

EVE™ HT

User Manual



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EVE™ HT User Manual

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General Description

EVE™ HT is an automated multi-cell counter designed to count number of cells and measure viability of cells using trypan blue exclusion method. EVE™ HT uses automated image acquisition and proprietary image analysis method to quantify cell numbers and viabilities.

EVE™ HT requires only 20 μ L of samples to run measurements. EVE™ HT Counting Plate is a disposable plate with 48 channels which allows EVE™ HT can measures 48 samples simultaneously.

EVE™ HT can count a wide variety of eukaryotic cells. EVE™ HT also measures the distribution of cell size measured under bright field imaging.

EVE™ HT has little user-to-user variations and it provides consistently accurate results regardless of whoever the user may be.

EVE™ HT offers optional "21 CFR part 11 module" to safeguard all the records and data in compliance to the FDA requirements.



Components

EVE™ HT is shipped with the following components.

Upon receiving the instrument, please check that all items listed below are included in the shipment. If any of the items are missing or damaged, contact your local distributor or sales@nanoentek.com.

EVE™ HT

1 EA



Multi pipette

1 EA



Operating desktop

1 SET



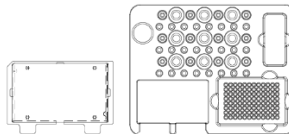
EVE™ HT Counting kit



EVE HT COUNTING KIT

EVE™ HT Accessories

Preparation plate (optional)
QC plate (optional)

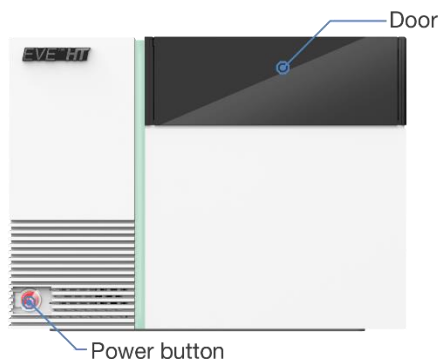


QC PLATE

PREPARATION PLATE

Front View

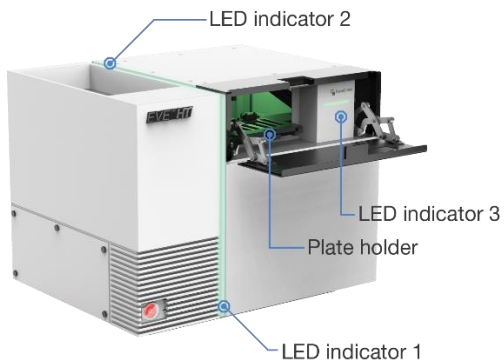
Front view showing various parts of EVE™ HT.



| Part name | Description |
|--------------|-----------------|
| Power button | Powering on/off |
| Door | Instrument door |

Upper Side View

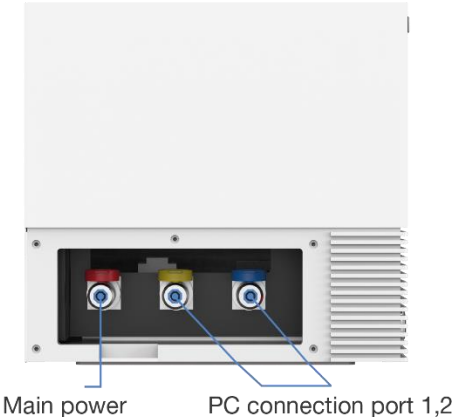
Upper side view showing various parts of EVE™ HT.



| Part name | Description |
|---------------|--|
| LED indicator | Product status display |
| Plate holder | Holder for plate when inserted/ejected |

Left Side View

Left side view showing various parts of EVE™ HT.



| Part name | Description |
|---------------------|---------------------------------------|
| Main power | Connection port for electrical outlet |
| PC connection ports | Connection ports for PC |

Environmental Requirements

CAUTION

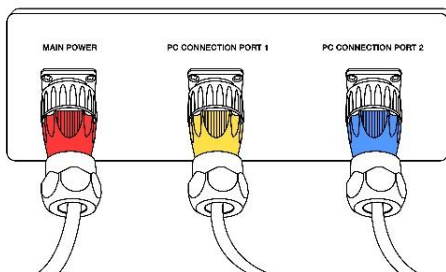
At low temperature (≤ 10 °C), allow the instrument to warm up for 10 minutes at ambient temperature before use.

To ensure correct operation and stable performance, install EVE™ HT in a proper location by complying with the followings:

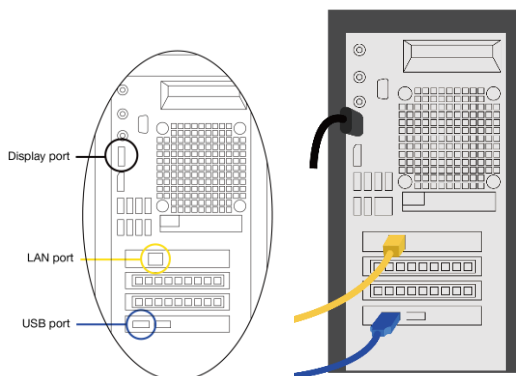
- Use at room temperature.
- Do not expose the instrument to direct sunlight.
- Do not expose the instrument to direct or continuous vibration.
- Do not expose the instrument to intense magnetic or electromagnetic fields.
- Do not install the instrument in high-humidity environment.
- Installation should be free corrosive gases or other corrosive substances.
- Minimize contact with dust or airborne particles.
- Secure at least 10 cm (4 inches) of free space around the instrument for the proper airflow.
- Do not place objects on top of this instrument.
- Connect EVE™ HT power cord to wall outlet directly.

Powering on and Installation

1. Connect the EVE™ HT with the color-coded power cord and connection cords of PC.



2. Connect the EVE™ HT to PC with LAN and USB cable.
3. Connect the PC to a PC monitor using a monitor cable. Then, connect the power cords to the PC and PC monitor.



