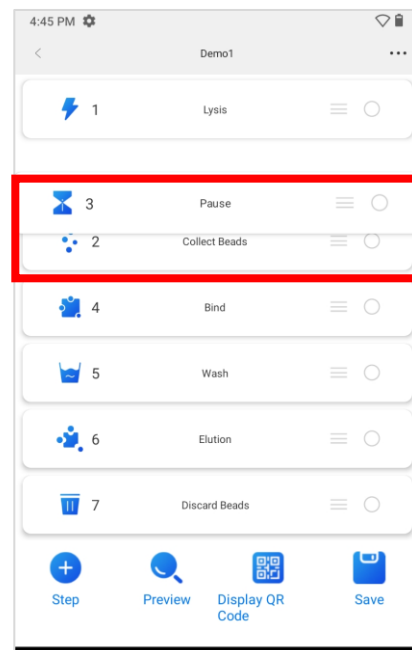


Fig 13. Select to Delete or Copy steps



Fig 14. Move the sequence of steps

| Icon | Name | Definition |
|---|---|---|
| ≡ | Move | Hold and drag to rearrange the steps of the current protocol. |
| ○ | Select a step | Select step for copying or deleting. |
| + | Step | Add a new step. |
| (QR icon) | Display QR Code | Generates the protocol specific QR code. |
| (magnifier icon) | Preview | Preview the step settings of the current protocol. |

**Step Parameters Settings**

Select a step from the list of steps of a protocol (press the middle of the bar) to enter the parameter settings interface (**Fig. 15**). At the top, the current sample-well position is shown (position 1-6). To change the position of the step, highlight another position number in orange. Parameters can be adjusted for "General", "Magnet", and "Advanced" settings (**Fig. 16, Fig. 17**). Note that in the "General" parameter settings interface, the temperature can only be adjusted if position 1 or 6 is selected; these are the locations of the heating block and typically correspond to lysis and elution steps.



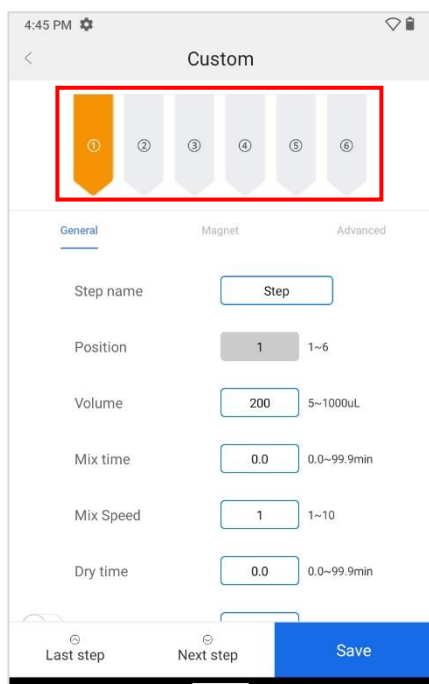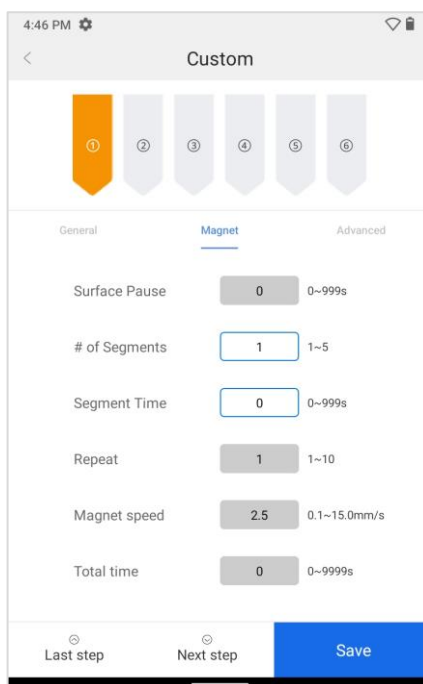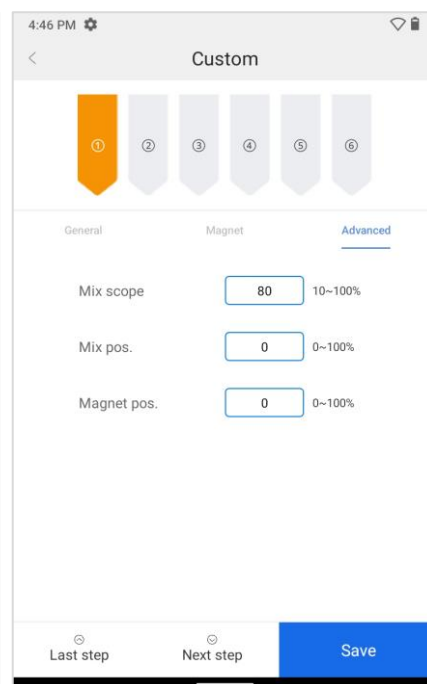Fig 15. General Parameters        Fig 16. Magnet Parameters        Fig 17. Advanced Parameters

| General Parameter Settings | Definition |
|---|---|
| Step Name | Name of step. The default steps cannot be renamed. Only a custom step can have a custom name. Custom |

