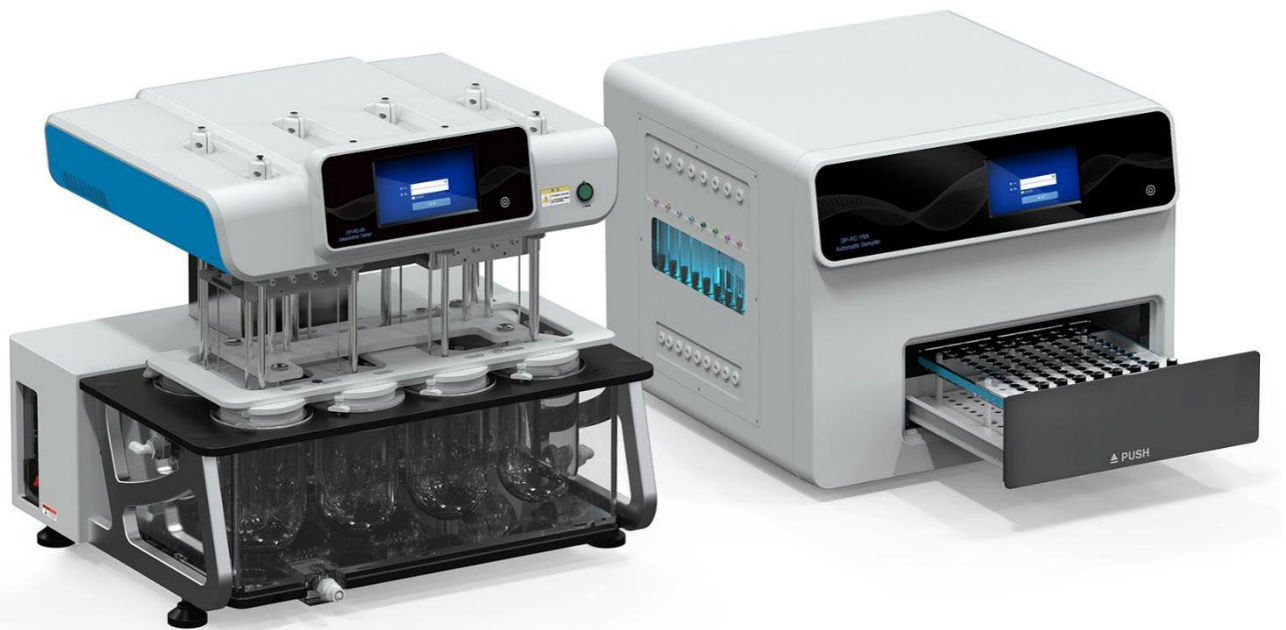# DRUG TESTING

**Testing for solid & liquid drug**
**Friability Tester, Multi-purpose Tester, Dissolution Tester,**
**Disintegration Tester, Tablet Hardness Tester, Clarity Tester,**
**Freezing force meter, Tablet Coater, Bloom Viscosity Tester,**
**Particle Analyzer, Melting Point Tester, Freezing Point Osmometer**

**Environmental management system: ISO14001**

**Medical devices quality management system: ISO1348**

$C \epsilon$ **ISO**

**Shuoboda Instruments (Hunan) Co., ltd**                     **An ISO9001:2015 certificate company**

# CONTENTS

# Tablet Disintegration Tester

## 1. DP-BJ-1 Automatic Tablet Disintegration Tester

### Descriptions:

DP-BJ series of instruments are used for detecting disintegration of solid in prescriptive conditions.

### Specifications

- Detecting disintegration of solid
- There are six tubes in one basket assembly
- Automatic Disintegration tester

### Applicable standards:

- National standard (Chinese codex)/2005/
- Corporate standard (Disintegration tester) Q/12XQ0188-2004

### Features:

1. There are six tubes in one basket assembly.
2. Auto stop at timing point.
3. The bath liquid can achieve an even temperature.
4. AMPU is used to automatically control the temperature, time and frequency of nacelle up and down.
5. The instrument automatically controls the water bath temperature to 37.0° C (pharmacopoeia regulations). High-precision digital electronic sensor ensures high precision and accuracy of water bath temperature without calibration.
6. Parameters can be preset at any time. The preset and real data can be displayed alternately in time.
7. Automation: auto-test, auto-diagnose, auto-alarm.

