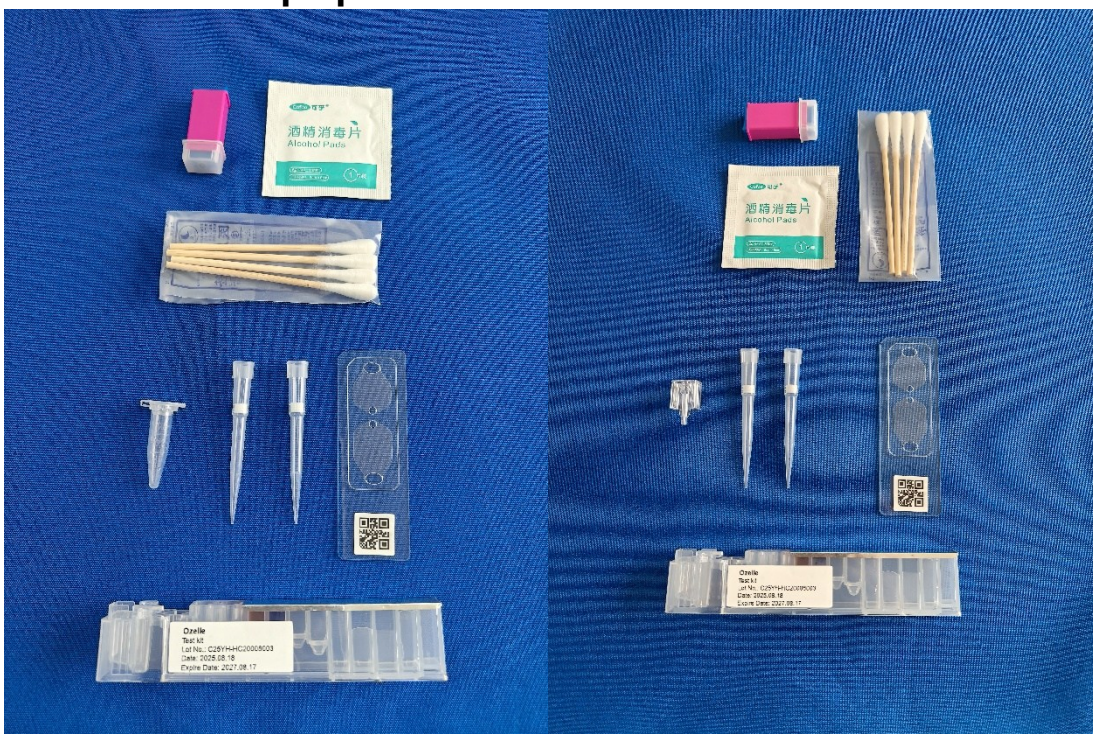
Ozelle
Reshapes Diagnostics

EHBT-50 Operation Guidance

1. CBC test

1.1 Consumables preparation



Disposable lancet.
Alcohol wipe.
Cotton swab.
EP tube (with EDTA)/Capillary.
Tips*2.
Counting chamber.
Test kit.

1.2 Collect sample

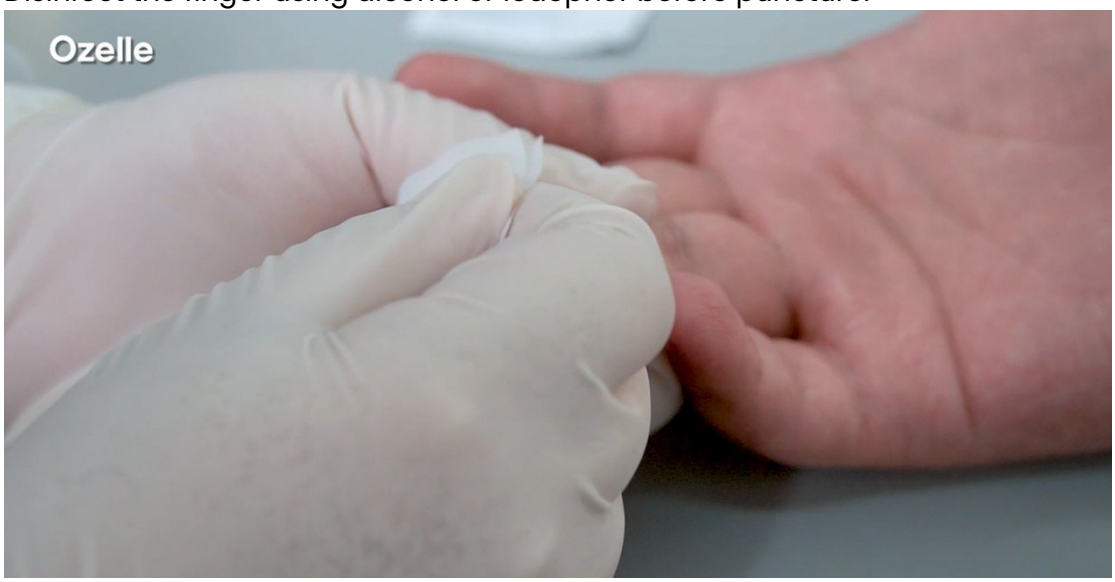
There are two ways to collect blood, one is using EP tube to collect, another is using Capillary.

1.2.1

Gently massage from the base of the palm toward the fingertips to promote blood circulation (it is recommended to puncture the side of the ring fingertip for less pain and better blood flow).

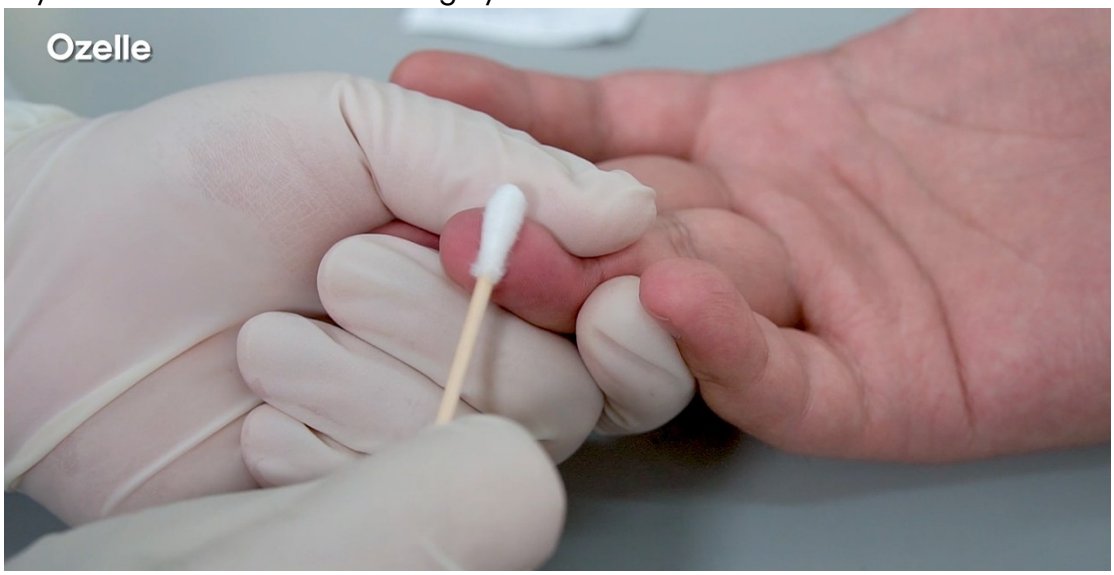
1.2.2

Disinfect the finger using alcohol or Iodophor before puncture.



1.2.3

Dry the disinfected area thoroughly with a cotton swab.



1.2.4

Place the disposable lancet at the lateral aspect of the ring finger and press it to puncture.

1.2.5

Wipe away the first drop of blood with a cotton swab.

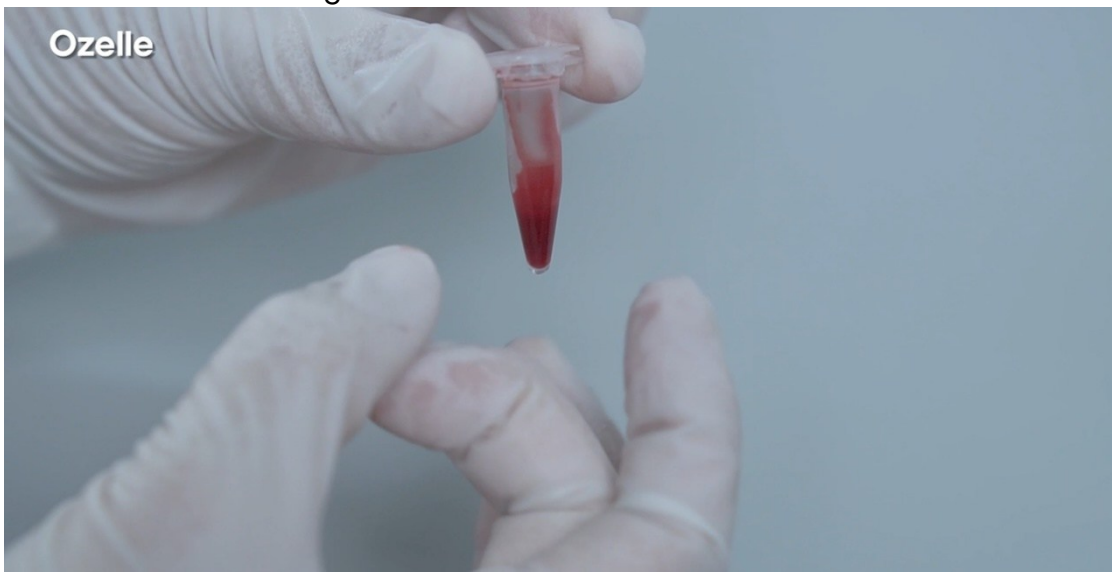
1.2.6.1

First method to collect blood-EP Tube

Open the cap of the EP tube with EDTA-k2 and collect 100μl of blood.