|  | step parameters are shown in Fig. 25. |
|---|---|
| Position | The position site corresponds to columns of the plate (position 1 = column 1 on plate), the positions for default steps are set as follows: 1 for lysis, 2 for collect beads, 1 for bind, 3 for wash, 6 for elution, and 3 for discard. |
| Volume | Set the volume of the corresponding position (50–1000µL) |
| Mix time | Set the mix time. Range 0.0 and 99.9min. |
| Mix speed | Set the mix speed. Range of 1-10. |
| Dry time | Set dry time. Range 0.0–99.9min. |
| Temperature | Set the temperature of the in the range of 37 – 120℃, Temperature can only be set for positions 1 and 6. Default temperature setting is "Off". |
| **Magnet Parameter Settings** | **Definition** |
| Surface Pause | The pause time after bead collection when magnetic rods & tip combs are above the liquid surface level to prevent loss of beads due to breaking the surface tension. Range 0–999s. |
| # of Segments | To maximize the collection of the magnetic beads after mixing, up to 5 segment positions can be selected. |
| Segment time | Time spent at each segment position. Range 0–999s. If segment time is set to 0, the other magnet parameter settings cannot be adjusted, and there will be no magnetization in the step. |
| Repeat | Repeat the full cycle of set magnetization parameters. Range 1-10. |
| Magnet speed | Set magnet speed. Range 0.1–15.0mm/s. |
| Total time | The estimated total time for the magnetic binding step process. The time remaining of each step is displayed on the control panel during a protocol run. Range 0–9999s |
| **Advanced Parameter Settings** | **Definition** |
| Mix scope | Set mix scope. Range 10–100%, the default is 80%. |
| Mix pos. | Set mix position. Range 0–100%, the default is 0%. |
| Magnet pos. | Set magnet position. Range 0–100%, the default is 0%. |
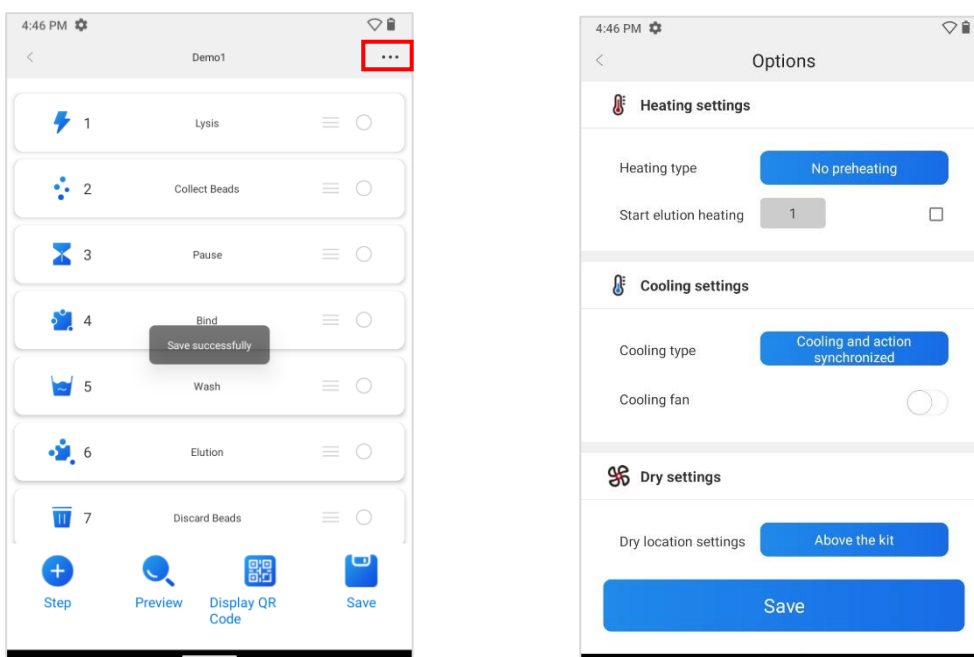
Fig 18. Option settings

**Note**: Click "Save" to save the current step setting parameters.
Option settings
Select the (   ...   ) icon on the top right of the protocol step interface to enter the options setting interface.

Click "save" to keep the adjusted parameters (**Fig. 18**).

| Step | Option | Definition |
|---|---|---|
| Heating settings | Preheating | When the protocol reaches a step that requires heating, the heating block will heat to the required temperature first, then the tip comb movement will begin. |
| | No Preheating | Heating and tip comb movement are carried out synchronously |
| | Start elution heating | Set the heating block to begin heating 1, 2, or 3 steps before elution. |
| Cooling settings | Action after cooling | When the protocol reaches a step that requires cooling, the cooling fan will cool to the required temperature first, then the tip comb movement will begin. |
| | Cooling and action synchronized | Cooling fan for the heating block and tip comb movement are carried out synchronously |
| | Cooling fan | Instrument cooling fan; optional, off by default |
| Dry settings | Above the kit | After bead collection, the tip combs will pause at the top of the plate. | The default drying position is on the top of the kit. |
| | Specify location | After bead collection, the tip combs will pause at a specified position above the liquid surface level. | |
| Action | Horizontal velocity (1- | Set horizontal movement speed of magnetic rods & |

| | | |
|---|---|---|
| parameter | 100mm/s) | tip combs, default 15mm/s |
| | Vertical velocity of magnetic rods (1-100mm/s) | Set vertical movement speed of magnetic rods, default 35mm/s |
| | Vertical velocity of tip combs (1-100mm/s) | Set vertical movement speed of tip combs, default 35mm/s |

