



明華生物

 *eDiagnosis*



Blood Gas Analyzer Introduction

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Product Introduction-Features

Maintenance Free

- High Stability
- Built-in Self-diagnosis Function
- Integrated Reagent Kit (Aspiration Needle, Electrode, Calibrator and Waste Bag)

Automation Design

- Automatic Inhalation, Calibration, Waste Collection
- Fast, 60s/Test
- Can Be Connected to HIS/LIS System

Convenient

- Small Size and Built-in Lithium Battery, Can Be Used Bedside, Cart and Other Scenes
- Stored at Room Temperature

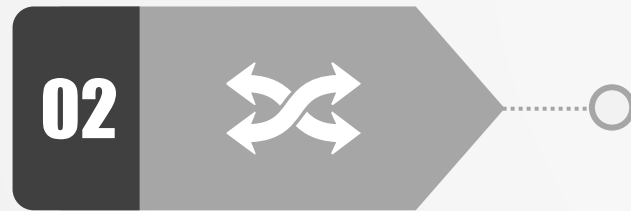
Product Introduction-Testing Method

Testing Method: Electrode Method

In principle, the main electrochemical method is used to analyze the contents of the following substances in the whole blood sample



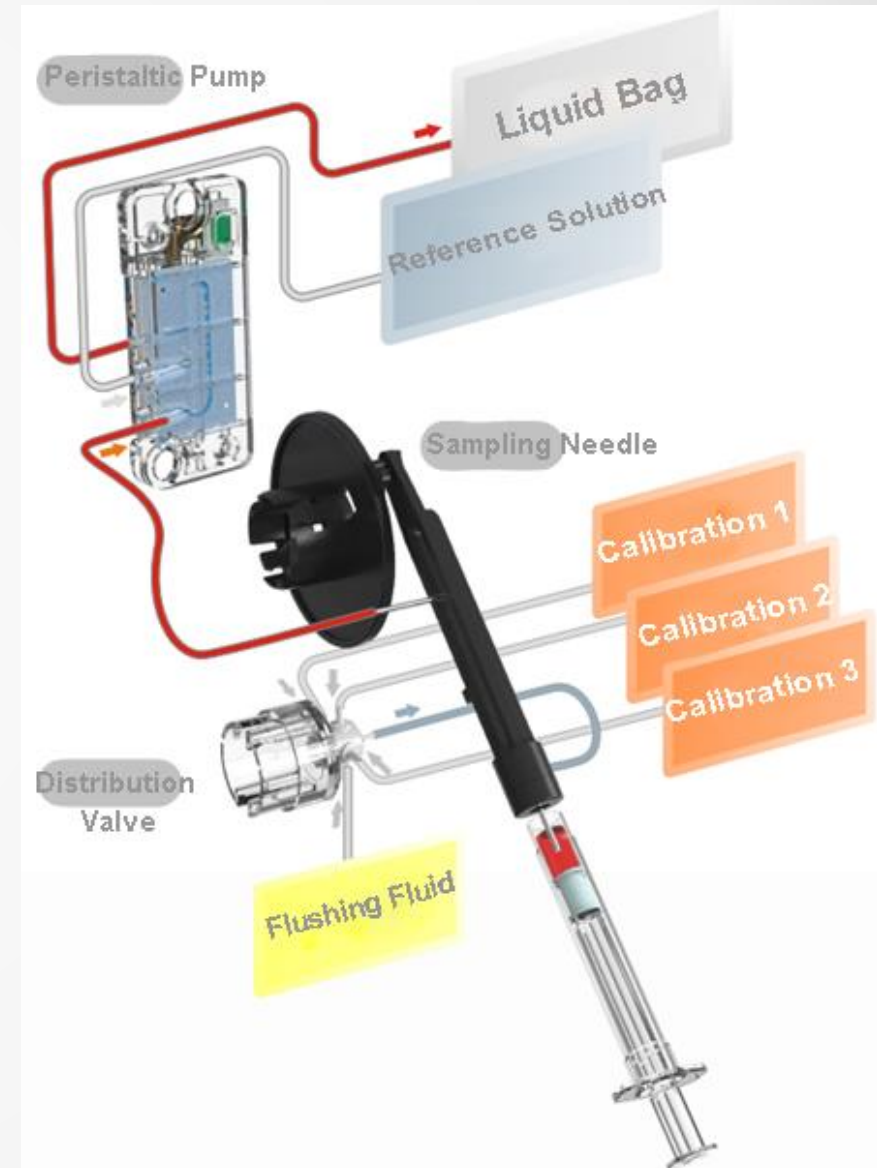
**POT Electrode
(Measuring Potential)**
pCO₂, pH, Cl⁻, Na⁺, Ca⁺⁺, K⁺



