

Digipol-D Density Meter User Manual



Please read the manual before installation and operation.

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I. Use instructions



WARNING: Those responsible shall be aware that if the protection provided by the instrument is not used as required by the manufacturer, the instrument itself may be weakened.



Warning: Carefully handle the various solutions used in the analysis in accordance with the laboratory safety regulations. Refer to the corresponding material and safety data sheet. Wear lab suits, goggles, and rubber gloves whenever possible. scald scald when handling heat reagents.



Warning: Risk of electric shock. Only professional personnel can open the cover and panel.

II.Features and purposes

The automatic density meter independently developed and produced adopts the principle of U tube oscillation method and perfectly combines Peltier accurate temperature control technology and high-definition video camera technology, which not only provides users with accurate, stable and reliable test results, but also brings users an efficient and convenient test experience.High-definition video can easily see whether there are bubbles affected in the sample. The pulse excitation and high-precision detection technology are used to facilitate users to accurately and quickly measure the sample density and density related parameters.

Instruments can be widely used in pharmaceutical, petrochemical, food, cosmetics and other fields, and are necessary instruments for the production and development of liquid-related products.

Features:

- Automated integration, to achieve one-button determination function;

- Built-in Paral temperature control to improve accuracy and stability;

- HD video avoids bubble effects;

- Data can be printed directly through the printer;

- Meet the 21CFR Part 11, audit tracking, pharmacopoeia, and electronic signature for connecting to the USB printer, thermal printer, or U disk export experimental report;

- Built-in Wifi wireless connection network, using the cloud service function;

- Complete compliance with the Pharmacopoeia GLP

requirements;

The whole machine has passed the TART quality certification standard of the laboratory analytical instrument.

III. Part name

The structural composition of the instrument is shown in Fig a:



Figure a, Instrument Front View

- 1.Upper cover of instrument
2. The capacitive touchscreen
- 3.Injection pump

IV. Function introduction

1. Boot animation

When turning on, the interface is shown in Figure 1, automatically boot and display the boot animation.

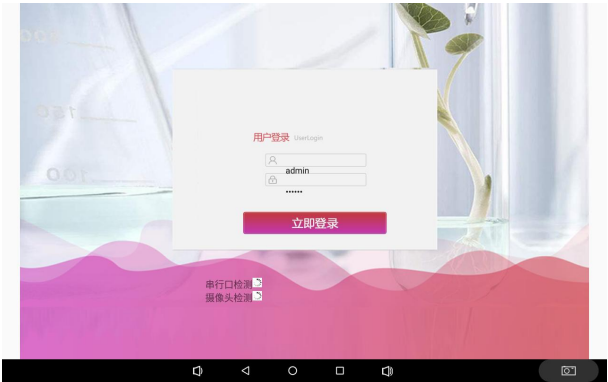


graph 1

2. Login interface

After the boot animation is completed, to the interface is shown in Figure 2. Please select and fill in the correct user name and password in the corresponding input box, and then click Login

(factory default maximum permission username admin, default password 888888).



graph 2

The 3. Test parameter interface is shown in Figure 3



graph 3

[Sample Name]: You can enter English, Chinese, numbers, or symbols;

[Sample number]: You can enter English, Chinese, numbers, or

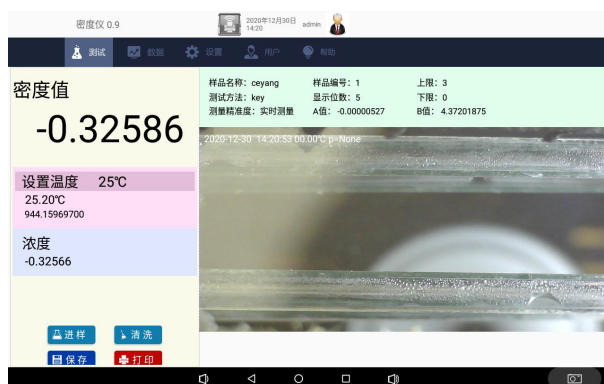
symbols;

[Test Method]: Drop-down box selection method;

[Set temperature]: The input value range is 5~65℃;

4. Automatic test interface

After the parameters are set at the test parameter setting interface, press the test key to enter the test interface. The interface is shown in Figure 4.



graph 4

Temperature: indicates the current sample temperature in the Type U tube;

Density value: indicates the sample density value after temperature.

