Short user's manual

VWR® Automated Cell Counter Fluo
Cat. no 49893-2000

Manufactured in China

TIPS: For more information, please consult the full manual

1- Safety

1.1 General safety requirements

Please follow the instructions on all safety warnings and labels in the manual and on the instrument.
Users are allowed to maintain the instrument only to the extent of recommended maintenance stated herein.

1.2 Electrical safety

Never disassemble the instrument without any authorization against any possible electric shock.
If any potential unsafe operation is detected, power off and unplug immediately to disconnect the mains.

1.3 Chemical waste safety

Please refer to the SDS and relevant local regulations for handling and disposing of waste.

1.4 Biosafety

It is possible that biological samples may transmit infectious diseases. Wear suitable protective glasses, clothing and gloves.

2- Symbols and conventions

Flammable environment hazard
Never operate the instrument in an environment with flammable gases.

Electromagnetic interference hazard
Make sure to operate the instrument in a controlled electromagnetic environment to avoid any risk associated with instrument failure.

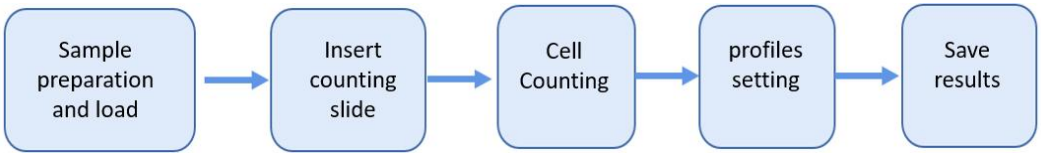
Radiation hazard
Follow all applicable radiation safety procedures all the time when handling radioactive samples.

Biological infection hazard
Samples used in the intended operation of the instrument may be infectious. It is recommended to follow the general laboratory regulations on infection control procedures.

3- Intended use

This equipment is designed for measurement and further fluorescence analysis of cell quantity and viability for cell lines, stem cells and primary cell samples. For research only. Not intended for diagnostics use.

4- Operation

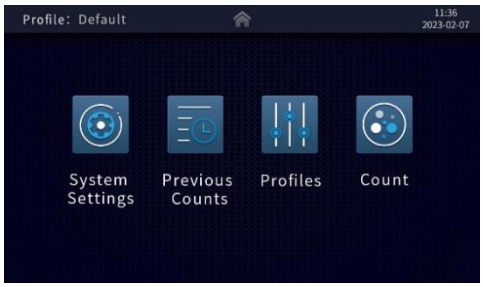


5- Sample preparation

Bright Field Assays
[Non-TP] mode: Non-Trypan Blue mode.Pipette and mix the cell suspension, load 10ul sample directly to the counting slide;
[TP] mode: Trypan Blue mode. Mix 10ul cell suspension with 10ul Trypan blue, and then load 10ul sample to the counting slide.
Fluorescence Assays
Mix 10ul cell suspension with 10ul AOPI solution (the recommended final concentration is AO: 5ug/ml, PI: 25ug/ml), incubate for about 3min, and then load 10ul sample to the counting slide.
Note:

- It is important to mix the sample sufficiently for accurate counting;
- After the sample is loaded, it is recommended to allow the slide to stand for 30s before counting for better focusing and counting.

6- Main interface



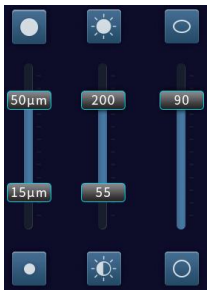
It contains four parts: **System Settings, Previous Counts, Profiles,** and **Count**.
Note: If directly insert the counting slide upon this interface, the system will switch to the [count] interface. Click [Profiles] to enter the profiles setting interface.

7- Mode selection

[Non-TP] Mode	[TP] Mode	Fluorescence field (FL) Mode
		

[Non-TP] mode: Count total cell concentration, obtain the total cell size distribution histogram and average diameter.
[TP] mode: Count total cell concentration, dead/live cell concentration and proportion, obtain the size distribution histogram and average diameter of dead/live cells.
[FL] mode: Count total cell concentration, different fluorescent cell concentration and proportion, obtain the total cell size distribution histogram and RFU distribution.

