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## Chapter 1 Overview about the Urine Analyzer

### 1.1 Urine Analyzer Overview

Urine Analyzer is a kind of semi-automatic photoelectric colorimeter that can be used together with the URS-10T, URS-11MA, URS-11-III. It can provide a qualitative or semi-quantitative result for Urobilinogen, Bilirubin, Kentone, Blood, Protein, Nitrite, Leucocytes, Glucose, Specific gravity, pH, Ascorbate Acid and Micro Albumin of the urine sample according to the color change caused by the interaction between the reagent areas and the biochemical components in urine.

Adopting the advanced “High luminosity cold light source reflection determination” technology, Urine Analyzer gets the specialties of resisting the interference of the ambient light and has longer lifespan. It can finish the testes on 11 kinds of biochemical components in urine within 7 seconds, and it also can revise the affects toward the test result which is caused by ambient temperature、ambient light、acid-base scale and abnormally colored sample. It can also connect with the urine sediment analyzer.

Urine Analyzer is a kind of invitro diagnostic device (IVD) used by professionals.

### 1.2 Technical Index

Testing Principle: super-high luminosity cold light source reflection testing principle

Testing Items: Leucocyte (LEU) Nitrite(NIT) Urobilinogen(URO) Protein (PRO) pH  
Blood (BLD) Specific Gravit (SG) Ascorbate( VC) Ketone(KET) Bilirubin (BIL)  
Glucose (GLU) Micro Albumin(MALB)

Matching Test Strip: URS-10T, URS-11

Light Wavelength : 420nm, 525nm, 560nm, 610nm, 660nm, 950nm

Testing Speed: 60 times/h for single testing, 120 times/h for continuous testing.

Data Memory: 1000 test results

Display Screen: 240mm\*64mm 240mm\*128mm

Printer: Thermal printer inside, with outer stylus printer interface

External Output: Connect with the computer through Standard RS232C port

Baud Rate of Data Communication Interface: 9600bps

Language: English

Environment Condition 0~40°C:RH < 85%

Power Supply AC 220V(±15%),50~60Hz

Fuse wire specification: 250V 2A

Power: ≤60W

Net: 4Kg

Vol. 355mm×300mm×145mm

### 1.3 Operation Principle

Urine Analyzer adopts the principle of photoelectric color comparison to test the quantity

of biochemical component according to the color change caused by getting the urinalysis strips react with the biochemical components in urine. The instrument uses four kinds of monochromatic light to scan the reagent areas one after another, and the scanning system converts the optical signal to electric signal. After treatment, the reflection rate of the reagent area can be calculated according to the strength of the electric signal. The amount of the biochemical component in the urine sample can be calculated according to the reflective rate.

Optics system principle is as follows.

$$R = \frac{T_m \times C_r}{T_r \times C_m}$$

In the principle:

R -----The reflection rate

$T_r$  -----The reflected intensity of the blocks on the strips under the reference light

$C_r$  -----The reflected intensity of the blank block under the reference light

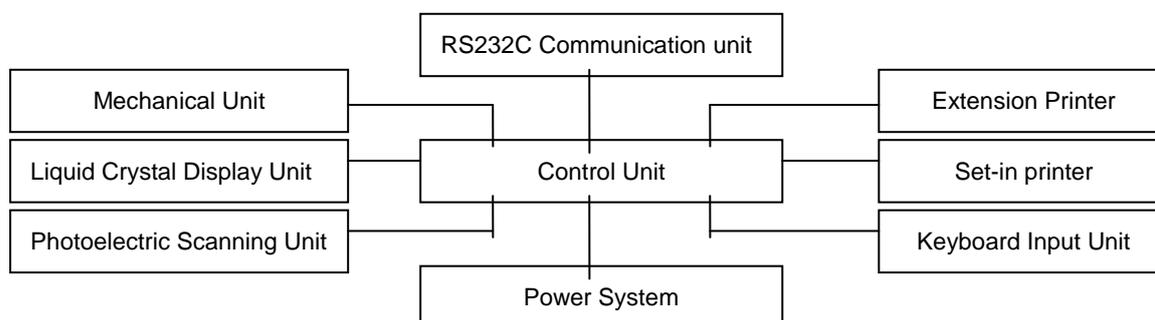
$T_m$  -----The reflected intensity of the blocks on the strips under the predetermined light

$C_m$  -----The reflected intensity of the blank block under the predetermined light

## 1.4 Composite Structure

Urine Analyzer is mainly composed of controlling unit, mechanism unit and photo electricity scanning unit etc.