## Create New Protocol Interface

Select the "Create new protocol" icon on the app main interface to quickly create a new protocol. The relevant settings are identical to those under "Local Creation" in the "Protocol Select and Transmit" interface (**Fig. 19**).
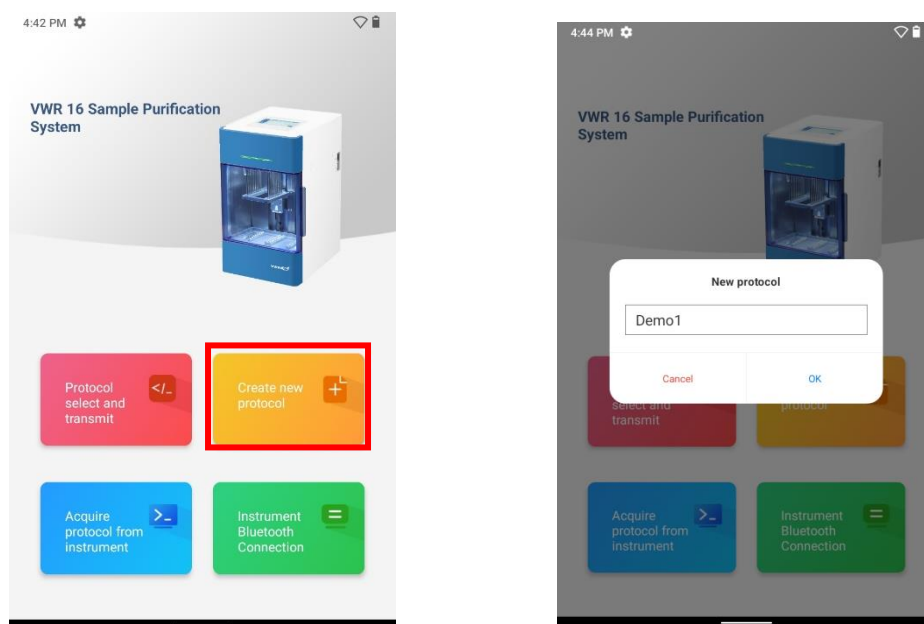


**Fig 19. Creating a New Protocol**

## Acquire Protocol from Instrument Interface

Before acquiring a protocol from the instrument onto the app, the Android device must be connected to the instrument via Bluetooth. After establishing a Bluetooth connection, the app allows viewing and downloading the saved protocols and the running logs from the instrument. The downloaded protocols/logs can be viewed and edited in the " Acquire protocol from instrument" interface.
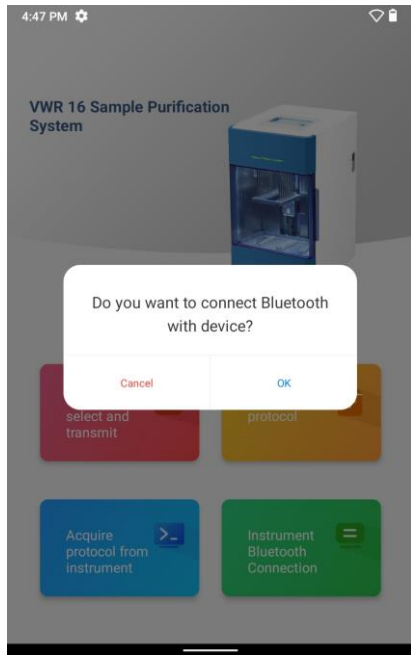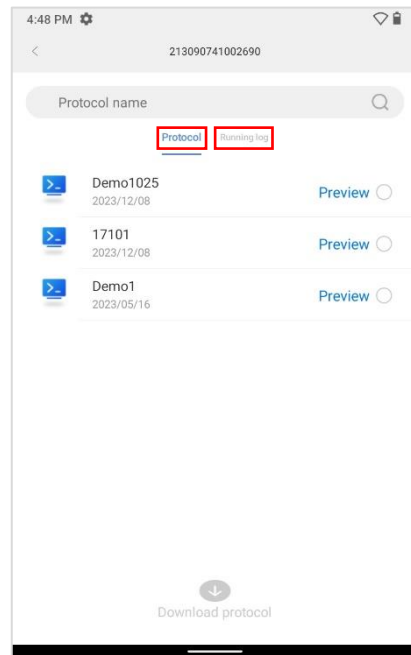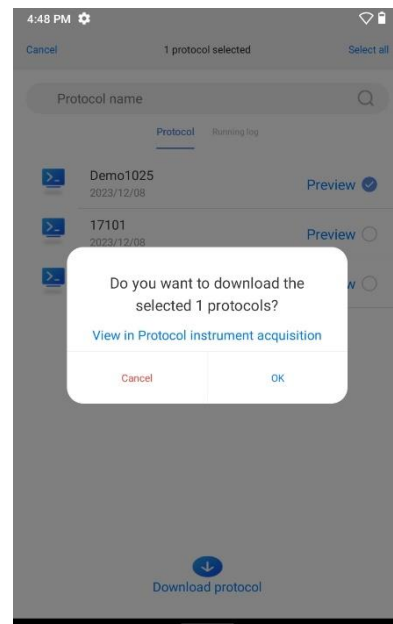
Fig 20. Connecting to Bluetooth



Fig 21. List of Protocols

**Fig. 21** displays the current protocols saved in the instrument's internal memory. Users can select protocols to download onto the app (**Fig. 22**).