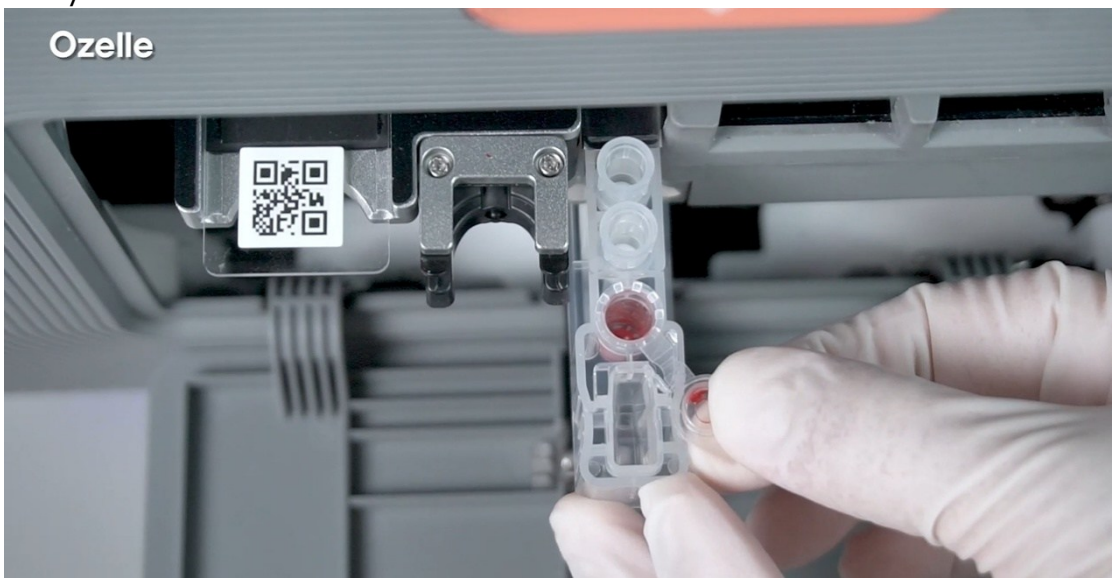
1.2.6.2

Cap the EP tube and flick it at least 20 times to ensure that the blood is well mixed with the anticoagulant.



1.2.6.3

Open the cap of the EP tube, put it into the test kit, and confirm that the cap is firmly secured.



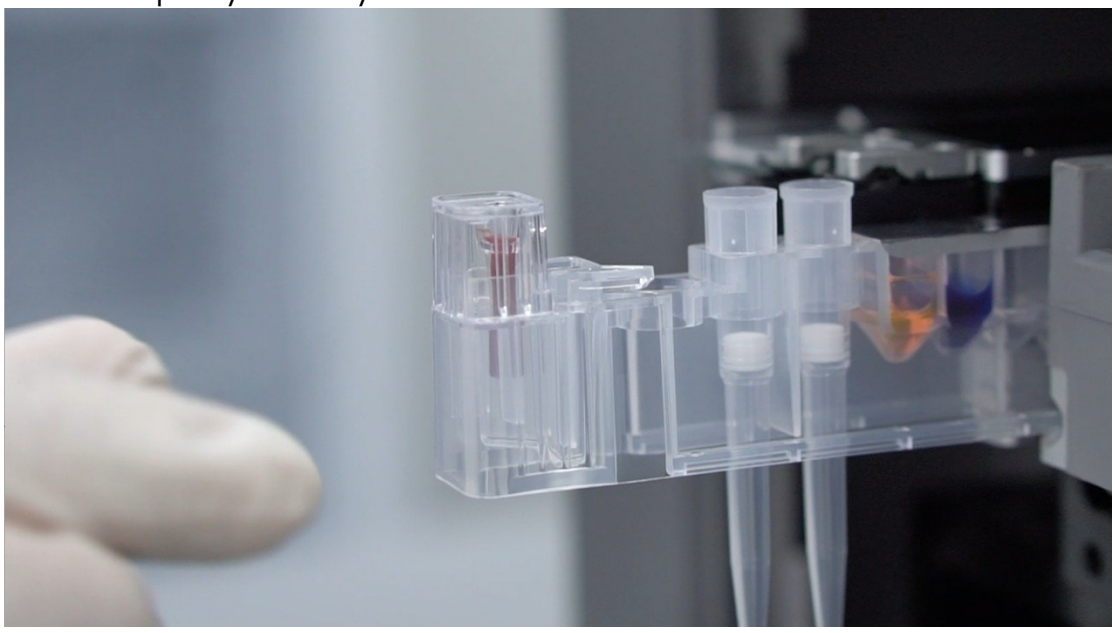
1.2.7.1

Second method to collect blood-Capillary

Once the end of capillary touch the drop of blood, capillary will observe the blood automatically because of atmospheric pressure.

1.2.7.2

Position capillary correctly on the end of test kit.



1.3 Sample in

1.3.1

Follow the on-screen prompts on the machine and properly place the counting chamber and test kit.

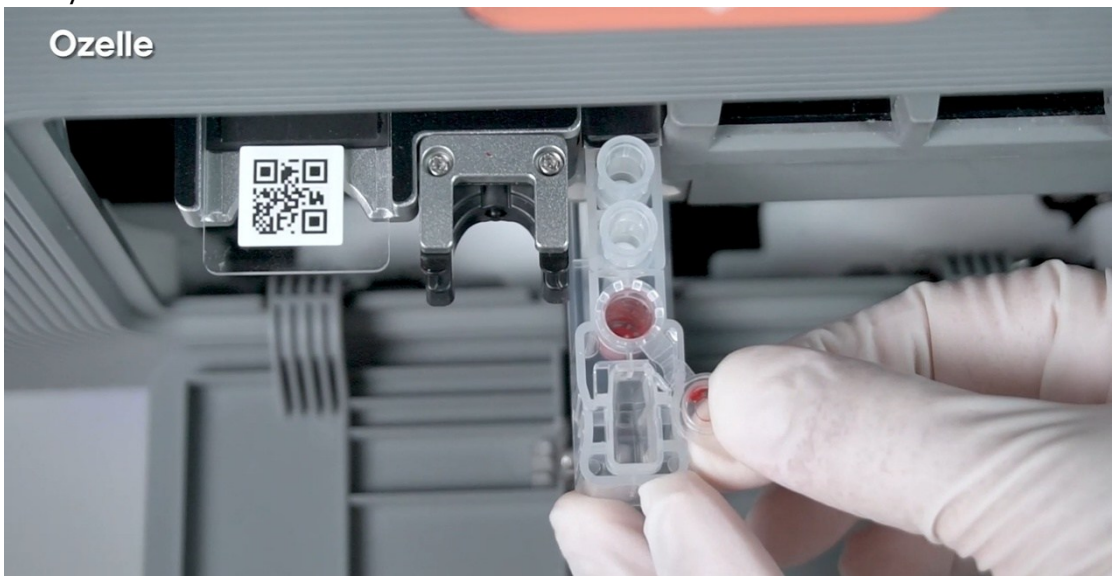
View the Operation Instruction and click “Next” to the “Sample in” page.

Place the counting chamber and test kit.

