



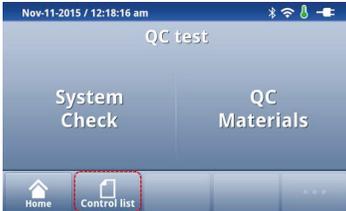
- 9. If you tap "OK" or "Print" button, ichroma™ II goes back to "Single Test" screen.
- 10. Please discard used test cartridge.

Sometimes LOT number and expiration date may not be displayed according to LOT number of ichroma™ Item.

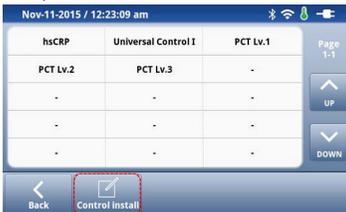
10.4.4.3. Registration of Control Materials

QC Test > Control List

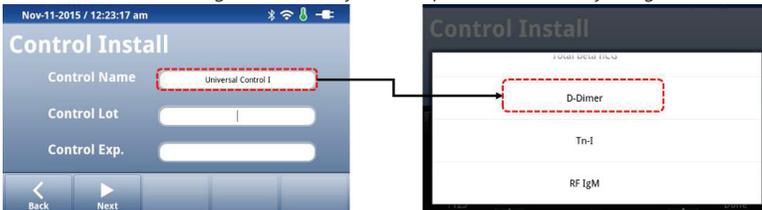
- 1) Tap "Control List" button.



- 2) Tap "Control Install" button.



- 3) Tap "Control Name" then ichroma™ II displays list of controls which are provided by Boditech Med Inc. Select one of them for registration. Also you can input control name by using barcode scanner.



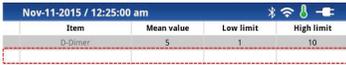
4) Tap "Control Lot" and "Control Exp." and input relevant information which are printed on the label of control. Then tap "Next" button. In case of inputting control name by using barcode scanner, LOT number and expiration date are inputted automatically.



5) Input item name(name of test), mean value and low/high limit. You can input this information by using barcode scanner also.



6) In case of you want to register more than 1 test item, please tap "Add Item".



7) Input relevant information and tap "Save" button for completing registration. After tapping "Save" button, you can find registered controls in LCD screen.



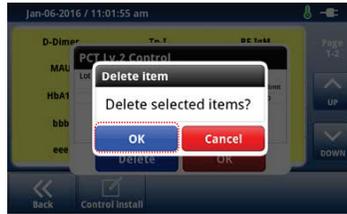
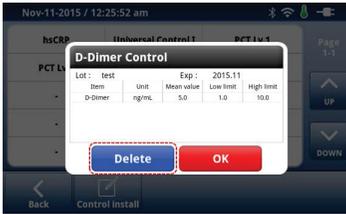
● **Checking information of registered control materials**

To check information of registered control materials, tap registered control name what you want to check. Then you can check name of item, unit, LOT number, expiration date, mean value and low/high limit value.



● **Delete information of registered control materials**

Tap control name what you want to delete and tap "Delete" button. To confirm deletion, tap "OK" button. This information will be deleted permanently.



You can input control information by manual input or using barcode scanner.

When you input control information by manual input, please input exact and correct information for LOT number and expiration date. Incorrect information may cause erroneous results.

Barcode scanner is an optional item. If you want to purchase it, please contact regional distributor or Boditech Med Inc.'s Sales department.

If user register the same control material on same item, the latest information will be registered.

10.5. Review data

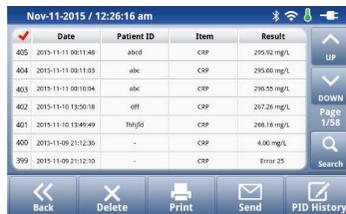
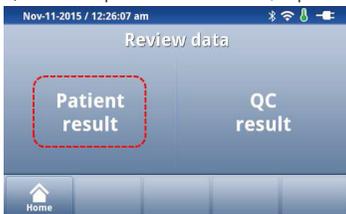
10.5.1. Patient test result

Review > Patient result

1) Tap "Review" button.



2) To check previous test results, tap "Patient result".



3) For more information, tap a test result what you want to check.



Sometimes LOT number and expiration date may not be displayed according to LOT number of ichroma™ Item.

● Button description

Button	Function / Description
	Go back to the previous screen.
	Delete selected test results. (This function is only available when ichroma™ II is logged in by "Admin" account.)
	Print selected test results out. (Only available when built-in printer is selected.)

	<p>Send selected test results to connected PC, LIS, WIFI or Bluetooth.</p>
	<p>When you tap this button after selecting one patient ID, all test results for selected patient ID are displayed. If there is no patient ID, this function is not available.</p>
	<p>You can search test results by inputting test date, name of item and patient ID.</p>
	<p>Go to the next page.</p>
	<p>Go back to the previous page.</p>
	<p>Selecting or deselecting listed test results. When this is marked on, it means that item is selected.</p>
	<p>ichroma™ II can save up to 1,000 test results in its internal memory. Further test results are saved automatically and oldest test results will be deleted.</p>

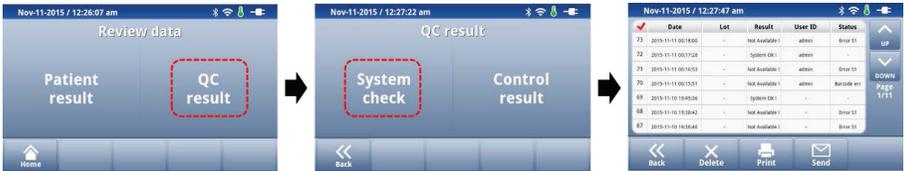
10.5.2. QC test result

10.5.2.1. System check test result

Review > QC result > System Check



Tap "System check" and check the system check test results.



	<p>Sometimes LOT number and expiration date may not be displayed according to LOT number of ichroma™ system check cartridge.</p>
--	--

● **Button description**

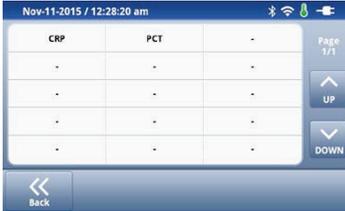
Button	Function / Description
	Go back to the previous screen.
	Delete selected test results. (This function is only available when ichroma™ II is logged in by "Admin" account.)
	Print selected test results out. (Only available when built-in printer is selected.)
	Send selected test results to connected PC, LIS, WIFI or Bluetooth.
	Go to the next page.
	Go back to the previous page.
	Selecting or deselecting listed test results. When this is marked on, it means that item is selected.

10.5.2.2. QC material test result

Review > QC result > Control Sample

ichroma™ II provides functions for checking and monitoring QC test result. Through these functions, we can provide proper quality control method.

1) Tap name of item.



2) Select LOT number of test Item, Control Name and Control LOT and tap "OK" button.



3) Information of selected item is displayed.