[Sample intake]: The instrument automatically enters the samples, automatically controls the temperature, and automatically conducts accurate test, that is, the test begins;

[Abandon experiment]: Click this button will abandon this experiment.

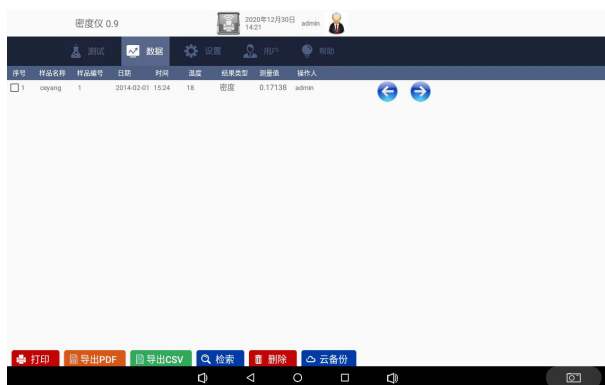
[Save]: Click this button and the instrument will save the test results;

[Print]: Click this button and the instrument will print this data.

The 6. database interface

Click the left [data] key in order to enter the database interface, as shown in Figure 5. This interface is used to display and query the data saved by the user, and can associate the corresponding video file and map file of each test data.

The more new the saved data, the higher the top, that is, the larger the serial number value, the newer the data displayed, click the data, you can check the data details.



graph 5

[Print]: Select the corresponding data, press the print button, select the print way to print the data (can serial print, WiFi print list, WiFi print details);

[When exporting the U disk on the PDF]: connection, generate the selected test data for a PDF report and export to the U disk;

[When exporting the U disk on the CSV]: connection, generate the selected test data for a CSV report and export to the U disk;

[Retrieval]: pop up the filter condition filling window for users to find out the qualified test data (all the data is displayed by default. If you want to display all the data again, please expand the retrieval conditions);

[Delete]: With the data delete permission, you can delete the data;

[Cloud Backup]: Upload all test data to the server;

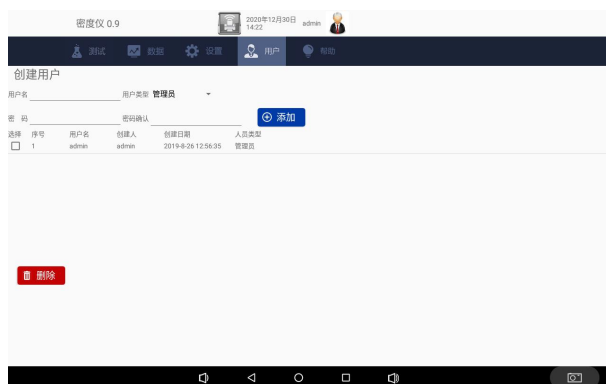
[←]: Turn the page up;

[→]: Turn down to the page;

At the last "video" and "atlas" columns of each row of data in the test list, display "Yes" means that the item data has a bound video or map, display "no" indicates no bound video or map, and help filter out the associated video or atlas records for further operation.

The 9. User management interface

Click left [user] to enter the user management interface as shown in Figure 6.

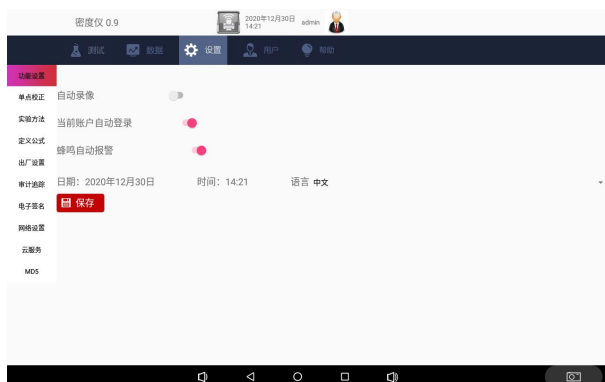


graph 6

Accounts with permission to create new users can be added on the current page, and no permission accounts can only be viewed. After entering the username and password, click the [Add] button to pop up for the permissions given to the new account. Complete complete missions assignment click [Save];

12. Basic Setup interface

At the settings interface, select the [function settings] option to enter the interface as shown in Figure 7.