Insert the two tips into the test kit

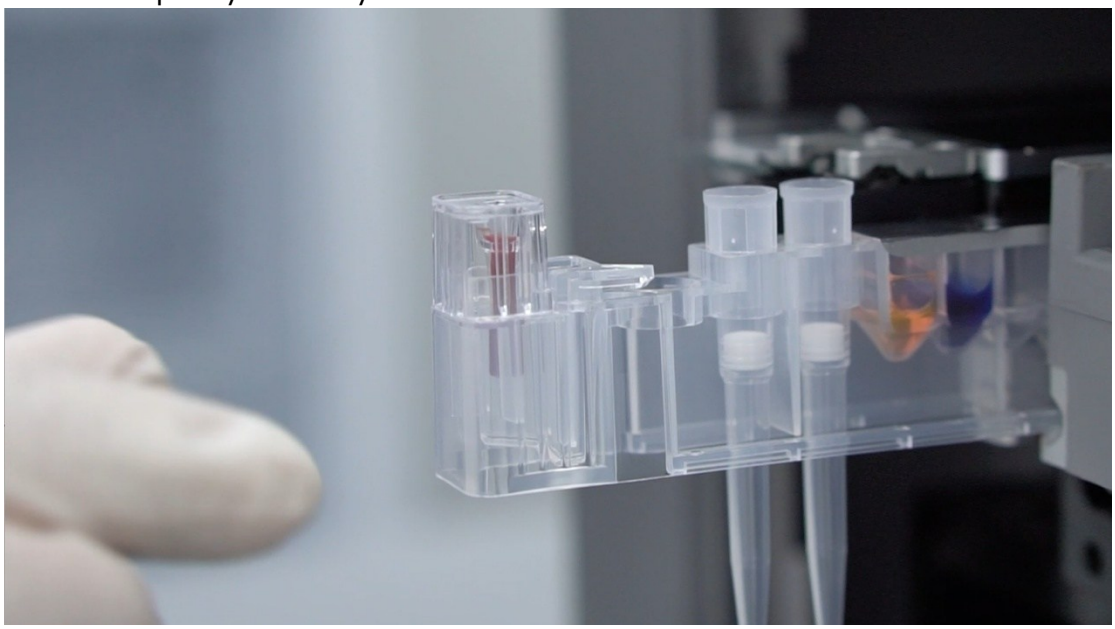
1.3.2.1

Open the cap of the EP tube, put it into the test kit, and confirm that the cap is firmly secured.



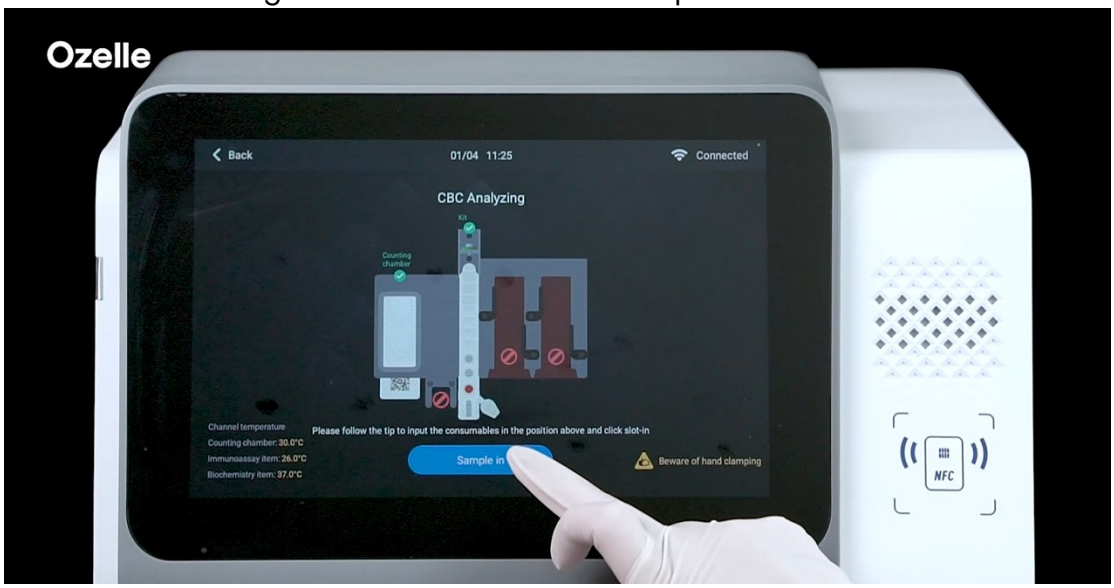
1.2.7.2

Position capillary correctly on the end of test kit.



1.3.3

Ensure the counting chamber and test kit are in place and start the test.



1.4 Test (Automatically)

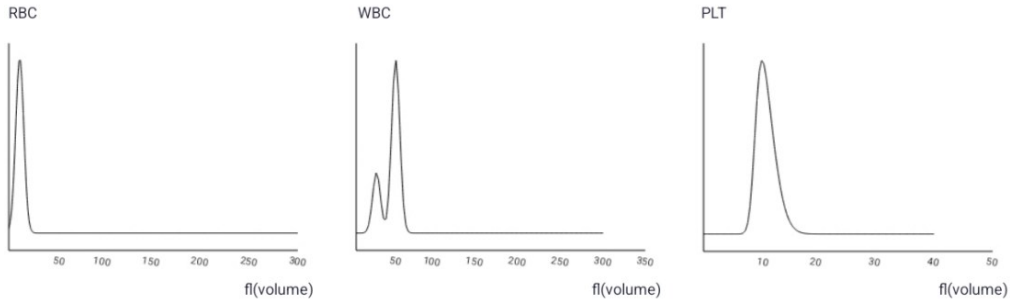
1.5 Report

The test results and cell images can be viewed upon the completion of test.

Ozelle clinic test report

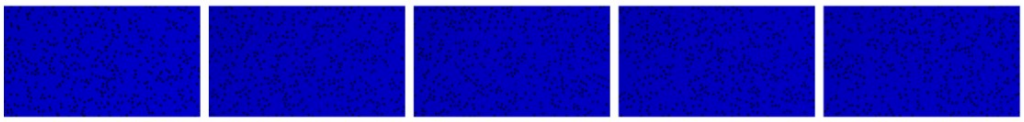
Sample No.: 2024092800338	Test institution: 24092800338982	Report time: 2025.06.04 08:36:49
Patient No.: 342456908345	Patient's name: C.Ronaldo	Gender: Male
Age: 28	Mobile: 8080808080	

Parameter	Result		Reference range	Low	Normal	High
WBC	2.94 10^9/L	↓	3.50 - 9.50			
NEU#	2.60 10^9/L		1.80 - 6.30			
NST#	0.01 10^9/L	↓	0.04 - 0.50			
NSG#	1.53 10^9/L	↓	2.00 - 7.00			
NSH#	0.00 10^9/L		0.00 - 0.30			
LYM#	1.14 10^9/L		1.10 - 3.20			
MON#	1.20 10^9/L	↑	0.10 - 0.60			
EOS#	0.08 10^9/L		0.02 - 0.52			
BAS#	0.01 10^9/L		0.00 - 0.06			
ALY#	0.00 10^9/L		0.00 - 0.20			
NEU%	54.36 %		40.00 - 75.00			
NST%	2.31 %		0.00 - 5.00			
NSG%	52.05 %		50.00 - 70.20			
NSH%	0.00 %		0.00 - 3.00			
LYM%	55.72 %	↑	20.00 - 50.00			
MON%	4.10 %		3.00 - 10.00			
EOS%	2.56 %		0.40 - 8.00			
BAS%	0.26 %		0.00 - 1.00			

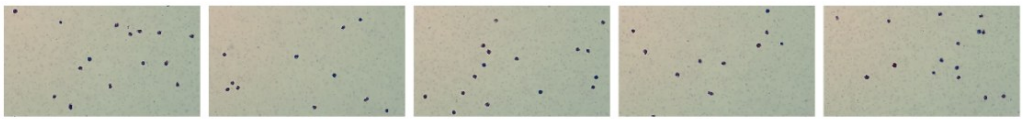


Note: The result is reported based on the sample, doctors should make diagnosis according to clinical symptoms.

RBC

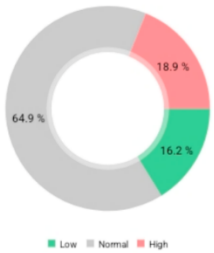


WBC



PLT

Overview

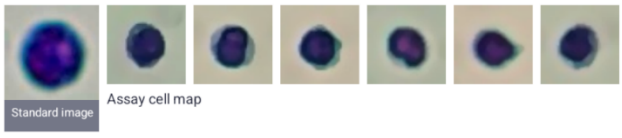


Basis: A decrease in lymphocytes (LYM reduction) along with an increase in monocytes (MON# increase) and immature neutrophils (NST# increase) may collectively indicate the following pathological mechanisms:

- **Acute or chronic infection**: An increase in neutrophils suggests infection, particularly bacterial; an increase in monocytes may suggest a chronic process or enhanced inflammatory response. A decrease in lymphocytes may be due to viruses inhibiting B/T cell function, or it could be an early stress response to infection.
- **Immune dysfunction**: A decrease in lymphocytes may be associated with immune s ↑ pression, such as from viruses (e.g., EB virus, HIV) or drug effects.
- **Stress response**: As in systemic inflammatory response syndrome (SIRS) or severe infection, which can cause the bone marrow to release immature granulocytes (NST# increase) and s ↑ press the generation or function of lymphocytes.

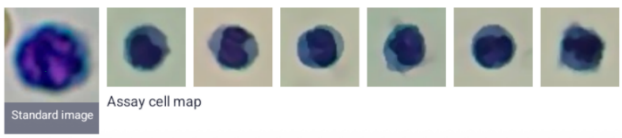
Overall, this set of abnormal indicators tends to s ↑ port the early or progressive phase of infection (especially bacterial or viral mixed infections) or inflammatory diseases.