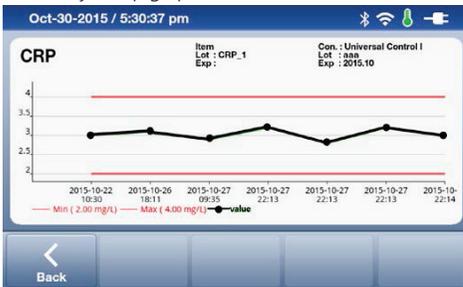
	Sometimes LOT number and expiration date may not be displayed according to LOT number of ichroma™ item.
--	---

● **Button description**

Button	Function / Description
	Go back to the previous screen.
	Delete selected test results. (This function is only available when ichroma™ II is logged in by "Admin" account.)
	Print selected test results out. (Only available when built-in printer is selected.)

	Send selected test results to connected PC, LIS, WIFI or Bluetooth.
	Test results are displayed with graph type.
	Go to the next page.
	Go back to the previous page.
	Selecting or deselecting listed test results. When this is marked on, it means that item is selected.

4) When you tap graph button, listed test results are displayed with graph type as follow.



	ichroma™ II provides efficient quality control method by displaying and analyzing QC test result as graph type.
--	---

10.6. Print test result

ichroma™ II can print test result out by using built-in printer or PC connection.

10.6.1. Print test results out by using built-in printer

- 1) In case of built-in printer is installed, you can print test result out immediately after test is completed.
- 2) To set built-in printer, please refer to clause 10.3.6. System.

Printed contents are as follow.

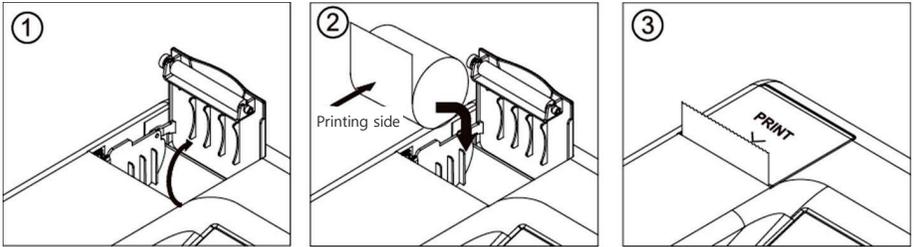
Run Test result(example)	QC Test result(example)	System Check result(example)
[CRP Test]	[PSA QC Test]	[System Check Test]
Date : 2015-10-29	Date : 2015-10-29	Date : 2015-10-29

Time : 08:54:36 User ID : admin ITEM LOT : CRXXX01 ITEM Exp. : 2016.12.31 Patient ID : aaa Age : 30 Gender : Male Result : 2.65 mg/L Reference Value :	Time : 08:54:36 User ID : admin ITEM LOT : PSXXX01 ITEM Exp. : 2016.12.31 Control : Universal Control I Control LOT : UCIXXX03 Control Exp. : 2015.12 Result : 2.65 ng/mL Low Limit : High Limit :	Time : 08:54:36 User ID : admin ITEM LOT : ITEM Exp. : Result : System OK ! Or Result : Not Available ! Error code
--	---	---

	Sometimes LOT number and expiration date may not be displayed according to LOT number of ichroma™ item.
--	---

● **Changing printer paper**

Open the printer cover and insert printer paper with correct direction as follow. Then close the printer cover.



	When the printer cover is closed, built-in printer ejects printer paper a little for initialization.
	Be careful excessive force when opening or closing the printer cover for preventing malfunction of built-in printer.

10.6.2. Print test results out by PC connection

ichroma™ II can print test results out by PC connection.

	To print test results out by PC connection, the specific software provided by Boditech Med Inc. is needed. This function will be presented in near future.
--	---

11. Optional

11.1. Built-in thermal Printer

Please refer to clause 10.3.6. System for built-in printer setting.



You can select/purchase built-in printer when you place an initial order.

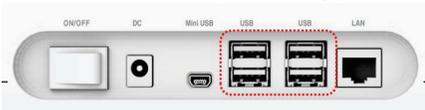
11.2. Barcode scanner

Barcode scanner is used for inputting user ID, patient ID or information of QC materials(controls).



How to use

- 1) Connect barcode scanner to USB port which is located on the rear side of ichroma™ II.
To use barcode scanner, specific setting procedure for using barcode scanner is not needed.



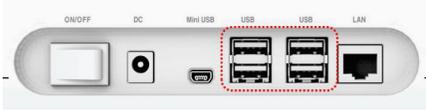
11.3. Keyboard

You can use keyboard instead of touchpad in LCD display.



How to use

- 1) Connect keyboard to USB port which is located on the rear side of ichroma™ II.
- To use keyboard, specific setting procedure for using keyboard is not needed.



11.4. WIFI Dongle

ichroma™ II can connect to LIS using WIFI dongle.

	This function will be presented in near future.
--	---

11.5. Bluetooth Dongle

ichroma™ II provides Bluetooth function.

	This function will be presented in near future.
--	---

11.6. SD Card

You can update software of ichroma™ II using SD Card.

Please refer to clause "10.3.6.5 update".

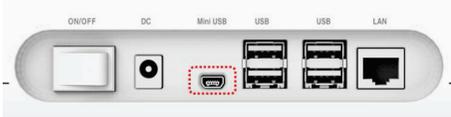
11.7. ichroma™ II PC Connector Cable (USB OTG Cable)

ichroma™ II provides functions for printing and updating by PC connection.

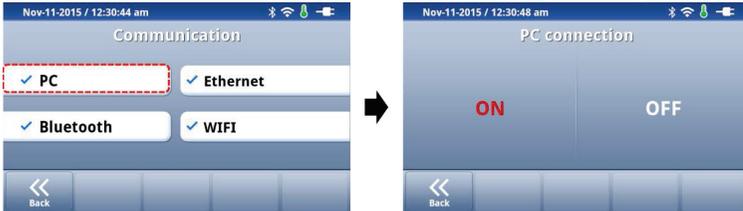


How to use

- 1) Connect connection cable to USB OTG port which is located on the rear side of ichroma™ II.
- 2) Connect connection cable to USB port of PC.



- 3) Tap "Setup > Communication > PC". Then ichroma™ II displays following screen.



- 4) To connect ichroma™ II to PC, tap "ON" button.

	<p>To connect ichroma™ II to PC, the specific software is needed. Please contact regional distributor or Boditech Med Inc.'s technical support team for detailed information.</p> <p>To print test results out by PC connection, the specific software provided by Boditech Med Inc. is needed. Please contact regional distributor or Boditech Med Inc.'s technical support team for detailed information.</p>
---	---

11.8. AA battery

ichroma™ II can use AA type batteries instead of AC adaptor.
To install/set batteries, please refer to section "8. Power supplement".

	<p>Use of batteries is only available in case of a blackout for instant operation. It is impossible for normal use with batteries for a long time. We suggest to use AC adaptor and power cable for stable and safe operation. It is possible 30 multi tests or 2 single tests when batteries are used.</p> <p>It is possible to use AC adaptor and batteries simultaneously. But we suggest to remove batteries when AC adaptor is used.</p>
---	---



For detailed information regarding optional items, please contact regional distributor or Boditech Med Inc.'s technical sales team.