**AMP Electrode
(Measuring Current)**
pO₂, Glu, Lac



**HCT Electrode
(Measuring Current)**
Hct



Product Introduction



Product Introduction-Blood Gas Analyzer



Category	Specification
Name	Blood Gas Analyzer
Throughput	Results in 60 Seconds after Sample Aspiration
Sample Volume	150μL
Operation Environment	10°C-31°C
Power Supply	AC 100 ~ 240V、 50Hz/60Hz
Dimensions	260mm*270mm*410mm
Net Weight	9.5Kg Without Cartridge
Display	10.4-inch color LCD Display, Resolution 1024*768
Battery	Lithium-ion Battery 14.8V/6500mAh
Input Device	Touch Screen and Barcode Scanner
Interface	4*USB 2.0 host、 WLAN
Fan	12V
Storage Capacity	100000+ Tests

Product Introduction-Measurement Parameters



	Model	Measurement Parameters
Blood Gas Testing Cartridge (Electrode Method)	PT-3	pH, pCO ₂ , pO ₂
	PT-8	pH, pCO ₂ , pO ₂ , Na ⁺ , K ⁺ , Ca ⁺⁺ , Cl ⁻ , Hct
	PT-9	pH, pCO ₂ , pO ₂ , Na ⁺ , K ⁺ , Ca ⁺⁺ , Cl ⁻ , Glu, Hct
	PT-10	pH, pCO ₂ , pO ₂ , Na ⁺ , K ⁺ , Ca ⁺⁺ , Cl ⁻ , Glu, Lac, Hct
Storage Temperature	15~25°C	
Package	60 Tests/Kit, 120 Tests/Kit, 200 Tests/Kit	
Shelf Life	Validity 180 days	
Onboard Life	Validity 21 days	
Sample Type	Arterial Blood, Venous Blood, Capillary Blood, Quality Control	
Dimensions	194mm*92mm*207mm	
Weight	2kg	
Calibration	One Point Calibration, Two Point Calibration	
Component	Aspiration Needle, Electrode, Calibrator and Waste Bag	

Product Introduction-Calculation Parameters



Number	Calculation Parameters	Unit	Number	Calculation Parameters	Unit
1	cH^+	nmol/L	13	$sO_2(\text{est})$	%
2	$cH^+(T)$	nmol/L	14	AnGap	mmol/L
3	pH(T)	-	15	tHb(est)	g/dL
4	$pCO_2(T)$	mmHg	16	$pO_2(A-a)$	mmHg
5	$pO_2(T)$	mmHg	17	$pO_2(A-a) (T)$	mmHg
6	$HCO_3^- \text{act}$	mmol/L	18	$pO_2(a/A)$	-
7	$HCO_3^- \text{std}$	mmol/L	19	$pO_2(a/A) (T)$	-
8	BB(B)	mmol/L	20	RI	-
9	BE(B)	mmol/L	21	RI (T)	-
10	BE(ecf)	mmol/L	22	pO_2/FIO_2	mmHg
11	CtCO ₂	mmol/L	23	$pO_2(T)/FIO_2$	mmHg
12	$Ca^{++}(7.4)$	mmol/L			

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Operation Interface-Homepage

Click Here to View
The Information
of Kit In Use

1. Connect the power supply, turn on the power switch and press Start, the instrument enters the home page interface after the completion of system initialization self-check