LYM# 0.98 ↓ (1.10-3.20)
- **Clinical implication:** Indicates possible viral infection, immunos ↑ pression, or stress state
- **Guideline:** Lymphocytopenia is common in viral infections or immunos ↑ pression, such as HIV, EB virus, systemic inflammation, or drug effects.



Assay cell map

MON# 0.99 ↑ (0.10-0.60)
- **Clinical implication:** Suggests the possibility of chronic infection, inflammatory response, or certain immune diseases
- **Guideline:** Elevated monocytes are commonly associated with chronic inflammation, tuberculosis, autoimmune diseases, and some hematological conditions.

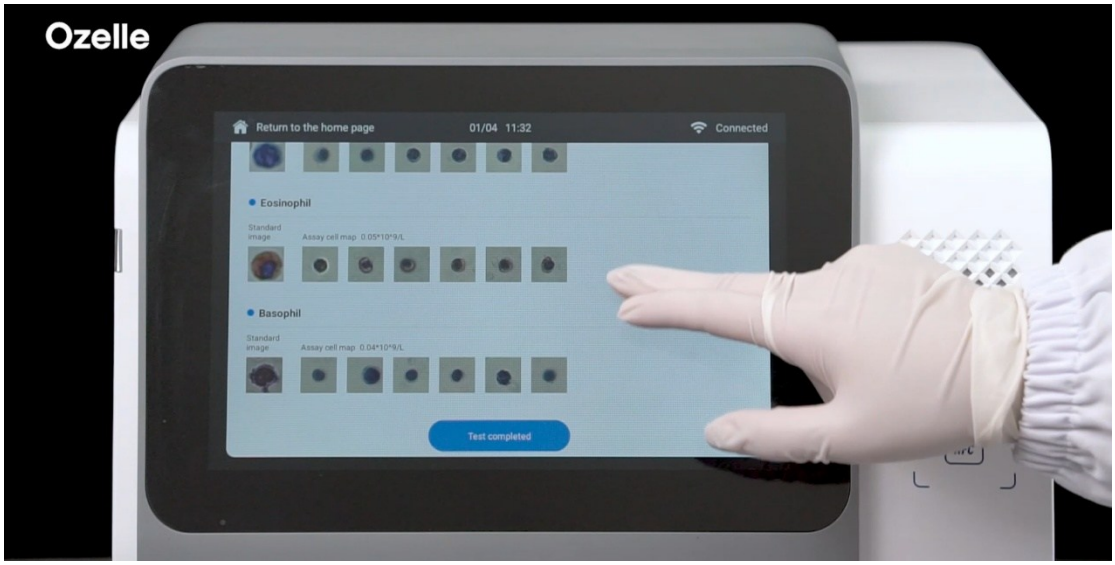


Assay cell map

1.6 Test completed

1.6.1

Click “Test Completed” button on the screen, waiting in the “Sample OUT…” page, then the tray door will open, when the tray out, take out all consumables used.



1.6.2

Please take out all the consumables after usage and dispose properly.
CBC test is finished.

2. Immunoassay Item Test

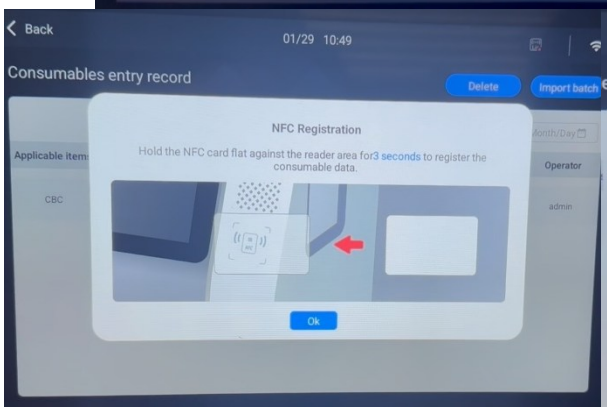
2.1 Consumable preparation

Fluorescence diluent.
Fluorescence test card.
Pipette (Including).

2.2 Register consumable data

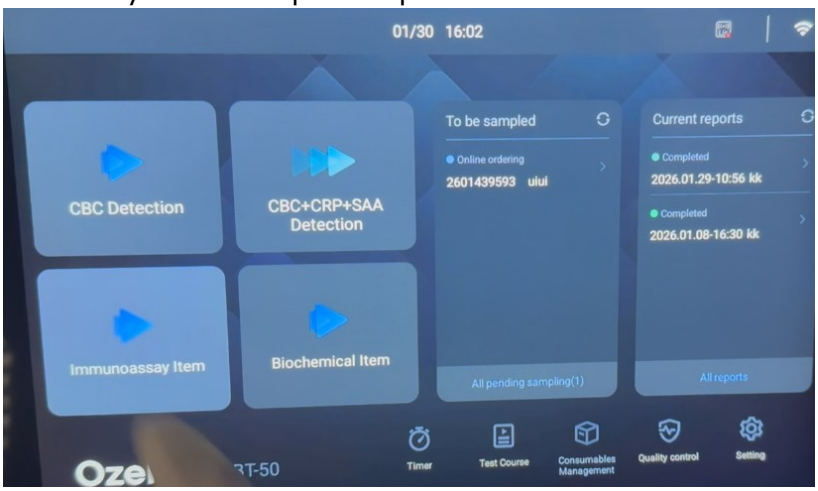
2.2.1

Click “Consumables Management” to consumable page, hold NFC card on the reading area for 2 seconds to register consumable data:

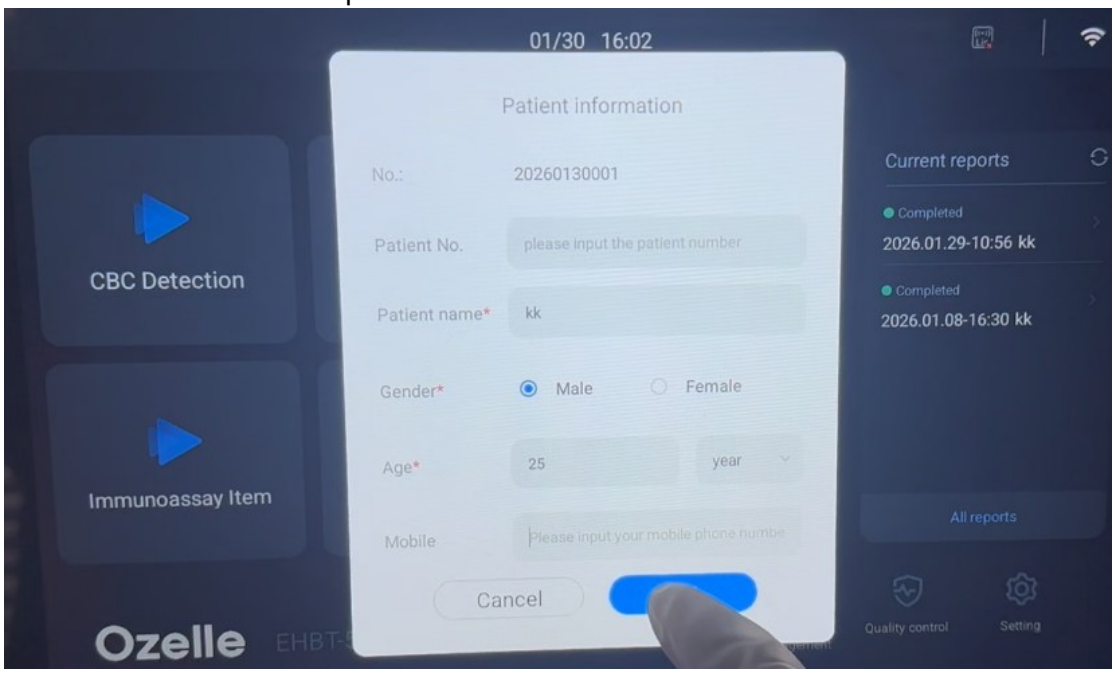


2.3 Test

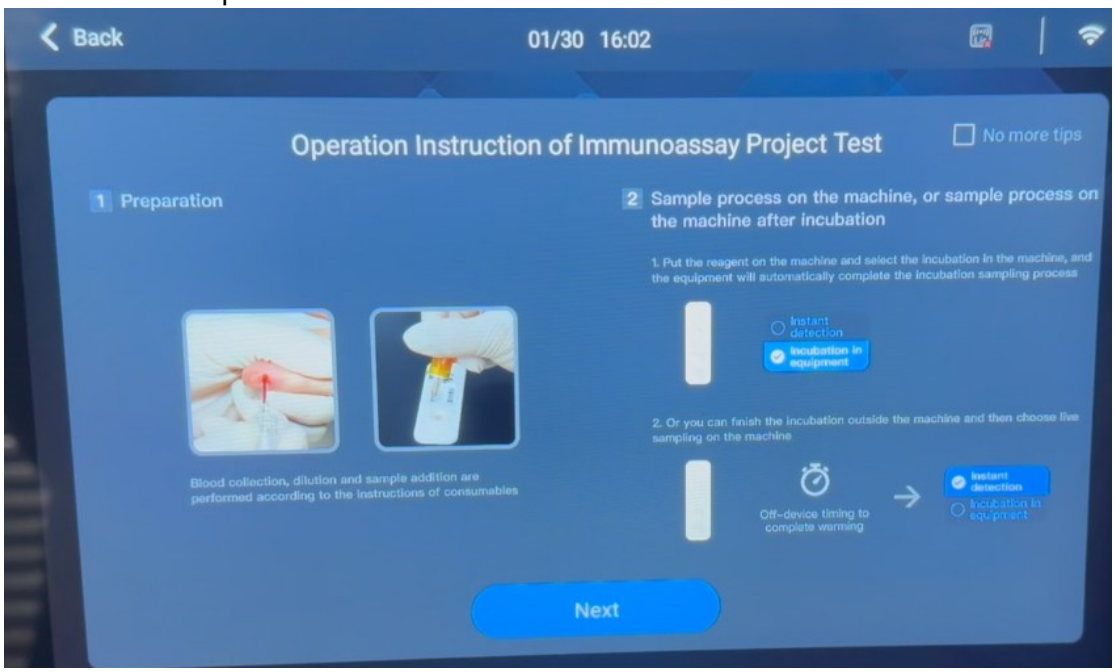
Click “Immunoassay Item” to input the patient information.