12. Troubleshooting

Symptoms	Problem causes	Recommended remedial/corrective measures
Nothing happens; ichroma™ II does not show any sign of functioning	Poor connection between the power adapter and the power cable.	Remove the power cable / adaptor and reconnect firmly.
	Power failure	Please use AC adaptor provided by Boditech Med Inc.
	Power switch is off.	Please turn the power switch on.
	AC adaptor failure	Contact regional distributor or Boditech Med Inc.'s technical support team.
LCD is not on or does not work properly.	External shock	Check there are some electromagnetic field emitting devices around ichroma™ II. Please install ichroma™ II apart from that kinds of devices. If problems are not solved, contact regional distributor or Boditech Med Inc.'s technical support team.
	Power failure	Refer to "Nothing happens" descriptions. If problems are not solved, contact regional distributor or Boditech Med Inc.'s technical support team.
ichroma™ II does not display test result after completing the test.	ichroma™ II in under calculating test result.	Please wait until ichroma™ II displays the test result.
	Internal communication failure	Restart ichroma™ II. If problems are not solved, contact regional distributor or Boditech Med Inc.'s technical support team.
The cartridge holder does not work.	Foreign material	Contact regional distributor or Boditech Med Inc.'s technical support team.
	Software failure	Restart ichroma™ II. If problems are not solved, contact regional distributor or Boditech Med Inc.'s technical support team.

		support team.
Some noise generate while ichroma™ II is working.	Foreign material	Contact regional distributor or Boditech Med Inc.'s technical support team.
	Software failure	Restart ichroma™ II. If problems are not solved, contact regional distributor or Boditech Med Inc.'s technical support team.
Operation temperature is out of range. Do you want to proceed the test?	Environment temperature is out of operation temperature range(15-35°C).	It is possible to proceed test. But test result may not correct due to operation temperature is out of suggested condition(15-35°C). Please set environment temperature as 15-35°C.
It is impossible to proceed the test due to system error.	System error	Contact regional distributor or Boditech Med Inc.'s technical support team.
ichroma™ II is working. Please wait.	The cartridge holder is moving.	Please wait until the cartridge holder stops.
Insert test cartridge.	In case of tapping "Next" button without inserting test cartridge in single test mode.	Please insert test cartridge and tap "Next" button.
Register or insert ID chip.	In case of ID chip is not registered or not registered item is tested without ID chip.	Please insert or register ID chip first. Some items are can't be registered. Please check items again.
Please check test cartridge.	In case of use of system check cartridge in multi, single and control materials test mode.	It is impossible to use system check cartridge in multi, single and control test mode. Try the test again with proper test cartridge.
Check system check ID chip.	In case of tapping "Next" button without system check ID chip. In case of other ID chip is inserted.	To proceed system check, you should insert system check ID chip. Please insert system check ID chip and try system check procedure again.
Check LOT number of system check cartridge and ID chip.	LOT number of system check cartridge and ID chip do not match.	Please check LOT number and try again.
System check cartridge is expired. Do you want to proceed system	Incorrect set of date and time.	Please check date and time in ichroma™ II.

check test?	System check cartridge is expired.	In case of expiration date of system check cartridge is over, it is possible to proceed system check procedure. But it may cause incorrect system check test result.
Select name of control.	In case of control materials test is started without selecting name of control.	Please input name of control and try again.
It is impossible to print. Check printer.	There is no printer paper. Printer failure	Please install/insert printer paper with correct direction. If problems are not solved, contact regional distributor or Boditech Med Inc.'s technical support team.
It is impossible to search items which are not including patient ID.	In case of user tries to search items which are not including patient ID.	If test result information does not include patient ID, it is impossible to search test result by patient ID. Please check patient ID is included in the test result information.
There is no selected data.	In case of tapping "Print" or "Delete" button without selecting data.	Please select data what you want to print or delete and try again.
Input user ID with more than 2 characters at least.	In case of inputted user ID with only 1 character.	Please input ID again with more than 2 characters.
Input password with more than 2 characters at least.	In case of inputted password with only 1 character during user ID registration.	Please input password with more than 2 characters.
Incorrect password Check your password and try again.	In case of inputted password and confirmation password do not match during user ID registration.	Please check inputted password and try again.
This ID is already registered.	In case of inputted user ID is already registered/exist during user ID registration.	Please check user ID and try again.
ichroma™ II can register maximum 100 users.	The number of registered user ID exceed 100 during user ID registration.	Please delete user ID and try again.
Input user ID.	In case of tapping "OK" button without inputting user ID.	Please input user ID and try again.
Input password.	In case of tapping "OK" button without inputting password	Please input password and try again.

13. Error code

Error code	Probable causes	Recommended Remedial / Corrective measures
Error 21 - 24	Electrical/mechanical damages	Turn the power off and contact regional distributor or Boditech Med Inc.'s technical support team.
Error 25 - 31	Technical problems in test cartridge	Try again the test with new test cartridge.
Error S1, Error S2	Optical failure	Turn the power off and contact regional distributor or Boditech Med Inc.'s technical support team.
Value Error 1 - 10	Improper sample or buffer is used.	Try again the test with new test cartridge and test sample.
Caution Error	Technical problems in test cartridge	Try again the test with new test cartridge.
Barcode Error	Problem in identification of barcode on test cartridge	Check barcode on test cartridge is damaged or contaminated by foreign materials.. Insert test cartridge into the cartridge holder to the end. If problems are not solved, contact regional distributor or Boditech Med Inc.'s technical support team.
Password error	Incorrect password	Try again after checking user ID and password.
ID chip cartridge Mismatch	ID chip and test cartridge do not match.	Match ID chip and test cartridge. Then try again the test.
ID chip cartridge Lot Number Mismatch	LOT number of ID chip and test cartridge do not match.	Match LOT number of ID chip and test cartridge. Then try again the test.
Invalid Item	ID chip problem	Change ID chip and try again with new ID chip. If problems are not solved, contact regional distributor or Boditech Med Inc.'s technical support team.
SW & Test batch not compatible	Test item is not included in software.	Contact regional distributor or Boditech Med Inc.'s technical support team.

Optics part Error !	Optical failure during self-testing procedure	Contact regional distributor or Boditech Med Inc.'s technical support team.
Moving part Error !	Moving part failure during self-testing procedure	Contact regional distributor or Boditech Med Inc.'s technical support team.
Storage disk Error !	Internal storage failure during self-testing procedure	Contact regional distributor or Boditech Med Inc.'s technical support team.
Temperature sensor Error !	Temperature sensor failure during self-testing procedure	It is possible to proceed test. But test result may not correct due to operation temperature is out of suggested condition(15-35°C). Contact regional distributor or Boditech Med Inc.'s technical support team.
Printer initializing Error !	Built-in printer failure during self-testing procedure	It is possible to proceed test. But it is impossible to print the test result out. Contact regional distributor or Boditech Med Inc.'s technical support team.
Incorrect Temperature !	Environment temperature is out of operation temperature range during self-testing procedure	It is possible to proceed test. But test result may not correct due to operation temperature is out of suggested condition(15-35°C). Please set environment temperature as 15-35°C.

14. Warranty

ichroma™ II has passed strict quality assurance and testing procedures.

Boditech Med Inc.'s expressed and implied warranties are conditional upon full observance of Boditech Med Inc.'s published directions with respect to the use of Boditech Med Inc.'s products.

Under no circumstances whatsoever shall Boditech Med Inc. be held liable for any indirect or consequential damages.

To avail the warranty service, the consumer must return the defective ichroma™ II unit or any component thereof; along with proof of purchase to Boditech Med Inc. or it's nearest Authorized Service Agent.