### Technical Parameters:

| Model | DP-BJ-1 |
|---|---|
| Basket assembly | 1 |
| Nacelle up and down frequency | 30 - 32 time/min |
| Nacelle up and down range | 54-56 mm |
| Automatic time range | 1-900 minutes |
| Time accuracy | +/- 0.5 minute |
| The cubage of beaker | 1000 ml |
| The quantity of glass tube | 6 pcs |
| Controlling temperature range | Room temperature to 45 °C |
| Accuracy of controlling temperature | +/- 0.5 °C |
| Power | 600 W |
| Power supply | AC, 220V/50HZ or 110V/60HZ 1 phase |
| Net weight | 11 kg |
| Overall size | 260300 x 420 mm |

## 2. DP-BJ-2 Automatic Tablet Disintegration Tester



### Descriptions
DP-BJ series of instruments are used for detecting disintegration of solid in prescriptive conditions.

### Specifications
- Detecting disintegration of solid
- There are twelve tubes in two basket assemblies
- Automatic Disintegration tester

### Applicable Standards
- National standard (Chinese codex)/2005/
- Corporate standard (Disintegration tester) Q/12XQ0188-2004

### Main Features

1. The double basket working station system determines the disintegration time.
2. 2 sets of hanging baskets can conduct disintegration experiments independently.
3. Electronic temperature sensors display and monitor the temperature at various points in the water bath and in the beaker. Using high-precision digital electronic sensors, it can ensure high precision and accuracy of the water bath temperature without calibration.
4. Automatically control the water bath temperature to 37.0°C (pharmacopoeia regulations). And the preset temperature can be reset at any time.
5. The lifting time of the hanging basket is automatically set to 15 minutes, and can be reset at will.
6. It adopts computer control technology with single-chip microcomputer as the core to intelligently control two performance parameters: water bath temperature and working time.
7. With function of monitoring the water bath temperature, overheating alarm and automatic protection.

## Specifications

| MODEL | DP-BJ-2 |
|---|---|
| Basket Assembly | 2 pcs |
| The quantity of glass tube | 12pcs |
| The cubage of beaker | 1000ml |
| Basket up and down frequency | (30-32)times / min |
| Basket up and down range | (55±1) mm |
| Minimum screen spacing | (25±2) mm |
| Time setting range | (1-900) minutes |
| Timing accuracy | ±0.5 min |
| Preset temperature range | (20-45) °C |
| Automatic temperature control precision | ±0.5°C |
| Heater power | 500W |
| Continuous working time | ＞24hours |
| Power supply | 220V/50Hz |
| power | 600W |
| Dimension | 400 X300 X420 mm |
| Weight | 16KG |

# 3. DP-BJ-3 Automatic Tablet Disintegration Tester



## Description

BJ series of instruments are used for detecting disintegration of solid in prescriptive conditions.

## Specifications

- Detecting disintegration of solid
- There are eighteen tubes in three basket assemblies
- Automation
- Disintegration tester

## Applicable standards:

- National standard (Chinese codex)/2005/
- Corporate standard (Disintegration tester) Q/12XQ0188-2004

## Features:

1. There are eighteen tubes in three basket assemblies.
2. Each test station is driven independently. Auto stop at timing point.
3. The bath liquid can achieve an even temperature.
4. AMPU is used to automatically control the temperature, time and frequency of nacelle up and down.
5. Parameters can be preset at any time. The preset and real data can be displayed in time.
6. Automation: auto-test, auto-diagnose, auto-alarm.

## Technical Parameters:

| Model | DP-BJ-3 |
|---|---|
| Basket assembly | 3 |
| Nacelle up and down frequency | 30 - 32 time/min |
| Nacelle up and down range | 54-56 mm |
| Automatic time range | 1-900 minutes |
| Time accuracy | +/- 0.5 minute |

| The cubage of beaker | 1000 ml |
|---|---|
| The quantity of glass tube | 18 pcs |
| Controlling temperature range | Room temperature to 45 °C |
| Accuracy of controlling temperature | +/- 0.5 °C |
| Power | 600 W |
| Power supply | AC, 220V/50HZ or 110V/60HZ 1 phase |
| Net weight | 22 kg |
| Overall size | 540 x 300 x 420 mm |

## 4. DP-BJ-3A Automatic Tablet Disintegration Testing Apparatus



**Performance features:**

• Color touch screen operation, automatic positioning sandblasting base plate, integrated paint injection molding shell.