Fig 22. Acquiring Protocol From Instrument ➜ App

## Running log

Select the "Running log" tab and a log to download onto the app. Click the "Download running log" button to download the log (**Fig. 33**). After downloading the log, click to preview it. The log is transmitted to the app in a .CSV format. The app will convert the .CSV to a .PDF format for viewing it (**Fig. 23, Fig. 24**).
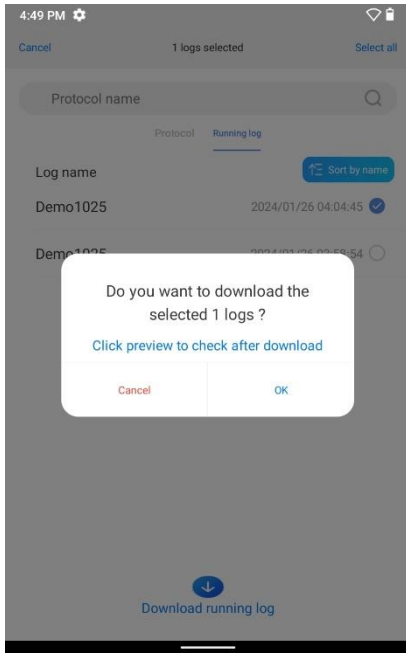
Fig 23. Download Log


Fig 24. Log Preview

## Instrument Bluetooth Connection Interface

When Bluetooth is turned on for the Android device, the app can directly open the "Instrument Bluetooth Connection" interface. The "My instruments" section displays each instrument the Android device has connected to. The right side of the screen will indicate which instrument the app is currently connected to.

Click one of the instruments to establish a connection between the app and the instrument (**Fig. 25**).
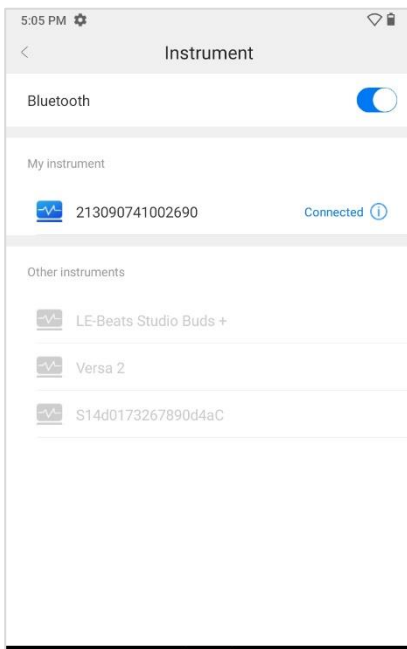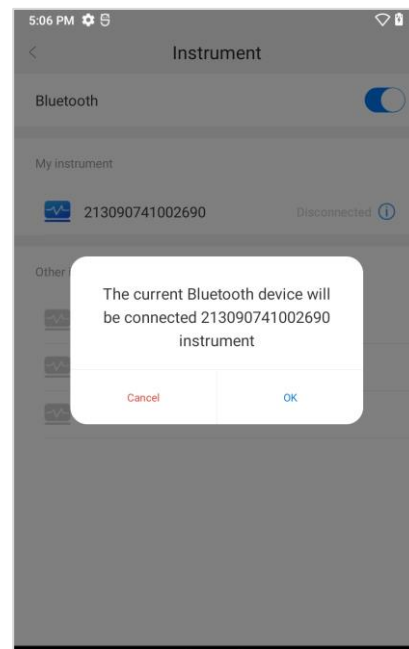

Fig 25. Bluetooth Connection


Fig 26. Connect via Bluetooth

**Note**: The default Bluetooth ID of the instrument is its serial number.

## Modify Instrument Information

In the "Instrument Bluetooth Connection" interface. Select the "  ![i icon]  " icon to rename the instrument's Bluetooth ID or to disconnect the Bluetooth connection.
Click "**Disconnect**" to disconnect the Bluetooth connection between the Android device and the instrument.
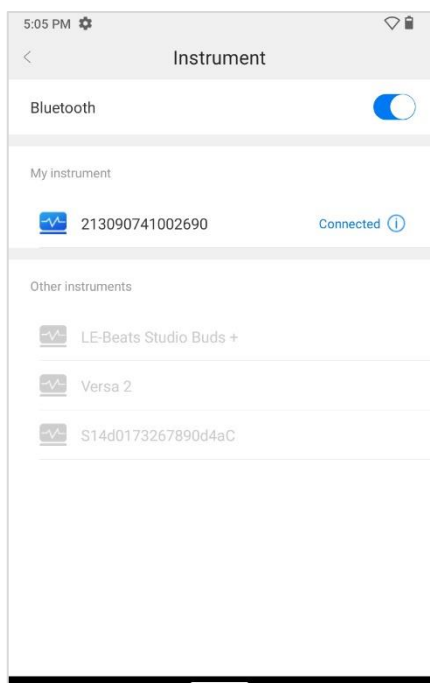Click "**Delete this instrument**" to remove the selected instrument from the "My instrument" section.
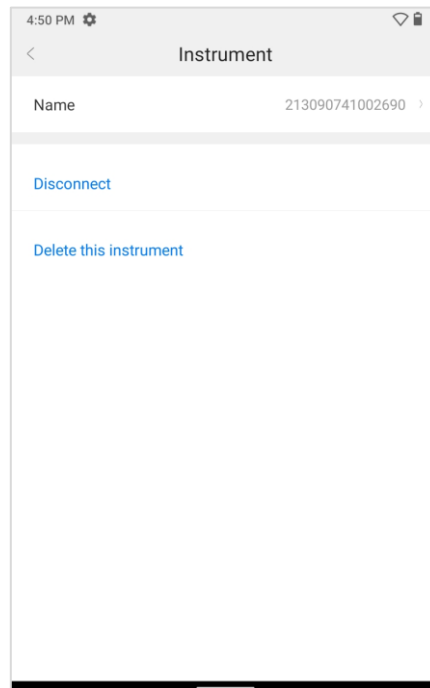


Fig 27. Modify Instrument Information       Fig 28. View Bluetooth Information

# Instrument Software
## Start-up Interface
Upon powering on the instrument, the start-up screen will be displayed (**Fig. 29**).