Warranty Information

During the warranty period (12 months from the date of purchase), defective or spontaneously malfunctioning ichroma™ II or its component(s) will be repaired free of cost or may be compensated for in accordance with consumer protection rules and regulations.

The consumer may be charged for repair of AFIAS-6 even during the warranty period in following cases:

- Improper use or misuse
- Consumer's intentional mishandling, abuse or neglect of the product(s)
- Unauthorized repair / replacement of or alteration in any component
- Missing of warranty card or intentional modification of information in warranty card
- Damages or defects due to fire, pollution, earthquake or other natural disasters.

For after-sales inquiry, please contact:

Boditech Med Incorporated

43, Geodudanji 1-gil, Dongnae-myeon, Chuncheon-si, Gang-won-do,

REPUBLIC OF KOREA.

Phone No.: +82 33 243 1400 / Fax No.: +82 33 243 9373

E-mail: support@boditech.co.kr / Website: www.boditech.co.kr

Warranty card

Thank you for purchasing ichroma™ II.

Please fill the required information and send a copy of this warranty card within 30 days of date of purchase to the above address.

Product Name	ichroma™ II
Serial No.	
Date of Manufacture	
Warranty Period	12 months from the date of purchase
Date of Purchase	Year _____ Month _____ Day_____
Manufacturer	Boditech Med Inc.
Purchase Location	

Respect for life



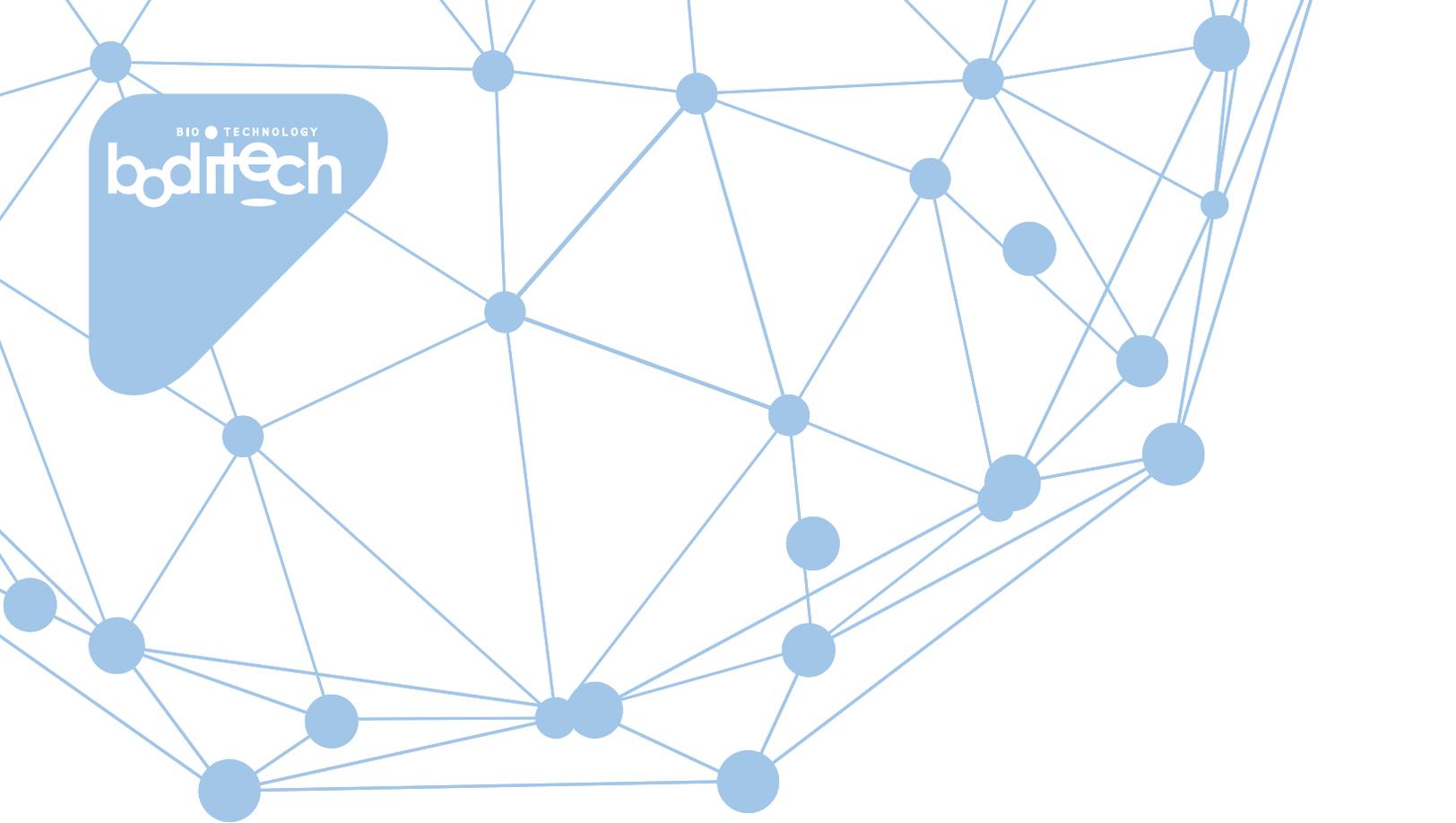
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ichromaTM
Total solution for
In-Vitro Diagnostic
Boditech Med Inc.

Vol.03

BIO ● TECHNOLOGY

boditech



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**Total solution for
In-Vitro Diagnostic
Boditech Med Inc.**

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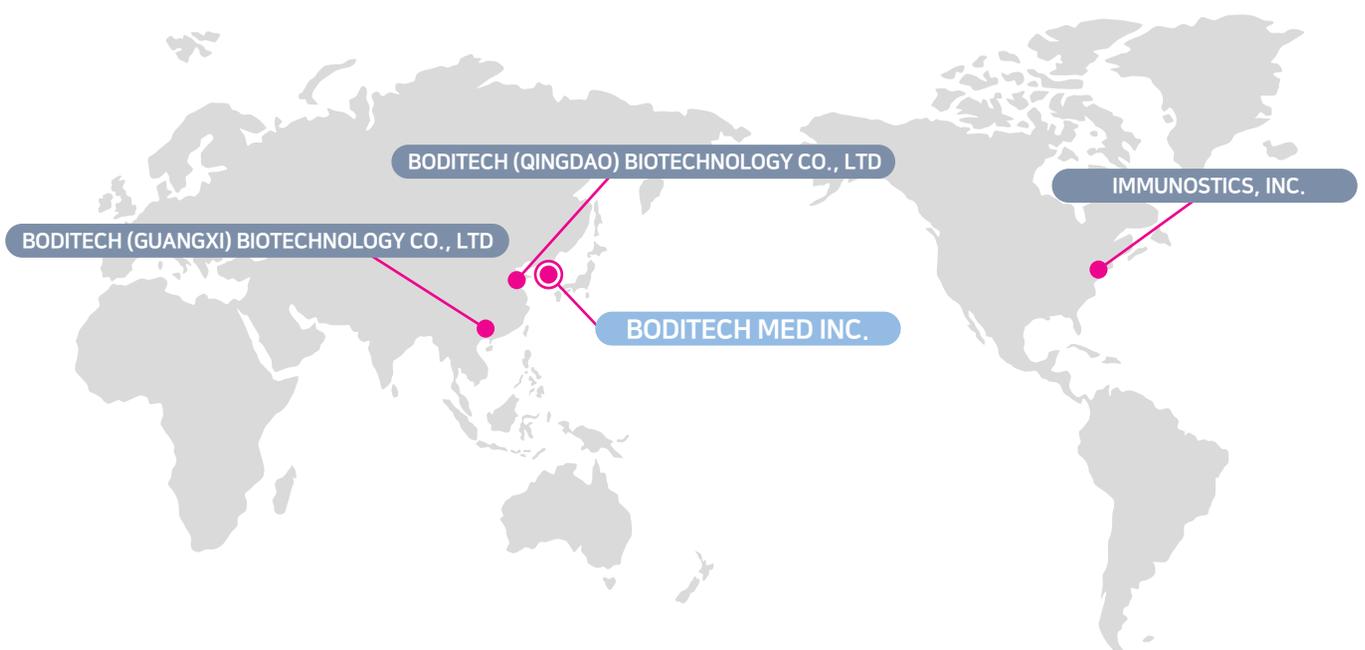