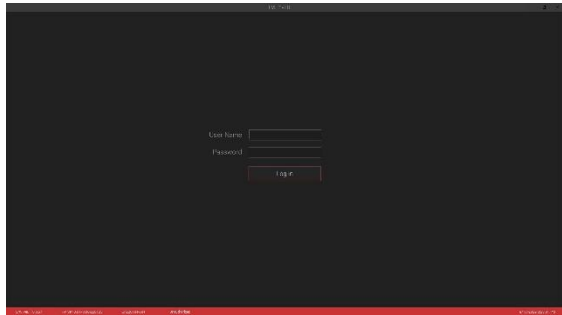
⚠ CAUTION

- Do not tilt the instrument too much when connecting the power cord.
- Do not move the instrument after connected to the power cord.

4. Turn on EVE™ HT instrument.
5. Turn on the PC and run EVE™ HT main software.

⚠ CAUTION

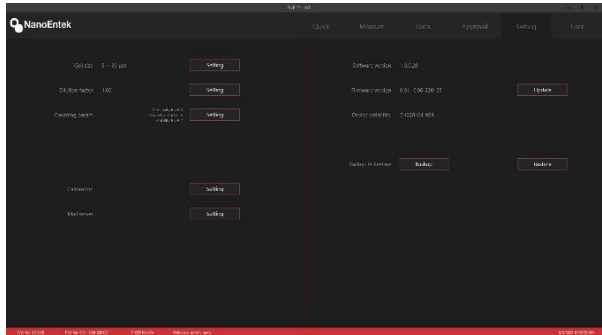
If the error code occurs during the program initializing process, turn off the instrument and the PC. Repeat Step 4 and 5 above. If the same error message appears repeatedly, contact your local distributor or sales@nanoentek.com.



6. Log in from the login screen. (default ID/PW: adam/0000)

Instrument Settings

Press '**SETTING**' from the startup screen. The setting menu allows you to set up the followings.



1. Click '**Calibration**' to calibrate the instrument image background level.

a) Sample preparation

- ① Mix **20 μ L of culture media** and **20 μ L of trypan blue** thoroughly.
- ② Load **20 μ L of the mixture** into one channel in an EVE™ HT Counting Plate.
- ③ Insert the counting plate into the plate holder of the instrument.

b) Instrument setting

- ① Select '**Setting**' tab.
- ② Click '**Calibration**' button.
- ③ Click '**Insert**' button.
- ④ Select the **wells** loaded with the mixture
- ⑤ Click '**Check**' button.
- ⑥ After finish the calibration, click '**Apply**' button.

2. Set the **minimum and maximum cell size**.

3. Set the **dilution factor** according to the test.

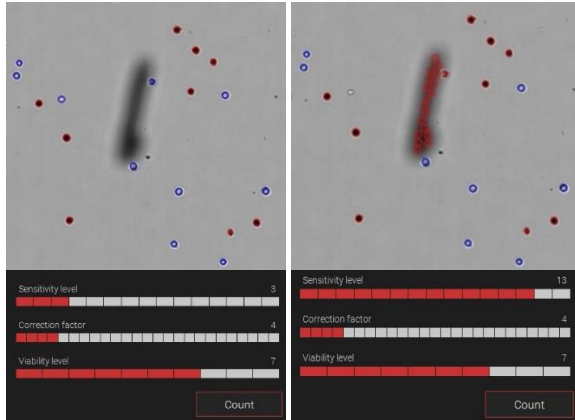
Instrument Settings

4. Set the **Counting parameter**.

It is highly recommended that users use default counting parameters. However, depending on cell types and media conditions, one may need to adjust these counting parameters.

① Sensitivity level

As this level gets lower, it becomes easier to remove the effects of debris.

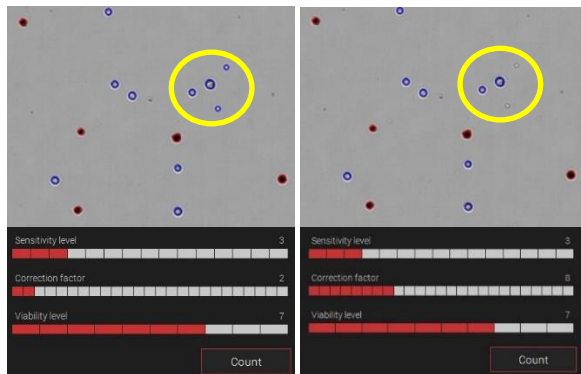


< Sensitivity 3>

< Sensitivity 13>

② Correction factor

As this factor gets lower, the software becomes more sensitive to pick up vague objects.



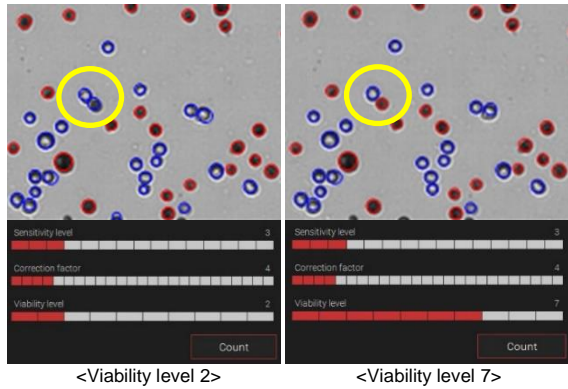
<Correction factor 2>

<Correction factor 8>

Instrument Settings

③ Viability level

As this level gets higher, marginally dark objects won't be counted as dead cells.



5. Update to install new **software** or **firmware** as they become available.

- ① Connect the **USB** with the update file to computer.
- ② Click '**Update**' button in setting tab.

6. Backup

- ① Click the button.
- ② Enter the name of **back-up files**.
- ③ Click the '**Save**' button.

7. Restore

- ① Click the button.
- ② Select the **back-up file**.
- ③ Click the '**Open**' button.

Recommended Actions

To obtain the best results, follow these recommendations:

Sample

1. Wear protective gloves while handling samples.
2. For accurate results, ensure that samples are well mixed.
3. Also, allow loaded samples to settle for **2 minutes** before Focus setting.