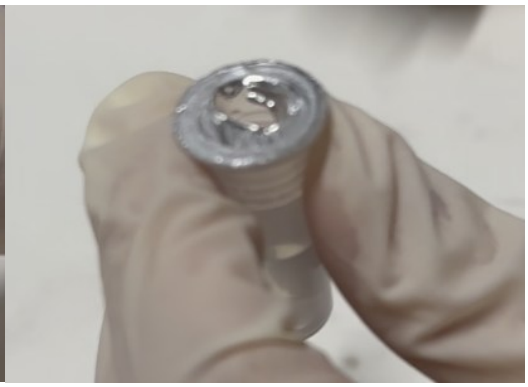
Then click “OK” to view Operation Instructions.



Click “Next” to open hatch door.



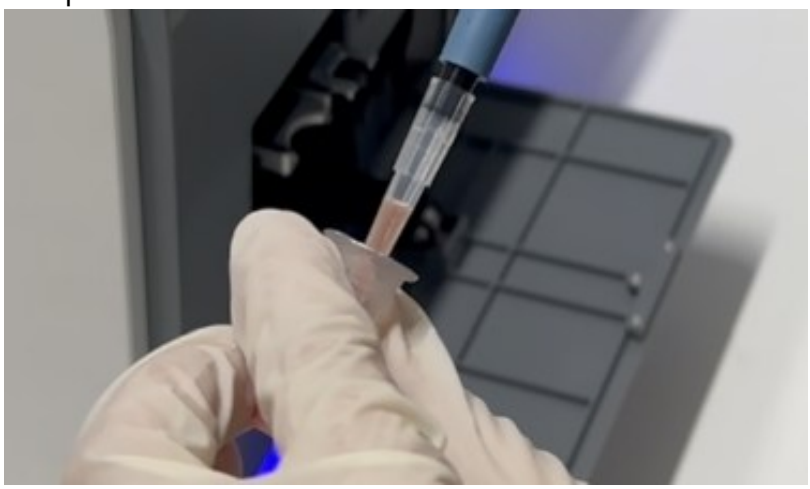
Use clean tip to open the cover of diluent.



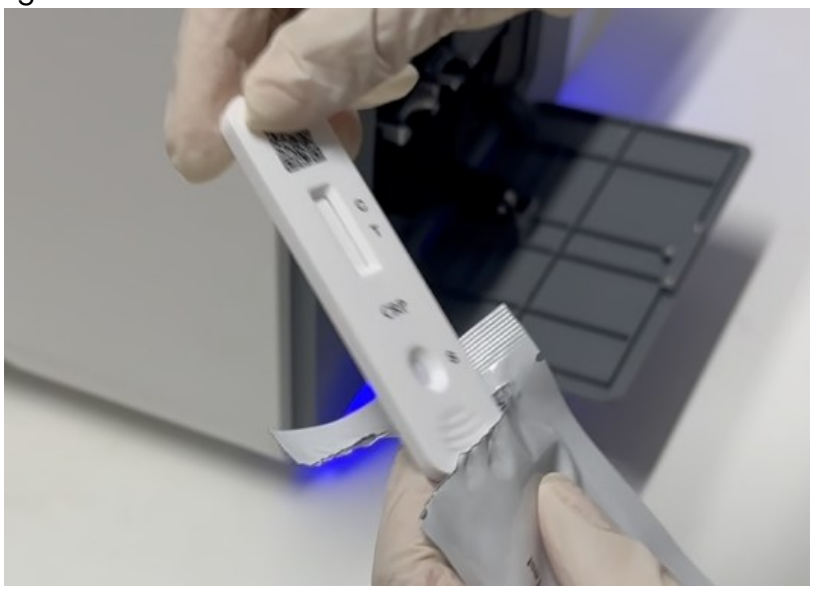
Take 10 ul sample to the diluent.

After taking sample to the diluent, adjust the pipette volume to 100 ul. Aspirate and dispense repeatedly until completely mixed.

Take 100ul sample out.

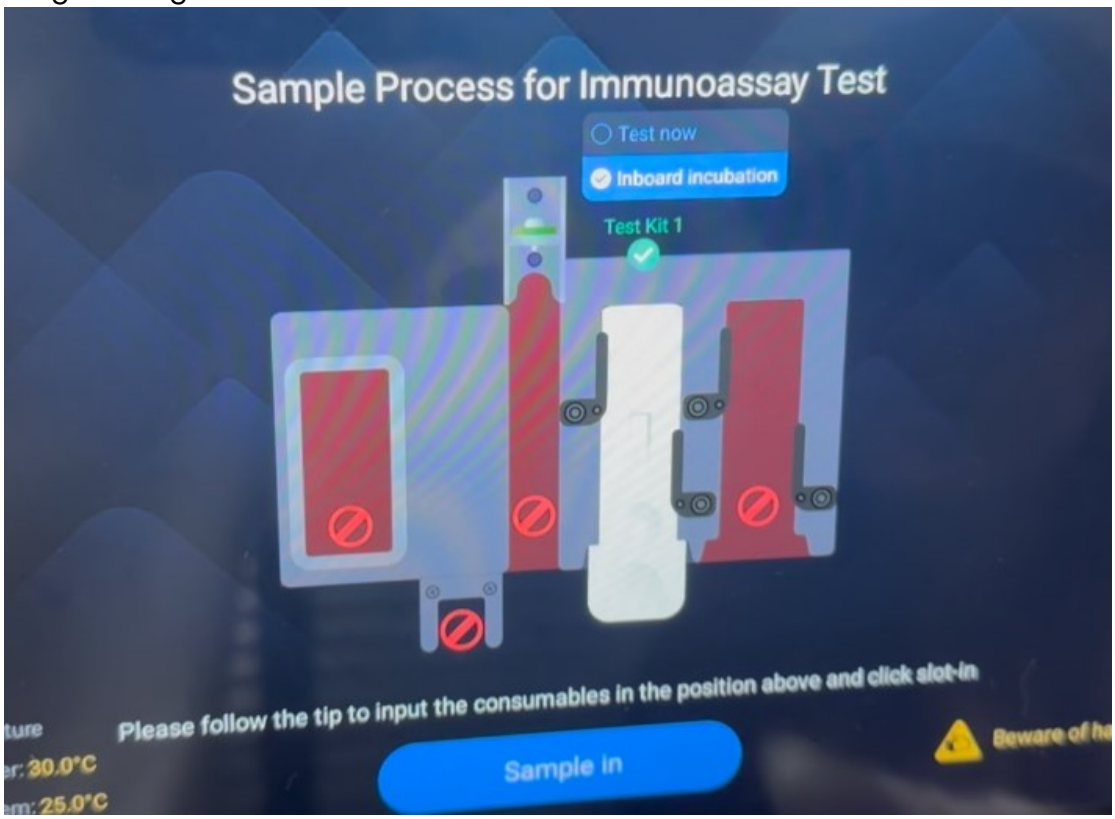


Prepare reagent card at the same time.