Overview

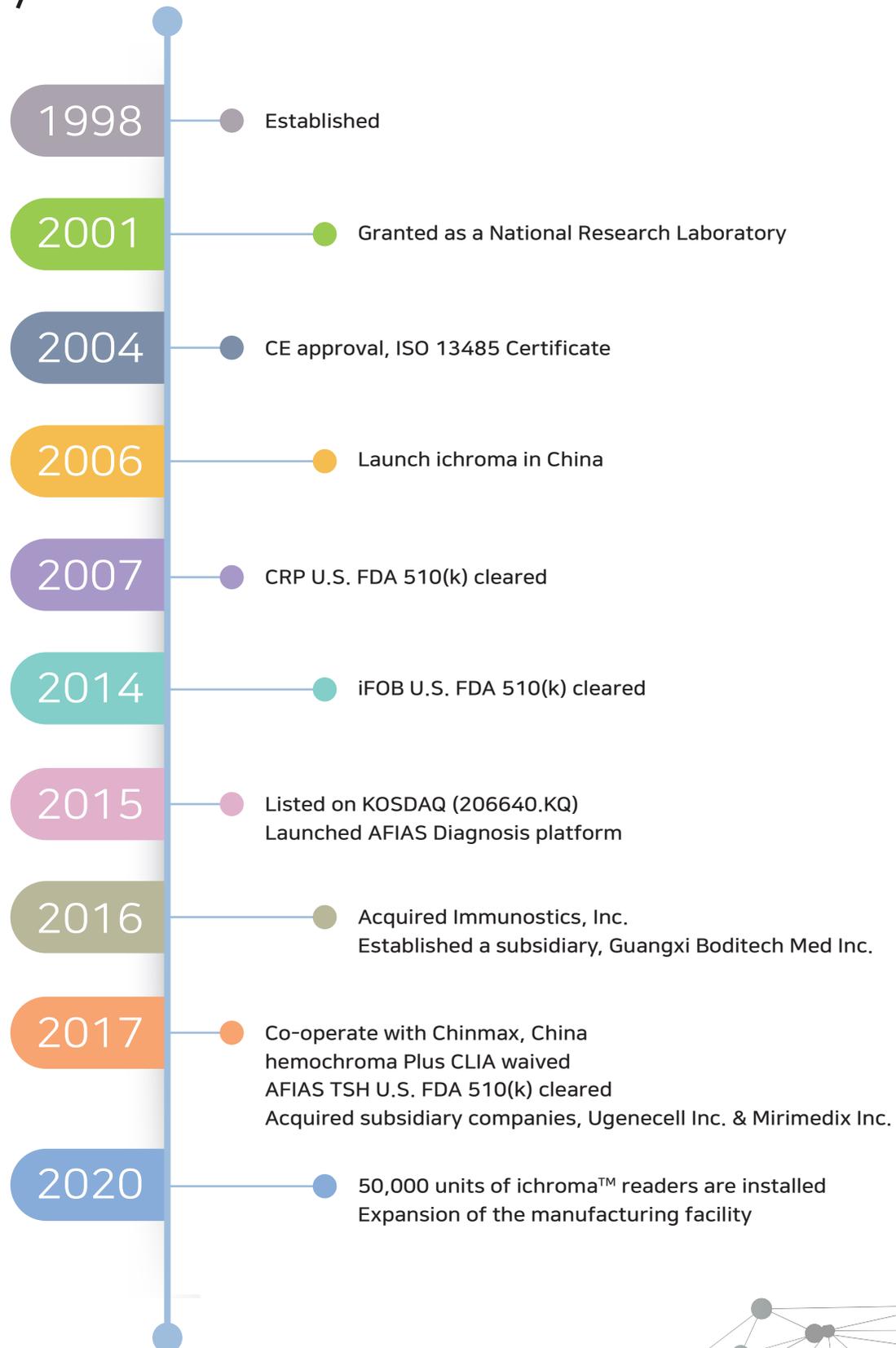
Since the establishment in 1998, Boditech Med Inc. has been providing high quality in vitro diagnostic analyzers and reagents to customers over 120 countries worldwide. As a leading manufacturer in IVD market, Boditech Med Inc. can help you provide high quality, cost-effective, user-friendly IVD products for those who require such solution. Providing various platforms from small manual analyzers to full-automatic analyzers, you can test most areas including infectious, diabetes, cardiac, hormone, and even cancer markers with one of your choices. With our continuous investment into Research & Development, we aim to improve existing products while developing new products so that our customers will have more choices with our platform. IVD is our passion and with more than 20 years of experience developing diagnostic biomarkers we believe in producing high quality and wider range of products that can provide various solutions to enhance human health and wellness.