The screenshot displays the instrument's homepage interface. At the top, a dark status bar shows the date and time (2021/03/16 15:42:25) and system icons. Below this, the main display area is divided into several sections. On the left, there are four vertical panels for blood types: Arterial blood, Venous blood, Capillary blood, and Quality control. The central area features a grid of buttons for test parameters: All, BG, BG+ISE, BG+ISE+GLU, pH, pCO₂, pO₂, Na⁺, K⁺, Cl⁻, Ca⁺⁺, Glu, Lac, and Hct. A large blue 'Start' button is positioned on the right side of the grid. Above the grid, there are two summary boxes: 'Reagent pack PT10' with a green progress indicator and 'Remaining 18 days Remaining 169 samples', and 'Calibration' with a graph and '2-point calibration: 16:00:25'. At the bottom, a dark navigation bar contains icons for Home, Database, and Settings.

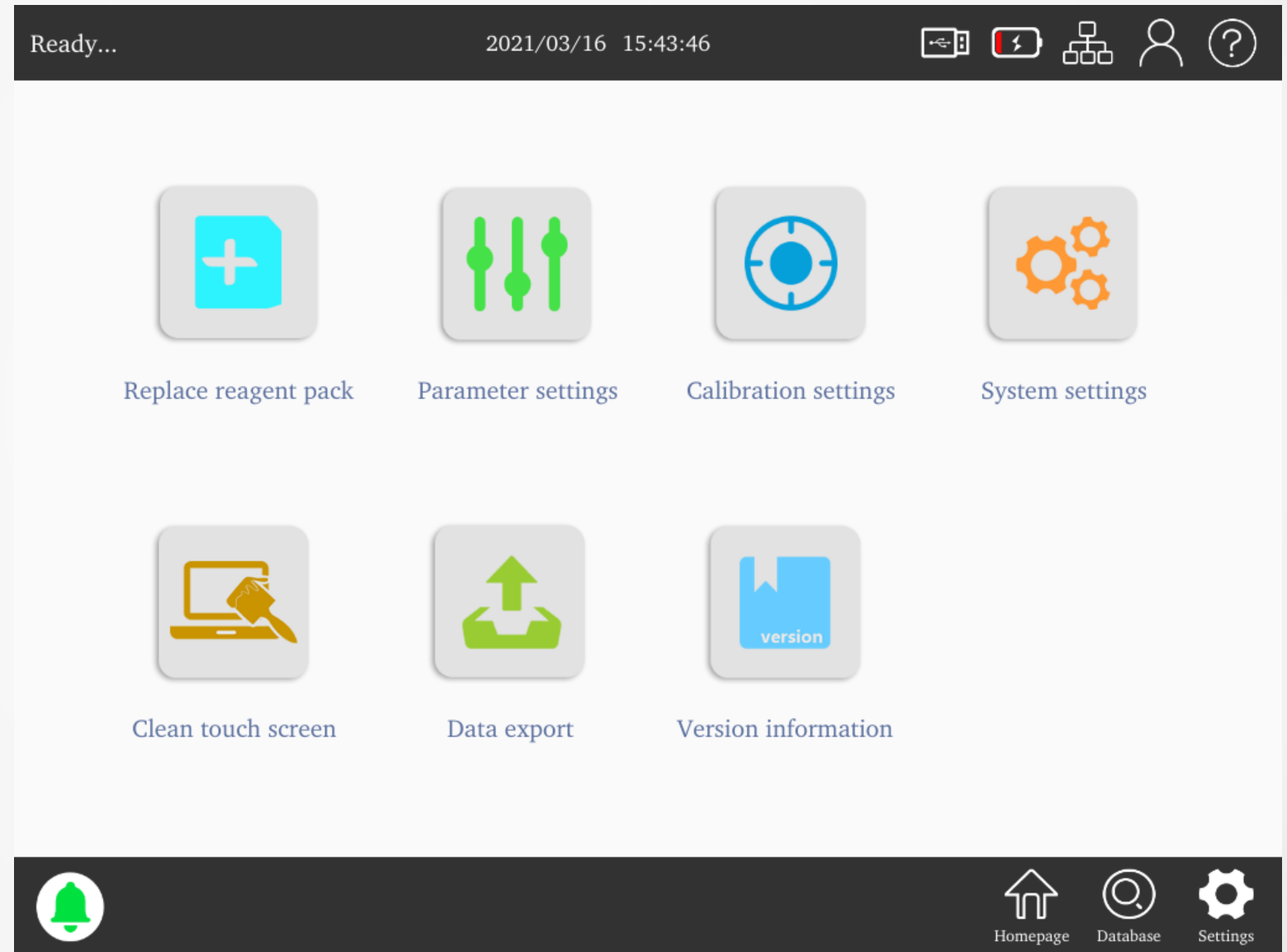
Upper
Status Bar

Middle
Display
Area

Lower
Status Bar

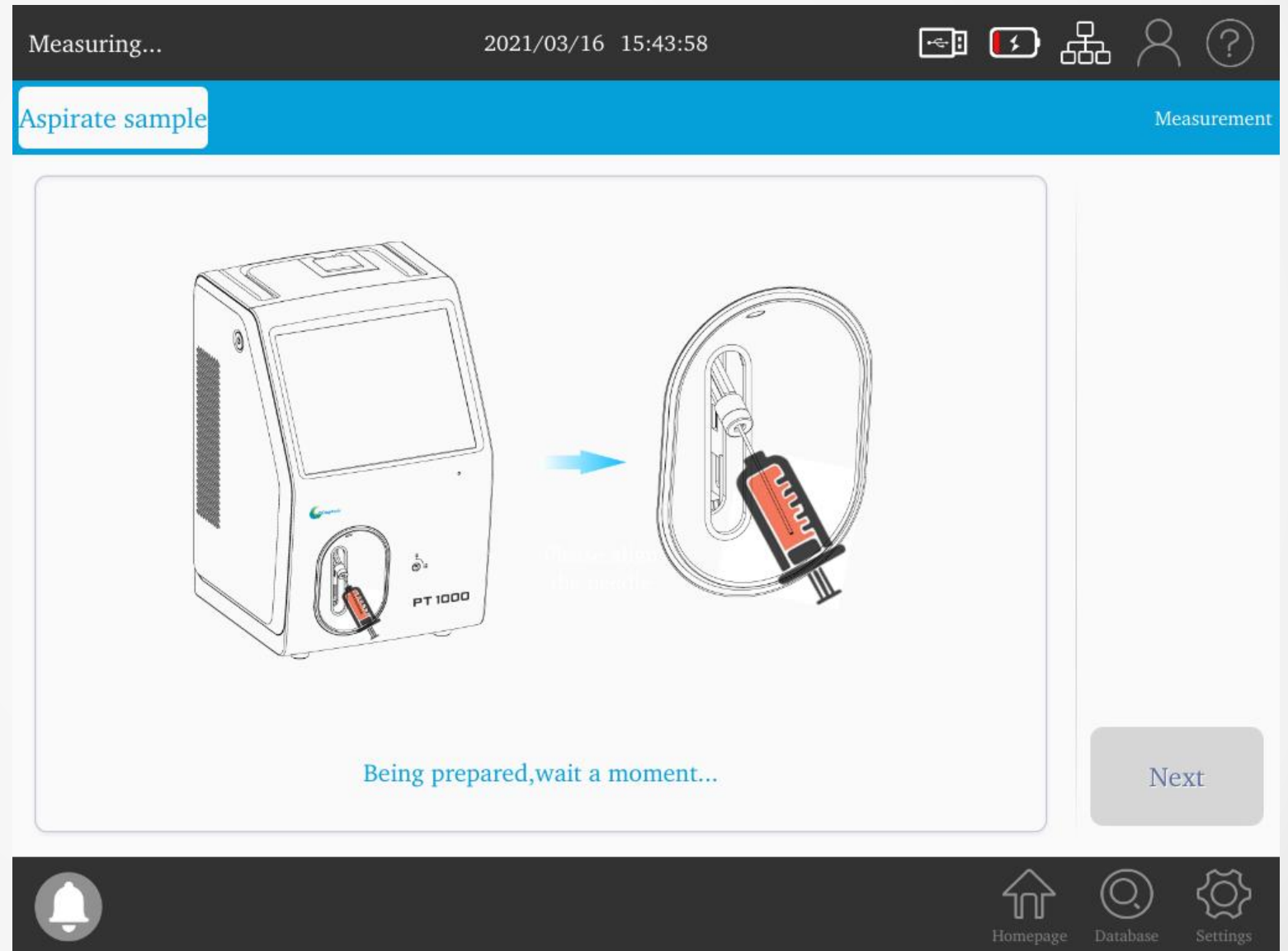
Operation Interface-Setting

2. In setting interface to do turn off, reagent kit replacement or parameter setting



Operation Interface-Testing and Analysis

3. In homepage, select sample type, and test parameters, click Start button to start testing process.
4. Connect the instrument with the syringe/ capillary tube



Operation Interface-Testing and Analysis

5. Remove the syringe and click the "next" button, the instrument will withdraw the sample aspirating probe and enter testing and analysis stage