• Using an integrated PC water bath design, the water bath temperature is more stable and uniform.

• Using a quick-detach hanging basket card, the hanging basket can be quickly disassembled and assembled.

• **3 cups have an independent lighting system for easy observation.**

• DC brushless circulation pump, silent and long life.

• PTC heater with temperature protection switch.

• **With audit tracking and authority management functions.**

• Using high-precision platinum resistance Pt1000 sensor imported from Germany, the temperature is more accurate.

**Technical Parameters:**

| Model | DP-BJ-3A |
|---|---|
| Quantity of hanging baskets | 3 |
| Lifting distance | 55mm±1mm |
| Upgrade frequency | 30 times/minute~32 times/minute |
| Water bath temperature | room temperature ~45℃ |
| Temperature resolution | 0.01℃ |
| Temperature control accuracy | 37℃±0.5℃ |
| Timing range | 0-99 hours and 59 minutes |
| Screen aperture | standard 2mm; optional 1mm, 0.71mm, 0.42mm |
| Permission management | three levels, seven users |
| Audit trail | 128 items × 366 days |
| Login method | username + password, fingerprint |
| Online printing | supported (optional) |

# 5. DP-BJ-4 Disintegration Testing Apparatus (four cups)

The disintegration testing apparatus is a drug testing instrument for testing the disintegration time of tablets, capsules, and pills according to the "Chinese Pharmacopoeia".

## Technical indicators

| Model | DP-BJ-4 |
|---|---|
| Temperature preset range | room temperature ~ 50℃ |
| Display resolution | 0.1℃ |
| Temperature control accuracy | ±0.3℃ |
| Timing preset range | 1min～999min |
| Time control accuracy | ±0.5min |
| Working noise | <60db |
| Number of lifting baskets | 4 sets |
| Gondola lifting frequency | (30~31) times/minute |
| Lifting distance of hanging basket | (55±1)mm |
| Minimum distance from screen to cup bottom | 25mm±2mm |
| Screen aperture | standard 2mm, (0.425mm, 1mm aperture optional) |
| Power supply | 220V50Hz |
| Machine power | 600W |
| Overall dimensions | length*width*height 540mm*320mm*440mm |

## Main Feature:
- The 4-basket working position system determines the disintegration time limit.
- **4 sets of hanging baskets, 2 hanging baskets are a group, 2 groups operate independently and can be controlled separately.**
- The electronic temperature sensor can display and monitor the temperature at various points in the water bath and in the beaker. Using high-precision digital electronic sensors, it can ensure high precision and accuracy of the water bath temperature without calibration.
- The instrument automatically controls the water bath temperature to 37.0° C (pharmacopoeia

regulations). And the preset temperature can be reset at any time.

- The instrument automatically sets the lifting time of the hanging basket to 15 minutes, and it can be reset at will.
- Using computer control technology with single-chip microcomputer as the core, it intelligently controls two performance parameters: water bath temperature and working time.
- The instrument has the function of monitoring the water bath temperature, overheating alarm and automatic protection.

## 6. DP-BJ-2D Intelligent Disintegration time limit tester, 2 cups

DP-BJ-2D intelligent disintegration instrument is a high-precision intelligent drug testing instrument developed and produced according to the Chinese Pharmacopoeia's 2015 edition of the disintegration time limit for tablets, capsules and pills. Its main technical indicators are in line with USP, BP, and JP regulations on the detection of disintegration time limits.

## working environment

• Safety performance: In accordance with the provisions of China's pharmaceutical industry standards related to the "disintegration instrument"
• Working power supply: AC 220V±10% 50Hz ≤800W
• Environmental conditions: room temperature 5 ~ 35 ° C humidity <80%

## Features

• DP-BJ-2D adopts high-resolution color touch screen, and the human-machine interface is friendly. Users can enjoy intelligent and interactive operation according to the screen prompts.
• The instrument is a two-basket working position. Each basket can be disintegrated independently, or it can be disintegrated in a double basket.
• The instrument provides two working modes: basic test and program control test; the basic test default temperature is 37 °C, the time is positive timing, the time can be paused, and the time can be connected to facilitate the research test. The program-controlled test can preset the temperature and time limit arbitrarily, and save it automatically. The time is countdown, which is convenient for routine repeatability test.
• The real-time basket lift display function provides users with a reliable method to monitor the lifting frequency of the basket.
• At the end of the test, the basket is automatically parked at the highest position for easy loading of the basket and beaker.
• The instrument provides timed shutdown and timed automatic warm-up function.
• The instrument provides intelligent temperature correction function, which allows users to easily and easily perform temperature correction through interactive operation.
• The instrument has temperature abnormality, temperature over limit alarm and secondary overheating automatic protection function.
• The instrument provides real-time display of "year, month, day, hour, minute, second" function.