Trypan blue

1. Warm up to room temperature before use in order to avoid debris.

EVE™ HT Counting Plate

1. Keep the Counting Plate in the carriage and use on a clean table to prevent dust from sticking.
2. Do not touch any surfaces except for the handles
3. Ensure that the sample fills up entire channel.
4. Do not tilt the plate after loading the sample.
5. Do not insert the plate upside-down as this may cause liquid to flow into the instrument and cause damage.
6. Do not re-load the sample into used channel. One can use same plate multiple times as long as new channel(s) are used each time.
7. Make sure to push the plate all the way in.

Instrument

1. Use EVE™ HT at room temperature only (20 ~ 25 °C).
2. Turn on the instrument before the EVE™ HT software.
3. Do the background calibration when using trypan blue with a new lot number. (Refer to page 11).
4. Make sure the door and plate holder are closed.

Quality Control

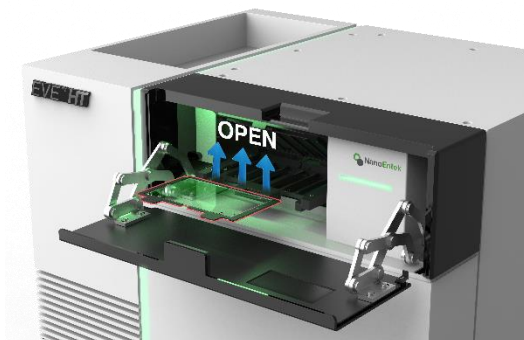
QC Plate Preparation

This is for quality control using **QC plate**. Follow the instruction below only if necessary.

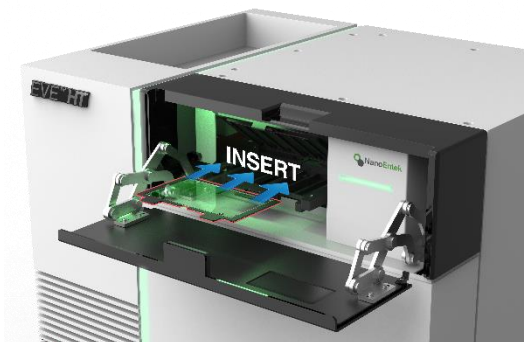
1. Prepare the **QC plate**.



2. Open the EVE™ HT **door**.
3. Push the **plate holder cap** to open up the plate holder.



4. Insert the **QC plate** into the plate holder of the instrument.

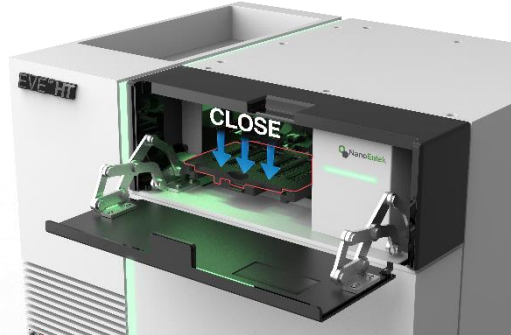


CAUTION
Make sure to push the plate all the way in.

Quality Control

QC Plate Preparation

5. Close the **plate holder** first then the **door**.



CAUTION
Make sure the door and plate holder are properly closed.

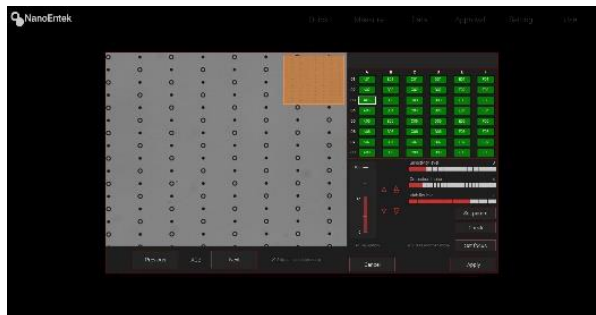
Select menu

1. Click the **'Measure tap'**.
2. Click the **'QC'**.
3. Click the **'Slide'**.

Well setting

1. Select all 48 channels. For individual selection, click each well you want to measure. For group selection, left click and drag.
2. Click **'Include'** button or select **'Include'** option from **'Select'** menu by right click. Make sure the selected wells are displayed in red.
3. Well setting can be edited from the **'Select'** menu.
4. Click **'Focus Setting'**.

Focus setting



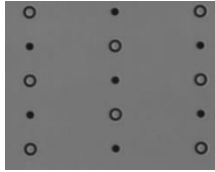
- **Press and then move:** After focus has been set, the lens moves to the next well automatically.
 - **Skip completed channel:** Focused wells will be skipped during this setting.
1. Adjust the focus using the focus buttons.
 - Fine focus: Hold **'Shift or Control'** button and **scroll the mouse wheel** for adjustment.

Quality Control

Counting QC Plate

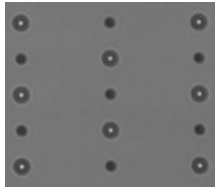
➤ Focus example

Good focus



► Objects have **clear** boundaries

Bad focus



► Objects have **blurry** boundaries.

2. Click **'Check'** button to check live and dead cells at the current focus location.
3. When you are satisfied, click **'Set Focus'** and **'Apply'** button.
4. Click the **'Run sample'** button.
 - * During measurements, results for wells already counted can be checked while counting other remaining wells.
5. The results are displayed on the **QC section** from the **Data** menu.

Data Analysis

The result should meet the **'Acceptance range'** in the QC plate.

Acceptance range:

Cell concentration: $8.0E+05 \sim 1.2E+06$ /mL

Viability: 47.5 ~ 52.5 %

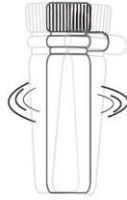


Quality Control

Bead Preparation

This is for quality control using Bead Solution. Follow the instruction below only if necessary.

1. Let the **Bead Solution** come to room temperature for up to **10 minutes** before use.
2. Shake bottle vigorously or vortex briefly for 5 seconds before use.