Following is the structure Diagram



The core of the Urine Analyzer is controlling unit. The main function is to taking over, transmitting, storing, disposing and sending all kinds of signal, so that each part will run harmony. Photo electricity cell is to finish the sending and inception of the cold light resource, the collection and transition of the testing signal, and further more change the Optical signal into the electronic signal. Mechanism cell mainly carries and scans the strip by the order of the control cell. LCD and the keyboard mainly realize the comfortable

interface for the users. As to the data output, the Urine Analyzer mounts the traditional thermal printer inside, besides outer stylus printer with 25 parallel interfaces, which realize the data memory permanently. The Urine Analyzers manage and control the data through RS232C port connected with computer.

## 1.5 Surface Introduction



- |                               |                                      |
|-------------------------------|--------------------------------------|
| 1. Keyboard                   | 7. Electric outlet                   |
| 2. Led screen                 | 8. Power switch                      |
| 3. blind flange of printer    | 9. External Printer interface socket |
| 4. Printer box                | 10. Loading platform                 |
| 5. Standard RS232C connection | 11. pallet of object stage           |
| 6. fuse                       | 12. label                            |

## 1.6 Keyboard Instruction

1、 Start key, press this key, there will be a reminder ring suggested to dip the test strip into urine. The analyzers are ready for test in 40 seconds. Pressing this key is no answer when testing.

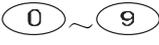
2、 Enter key, in menu condition, press this key can enter the sub-menu or confirm the information on the screen. User can change or confirm the option.

3、 Cancel key, In the continuous test mode, pressing this key when the current test is finished, it can stop the test and back to the under test state. In the current state, pressing this key can back to the main screen.

4、 Print Press this key will print the current test data displayed on the screen.

5、 Menu key, under the main screen, pressing the key can enter the main menu.

6、 Clear key, press this key can clear the data in the database.

7、 Number keys, these are used to enter the corresponding number.

8.  Under the Menu state, press the up, down, left or right key can move to the last item or the next item. In the data search state, press the up or down key can inquiry the last of the next test record.

These four keys can move the cursor.

## 1.7 Biohazard Symbol



is the biohazard symbol

Urine has the potential infectious. Please take the protective measures in the process of test, clear or repair.

Please disposable the urine specimen and used test strips as the lab rules.

## Chapter 2 Setup Instruction about Urine Analyzer

### 2.1 Environment Condition of Instrument Installation

Please put the instrument on a clean, stable and flat stage, keep far away from centrifuge, any vibration sources or refrigerators.

Do not put the instrument in the environment which is affected by chemicals, corrosive gas or strong electromagnetic interference places.

Keep the instrument from the direct sunlight, damp or high temperature place, at the same time, avoid too much dust corroded.

The temperature of working environment should be at 18°C-30°C , the optimum temperature should be at 20°C-25°C ,the relative humidity should lesser than 80%.

The installation of instrument should connect to the electronic outlet of low voltage supply network, the earth terminal of electronic outlet should contact with the earth wire.

### 2.2 Unpacking

Take out urine analyzer and accessories, please check them with the package list .Any damage, please contact the manufacturer.

Package list: ① urine analyzer ② blown fuse ③ calibrated strip (2 strips)  
④ print paper ⑤ power line ⑥ sample strip ⑦ product specification

### 2.3 Instrument Installation

#### 2.3.1 Printing Paper Setup

(1) The width of thermal printing paper should be 57mm, the diameter should less than 50mm.

(2) Take out the hood of printer

(3) Put the paper in the printing box and loosen the paper; Let the paper-out side near the inside of the instrument.

(4) Switch out the holder of print box and put the printing paper in the print box; Pull the paper up and down, put down the holder when the paper goes smoothly.

(5) Let the paper through the exit and cover up the hood of printer.

#### 2.3.2 Computer Connection

Achieving data communication by using the standard RS232C port with the external computer, the computer can store the test result and establish the complete illness case database. The operator can accurately and conveniently manage the database; the computer can display the illness case and print data. At the same time, the data can be transferred to the manage network of hospital, such network management can provide service systematically for medical experts and form an auxiliary diagnosis automatically.