Global Networks



History



ichroma™ Parameters

Category	item	ichroma™ II ichroma™ III	ichroma™-50	ichroma™ M2	ichroma™ M3	Sample type	Working range	Test time (min)	
Cardiac	Tn-I	●				S/P	0.1-50.0 ng/mL	12	
	Tn-I Plus	●	●			W/S/P	0.01-15 ng/mL	12	
	CK-MB	●	●			W/S/P	3-100 ng/mL	12	
	D-Dimer	●	●			WB/P	50-10,000 ng/mL	12	
	NT-proBNP	●	●			W/S/P	10-30,000 pg/mL	12	
	Myoglobin	●	●			W/S/P	5-500 ng/mL	12	
	hsCRP	●				W/S/P	0.1-10.0 mg/L	3	
	Cardiac Triple	●	●			W/S/P	Tn-I: 0.01-15 ng/mL CK-MB: 3-100 ng/mL Myoglobin: 5-500 ng/mL	12	
	ST2	●	●			W/S/P	3.1-200 ng/mL	12	
	BNP	●				W/S/P	10 – 20,000 pg/mL	12	
Troponin T	●				W/S/P	5-5,000 pg/mL	12		
Cancer	PSA	●				W/S/P	0.1-100.0 ng/mL (WB: 0.5-100.0 ng/mL)	15	
	PSA Plus	●				W/S/P	0.07-50 ng/mL	12	
	AFP	●				W/S/P	5-350 ng/mL	15	
	AFP Plus	●				W/S/P	0.5-350 ng/mL	12	
	CEA	●				S/P	1-500 ng/mL	12	
	CEA Plus	●				S/P	0.5-200 ng/mL	12	
Diabetes	iFOB Neo	●	●			Feces	25-1,000 ng/mL	10	
	HbA1c	●				WB	(NGSP) 4-15%	12	
	Microalbumin	●				Urine	2-300 mg/L	12	
Hormone	Cystatin C	●				S/P	0.1-7.5 mg/L	10	
	TSH	●				S/P	0.1-100.0 µIU/mL	12	
	TSH Plus	●				W/S/P	0.1-50 µIU/mL	12	
	T3	●				S/P	0.77-7.70 nmol/L	16	
	T4	●				S/P	10.23-300.00 nmol/L	16	
	FSH	●				S/P	1-100 mIU/mL	15	
	Progesterone	●				S/P	4.45-127.20 nmol/L	15	
	β-HCG	●	●			W/S/P	5-50,000 mIU/mL	15	
	β-HCG Plus	●				W/S/P	2-5,000 mIU/mL	12	
	LH	●				S/P	1-100 mIU/mL	15	
	PRL	●				S/P	1-100 ng/mL	10	
	Testosterone	●				S/P	1-10 ng/mL	15	
	Cortisol	●				W/S/P	80-800 nmol/L	10	
	AMH	●				S/P	0.02-15 ng/mL	12	
	Infection	COVID-19 Ab	●		●		W/S/P	Qualitative	10
		COVID-19 Ag	●		●		NS	Qualitative	12
		COVID-19/Flu Ag Combo	●		●		NS	Qualitative	20
COVID-19 nAb		●		●		W/S/P	Qualitative	20	
CRP		●	●		●	W/S/P	2.5-300 mg/L	3	
hsCRP All-in-one		●	●			W/S/P	0.5-200 mg/L	3	
PCT		●	●			W/S/P	0.1-100.0 ng/mL	12	
PCT Plus		●	●			W/S/P	0.02-50 ng/mL	12	
IL-6		●	●			W/S/P	2-2,500 pg/mL	12	
ASO		●				S/P	25-800 IU/mL	12	
Dengue NS1 Ag		●				W/S/P	Qualitative	12	
Dengue IgG/IgM		●				W/S/P	Qualitative	12	
HBsAg		●				W/S/P	Qualitative	12	
Anti-HBs		●				W/S/P	Qualitative	15	
Anti-HCV		●				W/S/P	Qualitative	12	
Influenza A+B		●	●		●	NS	Qualitative	10	
RSV		●			●	NS	Qualitative	10	
Influenza A+B/RSV		●	●		●	NS	Qualitative	10	
NORO		●				Feces	Qualitative	12	
ROTA		●				Feces	Qualitative	12	
Adeno		●				NS	Qualitative	10	
Rota/Adeno		●				Feces	Qualitative	12	
Strep A		●			●	Throat swab	Qualitative	5	
Mycoplasma		●	●		●	Throat swab	Qualitative	10	
IGRA-TB		●	●			P	Qualitative	15	
IGRA-TB 25		●				P	Qualitative	15	
Toxo IgG/IgM		●				W/S/P	Qualitative	12	
RF IgM		●				W/S/P	8-200 IU/mL	5	
Autoimmune		Anti-CCP Plus	●				W/S/P	3.5-300 U/mL (Semi-quantitative)	12
		Total IgE	●				W/S/P	1-1,000 IU/mL	12
Other test items	Ferritin	●				S/P	10-1,000 ng/mL	10	
	Vitamin D	●				S/P	8-70 ng/mL	28	
	Calprotectin	●	●			Feces	10-1,000 mg/kg feces	10	
	H. pylori SA	●				Feces	Qualitative	12	

ichromax™

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Advanced Compact Immunofluorescence Analyzer

ichroma™ II

ichroma™ II is a compact, easy-to-use diagnostic immuno-analyzer to measure the presence of various biomarkers for cardiac, cancer, hormones, infectious diseases, autoimmune diseases, and metabolic diseases.

- ▶ High performance with reliability
- ▶ Small, compact & light
- ▶ Multi-test function
- ▶ LIS/HIS compatible



Specification

Item	ichroma™ II Specification
Dimensions	276 mm (L) x 220 mm (W) x 91 mm (H)
Weight	1.3 Kg
Power supply	DC 12V/5A, AC/DC Adaptor Input 100-240V ~ 50/60Hz, 1.8A, Output DC 12V/5A (AA battery) DC 1.5V X 4ea
Data output	LCD / Internal Printer / RS232
Operation temperature	15-35°C (59-95°F) 15 t.s.
Memory	1,000 Patient results / 1,000 QC results 8 t.s. 500 ID chips / 100 User IDs
Interface	1 RS232 Port / 4 USB Ports 1 LAN Port / 1 SD Card Slot 9 t.s.
Display LCD	7" Touch-screen
Cat#	FPRR021

High-throughput Immunofluorescence Analyzer

ichroma™ III

ichroma™ III accepts cartridges for various biomarkers in random sequence and process them in a preset temperature, even combines test parameters with differing incubation period. The user will prepare each cartridge before inserting it to the system, one at a time.

- ▶ Random access for various parameters
- ▶ Continuous testing
- ▶ Flexible temperature control
- ▶ Patient ID handwriting & HL7 compatible



Specification

Item	ichroma™ III Specification
Dimensions	240 mm (W) x 465 mm (L) x 341 mm (H)
Weight	11 Kg
Power supply	Input power source : 100~240 AC Rated frequency : 50 ~ 60 Hz Rated current: 2.5~1.0A
Data output	LCD / Internal Printer / USB OTG / RS232
Operation temperature	Temperature 15- 35°C
Memory	5,000 Patients results / 1,000 QC results 500 ID chips / 100 User IDs
Interface	1 RS232C Port 1 USB OTG Port for connecting PC 4 USB Ports / 1 LAN Port / 1 SD Card Slot
Display LCD	7" Touch-screen
Cat#	FPRR037

World First Automated Dry Immunoassay System

ichroma™-50

ichroma™-50 can automatically process 50 tests per batch. The user will load samples in blood tubes, up to 50 at a time, and the system takes care of the rest. You can run two differing biomarkers, 25 each as well. The system can process 80 samples max an hour and is fully HL7 comparable.

- ▶ High-throughput results (up to 80 tests in an hour)
- ▶ Various sample types (serum, plasma, whole blood, fingertip blood, and stool)
- ▶ Can run two differing biomarkers, 25 each per a bay.
- ▶ LIS/HIS Compatible



Specification

Item	ichroma™-50 Specification
Dimensions	610 mm (L) x 610 mm (W) x 606 mm (H)
Weight	49 Kg
Power supply	110-240V AC, 47~63 Hz, 1.1-2.2A
Data output	LCD / Internal Printer / RS232
Operation temperature	15-35°C (59-95°F)
Memory	5,000 Patient results / 5,000 QC results 10 User IDs
Throughput	Up to 80 tests / hour
Interface	1 RS232 Port / 4 USB Ports 1 LAN Port / 1 SD Card Slot / 1 mini USB Port
Display LCD	10.1" TFT LCD (touch screen)
Cat#	FPRR022

Respiratory Solution Analyzer

ichroma™ M2

ichroma™ M2 is a compact, hand-held immunoassay reader platform that shares cartridges with other platforms from Boditech Med. It can run on external batteries to enhance its mobility. We optimized the system for delivering diagnostics for respiratory infections such as COVID-19, influenza, and RSV.