[Shake bottle vigorously]



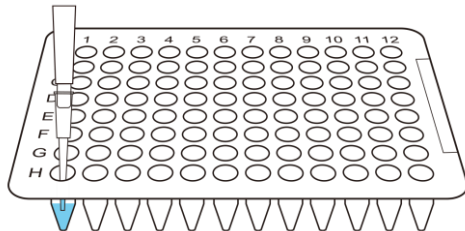
[Vortexing]

3. Vortex again for 4 seconds and pipette immediately.



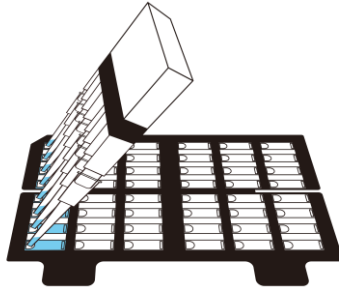
[Vortexing]

4. Transfer **20 μ L of calibration bead** to the Mix Well Plate, add **20 μ L of trypan blue**, and mix well by pipetting up and down.

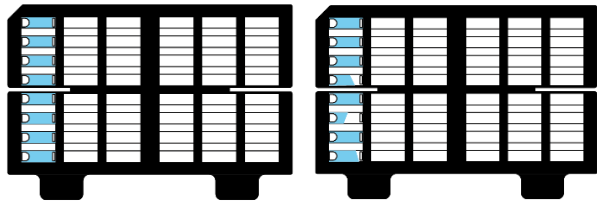


Quality
Control
Bead
Preparation

5. Load **20 μL of mixture** into each channel of EVE™ HT Counting plate.



Correct and incorrect example of loaded sample



Correct

Incorrect

6. Open the EVE™ HT **door**.
7. Push the **plate holder cap** to open up the plate holder.
8. Insert the **plate** into the plate holder of the instrument.

⚠ CAUTION
Make sure to push the plate all the way in.

📌 NOTE
Allow beads to settle for '1 minute' after inserting the EVE™ HT Counting plate to the instrument.

9. Close the **plate holder** first then the **door**.

⚠ CAUTION
Make sure the door and plate holder are properly closed.

Quality Control

Bead Counting

Select menu

1. Click the **'Measure tap'**.
2. Click the **'QC'**.
3. Click the **'Bead'**.

Lot setting

* The last lot used will be automatically applied.

Creating new lot

1. Click **'Lot Setting'** button followed by **'New'** button.
2. Enter **'Lot number'** of calibration beads and **'Acceptance range'**.
3. Click **'Apply'** button.
4. Select **'New lot'** from List option and click **'Apply'** button.

Using previous lot

1. Click **'Lot Setting'** button and find the lot number from **'Search'** tab.
2. Select the lot you want and click **'Apply'** button.

Well setting



1. Select the **wells** loaded with samples. For individual selection, click each well you want to measure. For group selection, left click and drag.
2. Click **'Include'** button or select **'Include'** option from **'Select'** menu by right click. Make sure the selected wells are displayed in red as shown.
3. Well setting can be edited from the **'Select'** menu.
4. Click **'Focus Setting'**.

Quality Control

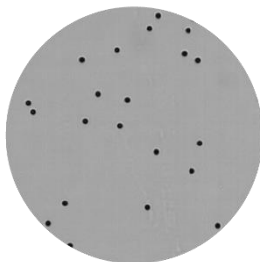
Bead Counting

Focus setting

1. Adjust the focus using the focus buttons.
 - Fine focus: Hold '**Shift**' or '**Control**' button and **scroll the mouse wheel** for adjustment.

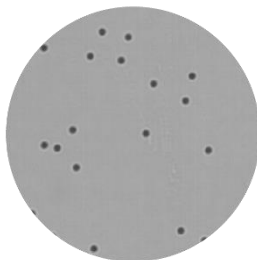
➤ Focus example

Good focus



- ▶ Beads have a uniformly dark color throughout the beads with no bright centers.

Bad focus



- ▶ Beads have blurry boundaries.

2. Click '**Set Focus**' button.
3. Click '**Apply**' button.

Counting and getting result

1. Click '**Run sample**' button.
2. During measurements, results for wells already counted can be checked while counting other remaining wells.
3. The results are displayed on the **QC section** from the **Data** menu.

Quality Control

Bead Counting

Data Analysis

The result should be **within the range on the label** of the QC bead bottle. (e.g. $8.0E+05 \sim 1.2E+06/\text{mL}$)

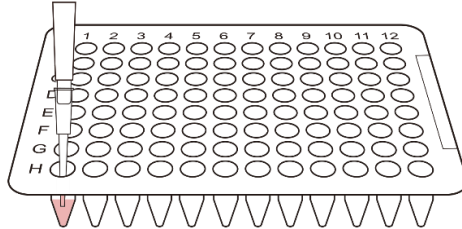


Sample Test

Sample Preparation

Instruction is provided in this chapter for preparing the sample using EVE™ HT trypan blue stain and disposable EVE™ HT Counting Plate.

1. Prepare cell suspensions either in growth media or PBS
2. Thoroughly **mix the cell pellet** by vortexing.
3. Dilute cell solutions so that expected final concentration will be between 1×10^4 and 1×10^7 cells/mL.
4. Load **20 μ L of well-mixed sample** into a mix well plate. Small volume PCR plates are included in EVE™ HT kit to be used as mix well plates.



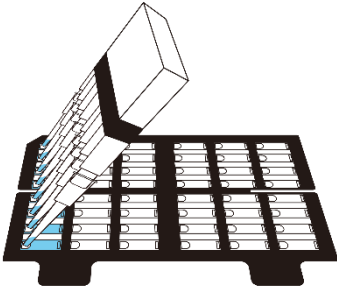
5. Dispense enough amount of **trypan blue** to a reservoir. Disposable reservoirs are included in EVE™ HT kit.
6. Add **20 μ L of trypan blue** to the sample-loaded well using multi pipette and **mix the sample and trypan blue by pipetting up and down**. A 8-channell multiwell pipette is included in each EVE™ HT.