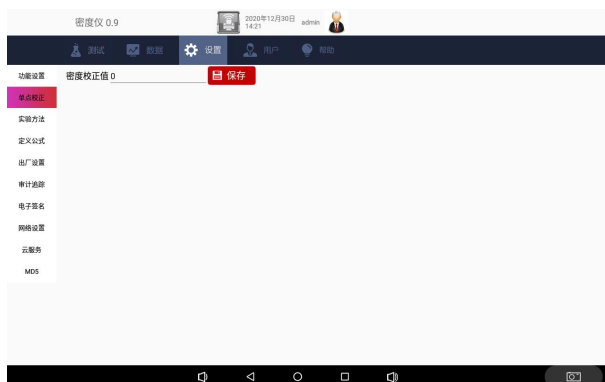


graph 7

On this page, time can be set, language (including Simplified Chinese and English).

13. Density calibration interface

At the settings interface, select the [Single Point Correction] option and enter the interface as shown in Figure 8.

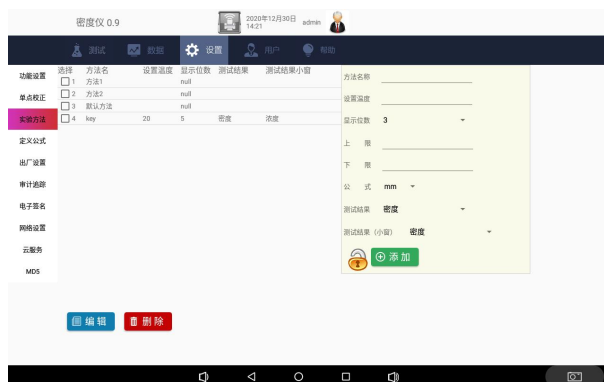


graph 8

After the equal temperature stabilizes to 20.0°C, enter 0.9982 and complete the single point calibration as saving.

14. The method library interface

At the setup interface, select the [Experimental Methods] option and enter the interface as shown in Figure 9.



graph 9

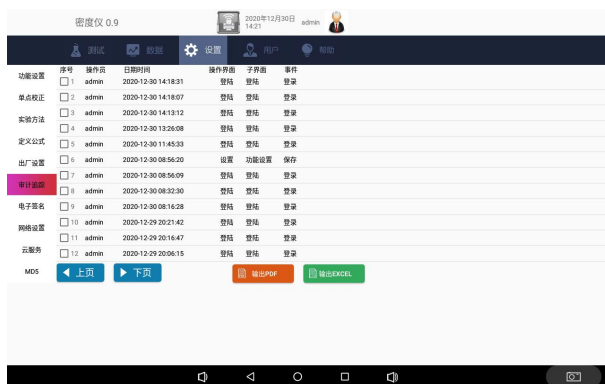
The parameters that can be set here are the same as those on the test page. The saved method can be called by the method drop-down box selection under the parameter settings page of the test page.

15. The audit tracking interface

At the setup interface, select the [Audit Tracking] option and enter the interface as shown in Figure 10.

This table records key operations for all users, similar to system logs, you can use an external U disk to export this audit tracking log, and export a file type of Excel. encrypted using MD5

Audit tracking record times include: date, time modification, deletion of test database content, system upgrade, startup time (accurate to minute), fault and error detection adjustment, sensor calibration, permission configuration, deletion of video file, cloud backup upload, download, delete, user addition, user delete, modify user password, user permission change, login user name, new test method, delete test method, modify test method, modify automatic login name and input password failure.

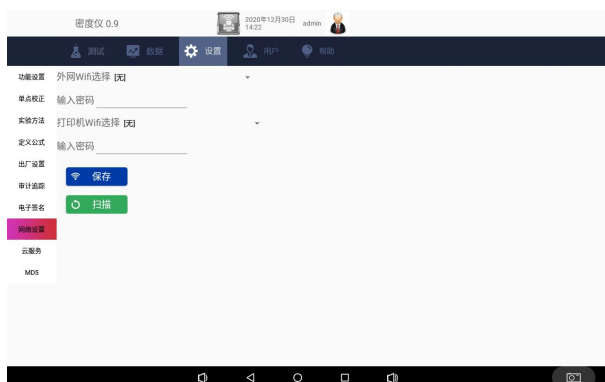


graph 10

[Export]: Click this button to export the audit tracking record table to the external U disk behind the instrument (unsuccessful export without U disk);