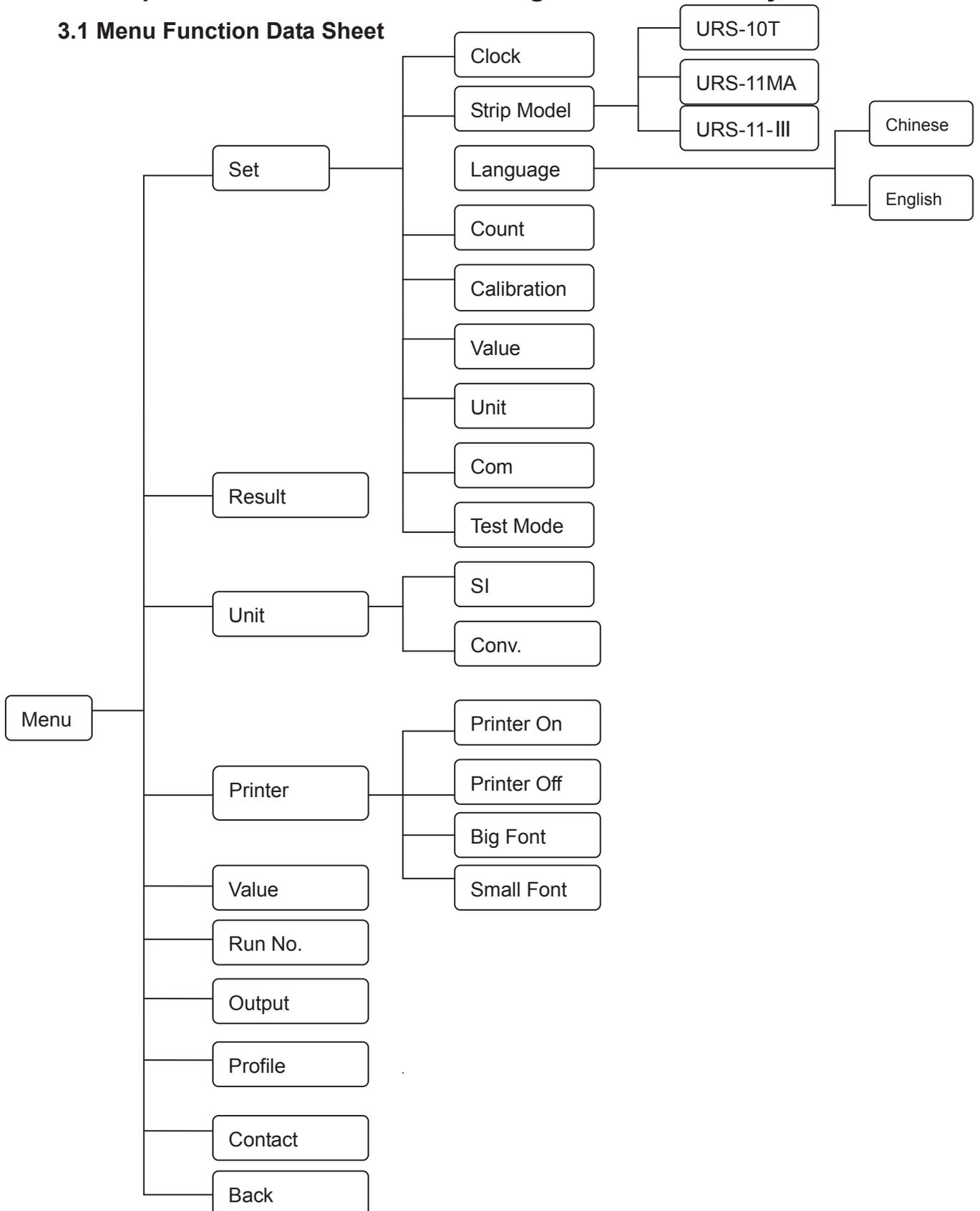
### **2.3.3 Stylus Printer Connection**

Another data interface can connect with the external stylus printer. There is an option in the menu "PRT Setup- External". Through this way, the testing data of urine analyzer can be transferred to the external stylus printer; the information of illness case can be stored for long time.

Attention: urine analyzer can connect with EPSON LQ1600K series, EPSON LQ 300K series, and Panasonic 1121 series stylus printer.

## Chapter 3 The Function and Setting of the Urine Analyzer

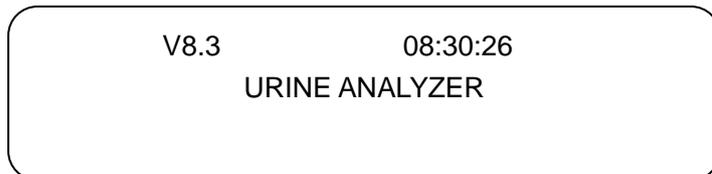
### 3.1 Menu Function Data Sheet



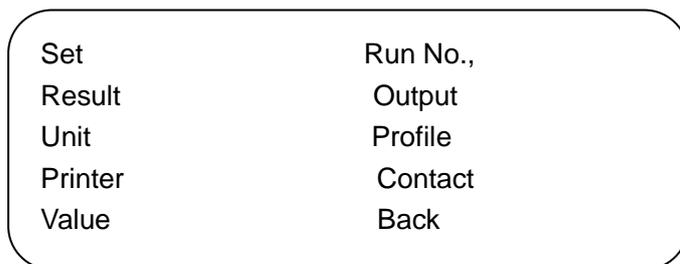
## 3.2 Function

### 3.2.1 System Self-testing

System self-testing will start when the power is on. The instrument will test the environment light, mechanism cell, controlling cell, photosensitive cell. Self-testing is normal, then entering the main screen, showing the time, date and so on (see the following graphs); or if the self-testing is abnormal, then the screen will show the error information, then you can refer to Chapter 8 for the relative ways to solve the problem.