## Main Specifications

| MODEL | DP-BJ-2D |
|---|---|
| Timing range | arbitrarily set within 24 hours, display resolution, hour: minute: second |
| Temperature control range | 5 ° C ~ 50 ° C, display resolution is 0.01 ° C |
| Temperature control | ≤±0.3°C |

| | |
|---|---|
| accuracy | |
| Basket lifting frequency | 30~32 times/min. |
| display resolution | 1 time, accuracy rate is 100%, real-time display function of the number of lifting and lowering of the basket, |
| Basket lifting amplitude | 55mm |
| Lifting amplitude accuracy | ≤±0.5mm |
| Screen bottom distance | 25mm |
| Screen hole diameter | 2mm, 0.425mm (1mm optional) |
| Dimensions | length 340mm, width 350mm, height 550mm |

# 7. DP-BJ-4D Intelligent Disintegration time limit tester, 4 cups



DP-BJ-4D intelligent disintegration instrument is a high-precision intelligent drug testing instrument developed and produced according to the Chinese Pharmacopoeia's 2015 edition of the disintegration time limit for tablets, capsules and pills. Its main technical indicators are in line with USP, BP, and JP regulations on the detection of disintegration time limits.

## working environment:

- Safety performance: In accordance with the provisions of China's pharmaceutical industry standards related to the "disintegration instrument"
- Working power supply: AC 220V±10% 50Hz ≤800W
- Environmental conditions: room temperature 5 ~ 35 ° C humidity <80%

## Features:

- DP-BJ-4D adopts high-resolution color touch screen, and the human-machine interface is friendly. Users can enjoy intelligent and interactive operation according to the screen prompts.
- The instrument has four working positions, one for each two baskets, which can be divided into separate disintegration tests, or four baskets for disintegration test.
- The instrument provides two working modes: basic test and program control test; the basic test default temperature is 37 °C, the time is positive timing, the time can be paused, and the time can be connected to facilitate the research test. The program-controlled test can preset the temperature and time limit arbitrarily, and save it automatically. The time is countdown, which is convenient for routine repeatability test.
- The real-time basket lift display function provides users with a reliable method to monitor the lifting frequency of the basket.

- It can provide temperature control solution below room temperature water bath, and realizes stepless preset and constant temperature control from 5 °C to 50 °C. The temperature control resolution reaches 0.01 °C.
- At the end of the test, the basket is automatically parked at the highest position for easy loading of the basket and beaker.
- The instrument provides timed shutdown and timed automatic warm-up function.
- The instrument provides intelligent temperature correction function, which allows users to easily and easily perform temperature correction through interactive operation.
- The instrument has temperature abnormality, temperature over limit alarm and secondary overheating automatic protection function.
- The instrument provides real-time display of "year, month, day, hour, minute, second" function.
- The instrument provides two kinds of operation interface in Chinese and English, one button to switch.

## Main Specifications:

| MODEL | DP-BJ-4D |
|---|---|
| Timing range | arbitrarily set within 24 hours, display resolution, hour: minute: second |
| Temperature control range | 5 °C ~ 45 °C, display resolution is 0.01 °C (less than room temperature control need to add assembly device) |
| Temperature control accuracy | ≤±0.3°C |
| Basket lifting frequency | 30~32 times/min. |
| Display | Real-time display of the number of lifting and lowering of the basket, the display resolution is 1 time. Accuracy rate is 100% |
| Basket lifting amplitude | 55mm |
| Lifting amplitude accuracy | ≤±0.5mm |
| Screen bottom distance | 25mm |
| Screen hole diameter | 2mm, 0.425mm (1mm optional) |
| Dimensions | length 570mm, width 350mm, height 550mm |

## 8. DP-BJ-6D Intelligent Disintegration time limit tester, 6 cups



DP-BJ-6D intelligent disintegration instrument is a high-precision intelligent drug testing instrument developed and produced according to the Chinese Pharmacopoeia's 2015 edition of the disintegration time limit for tablets, capsules and pills. Its main technical indicators are in line with USP, BP, and JP regulations on the detection of disintegration time limits.