The screenshot shows the PT 1000 instrument interface. At the top, it displays 'Measuring...' and the date/time '2021/03/16 15:44:20'. Below this is a blue header bar with 'Aspirate sample' on the left and 'Measurement' on the right. The main area contains two line drawings of the PT 1000 instrument. The left drawing shows the syringe attached to the sampling needle. A blue arrow points to the right drawing, which shows the syringe detached and falling away. Below the drawings, the text reads: 'Please separate the syringe from the sampling needle, then click the next button'. A blue 'Next' button is located at the bottom right of the main area. The bottom navigation bar includes a bell icon, a home icon, a magnifying glass icon, and a gear icon, labeled 'Homepage', 'Database', and 'Settings' respectively.

Operation Interface-Testing and Analysis

6. After the system finishes calculation and analysis, the page will switch to the tab of testing result. The displayed testing results include measurement results and calculation results

Measuring... 2021/03/16 15:44:33

Sample information Measured result Calculated results

Parameter	Value	Unit	Range
pH		-	[7.35 - 7.45]
pCO ₂		mmHg	[35.0 - 45.0]
pO ₂		mmHg	[80.0 - 105.0]
Na ⁺		MEq/L	[138.0 - 146.0]
K ⁺		MEq/L	[3.50 - 4.90]
Ca ⁺⁺		mmol/L	[1.120 - 1.320]
Cl ⁻		MEq/L	[98.0 - 109.0]
Glu		mmol/L	[3.90 - 5.80]
Lac		mg/dL	[3.60 - 11.71]
Hct		%	[38 - 51]

10%
Time to obtain results: 00:54

Print

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Homepage Database Settings

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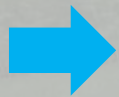