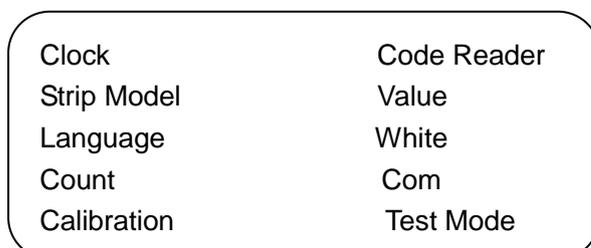
At this time press start key to enter the testing status, menu key to enter the system setup status, the main menu appears on the screen as following:



Putting into the relative   key, press  key, the user will see the relative sub-menu, finish the setup, press  to return the main screen.

### 3.2.2 Options

Under the main menu, move the cursor to the Set, press , on the screen, the Options menu.



#### 3.2.2.1 Clock

Under the option menu, move the cursor to the clock, press  to start Clock

setup.

Please input time		
YY/MM/DD	0000/00/00	00:00

Put into the current time with the number key according to the hint on the screen. If put

incorrect, press , then put the correct time, press  to confirm.

### 3.2.2.2 Strip Model

Move the cursor to the type of strip item, press  to change the type of the strips. There are 11MA, 10T and 11-III, users can choose as need.

Notice: the setup type of strip on the analyzer must be same as the use.

analyzers, the suitable strips are URS-11MA, URS-10T and URS-11-III. For the accurate testing results, do not use the other types and other manufactory's strips.

### 3.2.2.3 Language

Move the Cursor to the (English) item, press the  key to change the language. There are two types of language: Chinese and English. Users can choose the language as need.

### 3.2.2.4 Count

Move the cursor to the Count items, select Continuous Count or Rest Count. Continuous count is to count the test result serial number from the last time. Reset count is to count the test result serial number from zero.

### 3.2.2.5 Calibration

This is for sale-after service.

### 3.2.2.6 Code Reader

Under this item, choose barcode reader function.

### 3.2.2.7 Value

### 3.2.2.8 White

This is for sale-after service.

### 3.2.2.9 Com

This is for computer connect, according your need, to select COM set.

### 3.2.2.10 Test Mode

Select Continuous test or single test as your need.

## 3.2.3 Result

Urine Analyzers have the perfect database function, can reserve 1000 test results, users can check and print at any time. For each test results, this is including testing time, order number and test result. The analyzer automatically preserves results after finishing the testing. If the preserved results are more than 1000, the new results will cover the existed results.

On the main screen, press  into main menu, move the cursor on the set, under Set, find the result, then press , into data search.

Search the relative records according to the clinical number. Move the cursor to the searching item, press , the screen shows:

Input index:

Put the clinical numbers with the number keys, press  to start the checking. If there is no this record, the screen shows" Record not found"; or it shows the contents of this result. Use the   to see the complete contents. Press  to print the

results,  to exit.

### 3.2.4 Unit

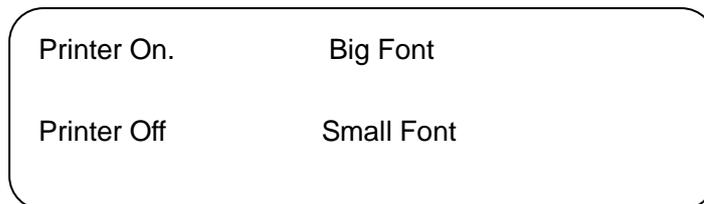
Users can choose international standard SI and Conventional. Press  to the main menu, move the cursor to Unit item, press , the screen shows:



Move the cursor to Unit item, press  to choose Conventional or SI. After this, move the cursor to exit, press  again to back main menu.

### 3.2.5 Printer

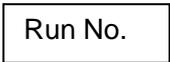
On the main screen, press  into main menu, move the cursor to print setup, press , the screen shows,

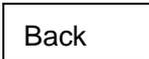


After the setup, move the cursor to exit, press  again back to main menu.

### 3.2.6 Value

#### 3.2.7 Run No.

Move the cursor to  screen show "Continue", "Reset", "Back", continuous represents count follow the last serial No., reset count represents count from zero, click

 to finish and back to last menu.

### 3.2.8 Output

Select Real-time output or Command output.

Realtime represents data is output one by one.

Command represents data is output as command.

### 3.2.9 Profile

### 3.2.10 Contact

## Chapter 4 Quality Control Monitor

### Attention:

Check the loading platform: please check the position of object stage and the clean of loading platform & white calibrated slice. If the position is inaccurate or they are dirty, please dispose it according to the details in the chapter 6 "cleaning and maintenance". Reset the analyzer and self-test after fixing it.