Fig 29. Start-up Display

## Run Interface

Select "Run" to enter the Run interface. This interface is divided into two views: Shortcut View and List View. (**Fig. 30, Fig. 31**).
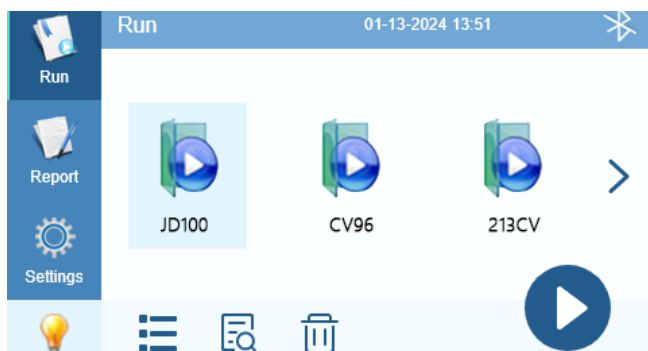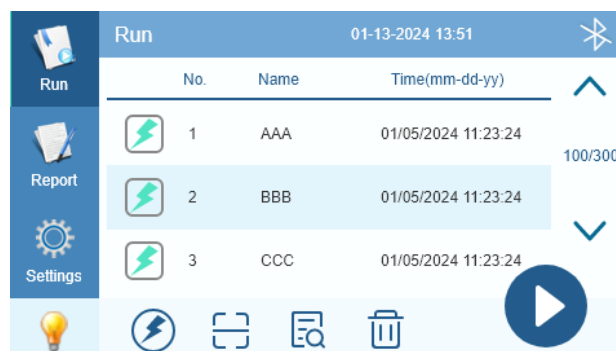

**Fig 30. Shortcut View**


**Fig 31. List View**

Press the icons:  or  to toggle between views.
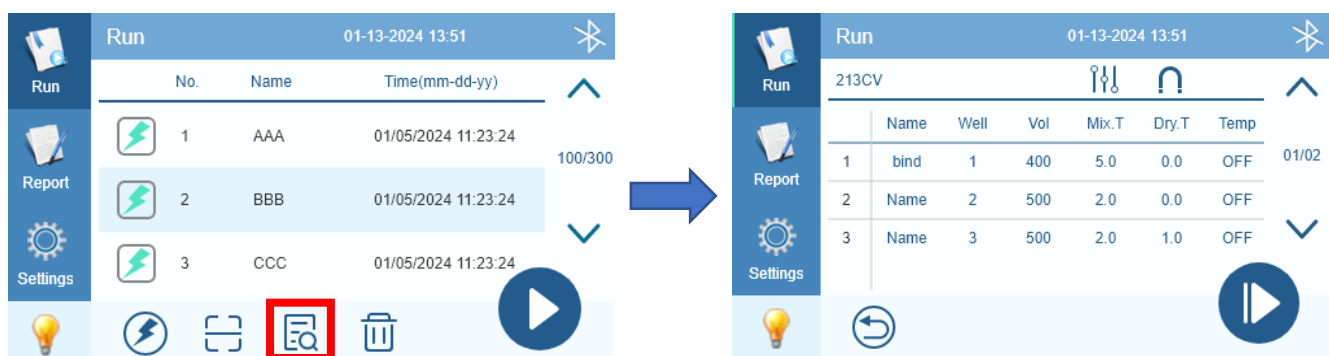

**Fig 32. Preview the Steps of a Protocol**

Click the "  " icon to preview the selected protocol, as shown in figure 32 below.

| Icon | Definition |
|---|---|
|  | Delete the selected protocols from the instrument's internal memory. |
|  | Switch from Shortcut view to List view, and vice versa. |
|  | Activate the instrument scanning software, which allows the scanning of a QR code for instant protocol upload. |
|  | Preview the parameter settings of a selected protocol. |

| | |
|---|---|
|  | Run the selected protocol. |
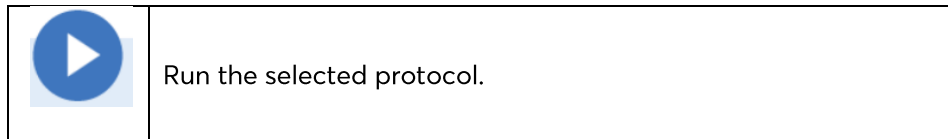
**Running a Program**

Click the  icon to start a protocol run, and  icon to pause. (**Fig. 33**). During a protocol run, a progress bar at the bottom of the screen provides an indication of the process.  Remaining time, temperature of the heating blocks, current step name and details of the current step are also displayed.
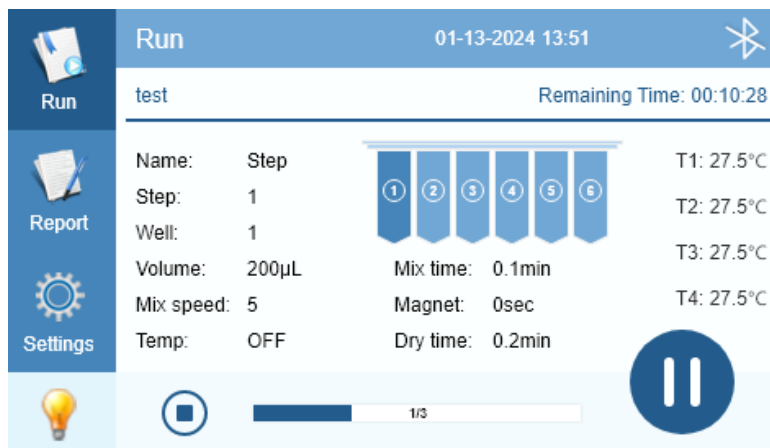