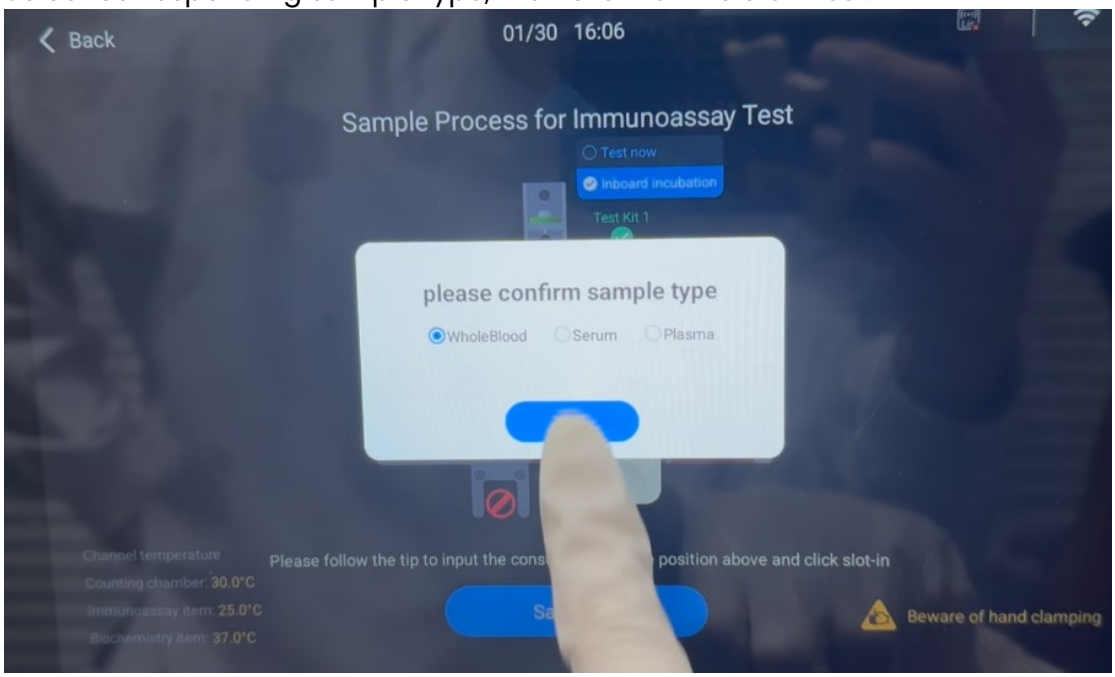


Transfer 100ul sample to the reagent card.

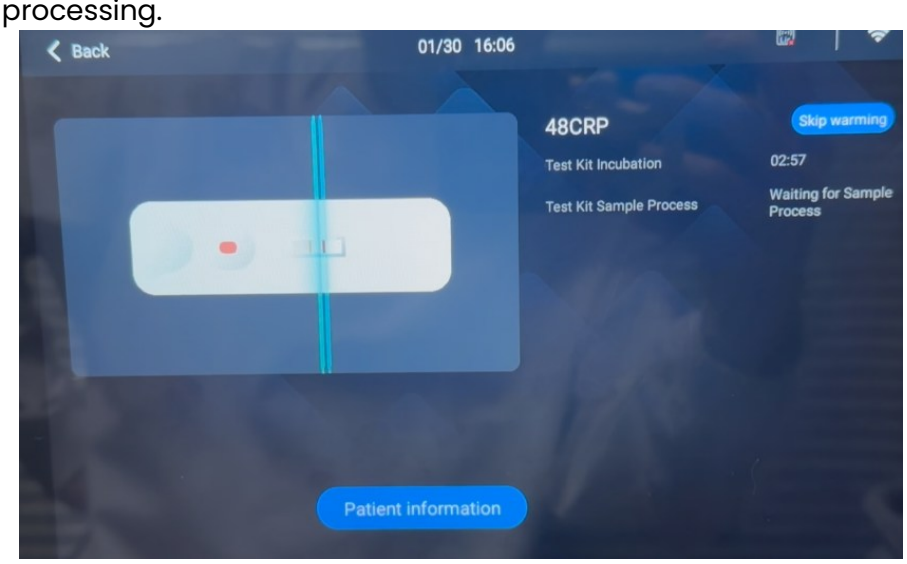
Before testing, we recommend to select “Inboard incubation”. Then insert reagent card and click “Sample in”. Green light will be on if the position of reagent is right.



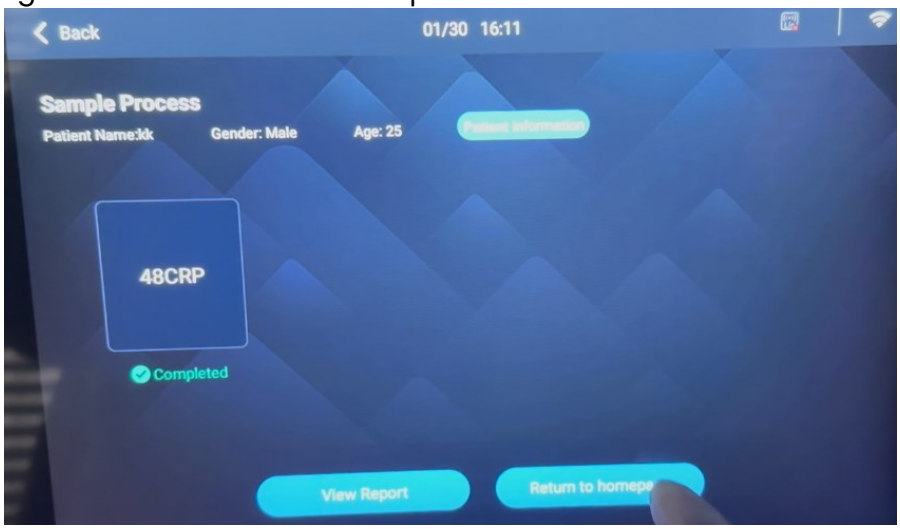
Select corresponding sample type, then click “OK” to start test.



Test is processing.



When the test is done, click “View Report” to check report or click “Return to homepage” to finish test and view report later.



Remove consumable after hatch door opening. Then click “Removed” to finish the test.

3. Biochemical test

3.1 Consumable preparation

Test kit
Sample collection rack
EP tube
Tips*2

3.2 Collect blood sample

3.2.1

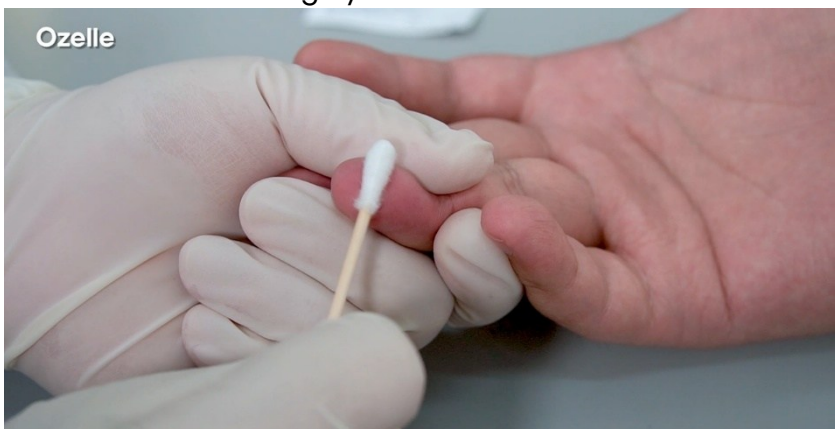
Gently massage or apply a warm towel to the palm to naturally congest the local tissue.

3.2.2

The preferred blood collection site is the fingertip of the ring finger. Disinfect the fingertip by wiping with an alcohol pad or 75% ethanol.

3.2.3

Dry the disinfected area thoroughly with a cotton swab.



3.2.4

Place the disposable lancet at the lateral aspect of the ring finger and press it to puncture.

3.2.5

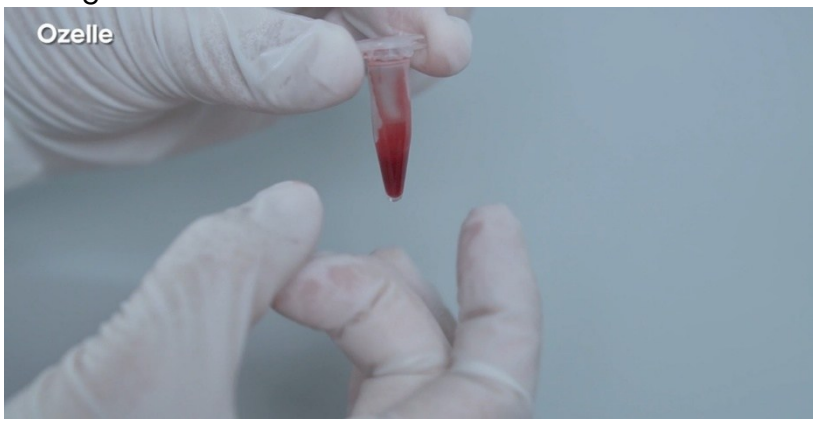
Wipe away the first drop of blood with a cotton swab.

3.2.6

Tilt the back of the hand downward to squeeze out a convex spherical drop of blood, due to gravity, the blood will not flow randomly.