Sample Test

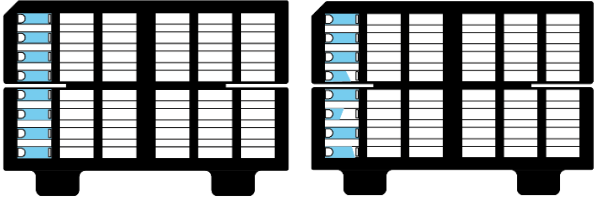
Sample Preparation

7. Load 20 μL of sample mixture into the EVE™ HT Counting plate.



NOTE
EVE™ HT can analyze cell concentrations of 1×10^4 to 1×10^7 cells/mL.

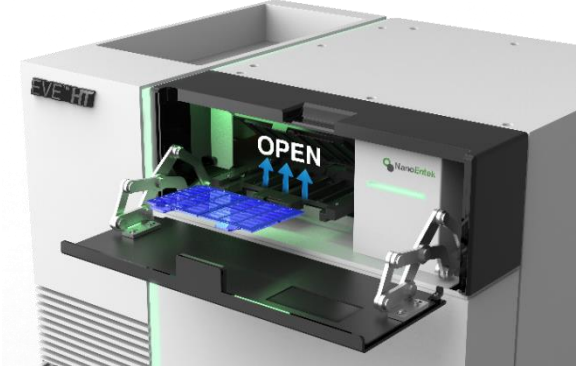
Correct and incorrect example of loaded sample



Correct

Incorrect

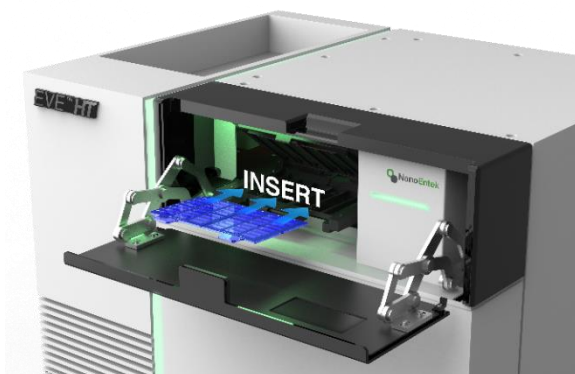
8. Open the EVE™ HT door and press **plate holder** cap to open the plate.



Sample Test

Sample Preparation

9. Insert the **EVE™ HT Counting plate** loaded with sample into the plate holder.



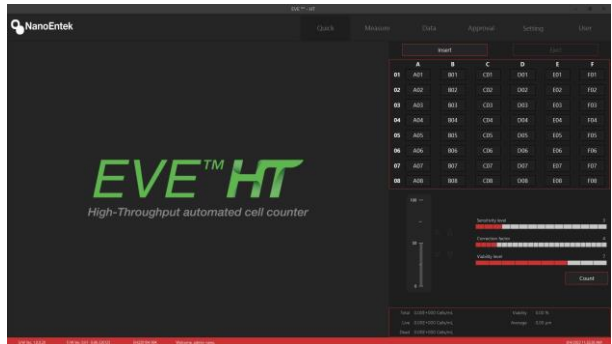
10. Close the **plate holder** first then the **door**.



- ⚠ CAUTION**
Allow sample to settle for '2 minutes' after inserting the EVE™ HT Counting Plate into the instrument.
- ⚠ CAUTION**
Make sure to put the plate all the way in when inserting the plate.
- ⚠ CAUTION**
Make sure to properly close the door and plate holder cover before operating.

Sample Test

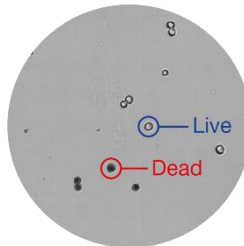
Quick Count



1. Click the **'Insert'** button.
2. After finish the insert the plate, click the **sample loaded well**.
3. Set the **focus** following the focus guide.
4. Adjust the **focus** using the **'focus'** buttons.
 - Fine focus: Hold **'Shift or Control'** button and **scroll the mouse wheel** for adjustment.

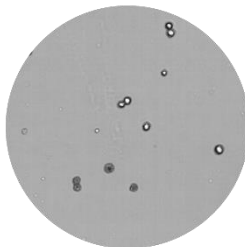
➤ Focus example

Good focus



- ▶ Live cells have bright centers and dark edges.
- ▶ Dead cells have a uniformly blue color throughout the cell with no bright centers.

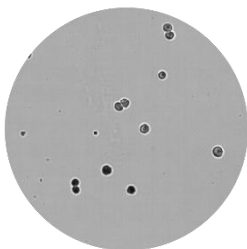
Bad focus



- ▶ Dead cells have bright centers and blurry boundaries.

Sample Test

Quick Count

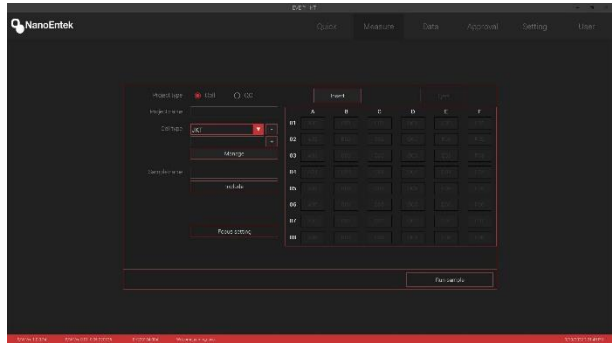


► Live cells with dark centers are counted as the dead cells.

5. Check the **counting parameter**.
6. Click the **'Count'** button.
7. The results are displayed on the **Quick Count section** from the **Data** menu.

Sample Test Measure

This section provides procedures and tips for cell counting using EVE™ HT.



Measure menu

1. Click **'Measure'** menu.
2. For project type, select **'Cell'** and enter **'Project name'**.
3. Select **'Cell type'** and enter **'Sample name'**.

Cell type

Make the new cell type.

1. Enter the **name of cell type**.
2. Click the **'+'** button.
3. Set the **'Cell size'** and **'Dilution factor'**
4. Click the **'Apply'** button.