- ▶ Portable and compact with high performance
- ▶ One-click operation for user convenience
- ▶ Cost-effective
- ▶ Power supply with portable charger

**Specification**

Item	ichroma™ M2 Specification
Dimensions	165 mm (L) x 95 mm (W) x 55 mm (H)
Weight	300 g
Power supply	Input: 100-240 V ~ 50/60Hz / Adaptor 5V 1A
Data output	LCD
Operation temperature	15-30°C
Interface	RS232C (factory only)
Technology	TRF
Cat#	FPRR031

Specialized Solution Analyzer

ichroma™ M3

ichroma™ M3 is a compact, hand-held immunoassay reader platform that shares cartridges with other platforms from Boditech Med. It can run on external batteries to enhance its mobility. ichroma M3 is configured to run CRP tests only.

- ▶ Portable and compact with high performance
- ▶ One-click operation for user convenience
- ▶ Cost-effective
- ▶ Power supply with portable charger



Specification

Item	ichroma™ M3 Specification
Dimensions	165 mm (L) x 95 mm (W) x 55 mm (H)
Weight	300 g
Power supply	Input: 100-240 V ~ 50/60Hz / Adaptor 5V 1A
Data output	LCD
Operation temperature	15-35°C
Interface	RS232C (factory only)
Technology	Fluorescence
Cat#	FPRR035

Total Hemoglobin Meter

hemochroma PLUS

hemochroma PLUS is a handheld device that can run tests for anemia. One uses a disposable test cuvette to pick up sample blood from the fingertip. It accommodates tube bloods with a pipette. Each test takes 3~5 seconds and the user can transmit the result to a host computer.

- ▶ US FDA 510(K) CLIA waived
- ▶ Quick test results in 3 seconds
- ▶ User-friendly graphic interface
- ▶ Stores 1,000 results onboard



Specification

Item	hemochroma PLUS Specification
Dimensions	106.5 mm (L) x 151.0 mm (W) x 38.5 mm (H)
Weight	215 ± 3 g
Power supply	Battery (AA 1.5V x 4ea) / USB power
Data output	LCD, thermal printer (option)
Operation temperature	10~40°C
Measuring time	3 sec
Detection range	5.0~25.6 g/dL
Sample	Whole blood (Capillary, tube blood (15 µL))
Memory	Test results up to 1,000
Interface	1 RS232 Port / 1 USB Port
Display LCD	3.2" TFT color LCD
Cat#	FPRR016

i-chamber

The i-chamber is an auxiliary device for the ichroma (ichroma™, ichroma™ II) systems and provides an environment set to the correct temperature to the ichroma cartridge when heating is required between tests. You can improve the reliability of your test results by keeping the temperature constant, one of the environmental factors that can cause unexpected errors in your test results.



Specification

Item	i-chamber Specification
Dimensions	190.0 mm (L) x 120.6 mm (W) x 108.0 mm (H)
Weight	1.5 kg (± 0.3 kg)
Power supply	DC 12V, 5A
Data output	LCD (16 x 4 characters)
Operation temperature	15-35°C (59-95°F)
Slots	6
Interface	1 Mini USB Port
Cat#	FPRR009

Test items

Cardiac	20-30
Cancer	32-38
Diabetes	40-42
Hormone	44-56
Infection	58-82
Autoimmune	84-86
Other test items	88-91
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Cardiac

Brain natriuretic peptide (BNP)	20
Cardiac triple (Tn-I, CK-MB, Myoglobin)	21
Creatine kinase MB isoenzyme (CK-MB)	22
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High-sensitivity C-Reactive Protein (hsCRP)	24
Myoglobin	25
N-terminal proBNP (NT-proBNP)	26
Troponin-I (Tn-I)	27
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Troponin-T (Tn-T)	29
Suppression of tumorigenicity 2 (ST2)	30

BNP

Description

BNP, a heart-specific protein produced in the left ventricle of the heart, increases in blood concentration when the movement of the heart's left ventricle is cumulatively increased for abnormal reasons. This product quickly and quantitatively measures BNP in the blood to help diagnose and assess the severity of heart diseases, including congestive heart failure (CHF).

Indication

Acute Heart failure, Congestive Heart Failure.

Diagnostics Value

BNP levels are simple and objective measures of cardiac function. These measurements can diagnose (congestive) heart failure, including diastolic dysfunction. The BNP test result is particularly useful for ruling out heart failure in the ER. The BNP test may run with fingertip blood and delivers reliable results in 12 minutes so that clinicians can proactively respond.

Selection guide

Item / Platform	ichroma™ II	ichroma™ III
ichroma™ BNP	●	●

Specification

Sample type	Whole blood, Plasma
Sample vol.	35 µL
Assay time	12 min
Working range	5 - 5,000 pg/mL
Storage	2-30°C
Shelf life	20 months

Performance

Accuracy	$y=0.9919x + 0.3835$ $R=0.9958$
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Ordering information

Cat #	CFPC-121
Test/Kit	25T/Kit

Cardiac triple (Tn-I, CK-MB, Myoglobin)

Description

This product is capable of simultaneously measuring the three most clinically proven cardiovascular disease markers (Tn-I, CK-MB, Myoglobin) at once, providing fast and accurate results for myocardial infarction.

Indication

Acute myocardial infarction, Acute coronary syndrome.

Diagnostics Value

Three biomarkers Tn-I, CK-MB and Myoglobin reveal differing information on cardiac damages. Cardiac Triple measures all of them at the same time to help clinicians assess the situation with one test. The rapid TAT should be important in ER or other urgent care facilities.

Selection guide

Item / Platform	ichroma™ II	ichroma™ III	ichroma™-50
ichroma™ Cardiac triple	●	●	●

Specification

Sample type	Whole blood, Serum, Plasma
Sample vol.	75 µL
Assay time	12 min
Working range	Tn-I: 0.01-15.00 ng/mL
	CK-MB: 3-100 ng/mL
	Myoglobin: 5-500 ng/mL
Storage	2-8°C for DB/4-30°C for Cartridge
Shelf life	20 months

Performance

Accuracy	Tn-I	$y=1.3901x - 0.1033$ and $R=0.9705$
	CK-MB	$y=0.8942x - 0.0421$ and $R=0.9944$
	Myoglobin	$y=0.9292x + 3.6709$ and $R=0.9708$

Ordering information

Cat #	CFPC-78
Test/Kit	25T/Kit

Creatine Kinase MB (CK-MB)

Description

CK-MB increased rapidly in a short time when cardiac muscle cells are damaged. At the emergency room, it is possible to determine the heart damage by checking the change in the concentration of CK-MB when repeatedly measured at intervals of 4-6 hours. However, since there are individual differences in the normal blood concentration of CK-MB, it is recommended to cross-measure additional cardiovascular markers such as Troponin I to determine the presence or absence of heart damage for a reliable diagnosis.

Indication

(Acute)myocardial infarction, Primary Coronary Syndrome.

Diagnostics Value

The level of CK-MB, together with Troponin I and other cardiac-related biomarker levels, plays a vital role in assessing the AMI. It can provide close to the real-time value of CK-MB in the ER and equivalent facilities to help clinicians to produce up a treatment plan.