3.2.7

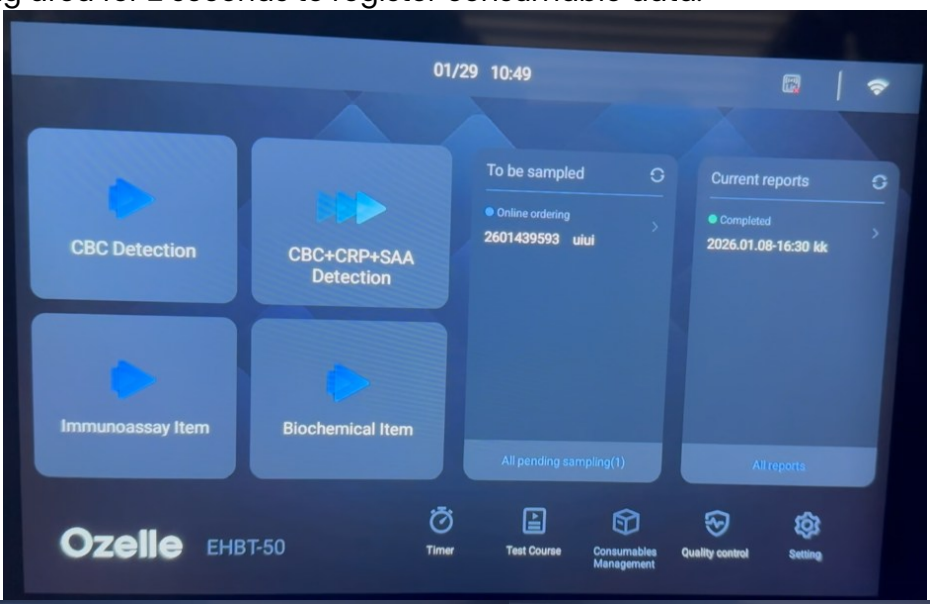
Cap the EP tube and flick it several times to ensure that the blood is well mixed with the anticoagulant.

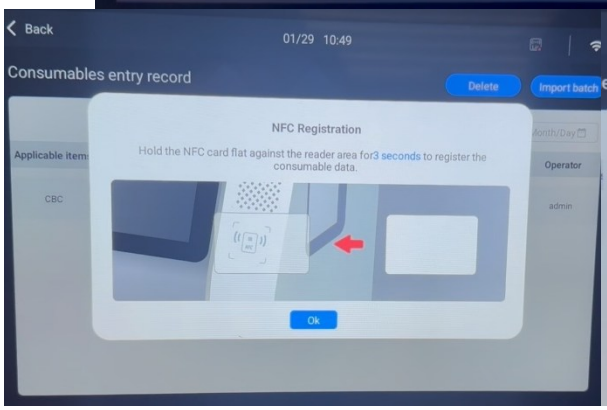


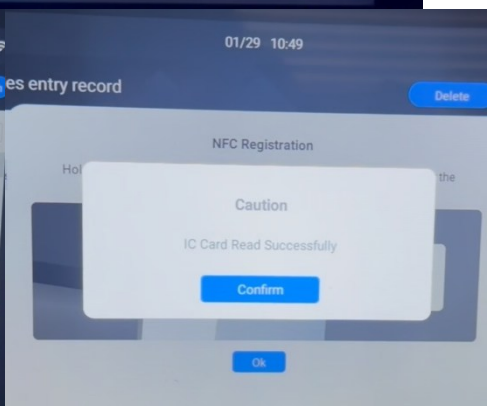
3.3 Test

3.3.1 Register consumable data

Click “Consumables Management” to consumable page, hold NFC card on the reading area for 2 seconds to register consumable data:

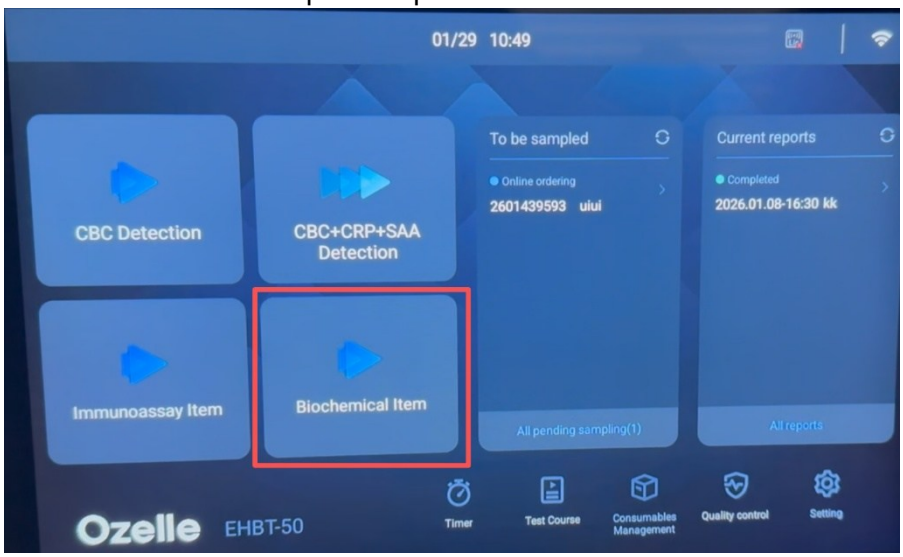




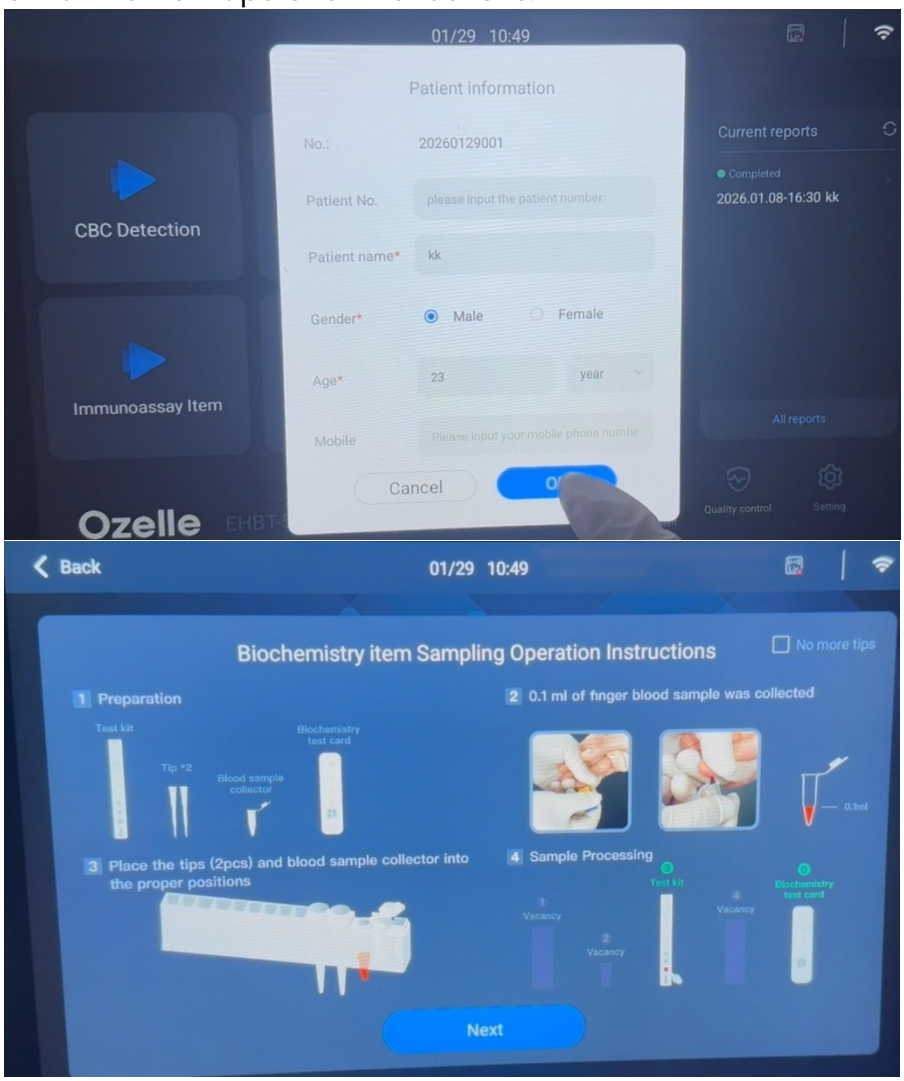


3.3.2

Click “Biochemical Item” to input the patient information.



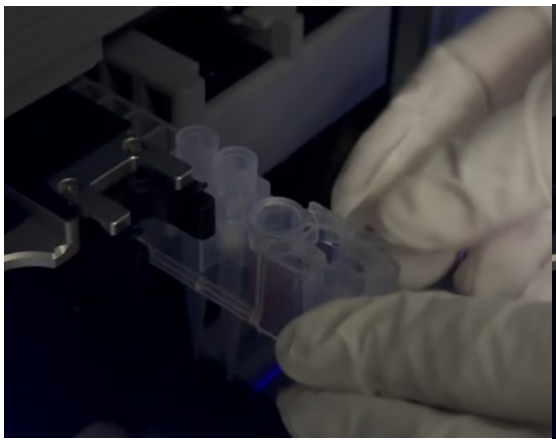
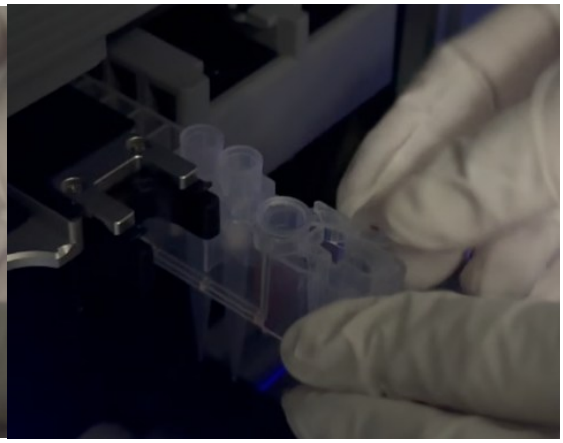
Then click “OK” to view Operation Instructions.