Using the previous cell type

1. Click the **'∇'** button.
2. Select the cell type.

Delete the cell type

1. Click the **'∇'** button.
2. Select the **cell type**.
3. Click the **'-'** button.
4. Click the **'OK'** button.

Manage the cell type.

1. Click the **'Manage'** button.
2. Select the **cell type**.
3. Set the **cell size** and **dilution factor**.
4. Click the **'Apply'** button.

4. Select the wells loaded with samples. For individual selection, click each well you want to measure. For group selection, left click and drag.
5. Click **'Include'** button or choose **'Include'** option from **'Select'** menu. Then, make sure the selected wells are displayed in red.
6. Repeat Step 3 and 5 for remaining wells.

Sample Test Measure

Use the previous Well setting.

Well setting format

User can edit the well setting in excel file.

- **Export**

1. Click the '**right**' button of the mouse in the Well Setting window.
2. Click the '**Format**' or '**Export**' and enter the file name and pathway.

- **Edit**

1. Open the **excel file**.
2. **Edit** the file (Include, Group, Name, Cell type, Size min, Size max, Dilution) and save.

- **Import**

1. Click the '**right**' button of the mouse in the Well Setting window.
2. Click the '**Import**' and **select** the excel file.

7. Adjust the focus using the '**Focus Setting**'.

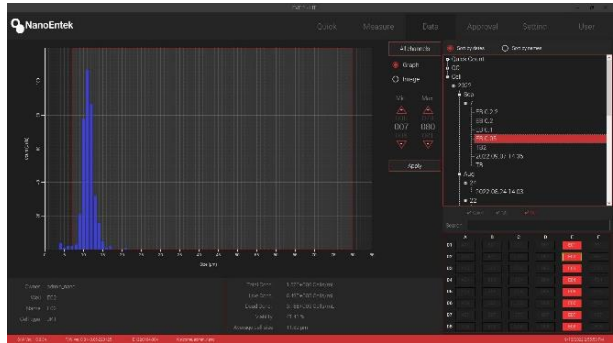
▪ **NOTE**

*Load the Counting plate in the plate holder and perform 'Focus setting' after 2 minutes. * Refer to the page 27.*

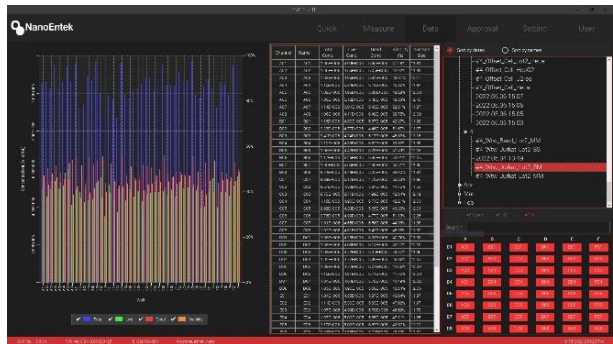
8. Set the '**counting parameter**'. Refer to the page 12-13.
9. Click '**Check**' button to check live and dead cells at the current focus location. Refer to the page 27-28.
10. When you are satisfied, click '**Set Focus**' and '**Apply**' button.
11. Click the '**Run sample**' button.
 - * During measurements, results for wells already counted can be checked while counting other remaining wells.
12. The results are displayed on the **Cell section** from the **Data** menu.

Data

Data menu allows users to review the raw data including counting results and images from each well. Reviewing, editing, saving and exporting the data can be done.



Data menu (Well graph)



Data menu (Plate graph)

Data

Data list

When counting is complete, all the information is automatically stored in the data list. This list can be sorted by either date or name.



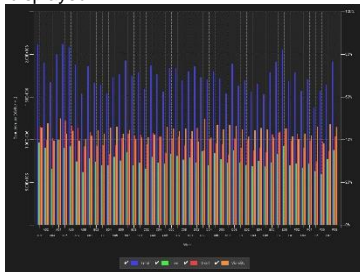
| | |
|--------------------|--|
| Quick Count | Data list taken from the Quick menu. |
| QC | Data list taken from the QC mode (Project type). |
| Cell | Data list taken from the Cell mode (Project type). |
| View type | It can be viewed by two criteria, date or name. |
| Search | Search the data in each section. |

Graph

| | |
|-----------------------------|--|
| Lot graph in QC mode | Period of date can be set. (Day, Month, Year or Index) |
|-----------------------------|--|

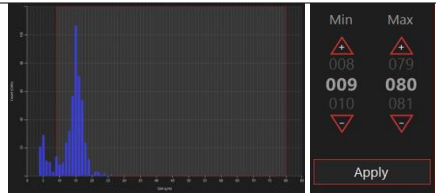
- Maximum of 48 counting results will be displayed on the graph and the data list.
- The graph and table of well are linked. When you select the data on the graph, the corresponding well will be displayed in the table. When you double click the well in the table, the corresponding well will be displayed.

Plate graph in QC and cell mode



| | |
|----------------------|---|
| Graph in well | <ul style="list-style-type: none">• Value for minimum and maximum cell size can be set in Size graph.• Minimum and maximum cell sizes are used to determine the low and high ranges of cell size for measurement. |
|----------------------|---|

Data

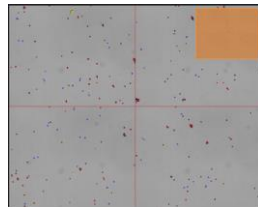


Users can edit the following functions through the captured image:

- Circle on/off
- Navigation on/off
- Image editing:
 1. Right-click on the circle to go to menu. Right-click and drag images for multiple selection.
 2. Click live, dead or debris.
 3. Click '**Save**' button to apply or '**Reset**' button to cancel.

Image in well

- Change the Counting parameter. Refer to the page 12-13.



Edit function

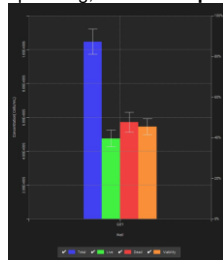
- **Right-click** on each project or well to go to menu.