Product Introduction

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Applicable Scene



Applicable Scene-Population

01

Patients With Hypoxia And/Or Acid-base Imbalance (Anesthetized)

02

Acute And Critical Patients (Myocardial Infarction, Stroke)

03

Patients Receiving Oxygen Or Assisted Breathing (Ventilator)

04

Newborn: Diagnosis of Neonatal Asphyxia, Neonatal Pulmonary Disease, Acid-base Balance Monitoring

Applicable Scene

Department	Clinical Significance
Clinical Laboratory	Assess respiratory function, analyze the acid-base balance
ICU	Blood gas, electrolyte and acid-base balance monitored in critically ill patients
Emergency Department	Poisoning, coma, convulsions
Anesthesiology/Operating Room	Blood gas monitoring during anesthesia
Respiratory Department	Classification of respiratory failure, evaluation of hypoxia degree and guidance of ventilator adjustment
Obstetrics and Gynecology/Neonatology	Diagnosis of neonatal asphyxia, neonatal pulmonary disease, acid-base balance monitoring
Neurology Department	Blood gas and acid-base balance monitored in coma patients
Cardiology Department	Blood gas monitoring in patients with heart failure
Surgery Department	Blood gas, electrolyte and acid-base balance monitored during operation
Gastrology Department	Electrolyte and acid-base balance monitoring in patients with diarrhea/vomiting accompanied by coma
Dermatology Department	Monitor electrolyte and acid-base balance in patients with severe trauma, burn, scald
Diabetic Clinic	Monitor blood gas and acid-base balance from a patient with ketoacidosis



Thanks