**Fig 33. Run a Protocol**

**Log Interface**

The instrument automatically generates and stores a log of each protocol run. The report contains the name of the protocol, date and time of the protocol run, parameter settings for each step, instrument information, and more. The instrument can store reports of up to 1000 protocol runs, which can be exported via a USB flash drive. The most recent report will display at the top of the list in the "Report" interface (**Fig. 34**).
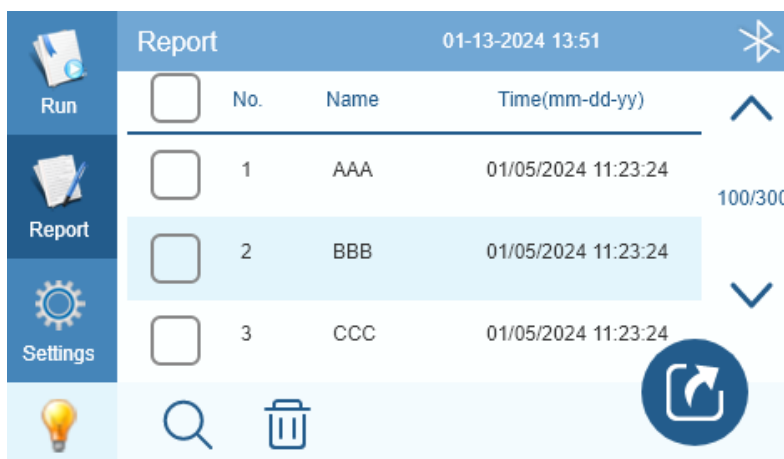


**Fig 34. Protocol Report**

| Icon | Definition |
|------|------------|
|  | Delete the selected logs |
|  | Search for a specific log |
|  | Export log to a USB flash drive |

**Settings Interface**
The settings interface has 4 tabs: "UV", "Fan", "System" and "Maintenance".
**UV**: The time of sterilization can be set. Click the start button to begin the process. The UV light will turn off automatically after the timer has ended.
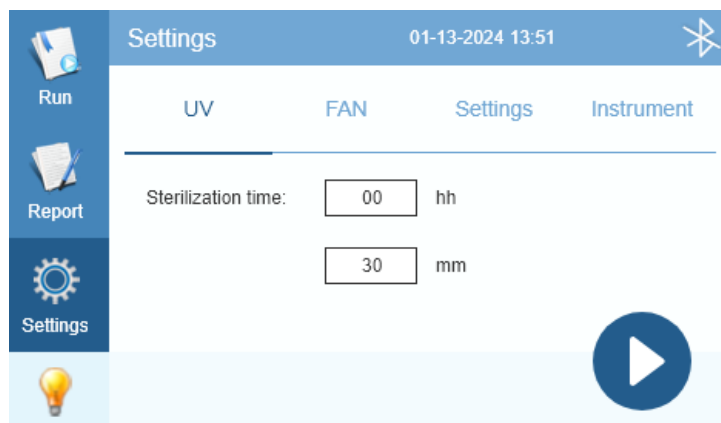

**Fig 35. UV Sterilization Settings**

**Fan**: The internal fan can be turned on or off during a protocol run.
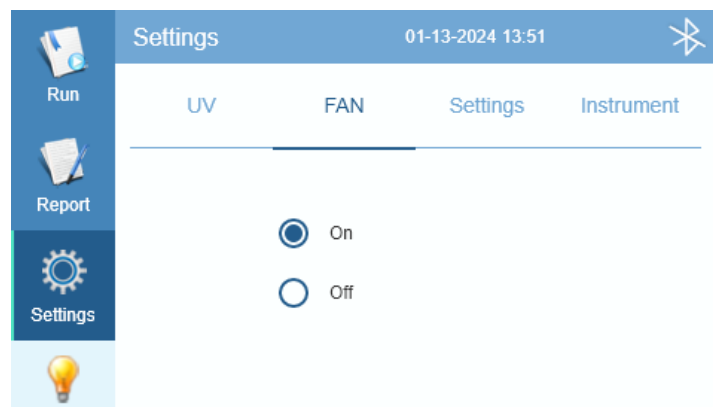

**Fig 36. Internal Fan Settings**

**System:** Settings for "System" interface is divided into "Time", "Language", "Transfer", "Bluetooth" and "Version", (**Fig. 37, Fig. 38**).