### Working environment:
- Safety performance: In accordance with the provisions of China's pharmaceutical industry standards related to the "disintegration instrument"
- Working power supply: AC 220V±10% 50Hz ≤1100W
- Environmental conditions: room temperature 10 ~ 30 ° C humidity <80%

### Features:
- DP-BJ-6D adopts high-resolution color touch screen, and the human-machine interface is friendly. Users can enjoy intelligent and interactive operation according to the screen prompts.
- The instrument is a six-basket working position, and each of the two hanging baskets is a group. The disintegration test can be carried out independently in groups, or the disintegration test can be carried out simultaneously in six baskets.
- The instrument provides two working modes: basic test and program control test; the basic test default temperature is 37 °C, the time is positive timing, the time can be paused, and the time can be connected to facilitate the research test. The program-controlled test can preset the temperature and time limit arbitrarily, and save it automatically. The time is countdown, which is convenient for routine repeatability test.

- Provide temperature control solution below room temperature water bath to realize stepless preset and constant temperature control from 5 °C to 50 °C. The temperature control resolution reaches 0.01 °C.
- The real-time basket lift display function provides users with a reliable method to monitor the lifting frequency of the basket.
- At the end of the test, the basket is automatically parked at the highest position for easy loading of the basket and beaker.
- The instrument provides timed shutdown and timed automatic warm-up function.
- The instrument provides intelligent temperature correction function, which allows users to easily and easily perform temperature correction through interactive operation.
- The instrument has temperature abnormality, temperature over limit alarm and secondary overheating automatic protection function.
- The instrument provides real-time display of "year, month, day, hour, minute, second" function.
- The instrument provides two kinds of operation interface in Chinese and English, one button to switch.

## Main Specifications:

| MODEL | DP-BJ-6D |
|---|---|
| Timing range | arbitrarily set within 24 hours, display resolution, hour: minute: second |
| Timing accuracy | 24 hours error ≤ 3 seconds |
| Temperature control range | 5 °C ~ 45 °C, display resolution is 0.01 °C (less than room temperature control need to add assembly device) |
| Temperature control accuracy | ≤±0.3°C |
| Basket lifting frequency | 30~32 times/min. |
| Display | Real-time display of the number of lifting and lowering of the basket, the display resolution is 1 time. Accuracy rate is 100% |
| Basket lifting amplitude | 55mm |
| Lifting amplitude accuracy | ≤±0.5mm |
| Screen bottom distance | 25mm |
| Screen hole diameter | 2mm, 0.425mm (1mm optional) |

## System configuration

DP-BJ-6D intelligent disintegration instrument 1 set
Collapse basket 6 pcs
Water bath 1set
1000ml beakers 6 pcs
Baffles 36 pcs

# 9. DP-BJ-2DF Intelligent Disintegration time limit tester, 2 cups



DP-BJ-2DF intelligent disintegration time limit tester is developed and produced by shuoboda, in accordance with the regulations on the disintegration time limit of tablets, capsules, pills, etc. in the 2020 edition of the "Chinese Pharmacopoeia". A high-precision intelligent disintegration time limiter that records the disintegration test process and results. Its main technical indicators also comply with the requirements of USP, BP and JP on disintegration time limit detection.

## Working environment
- Safety performance: Comply with the provisions of the "Disintegration Apparatus" of my country's pharmaceutical industry standards
- Working power supply: AC 220V10% 50Hz, 800W

## Applicable standards
- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations

## Features:
- Unconditional audit trail record + traceability function
- With scheduled shutdown and scheduled preheating function
- With intelligent interactive temperature correction function
- Equipped with temperature abnormality, temperature over-limit alarm and secondary overheating automatic protection functions
- The instrument displays "year, month, day, hour, minute and second" in real time