Adjust the test mode to single step (For details, chapter 3, function and setting of urine analyzer)

### 4.1 Calibrated Strip Test

Calibration method

First, press  key in the main screen, the loading platform will come out until the outermost side. The instrument enters the "Testing" condition. The screen shows as followed:

Press Start to test  
Press Cancel to stop

Second, put the calibrated strip in the middle of object stage. Push the strip to the top of object stage. Press  key to test. The instrument would print out the test result when the test is over. At the same time, the result will compare with the test value of calibrated strip.

If the result of comparison is the same, the urine analyzer has been calibrated. You can use it.

If the result of comparison is not the same, which means operation of instrument is not normal. Please contact with the manufacturer.

We advise you to use the calibrated strip to test urine sample once a week or twice a week in order to make sure the test result is correct.

### 4.2 Reagent of Quality Control test

First, press  key in the main screen, the loading platform will come out until the outermost side. The instrument enters the "Testing" condition. The screen shows as followed:

Press Start to test  
Press Cancel to stop

Second, the instrument will make a sound when you press  key. When you hear

the sound, please let the reaction area of strip completely immerse into the quality control reagent and take out immediately. Make the side edge of test strip scrape the extra liquid along the pipe wall of urine container or make the water paper absorb the extra liquid. Then put the test strip in the middle of loading platform flatware. Push the strip to the top

of object stage. Press  key to test. The instrument would print out the test result when the test is over. The test value will compare with the reference value in quality control reagent specification.(The reagent of quality control is self-provided.)

## Chapter 5 Urine Test

### **Warning**

Urine has the potential infectious. Please do the protective measure in the process of test, clear or repair.

Disposal the urine specimen and used strips as the local library rules.

This chapter introduces the methods of routine urine detection with the . The first use, please carefully read “chapter 3 Function and Setting of Urine Analyzer”(page 9)

### **Notice:**

Only the suitable strips can promise the testing precision.

Read the Testing Operation Procedure carefully.

If the self test do not pass and show the wrong information code, please do according to the chapter 9.

When analyzers do the test, avoid the direct sunlight, keep the testing precision.

Please check the type of the strips, avoid the wrong test results, because of the using urine test strips.

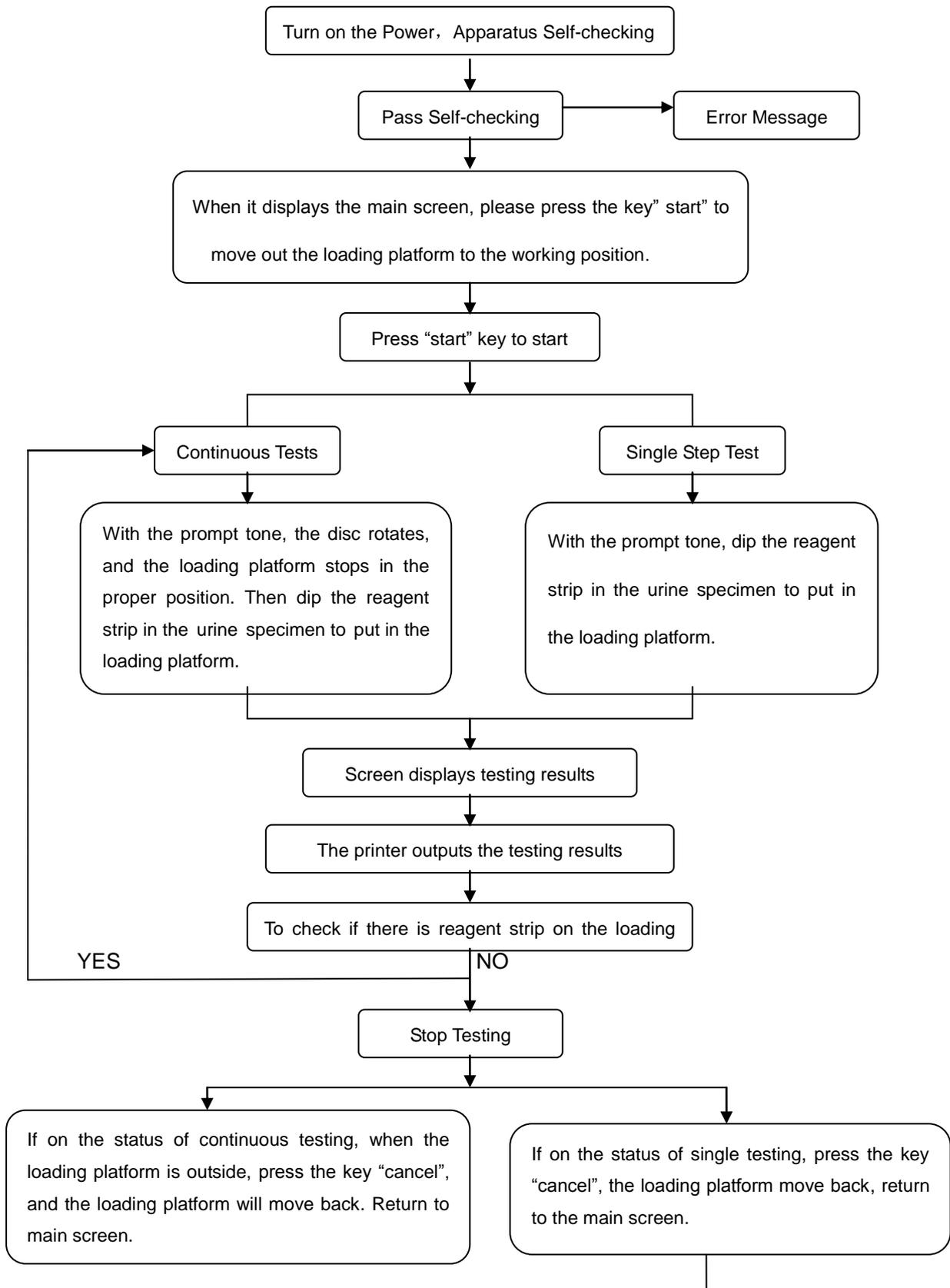
Do not use the strips which are over validity or metamorphic.