**Fig 37. System Settings 1/2**
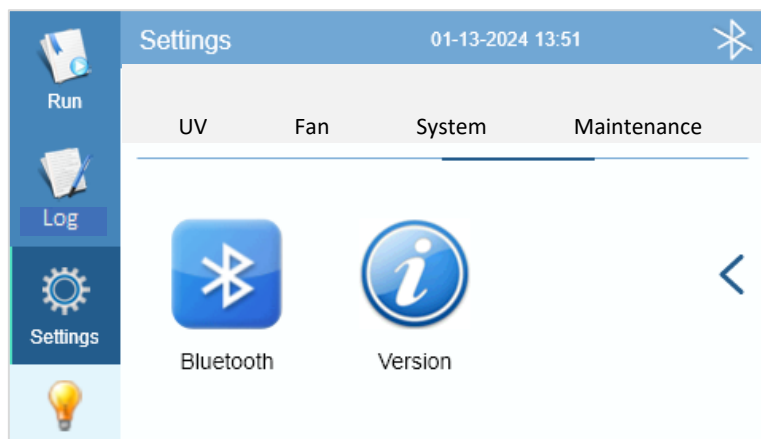

**Fig 38.System Settings 2/2**

**Time:** Change the currently displayed time on the instrument.


**Fig 39. System Settings**

**Transfer:** Import/Export protocols from/to a USB flash drive.

**Fig 40. Import/Export Protocol**

To import/export a protocol via USB, insert the included USB flash drive into the instrument. When importing a protocol, the file must be saved in the USB drive under a folder labeled "items". Then, select the "Import " (or "Export") button to enter the flash drive directory. Select the required protocols for transfer and press "Ok" to import/export.

**Bluetooth**: Turn Bluetooth on/off; the Bluetooth ID is the serial number of the instrument.


**Fig 41. Bluetooth Settings**

**Internal LED Lighting**
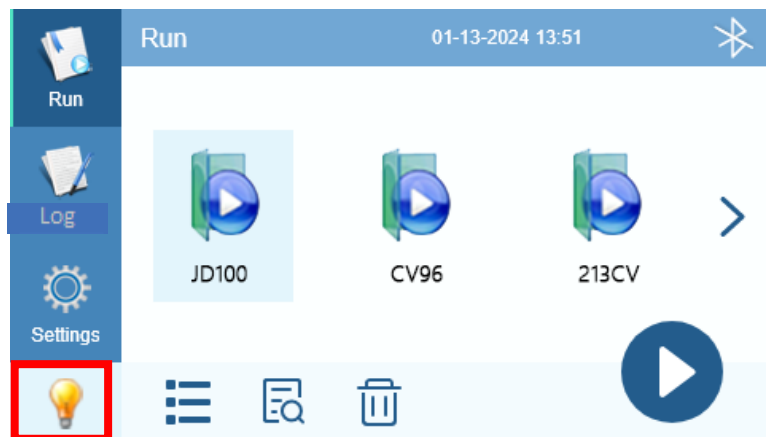

**Fig 42. Turn Internal Light On/Off**

In the lower left corner of the general instrument interface, there is a lamp icon "      ", Select the icon to

turn the Internal LED lamp on/off (**Fig. 42**).

# Troubleshooting

Review the information in the table below to troubleshoot operating problems.

| Problem | Cause | Solution |
|---|---|---|
| Instrument does not power on | **Power not connected, Fuse failure** | Ensure power supply is connected. Contact VWR Service |
| No UV Light | **UV bulb failure** | Replace UV bulb. Contact VWR Service. |
| No LED Light | **LED failure** | Replace LED. Contact VWR Service. |
| Program does not stop after opening chamber door | **Sensor failure** | Contact VWR Service. |
| Noticeable difference between theactual and display temperature | **Sensor failure** | Contact VWR Service. |
| Instrument does not start program after pressing "run" | **Controller and/or Motor failure** | Contact VWR Service |

# Repair and Maintenance

**Encountering problems**
For inquiries on the repair and maintenance of the instrument, please contact your local VWR service center for assistance.

# User Replaceable Accessories and Spare Parts

| Description | Quantity | Cat. No. |
|---|---|---|
| VWR 6-WELL SAMPLE VESSELS CS100 | 100 | 77321-868 |
| VWR TABLET FR 16 SAM PURIFICATION SYSTEM | 1 | 77321-874 |
| VWR 8 PLACE TIP COMBS CS50 | 50 | 77321-872 |

# Technical service

## Web Resources

Visit the VWR website at **www.vwr.com** for:

• Complete technical service contact information

• Access to the VWR Online Catalogue, and information about accessories and related products

• Additional product information and special offers

**Contact us** For information or technical assistance contact your local VWR representative or visit.
www.vwr.com.

# Warranty

**VWR** warrants that this product will be free from defects in material and workmanship for a period of two (2) years from date of delivery. If a defect is present, VWR will, at its option and cost, repair, replace, or refund the purchase price of this product to the customer, provided it is returned during the warranty period. This warranty does not apply if the product has been damaged by accident, abuse, misuse, or misapplication, or from ordinary wear and tear. If the required maintenance and inspection services are not performed according to the manuals and any local regulations, such warranty turns invalid, except to the extent, the defect of the product is not due to such non-performance.

Items being returned must be insured by the customer against possible damage or loss. This warranty shall be limited to the aforementioned remedies. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY.

# Compliance with local laws and regulations

The customer is responsible for applying for and obtaining the necessary regulatory approvals or other authorisations necessary to run or use the Product in its local environment.  VWR will not be held liable for any related omission or for not obtaining the required approval or authorisation, unless any refusal is due to a defect of the product.

# Equipment Disposal



This equipment is marked with the crossed out wheeled bin symbol to indicate that this equipment must not be disposed of with unsorted waste.

Instead it's your responsibility to correctly dispose of your equipment at lifecycle -end by handling it over to an authorized facility for separate collection and recycling. It's also your responsibility to decontaminate the equipment in case of biological, chemical and/or radiological contamination, so as to protect from health hazards the persons involved in the disposal and recycling of the equipment.

For more information about where you can drop off your waste of equipment, please contact your local dealer from whom you originally purchased this equipment.