16. Network setting interface

At the settings interface, select the [Network Settings] option to enter the interface as shown in FIG. 11.



graph 11

The searched wireless network name is displayed on the left. After clicking the name of the wireless you want to connect to enter the password correctly, the front of the connected wireless

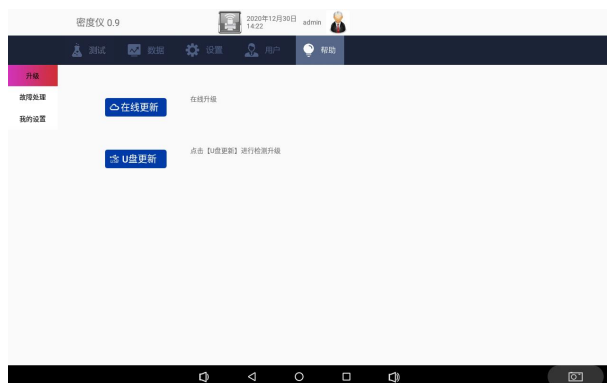
name displays a black point.Cloud service function operation can be performed after selecting the wireless network connected to the Internet, and the specified laser printer can print the A4 experimental report when the connection is named "DIRECT-95-HP LaserJet M104W" Wireless AP ".

The right DHCP enabled indicates the automatic assignment of the IP address, otherwise enter the IP address manually.

The left wireless network is invalid when wired through the back RJ45 port.

17. Fault handling interface

Click [Help] on the right to enter the fault processing interface as shown in Figure 12.The content is the fault processing list.Different fault names are explained in the list and appropriate handling methods are recommended.

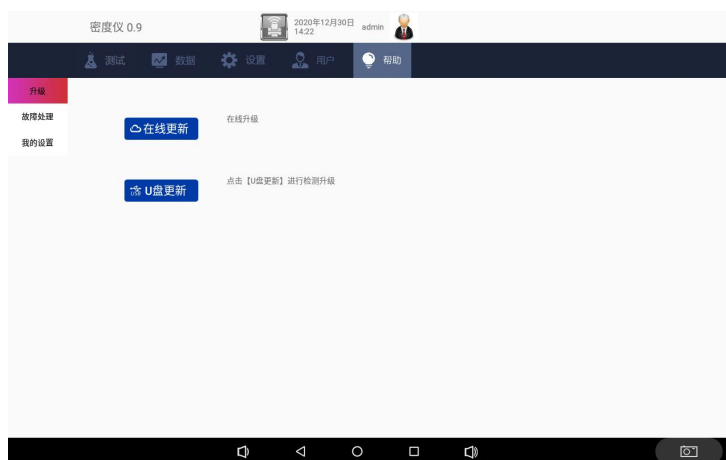


graph 12

18. Update interface

Click [Help] on the right and select the [Upgrade] tab to enter the software update interface as shown in Figure 13.The connected update makes sure that you click the update button to upgrade in the connected Internet state.The U disk update must place the update file under the root directory, then insert the USB interface

on the back of the instrument, and then click the U disk update button to complete the upgrade.



graph 13

V. Daily maintenance

1. instruments shall be used in dry and ventilated rooms and avoid water contamination to prevent moisture. The instrument adopts a three-core power plug, and the ground end shall be connected to the earth and cannot be replaced by the middle line.

The glass sleeve and capillary used by 2. instrument shall only allow the products provided by the factory, avoid replacement by third party glass sleeve or capillary in case of incorrect size fracture or test results, the fine capillary shall be selected.

If the 3. does not use the instrument for a long time, it is recommended to turn off the power switch at the rear of the fuselage and unplug the power cord.

VI. After-sales service matters and producer responsibilities

The whole machine is guaranteed for one year from the date of sale (subject to the date of the invoice issued), but the following circumstances are not within the warranty scope:

The 1, is over the warranty period;

2, causes damage to the instrument due to improper human use;

3, disassembled the instrument without the manufacturer's permission;

4, causes damage to the equipment due to improper transportation and storage.

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