## Main Specifications:

| MODEL | DP-BJ-2DF |
|---|---|
| Screen display | High-precision color touch screen, interactive control, intelligent management |
| Two baskets | Each basket can be raised and lowered independently or simultaneously. |
| Permission management settings | Three levels, multiple users (login method: username + password) |
| Audit trail query | Can query by date or number, and you can print it selectively or in full. |
| Print content | Sample name, logo, number, working water temperature, basket timing, number of lifts, quantitative disintegration test results (disintegration state ratio of 12 pipelines), tester, supervisor, start test time, end Time, test date... |
| Working modes | A. Basic test, the time is counting up, timing can be paused and continued, which is convenient for research tests.<br>B. Program-controlled test, the time is countdown, can be preset and saved to facilitate routine repetitive testing. |
| Timing range | Any setting within 24 hours (display resolution, hours: minutes: seconds) |
| Temperature range | 5C~50°C |
| Temperature accuracy | 0.01°C |
| Temperature deviation | $\leqslant \pm 0.3°C$ |
| Hanging basket lifting frequency | 30~32 times/minute |
| Basket lifting count | independent real-time display of the number of lifts and lowerings of the two baskets |
| Hanging basket lifting amplitude | (55+0.5) mm |
| Lifting amplitude accuracy | $\leqslant \pm 0.5mm$ |
| Screen cup bottom spacing | 25±1mm |
| Sieve aperture | 2mm (standard), optional 0.425mm, 0.71mm, 1mm |
| Dimensions | length 570mm, width 350mm, height 550mm |
| Language | Chinese and English |

## System configuration

1.  DP-BJ-2DF Intelligent Disintegration Apparatus 1set
2.  Lifting basket 2 sets
3.  Water bath 1pc
4.  1000ml beaker 2 pcs
5.  Baffle 12 pcs
6.  Micro Printer 1set

# 10.DP-BJ-3C Automatic Disintegration Time Limit Testing Apparatus (three cups)



DP-BJ-3C intelligent disintegration time limit testing apparatus is developed and produced by shuoboda, in accordance with the regulations on the disintegration time limit of tablets, capsules, pills, etc. in the 2020 edition of the "Chinese Pharmacopoeia". A high-precision intelligent disintegration time limiter that records the disintegration test process and results. Its main technical indicators also comply with the requirements of USP, BP and JP on disintegration time limit detection.

## Applicable standards
- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations

## Working environment
- Safety performance: complies with the provisions of the "Disintegration Apparatus" of country's pharmaceutical industry standards
- Working power supply: AC 220V+10%50Hz, 600W
- Environmental conditions: 5~35°C, humidity <80%

## Features:
- The real-time display function of the number of lifting and lowering of the hanging basket provides users with a reliable method to monitor the frequency of lifting and lowering of the hanging basket.
- At the end of the test, the hanging basket automatically stops at the highest position, making it easier to install and remove the hanging basket and beakers.
- The instrument provides scheduled shutdown and scheduled automatic preheating functions.
- The instrument provides an intelligent temperature calibration function. Users can easily,

conveniently and reliably complete temperature calibration through interactive operations.

- The instrument has temperature abnormality, temperature over-limit alarm and secondary overheating automatic protection functions.
- The instrument provides real-time display of "year, month, day, hour, minute and second" function.

## Main Specifications:

| MODEL | DP-BJ-3C |
|---|---|
| Screen display | High-precision color touch screen, interactive control, intelligent management |
| Three baskets | Each basket can be raised and lowered independently or simultaneously. |
| Permission management | Three levels, multiple users (login method: username + password) |
| Audit trail query | Can query by date or number, and you can print it selectively or in full. |
| Print content | Sample identification, name, number, water temperature, timing of each basket, number of lifts, quantitative disintegration test results (actual disintegration ratio of 18 samples) tester, supervisor, start test time, end time, test date ....... |
| Working modes | A. Basic test, the time is counting up, timing can be paused and continued, which is convenient for research tests.<br>B. Program-controlled test, the time is countdown, can be preset and saved to facilitate routine repetitive testing. |
| Timing range | Any setting within 24 hours (display resolution, hours: minutes: seconds) |
| Temperature range | 5C~50°C |
| Temperature accuracy | 0.01°C |
| Temperature deviation | $\leqslant\pm0.3°C$ |
| Temperature control sensor | 1/3B high-precision Pt1000 |
| Hanging basket lifting frequency | 30~32 times/minute |
| Basket lifting count | independent real-time display of the number of lifts and lowerings of the three baskets |
| Hanging basket lifting amplitude | (55+0.5) mm |
| Lifting amplitude accuracy | $\leqslant\pm0.5mm$ |
| Screen cup bottom spacing | 25±1mm |
| Sieve aperture | 2mm (standard), optional 0.425mm, 0.71mm, 1mm |
| Dimensions | length 570mm, width 350mm, height 550mm |
| Weight | 23kgs |
| Language | Chinese or English |