Immerse the reagent area of the strip in the urine specimen, the immerse time cannot be too short or too long, remove the excess urine with the blotting paper, or lead to the errors.

Please clean the stage after testing a specimen to avoid cross infection.

## 5.1 Working Regulation for Test

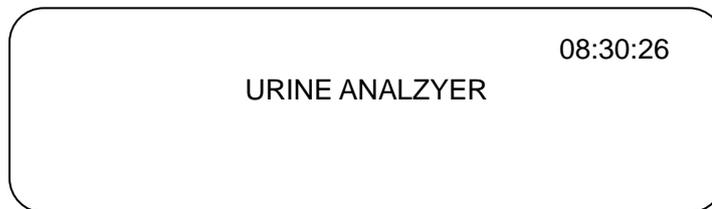
### Working Regulation for Test



## 5.2 Startup the Instrument

Turn off the Apparatus

After the instrument is finished installing, turn on the power-switch, and the instrument will go on the system self-checking. If the Self-checking passes, it enters working status, with the main screen displayed (Fig. As follow)



At the moment, press  to enter main menu. And the user can do system setting according to self-requirements; Press  to move out the loading platform, and the instrument is the readiness for action; Press  again to start testing.

If self-checking is abnormal, the screen displays corresponding error message. The user can handle the problem referring to the related content in Chapter 9 “Fault Clearance”.

## 5.3 Check the Loading Platform

Before testing, check first if the loading platform position is proper and the white calibration area is clean. If not, please deal with the problem according to the related content in Chapter 6. After installing well, re-open the apparatus for self-checking.

## 5.4 Reagent Strip Test Operation

When power on and it displays the main screen, press  “START” to move out the loading platform to the utmost end, then the apparatus is on the status ready for testing, the screen (refer to the right Fig.)

Press start to test  
Cancel to stop

The testing is divided to continuous testing and single testing.

### (1) continuous testing

The testing time is 30 seconds for each strip(the first is 60s), methods see the following:  
The first step: press “Start” key, there is reminder ring to stain the urine specimen.  
The second step: hearing the ring, immerse the strips test area to the fresh, mixed and not centrifugal urine specimen. Then draw the side-edge of the strip against the rim of the specimen container to remove the excess urine or use the blotting paper (Refer to Fig. 5-1) put the strip in the central of loading platform, put forward to the end of the loading platform.(this is Strip 1).

The third step, hearing the ring again, take another strip, immerse to the next urine specimen, then take it out immediately and wait for testing(this is Strip 2)

The fourth step, the count-down is 15 seconds, the loading platform move outside and stop, Strip 1 finish the test, the results show on the screen and be printed. At this time, take off the Strip 1, put Strip 2 in the central of loading platform.

The fifth step, the third time to hear the reminder ring, put another strips on the plotting paper to wait for testing.

The sixth step, repeat the fourth and fifth steps.

Notice: stop the testing, choose the following methods:

Wait for the loading platform moved out and print finished, before the reminder ring, press the cancel key, the analyzer stop and back to main screen.

No strip or the strip is in the incorrect position, the screen shows, "no strip" or "the wrong position", the testing stop.

## (2) single testing

The testing time is 30 seconds, the methods are following:

The first step, press "Start" key, there is reminder ring to stain the urine specimen, as the rules in the (1), the second step, put the strips on the loading platform, after 30 seconds, then start to test. Test is finished, results are printed, then the loading platform moves out. The second step, repeat the first step, do the next test.

### **Notice:**

After the loading platform move out, put the target strip correctly, but this must before hearing the reminder ring.

If there is no strips, the analyzer stop testing, press enter key, then do the testing again.

