Halo Counter Product Descritption

1. Abstract

This product is a cell counter that can be applied in the field of life sciences for the quantitative counting of cells in biological samples. It is used to monitor the health and viability of cultured cells, growth status curves, and more. The product features an advanced consumable-free design concept, combined with precise motion control and AI algorithms, to achieve fast and accurate counting results. It also embodies an environmentally friendly approach, meeting the needs of users across various industries in the market.

This manual will primarily introduce the product's features, usage methods, and precautions to help consumers better understand and use the product.

2. Product Features

2.1 Product Models

This product is available in two models: a bright-field cell counter and a fluorescence cell counter.

2.2 Product Applications

The bright-field cell counter can calculate indicators such as cell sample concentration, quantity, and diameter. When used with Trypan Blue, it can also determine cell viability in bright-field mode and calculate viability rates.

The fluorescence cell counter adds functionalities of AO, PI, GFP, RFP, and more to the basic functions of the bright-field counter. It can calculate indicators such as cell viability and transfection efficiency.

2.3 Product Specifications and Performance

Description	**Specification**
Dimensions	（L）366x（W）272x（H）240
Display Screen	9 inches
Weight（kg）	6
Material	ABS&Aluminium alloy
Power Supply Voltage	12V3A
Power	36W
Power Interface	5.5X2.1

External USB Port	2
Power Switch	1
Automatic Zoom	4x~10x
Detection Height	50um,200um,400um
Detection Diameter	1-400um
Detection Range(cells/ml)	$1X10^3$—$3X10^7$
Dual-Band WiFi	2.4GHz/5GHz

2.4 Product Structure Description

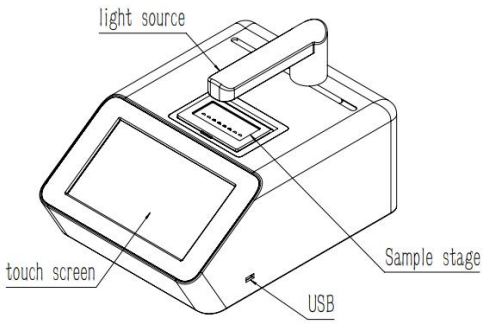

Figure 1: Axonometric View of the Bright-Field Cell Counter

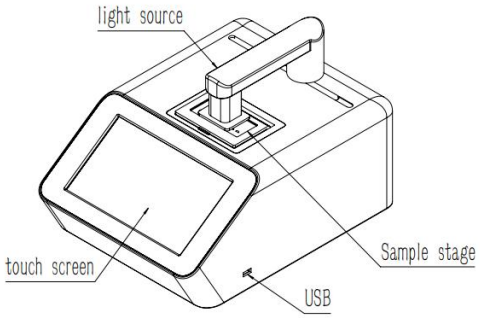

Figure 2: Axonometric View of the Fluorescence Cell Counter

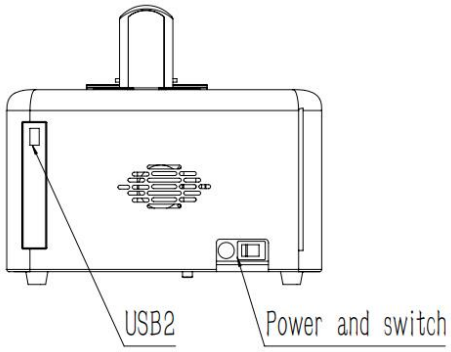

Figure 3: Rear View of the Cell Counter

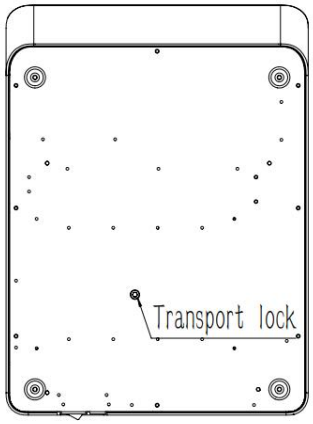

Figure 4: Bottom View of the Cell Counter

3. Product Usage Instructions

3.1 Open the packaging box and take out the device and power adapter.
3.2 Slightly lift the bottom of the device or place it sideways on the table, and use the provided wrench to remove the transport lock.
3.3 After removing the transport lock, place the device horizontally, connect the power cord, turn on the switch, and wait for the device to start and reset.
3.4 WiFi Connection Methods:
3.4.1 Command Line Connection:
Connect to WiFi using the command: nmcli dev wifi connect WiFi_name password WiFi_password.
3.4.2 Interface Connection:
Click the WiFi icon in the bottom right corner of the desktop, select the WiFi network, and enter the password.
3.5 Flip open the sample stage cover, clean the sample stage, and then close the cover.
3.6 Add the appropriate volume of cell samples into the channel of the sample stage.
3.7 Click to enter the corresponding app, select the operation, and count (for detailed operation steps, refer to the Halo Counter Operation Manual 2.0 (SOP)).

3.8 Wait for the results and review them.

4. Precautions

4.1 Check if the transport lock has been removed before powering the device.
4.2 The power supply voltage must not exceed 12V, and the power must not exceed 36W, otherwise, there is a high risk of damaging the device.
4.3 The sample stage includes areas made of transparent glass, which are fragile. Avoid scratching the glass with sharp objects and handle it gently.
4.4 Avoid hard objects impacting the touchscreen to prevent damage and ensure normal operation.
4.5 The movable arm is the top light source, not a handle. Do not lift the device by the arm to avoid affecting the test results.

5. Product Maintenance

5.1 After each cell sample test, it is recommended to use 75% medical alcohol to clean the sample stage to prevent cells from drying in the channel and affecting the next cleaning.
5.2 Regularly check the device's memory storage capacity based on usage frequency to prevent capacity overload and reduced operating speed.
5.3 If the device will not be used for a long period (e.g., during holidays), turn it off to ensure safety and save energy.

6. After-Sales Service

If you encounter any problems while using this product, please contact your local sales representative or call the Beijing after-sales service hotline 18201017232 for assistance.

7. Disclaimer

Please read the usage instructions and precautions mentioned in this product manual carefully. Follow the sequence of reading before use to avoid any damage to the device due to improper operation. The company disclaims any responsibility for issues caused by improper use.

8. Copyright and Legal Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

-This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.