## System configuration

- DP-BJ-3C Intelligent Disintegration Apparatus 1set
- Lifting basket 3 sets
- Water bath 1pc
- 1000ml beaker 3pcs
- Baffle 18 pcs
- Micro Printer 1set

# 11.DP-BJ-4DF Intelligent Disintegration Time Limit Testing Instrument (four cups)



DP-BJ-4DF intelligent disintegration time limit testing apparatus is developed and produced by shuoboda, in accordance with the regulations on the disintegration time limit of tablets, capsules, pills, etc. in the 2020 edition of the "Chinese Pharmacopoeia". A high-precision intelligent disintegration time limiter that records the disintegration test process and results. Its main technical indicators also comply with the requirements of USP, BP and JP on disintegration time limit detection.

## Applicable standards
- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations

## Working environment
- Safety performance: complies with the provisions of the "Disintegration Apparatus" of country's pharmaceutical industry standards
- Working power supply: AC 220V+10% 50Hz, ≤1000W
- Environmental conditions: 5~40°C, humidity <80%

## Features:
- The real-time display function of the number of lifting and lowering of the hanging basket provides users with a reliable method to monitor the frequency of lifting and lowering of the hanging basket.
- At the end of the test, the hanging basket automatically stops at the highest position, making it easier to install and remove the hanging basket and beakers.
- The instrument provides scheduled shutdown and scheduled automatic preheating functions.
- The instrument provides an intelligent temperature calibration function. Users can easily, conveniently and reliably complete temperature calibration through interactive operations.
- The instrument has temperature abnormality, temperature over-limit alarm and secondary

overheating automatic protection functions.

- The instrument provides real-time display of "year, month, day, hour, minute and second" function.
- Rapidly quantify statistical disintegration and dissolution ratios.
- The number of lifting and lowering times of the hanging basket is displayed in real time, and the four baskets are counted independently.

## Main Specifications:

| MODEL | DP-BJ-4DF |
|---|---|
| Screen display | High-precision color touch screen, interactive control, intelligent management |
| Four-basket working position | Each basket can be raised and lowered independently, or two baskets can be raised and lowered in two groups, or four baskets can be raised and lowered simultaneously. |
| Permission management | Three levels, multiple users (login method: username + password) |
| Audit trail query | Can query by date or number, and you can print it selectively or in full. |
| Print content | sample identification, name, number, water temperature, timing of each basket, number of lifts, disintegration and dissolution ratio: (actual disintegration state ratio of 24 pipelines), tester, supervisor, start test time, end Time, test date... |
| Working modes | A. Basic test, the time is counting up, timing can be paused and continued, which is convenient for research tests.<br>B. Program-controlled test, the time is countdown, can be preset and saved to facilitate routine repetitive testing. |
| Timing range | Any setting within 24 hours (display resolution, hours: minutes: seconds) |
| Temperature range | 5C~50°C |
| Temperature accuracy | 0.01°C |
| Temperature deviation | ≤±0.3°C |
| Temperature control sensor | 1/3B high-precision Pt1000 |
| Hanging basket lifting frequency | 30~32 times/minute |
| Hanging basket lifting amplitude | (55+0.5) mm |
| Lifting amplitude accuracy | ≤±0.5mm |
| Screen cup bottom spacing | 25±1mm |
| Sieve aperture | 2mm (standard), optional 0.425mm, 0.71mm, 1mm |
| Dimensions | length 570mm, width 350mm, height 550mm |
| Weight | 26kgs |
| Language | Chinese and English |

## System configuration

- DP-BJ-4DF Intelligent Disintegration Apparatus 1set
- Lifting basket 4 sets
- Water bath 1 pc
- 1000ml beaker 4 pcs
- Baffle 24 pcs
- Micro Printer 1set

# 12.DP-BJ-2UF Orally Disintegrating Tablets (ODTs) Disintegration Tester



DP-BJ-2UF Orally Disintegrating Tablets (ODTs) Disintegration Tester is developed and produced by shuoboda, in accordance with the provisions of the 2020 edition of the "Chinese Pharmacopoeia" on the disintegration time limit of orally disintegrating tablets, tablets, capsules, pills, etc. A high-precision intelligent disintegration time limit dual-purpose instrument that can complete both conventional disintegration tests and orally disintegrating tablet tests. Its main technical indicators comply with the requirements of USP, BP and JP on disintegration time limit detection.