Selection guide

Item / Platform	ichroma™	ichroma™ II	ichroma™ III	ichroma™-50
ichroma™ CK-MB	●	●	●	●

Specification

Sample type	Whole blood, Serum, Plasma
Sample vol.	75 µL
Assay time	12 min
Working range	3-100 ng/mL
Storage	2-8°C for DB/4-30°C for Cartridge
Shelf life	20 months

Performance

Accuracy	$y=1.0182x - 2.66$ and $R=0.9847$
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Ordering information

Cat #	CFPC-33
Test/Kit	25T/Kit

D-Dimer

Description

D-dimer is formed only when blood clots generated in blood vessels are decomposed, so it can be detected in the blood when acute or chronic inappropriate blood clots are generated. It is useful for diagnosing diseases caused by blood clots and monitoring the progress and treatment of diseases.

Indication

Deep Vein Thrombosis, Diffuse or disseminated intravascular coagulation, Various embolisms including PE and strokes.

Diagnostics Value

It produces the level of D-dimer in patient blood in 12 minutes. Attending clinicians can integrate this information with other pertinent parameters to assess the coagulation status of the patient. For example, a positive D-dimer result means that the patient has to undergo further imaging in order to diagnose whether or not he or she has DVT or PE.

Selection guide

Item / Platform	ichroma™	ichroma™ II	ichroma™ III	ichroma™-50
ichroma™ D-Dimer	●	●	●	●

Specification

Sample type	Whole blood, Plasma
Sample vol.	10 µL
Assay time	12 min
Working range	50-10,000 ng/mL
Storage	2-8°C for DB/4-30°C for Cartridge
Shelf life	20 months

Performance

Accuracy	$y=0.9393x - 65.134$ and $R=0.982$
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Ordering information

Cat #	CFPC-25
Test/Kit	25T/Kit

High-sensitivity C-Reactive Protein (hsCRP)

Description

As a high sensitive CRP test, it can detect or predict chronic cardiovascular diseases including atherosclerosis and acute myocardial infarction by quantifying this with hsCRP test for high-risk cardiovascular disease.

Indication

Acute coronary syndrome, Stroke, Peripheral arterial disease, Complications after myocardial infarction, such as heart failure.

Diagnostics Value

It is an 'all-in-one' type diagnosis system that maximizes the user's convenience. It helps predict the occurrence and progression of cardiovascular diseases by quantifying CRP with high sensitivity from a small amount of blood.

Selection guide

Item / Platform	ichroma™	ichroma™ II	ichroma™ III
ichroma™ hsCRP	●	●	●

Specification

Sample type	Whole blood, Serum, Plasma
Sample vol.	100 µL
Assay time	3 min
Working range	0.1-10 mg/L
Storage	2-8°C for DB/4-30°C for Cartridge
Shelf life	20 months

Performance

Accuracy	$y=1.0273x - 0.0289$ $R=0.9989$
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Ordering information

Cat #	CFPC-6
Test/Kit	25T/Kit

Myoglobin

Description

Myoglobin is a useful marker that can detect myocardial infarction before any other cardiac marker because the blood concentration reaches the highest level 3 to 6 hours after the first heart pain begins when myocardial necrosis occurs. If both myoglobin test results are negative, it can be confirmed that it is not an acute myocardial infarction. Therefore, using this product, you can quickly check for acute myocardial infarction and proceed with appropriate treatment.

Indication

Acute myocardial infarction (AMI).

Diagnostics Value

It helps early diagnosis and treatment of acute myocardial infarction by quickly and accurately detecting myoglobin from blood.

Selection guide

Item / Platform	ichroma™	ichroma™ II	ichroma™ III	ichroma™-50
ichroma™ Myoglobin	●	●	●	●

Specification

Sample type	Whole blood, Serum, Plasma
Sample vol.	10 µL
Assay time	12 min
Working range	5-500 ng/mL
Storage	2-8°C for DB/4-30°C for Cartridge
Shelf life	20 months

Performance

Accuracy	$y=0.9893x + 0.4756$ and $R=0.9955$
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Ordering information

Cat #	CFPC-37
Test/Kit	25T/Kit

NT-proBNP

Description

If the movement of the left ventricle of the heart is increased cumulatively for an abnormal reason, the concentration of NT-proBNP in the blood also increases significantly, so that the diagnosis and severity of heart failure can be assessed. It can quickly and quantitatively measure NT-proBNP in the blood to help diagnose and assess the severity of heart diseases, including congestive heart failure (CHF).

Indication

Exclusion test for heart failure diagnosis.

Diagnostics Value

The NT-proBNP test can determine the level of NTproBNP in the blood as fast as 12 minutes. The rapid turn-around should be a critical issue in ER or for paramedics in confirming the cardiac event.

Selection guide

Item / Platform	ichroma™ II	ichroma™ III	ichroma™-50
ichroma™ NT-proBNP	●	●	●

Specification

Sample type	Whole blood, Serum, Plasma
Sample vol.	10 µL
Assay time	12 min
Working range	10-30,000 pg/mL
Storage	2-8°C for DB/4-30°C for Cartridge
Shelf life	20 months

Performance

Accuracy	$y=0.9267x - 74.988$ and $R=0.9906$
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Ordering information

Cat #	CFPC-77
Test/Kit	25T/Kit

Troponin-I (Tn-I)

Description

Troponin T (Tn-I) can help quickly diagnose myocardial infarction and myocardial necrosis by quantifying the concentration of Tn-I in blood sensitively and specifically.

Indication

Acute myocardial infarction, acute coronary syndrome.

Diagnostics Value

This test can provide quick and accurate information to distinguish between myocardial infarction and other types of heart abnormalities. It can prove useful in ERs where urgent decisions are called for.

Selection guide

Item / Platform	ichroma™	ichroma™ II	ichroma™ III
ichroma™ Tn-I	●	●	●

Specification

Sample type	Serum, Plasma
Sample vol.	75 µL
Assay time	12 min
Working range	0.1-50.0 ng/mL
Storage	2-8°C for DB/4-30°C for Cartridge
Shelf life	20 months

Performance

Accuracy	$y=1.645x - 0.1831$ $R=0.9890$
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Ordering information

Cat #	13011
Test/Kit	25T/Kit

Troponin-I (Tn-I Plus)

Description

Troponin I (Tn-I) can diagnose myocardial infarction and myocardial necrosis at an early stage by quantifying the concentration of Tn-I in the blood with high sensitivity, preventing progression to severe and helping treatment.

Indication

Acute myocardial infarction, acute coronary syndrome.

Diagnostics Value

This test can provide quick and accurate information to distinguish between myocardial infarction and other types of heart abnormalities. It can prove useful in ERs where urgent decisions are called for.

Selection guide

Item / Platform	ichroma™ II	ichroma™ III	ichroma™-50
ichroma™ Tn-I Plus	●	●	●

Specification

Sample type	Whole blood, Serum, Plasma
Sample vol.	50 µL
Assay time	12 min
Working range	0.01-15.00 ng/mL
Storage	2-8°C for DB/4-30°C for Cartridge
Shelf life	20 months

Performance

Accuracy	$y=1.3924x - 0.0465$ $R=0.9910$
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Ordering information

Cat #	CFPC-65
Test/Kit	25T/Kit