Click “Next” to the sampling page. The hatch door opens, insert the test kit, set 2 tips in test kit.

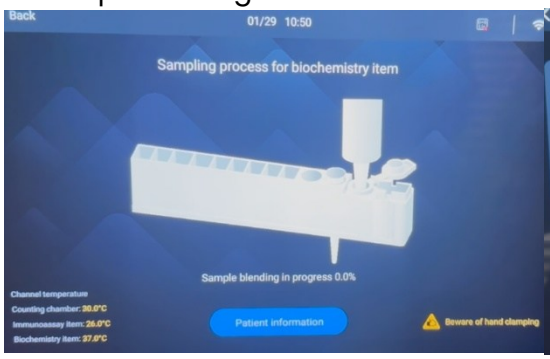

Flick sample gentely at least 20 times to mix sample woth anticoagulant nicely.

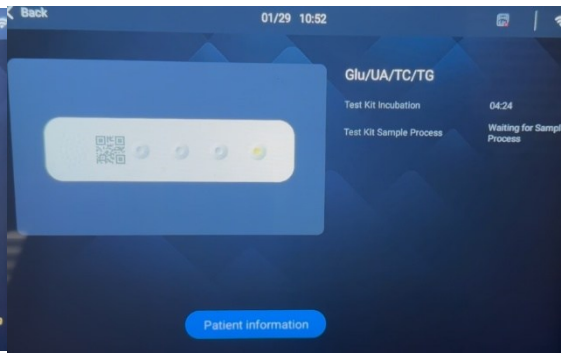
Set EP tube in the test kit, and push test kit inside. Insert biochemistry reagent card to the device.

Green light will turn on when position of consumables is right. Click “Sample in” to start the test.

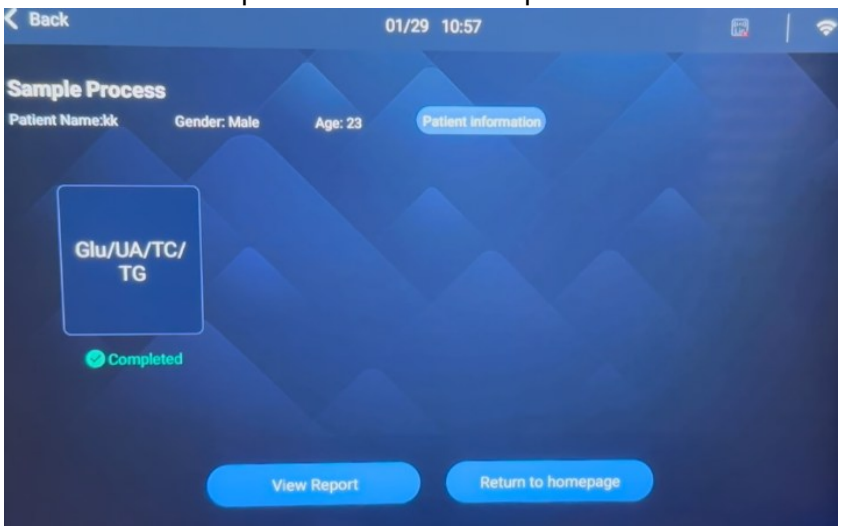
Test is processing.



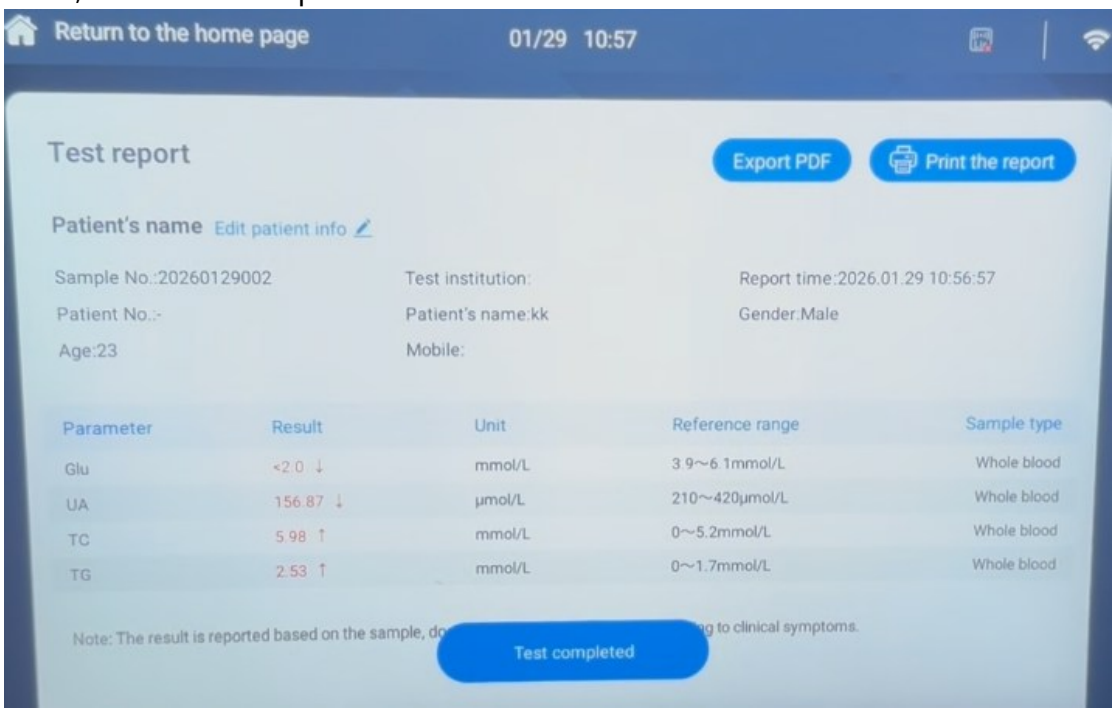


3.3.3 Report

Test finished. Click “View report” to check the report.

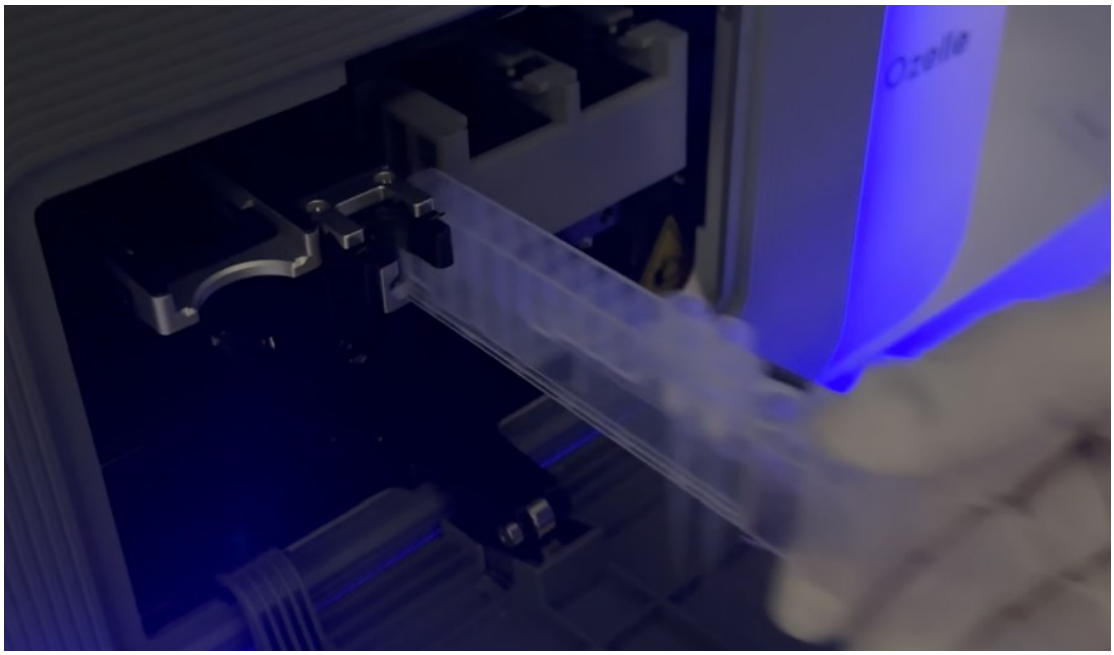


On the report page, users could Export and Print the report. When everything is done, click “Test completed”.



3.4 Finish Test

After clicking “Test completed”, hatch door will open for users to remove consumables.



After removing consumables, click “Removed” to finish test.