Edit

Rename the project name.
Set the Size gating and dilution factor. Set the Acceptance range is only possible in QC data.
✓ Edit can be modified in selected multi-wells.

To re-edit group setting, select **Group**.

Group



Save

To save project, select **Save**.
✓ The data type and pathway can be selected.

Delete

To delete project, select **Delete**.

Approval

The screenshot shows the NanoEntek approval interface. The main area displays a table of requests with columns for Request ID, Request Name, Request Date, Requester, Request Date, Approver, Approval Date, Status, and Action. The table contains several rows of data, including requests for 'User', 'Requester', and 'User'. The status for most requests is 'Not approved'. On the right side, there is a sidebar with a search bar and a 'Request' button. The top navigation bar includes 'Home', 'Request', 'Data', 'Approval', 'Setting', and 'User'.

Requestable

The list shows data that can be requested for approval.

1. Select the data to get approve.
2. Click the '**Request**' button.
3. Select an approver to request approval.
4. Click the '**Apply**' button.

Requesting

The requesting data are displayed. It is possible to '**Cancel**' the request for approval.

The approver can approve the request in Requesting tap. The approval no need to log in to the approval ID.

1. Select the Data in list
2. Click the 'Approval'
3. Enter the password.

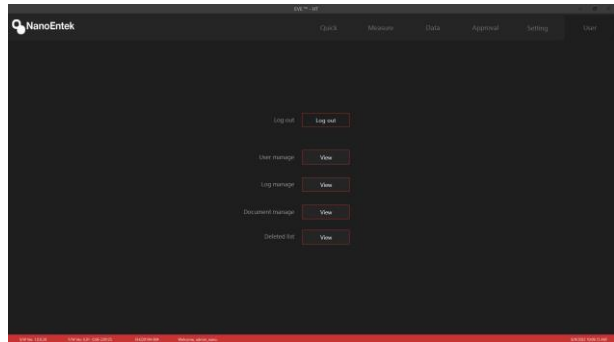
Approvable

The approvable data are displayed on this tap. It is possible to '**Reject**' or '**Approval**'.

Approved

The approved data is listed. It is possible to '**Export**' the Approved data.

User



User management

• New user registration.

1. Enter the user ID and PW.
2. Click the **'User privilege Setting'**.
3. Set the User privilege in each menu.
 - User and Supervisor default setting can be changed. Set the privilege and click the save button.
4. Click the **'Apply'** button.
5. Enter the signature and Click the **'Registration'**

• Edit the user option

1. Select the **user** in user list.
2. Do the same process in **Creating New user**.

• Password option

Set the **password** management rules.

• Lock in user list

User ID is locked when login fails. Lock icon turn red.
Click the button to unlock user ID and the button changes to grey.

• Log management

This **'Log management'** allows you to view a list of instrument log.
* Every logs can be saved in CSV file.

• Document manage

This **'Document manage'** allows you to check the documents made in the equipment.

• Deleted list

This **'Deleted list'** allows you to view a list of erased data

• *EVE-HT provides a comprehensive solution to comply with the requirements of the 21 CFR Part 11 rule.*

• *Please see the appendix for more information on these features.*

Maintenance and Cleaning

Clean the surface of EVE™ HT with a damp cloth.

The EVE™ HT does not need regular maintenance. To troubleshoot problems with the instrument, contact technical support. Do not perform any repairs or service on EVE™ HT to avoid damaging the instrument.

Trouble Shooting

Inaccurate result

1. Low and high results

- EVE™ HT is designed to read samples from 1×10^4 cells/mL to 1×10^7 cells/mL.
- If your sample is out of this range, you may need to dilute the sample or add more cells and read the sample again.

2. Dilution factor

- Check the mixing ratio of Sample 20 μ L + Trypan blue 20 μ L (1:1). Mix ratio is already applied so do not apply to dilution factor.
- Apply sample dilution to the dilution factor.

3. Dust or bubble

- Check the surface of EVE™ HT Counting Plate.
- Be careful not to make any bubble when mixing and loading sample with a pipette.
- Put trypan blue to room temperature for warm up before use in order to avoid debris.
- Set the 'Counting parameter' before count in Focus setting window. Refer to pages 13-14.
- Remove any bubble and dust in the image after count using the image edit function Refer to pages 33.

4. Incorrect focus

- Set the correct focus. Refer to page 22 and 27-28.

5. Background calibration

- Too bright or too dark background affects the result.
- Do the Background calibration in the Setting tab, when using trypan blue with a new lot number. Refer to page 12.

6. Too big or too many clumpy cell

- Ensure the cells are not clumped.

7. Plate

- Push the plate all the way in.

Saving problems

1. e-mail

- Check the internet connection.

2. USB

- Check the storage path.

Error Message

Error Message

| Error message | Solution |
|--|--|
| The power of EVE™ HT is turned off. After turning on the power of the device, restart the software. Press OL button to exit the software. | Turn on EVE™ HT prior to the EVE™ HT software. |
| Please insert the plate to use the EVE™ HT. | Make sure put the plate all the way in. |
| Please close the cover to use the EVE™ HT. | Close the cover of plate holder. |
| Please close the door to use the EVE™ HT. | Close the door completely. |

If the same error message appears repeatedly, contact your local distributor or sales@nanoentek.com.

Warranty

Under normal use, NanoEntek warrants that EVE™ HT shall be free from defects in material and workmanship for a period of one (1) year from the date of original purchase.

If any defects occur in EVE™ HT during this warranty period, NanoEntek will repair or replace the defective parts at its discretion without charge.

The following defects, however, are specifically excluded:

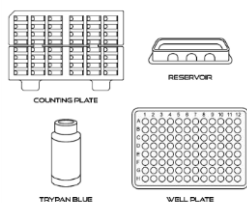
1. Defects caused by improper operation.
2. Repair or modification done by anyone other than NanoEntek or an authorized agent.
3. Damage caused by substituting alternative parts.
4. Use of fittings or spare parts supplied by anyone other than NanoEntek.
5. Damage caused by accident or misuse.
6. Damage caused by disaster.
7. Corrosion caused by improper solvent or sample.