Among the testing, the keys are invalid, there is no reaction press any keys.

Do not touch the loading platform, if touch it, the testing result will be affected.

The analyzer increase or reduce testing items automatically and arrange automatically the shown index and the printed sequence.

The clinical No. increase one automatically after one test finish. Each test result save in the database. Once test and once record, there is including time, clinical No. and the testing data. 1000 records can be saved automatically, in case repeat or miss.

## Chapter 6 Cleaning and Maintenance of the Urine Analyzer

### 6.1 Routine Maintenance and Attentions

Do not put the machine in the direct sunlight position when testing, otherwise it will influence the precision of test result.

Do not put things in front of object stage of analyzer, otherwise it will collide the object stage when it out.

Use the clean, soft and dry cloth to clean the analyzer often, keep the analyzer clean. If the surface of the analyzer is very dirty, you can use water to clean. Don't use gas, paint thinner, benzene compound such organic solvent. The solvent can make the analyzer distortion and influence the normal work.

Don't use water to clean the LCD screen. Use clean, soft and dry cloth or paper to clean it softly.

Make sure to keep the object stage clean, and wash it with water every day.

Replace the absorption strip in time to prevent the analyzer from invasion of the overflow fluid.

Notice: Because of the characteristic of the strip, it should be avoid of temperature influence, either cold or hot will influence the precision and correctness of the testing result(The temperature of working environment should be at 18°C-30°C, the optimum temperature should be at 20°C-25°C, the relative humidity should lesser than 80%. The optimum temperature for testing strip should be at 23°C-27°C)

### 6.2 Cleaning the loading platform

#### 6.2.1 Routine Cleaning

##### 1. Demount the loading platform

When the loading platform stays outside, turn off the power, hold the both front sides of the loading platform, pull it afterward gently.

##### 2. Clean the loading platform

Clean the loading platform and white calibrated slice with cotton which is soaked by distilled water or soft water paper. Check the surface of white calibrated slice and make sure that there is no dust, foreign water and scratch. Dry in the air before use it. Please change a new one when the calibrate slice can't be clean up, scratch or damaged. Notice: Do not use any hard thing to touch the loading platform and calibrated slice, either any solvent to clean the slice.

##### 3. Install the loading platform

Take the back side of calibrated slice, insert the loading platform to the pallet of it, pull it gently until it can't be moved any more.

##### 4. Reset the analyzer and self-testing

### 6.2.2 Regularity Cleaning

Please clean as followed steps if there is urine stain on the loading platform

1. Take out the loading platform
2. Let the cotton bud soak the 0.1N NaOH solution and clean the loading platform. Do not let the NaOH solution touch the white plastic calibrated slice.
3. Use the wet cloth clean the NaOH solution which lifted on the loading platform.
4. Use the water paper cleans the loading platform.
5. Put the object stage back to the pallet, as the third step in the 6.2.1

### 6.2.3 Disinfection Treatment

Because urine specimen always touches the loading platform, please disinfect it as follow steps:

1. Wash and dry the loading platform according to the four steps in the routine cleaning.
2. The following solutions can be used to conduct disinfection.
  - a). 2% glutaric dialdehyde solution (disinfect as the detailed specification in the reference label)
  - b). 5% hypochlorite natrium solution (add it to the 99ml water to be 1:100 thinner)
  - c). 70%-80% iso-propanol solution, no thinning
3. Put the disinfection liquid into a tall and narrow container, about 10 cm
4. Put the object stage into the liquid ,keep the white calibrated slice on the surface of the liquid
5. Keep it in the liquid about 10 munities.
6. Take out the loading platform; install the loading platform as the third step in the 6.2.1
7. Reset the analyzer and self-testing.

## Chapter 7 Transportation and Deposit of Urine Analyzer

### 7.1 Transportation Requirement

During the transportation, the instrument should be water resistant, against violent vibration and extrusion. Please handle with care when loading and unloading.

### 7.2 Deposit Requirements

The instrument should deposit in indoor environment which is no chemical goods, corrosive gas, adequate ventilation and hygiene & cleanliness at 0°C-30°C temperature.

## Chapter 8 Urine Analyzer and Computer Connected

urine analyzer connects with computer through RS-232 port. The protocol as follows:

Baud Rate: 9600/1200

Data Bit: 8 Bit

Stop Bit: 1 Bit

Verification: none

Hardware Handshake: none

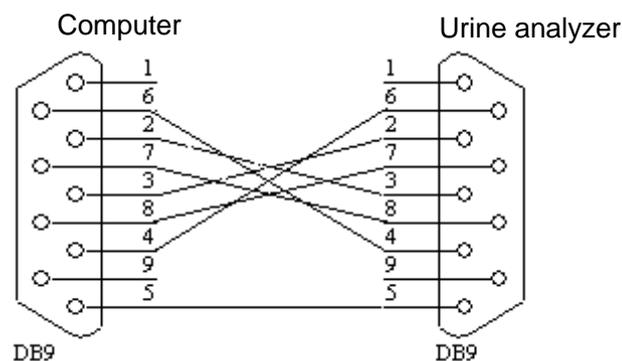
First Symbol: 02H

byte blank space: 20H

byte blank space: 0DH0AH

Tailed: 03H

Urine analyzer connect with computer



## Chapter 9 Fault Resolution of Urine Analyzer

This chapter has listed some simple answers to the questions that might appear in usage. If the corresponding methods can't still solve the problem please contact the sellers in order to obtain the quickest technical support and the service.