8- Profiles Setting



Size/ Brightness/ Circularity

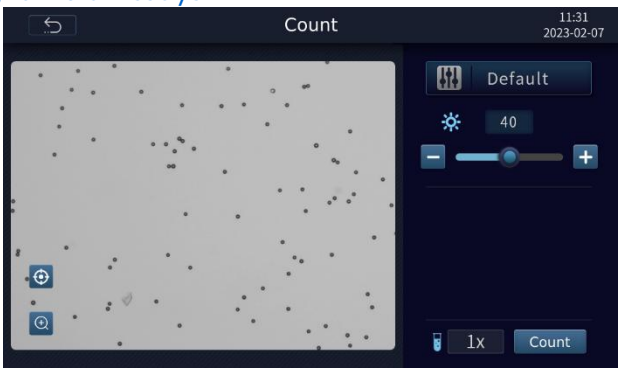
= Max_Size
= Min_Size
= Max_Brightness
= Min_Brightness
= Max_Circularity
= Min_Circularity

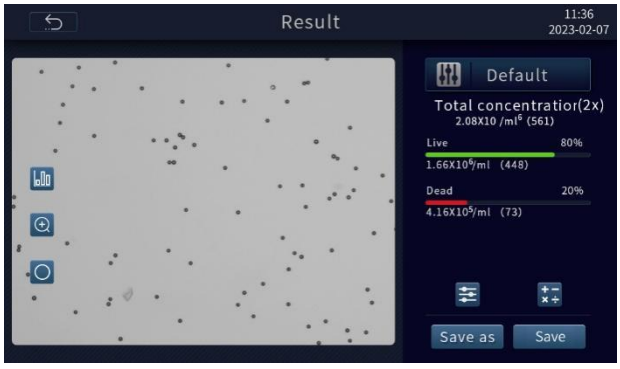
Relative Fluorescence Unit (RFU)

= Max_RFU
= Min_RFU

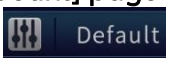
9- Cell Counting

Bright Field Assays





[Count] page

1)  shows current profile file name. Click to enter the Profiles page.

2) Brightness adjustment: If [Auto Exposure] is checked, it will be automatically adjusted. Users can also manually adjust by clicking − & +.

3)  is for dilution factor setting, the default dilution factor for the trypan blue mode is "2×","AO+PI" mode is "2×".

4) is for focusing. Click it to get the regulator slide  , and then click + and − to focus manually.

(Function of the [Set] icon: customize the focus value. When the instrument is used again, the focus value will be subject to focus fine tuning based on the last set point in the system by default in order to obtain good image quality.
Function of the [Auto] icon: autofocus.)

5) allows users to zoom in/out the active view/ image.

Click **[count]**, the counter will run the counting program and then switch to the [Result] page

[Result] page

Click to pop up a diameter distribution histogram, click again to exit.

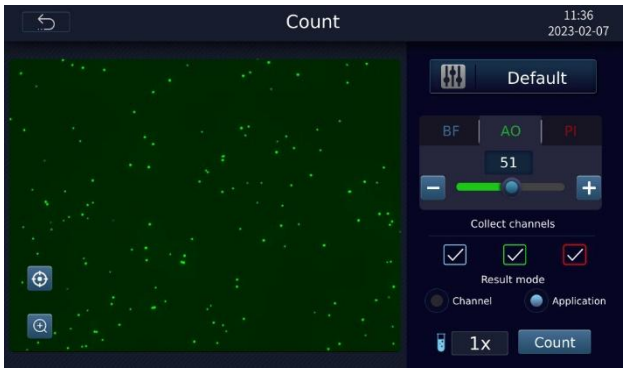
Click to select whether to display cell marker.

Click to enter the Adjustment page to re-adjust the profiles.

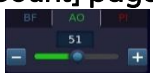
Click to enter the Dilution Calculator page.

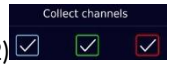
Click **[Save]** to save the results to local storage, or click **[Save As]** to rename and save the results to local storage and/or USB flash disk.

Fluorescence Assays



[Count] page

1)  Brightness adjustment: If [Auto FL Exposure] is checked, they will be automatically adjusted. Users can also manually adjusted by clicking  and  .

2)  Collect channels: select different channels for counting.

3) **Channel/Application:**
When the light source is a combination of AO&PI or GFP&DAPI, it is recommended to use [Application] to output results, which can directly display cell viability or the proportion of GFP cells. Other light source combinations use [Channel] by default, showing the proportion of cells in each fluorescence channel.

Click **[count]**, the counter will run the counting program and then switch to the [Result] page

Refer to the Bright Field assays for other relevant functional buttons.

[Results] page

Click  to pop up diameter/RFU distribution histograms.
The histogram of BF mode is distributed according to the cell diameter, and the histogram of FL mode is distributed according to RFU.

Click  to select cell markers of different channels for display.

Click  to select different channels to display- BF/FL/merge image, which can be used to view the cell images under different BF/fluorescence channel.

Click **[Save]** to save the results to local storage, or click **[Save As]** to rename and save the results to local storage and/or USB flash disk.

Refer to the Bright Field assays for other relevant functional buttons.