For your protection, EVE™ HT to be returned must be insured against possible damage or loss. NanoEntek will not be responsible for damage incurred during shipment of the defective instrument. It is recommended that you save the original packing material in which the instrument was contained. This warranty is limited to the replacement of defective products.

For any inquiry or request for repair service, please contact sales@nanoentek.com or your local distributor.

Technical Specifications

| EVE™ HT | |
|--|--|
| Measuring range | 1 x 10 ⁴ ~ 1 x 10 ⁷ cells/mL |
| Analysis time | < 3 minutes / 48 tests |
| Light | Bright |
| Number of channel | 1 |
| Cell size | 5 ~ 80 μm |
| 21 CFR Part 11 | Available |
| Operation System | Windows 10 |
| Size (W x D x H) | 586 mm (W) x 498 mm (D) x 458 mm (H) |
| Weight | 58 kg |
| Operation | |
| Temperature | 0°C ≤ Temperature ≤ 40°C |
| Humidity | 10% ≤ Humidity ≤ 90% |
| Altitude | Altitude ≤ 2,000 m |
| Transportation & storage environment condition | |
| Temperature | - 30°C ≤ Temperature ≤ 60°C |
| Humidity | 10% ≤ Humidity ≤ 90% |
| Accessories | |
| Multi pipette | 1 ea |



| EVE™ HT Counting kit | |
|----------------------|---|
| Counting plate | 15 ~ 30°C (59 ~ 86°F) |
| Solutions | |
| Trypan blue | 15 ~ 30°C (59 ~ 86°F) |
| Storage temperature | |
| Counting plate | 15 ~ 30°C (59 ~ 86°F) |
| Trypan blue | 15 ~ 30°C (59 ~ 86°F) |
| Expiration Date | |
| Counting plate | 2 year before open 1 year after open |
| Trypan blue | 2 year before open 1 year after open |

Ordering information

| Cat. No. | Description | Contents |
|----------|--------------------------------------|---|
| EVE HT | A High-throughput multi-cell counter | Main device (1 pc) Desktop & monitor (1 set) Multi-pipette (1 pc) |
| EVH-020 | EVE™ HT Counting kit | 48 tests/kit Counting plate (20 pcs, 48 tests per plate) Mix well plate (20 pcs) Trypan blue solution (2 bottles) Reservoir (20 pcs) |
| EHQP-001 | EVE™ HT QC plate (optional) | QC plate |
| EHPP-001 | EVE™ HT Preparation plate (optional) | Preparation plate |

Safety Precautions

Review and follow the safety instructions below:











- Do not install the instrument in a humid place such as a greenhouse or an incubator to avoid a danger of electric shock. If water or other material enters the instrument, the adaptor, or power inlet, disconnect the power cord and contact a service person. For operating environment, refer to Product Specifications.
- Do not touch the main plug or power cord with wet hands.
- Always ensure that the power supply input voltage matches the voltage available at your location.
- This instrument is air-cooled and its surfaces may become hot during operation. When installing, leave a space of more than 10 cm (4 inches) around the instrument and do not place any objects between the instrument and walls.
- Do not install an instrument on a slant or a place prone to vibrations, which induces the risk of malfunction or damage of the instrument.
- Never insert any objects into the air vents of the instrument as this can result in electric shock, personal injury, and equipment damage.
- Plug the power cord firmly into the wall outlet and AC adapter.
- To avoid potential shock hazard, make sure that the power cord is properly grounded.
- Be sure to position the instrument such that it is easy to disconnect.
- Turn off an instrument before unplugging the power cord and/or moving the instrument.
- If an instrument is dropped or broken, disconnect the power cord and contact a service person. The warrant will be void in case of disassembly.
- Use only authorized accessories (adaptor, power cord, and USB drive).

WARNING

Class A equipment is intended for use in an industrial environment. In the documentation for the user, a statement shall be included drawing attention to the fact that there may be potential difficulties in ensuring electromagnetic compatibility in other environments, due to conducted as well as radiated disturbances.

Explanation of Safety Symbols

The following symbols are found on the medical device and this document. Always use the instrument in the safest possible manner.

| Symbol | Meaning |
|---|--|
|  | Caution & Warning |
|  | Protective earth (Ground) |
|  | Power On/Off |
|  | The moving parts symbol indicates areas of the medical device in which moving parts can cause injuries. Do not operate the medical device with the door open. |
|  | This equipment has been tested and found to comply with the limits for a Class A digital medical device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. |
|  | This medical device and consumables conforms to the EC Declaration of Conformity. |
|  | Authorized representative in the European community |
|  | USB Connection |
|  | The LAN Port symbol identifies the communication between the medical device and the only external computer. |
|  | This product conforms to UL 61010-1, CAN/CSA C22.2 No.61010-1 "Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part I: General Requirements." This instrument bearing the TÜV symbol are certified by TÜV Product Services to be in conformance with the applicable safety standard for the US and Canada. |

Warnings



1. After using this medical device, please turn off the main power. If not, it may cause malfunction or lifetime reduction of medical device.

2. When turning off the medical device, make sure to lock the device by pressing 'Lock' button. If not, it may cause mechanical problem(s) or error message will appear during the device booting.

| Item | Warning |
|-----------------|---|
| Cover | Do not remove cover or disassemble case. There are no adjustable components inside the device. If malfunction occurs, please contact an authorized service person. |
| Manual | Do not attempt to service the device. This manual is only available in English. Failure to heed warnings may result in injury to service provider or operator. |
| Sample handling | Wear personal protective instrument during sampling and testing. Sample may contain infectious or bio-hazardous agents. Use of capped tubes and lint free wipes. Used lint free wipes shall be discarded. |
| Waste | After using the plate, dispose appropriately as bio-hazards waste. Do not reuse the plate. |

Technical Support

Visit our Website at www.nanoentek.com for:



- Technical resources, including manuals, FAQs, etc.
- Technical support contact information
- Additional product information and special offers

For more information or technical assistance, please call or email.

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EVE™ HT

NESMU-EVEHT-001E (V.0.2)



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