1. Faulting phenomenon: The screen does not have any display.

Elimination method: (1) Check the power source whether it has the electricity

(2) check the press or bounce of switch is normal or not

(3) Check the fuse in the back side of machine to see whether it's

normal

2. Faulting phenomenon: Fuse damaged

Resolution method: (1) Turn off the instrument and pull out the power plug

(2) Take out the damaged fuse

(3) Replace a new 2.0A fuse

3. Faulting phenomenon: The analyzer can't pass self-testing

Elimination method: (1) photosensitive probe is abnormal

a: Clean the loading platform as chapter 6.2

b: Reset the instrument

(2) mechanical unit is abnormal

a: Clean the blocks around the object stage

b: Don't touch the object stage when it's working.

c: Reset the instrument

4. Faulting phenomenon: The printer does not work

Elimination method: (1) Printer choose the Internal, Auto print choose "on"

(2) put paper if lacks

5. Faulting phenomenon: If it still demonstrates: "Strip position improper" when you put the urine strip correctly.

Elimination method: To check tray of the strip table to see if it installs correctly.

## **Appendix A**

### **Warranty**

Dear consumer:

Thank you for purchasing urine analyzer. Our company provides the following services for you:

1. Technical consultations are provided at any time.
2. Maintenance free of charge within a year from the day you purchase the instrument.
3. Maintenance will be charged in the following conditions:
  - 1) Product which has pass the date for free maintenance.
  - 2) Damage caused by accidental factor or improper use.
  - 3) Damage caused by the operation that not according to the instruction manual.
  - 4) Damage caused by your own repair that without our company's permission.
4. With the development of technology, will supply the service of update of analyzers

## Appendix B

## Urine Analyzer Testing Grades

Parameter	Conventional	SI	Arbitrary
Glucose	Neg 100mg/l 250mg/l 500mg/l 1000mg/l	Neg 5.5mmol/l 14 mmol/l 28 mmol/l 55 mmol/l	Neg ± 1+ 2+ 3+
Bilirubin	Neg 1 mg/dl 3 mg/dl 6 mg/dl	Neg 17 mol/l 50 mol/l 100 mol/l	Neg ± 1+ 2+ 3+
Ketone	Neg 5 mmol/l 15 mmol/l 40 mmol/l 80 mmol/l 160 mmol/l	Neg 0.5 mmol/l 1.5 mmol/l 4.0 mmol/l 8.0 mmol/l 16 mmol/l	Neg ± 1+ 2+ 3+ 4+
Specific Gravity	1.000 1.005 1.010 1.015 1.020 1.025 1.030	1.000 1.005 1.010 1.015 1.020 1.025 1.030	1.000 1.005 1.010 1.015 1.020 1.025 1.030
pH	5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0	5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0	5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0
Protein	Neg 10mg/dl 30mg/dl 100mg/dl 300mg/dl	Neg 0.1 g/l 0.3 g/l 1.0 g/l 3.0 g/l	Neg ± 1+ 2+ 3+
Urobilinogen	0.2 mg/dl 1 mg/dl 2 mg/dl 4 mg/dl 8 mg/dl	3.3 mg/dl 16mg/dl 33 mg/dl 66 mg/dl 130 mg/dl	Norm 1+ 2+ 3+
Nitrite	Neg Pos	Neg Pos	- +
Blood	Neg 10ca cells/l 25 ca cells/l 80 ca cells/l 200 ca cells/l	Neg 10ca cells/l 25 ca cells/l 80 ca cells/l 200 ca cells/l	- + 1+ 2+ 3+
Leukocytes	Neg 15ca cells/l 70 ca cells/l 125 ca cells/l 500 ca cells/l	Neg 15ca cells/l 70 ca cells/l 125 ca cells/l 500 ca cells/l	- + 1+ 2+ 3+
Ascorbate	0 mmol/l 10 mmol/l 25 mmol/l 50 mmol/l 100 mmol/l	0 mmol/l 0.6 mmol/l 1.4 mmol/l 2.8 mmol/l 5.0 mmol/l	0 mmol/l 0.6 mmol/l 1.4 mmol/l 2.8 mmol/l 5.0 mmol/l