By doing so, you will help to conserve natural and environmental resources and you will ensure that your equipment is recycled in a manner that protects human health.

Thank you

# Our local offices in Europe, AMEA and North America

**Austria**
VWR International GmbH
Graumanngasse 7
1150 Vienna
Tel.: +43 1 97 002 0
Email: info.at@vwr.com

**Belgium**
VWR International BV
Researchpark Haasrode 2020
Geldenaaksebaan 464
3001 Leuven
Tel.: +32 016 385 011
Email: vwr.be@vwr.com

**Canada**
VWR International
2360 Argentia Road
Mississauga, Ontario L5N 5Z7
Tel.: +1 800 932 5000
Email: Canada_Orders@vwr.com

**China**
VWR (Shanghai) Co., Ltd
Bld.No.1, No.3728 Jinke Rd,
Pudong New District
Shanghai, 201203- China
Tel.: +400 821 8006
Email: info_china@vwr.com

**Czech Republic**
VWR International s. r. o.
Veetee Business Park
Pražská 442
CZ - 281 67  Stríbrná Skalice
Tel.: +420 321 570 321
Email: info.cz@vwr.com

**Denmark**
VWR International A/S
Tobaksvejen 21
2860 Søborg
Tel.: +45 43 86 87 88
Email: info.dk@vwr.com

**Finland**
VWR International Oy
Valimotie 17-19
00380 Helsinki
Tel.: +358 9 80 45 51
Email: info.fi@vwr.com

**France**
VWR International S.A.S.
Immeuble Estréo
1-3 rue d'Aurion
93114 Rosny-sous-Bois cedex
Tel.: 0 825 02 30 30* (national)
Tel.: +33 (0) 1 45 14 85 00
(international)
Email: info.fr@vwr.com
* 0,18 € TTC/ min + prix appel

**Germany**
VWR International GmbH
Hilpertstrasse 20a
D - 64295 Darmstadt
Freecall: 0800 702 00 07
Tel.: +49 (0) 6151 3972 0
(international)
Email: info.de@vwr.com

**Hungary**
VWR International Kft.
Simon László u. 4.
4034 Debrecen
Tel.: +36 (52) 521-130
Email: info.hu@vwr.com

**India**
VWR Lab Products Private Limited
No.139. BDA Industrial Suburb,
6th Main, Tumkur Road,
Peenya Post,
Bangalore, India – 560058
Tel.: +91-80-28078400
Email: vwr_india@vwr.com

**Ireland**
VWR International Ltd
Orion Business Campus
Northwest Business Park
Ballycoolin
Dublin 15
Tel.: +353 01 88 22 222
Email sales.ie@vwr.com

**Italy**
VWR International S.r.l.
Via San Giusto 85
20153 Milano (MI)
Tel.: +39 02-3320311/02-487791
Email: info.it@vwr.com

**Korea**
Avantor Performance Materials Korea Ltd
2F ACE Gwanggyo Tower I
Daehak 4ro 17
Yeongtong-gu Suwon
Korea 16226
Tel.: +82 31 645 7250
saleskorea@avantorsciences.com

**Mexico**
VWR International, S.de R.L. de C.V.
Km. 14.5 Carretera
Tlalnepantla-Cuautitlán
Col. Lechería
Tultitlán Edo. de México
CP 54940
Tel.: +52 (55) 5005 0100
vwrmx@vwr.com

**Middle East & Africa**
VWR International FZ-LLC
Office 203, DSP Lab Complex,
Dubai Science Park
Dubai, United Arab Emirates
Tel.: +971 4 5573271
info.mea@vwr.com

**The Netherlands**
VWR International B.V.
Postbus 8198
1005 AD Amsterdam
Tel.: +31 020 4808 400
Email: info.nl@vwr.com

**Norway**
VWR International AS
Brynsalleen 4
0667 Oslo
Tel.: +47 22 90 00 00
Email: info.no@vwr.com

**Poland**
VWR International Sp. z o.o.
Limbowa 5
80-175 Gdansk
Tel.: +48 058 32 38 210
Email: info.pl@vwr.com

**Portugal**
VWR International – Mat. de
Laboratório, Soc. Unipessoal, Lda
Edifício Ramazzotti
Avenida do Forte 6, P-1.09 e P-1.10
2790-072 Carnaxide
Tel.: +351 21 3600 770
Email: info.pt@vwr.com

**Singapore**
VWR Singapore Pte Ltd
The Metropolis
Tower 1, #05-03
9 North Buona Vista Drive
Singapore 138588
Tel: +65 6505 0760
Email: sales.sg@vwr.com

**Spain**
VWR International Eurolab S.L.
C/ Tecnología 5-17
A-7 Llinars Park
08450 - Llinars del Vallès
Barcelona
Tel.: +34 902 222 897
Email: info.es@vwr.com

**Sweden**
VWR International AB
Fagerstagatan 18b
163 94 Stockholm
Tel.: +46 08 621 34 20
Email: info.se@vwr.com

**Switzerland**
VWR International GmbH
Lerzenstrasse 16/18
8953 Dietikon
Tel.: +41 044 745 13 13
Email: info.ch@vwr.com

**UK**
VWR International Ltd
Customer Service Centre
Hunter Boulevard
Magna Park
Lutterworth
Leicestershire
LE17 4XN
Tel.: +44 (0) 800 22 33 44
Email: uksales@vwr.com

**United States**
VWR International, LLC
100 Matsonford Road
Building One Suite 200
Radnor, PA 19087
Tel.: +1  800 932 5000
vwrcustomerService@vwr.com