## Applicable standards

- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations

## Working environment

- Safety performance: complies with the provisions of the "Disintegration Apparatus" of country's pharmaceutical industry standards
- Working power supply: AC 220V+10% 50Hz, ≤800W

## Features:

- Scheduled shutdown and scheduled preheating functions.
- Intelligent interactive temperature correction function.
- Temperature abnormality, temperature over-limit alarm and secondary overheating automatic protection function.
- The instrument provides real-time display of "year, month, day, hour, minute and second" function.

## Main Specifications:

| MODEL | DP-BJ-2UF |
|---|---|
| Screen display | High-precision color touch screen, interactive control, intelligent management |

| Two baskets | Each basket can be raised and lowered independently |
|---|---|
| Permission management | Three levels, multiple users (login method: username + password) |
| Audit trail query | Can query by date or number, and you can print it selectively or in full. |
| Print content | sample name, logo, number, working water temperature, basket timing, number of lifts, quantitative disintegration test results, tester, supervisor, start test time, end time, test date... |
| Working modes | A. Basic test, the time is counting up, timing can be paused and continued, which is convenient for research tests.<br>B. Program-controlled test, the time is countdown, can be preset and saved to facilitate routine repetitive testing. |
| Timing range | Any setting within 24 hours (display resolution, hours: minutes: seconds) |
| Temperature range | 5C~50°C |
| Temperature accuracy | 0.01°C |
| Temperature deviation | $\leqslant\pm0.3°C$ |
| Hanging basket lifting frequency | 30~31 times/minute |
| 6-hole conventional disintegration hanging basket lifting amplitude | (55+0.5) mm |
| Orally disintegrating tablets disintegrating hanging basket | (10+0.5) mm |
| Lifting amplitude accuracy | $\leqslant\pm0.5mm$ |
| The distance between the disintegration hanging basket sieve and the bottom of the cup | $25\pm1mm$ |
| Basket lifting count | independent real-time display of the times of lifts and lowerings of the two baskets |
| Sieve aperture | 6-hole disintegrating basket screen 2mm, orally disintegrating tablets disintegrating basket 710um |
| Dimensions | length 570mm, width 350mm, height 550mm |

## System configuration

- DP-BJ-2UF Intelligent Disintegration Apparatus 1set
- 6-hole conventional disintegration hanging basket 1set
- Orally disintegrating tablets disintegrating hanging basket 1set
- Water bath 1 pc
- 1000ml beaker 2 pcs
- Baffle 6 pc
- Micro Printer 1set

# 13.DP-BJ-6CH Automatic Tablet Disintegration Tester



The DP-BJ-6CH Automatic Tablet Disintegration Tester has six basket working position. It complies with the provisions of the 2020 version of the Chinese Pharmacopoeia regarding the disintegration time limit of tablets, capsules, pills, etc., and complies with the new version of GMP specifications. It promptly and accurately records and saves the traceability data of drug disintegration tests (testing process parameters, and quantification of 36 samples). information such as collapse results). Its main technical indicators comply with the requirements of USP, BP and JP on disintegration time limit detection.

## Applicable standards
- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations

## Working environment
- Safety performance: complies with the provisions of the "Disintegration Apparatus" of country's pharmaceutical industry standards
- Working power supply: AC 220V+10% 50Hz, ≤1000W
- Environmental conditions: 5~40°C, humidity <80%

## Features:
- The real-time display function of the number of lifting and lowering of the hanging basket provides users with a reliable method to monitor the frequency of lifting and lowering of the hanging basket.
- At the end of the test, the hanging basket automatically stops at the highest position, making it

easier to install and remove the hanging basket and beaker. Scheduled shutdown, scheduled automatic preheating function

- Intelligent temperature correction function allows users to easily, conveniently and reliably complete temperature correction through interactive operations
- It has temperature abnormality, temperature over-limit alarm and secondary overheating automatic protection functions.
- The instrument displays the "year, month, day, hour, minute and second" functions in real time.

## Main Specifications:

| MODEL | DP-BJ-4CH |
|-------|-----------|
| Screen display | High-precision color touch screen, interactive control, intelligent management |
| Six-basket working position | Every two hanging baskets form a group (two baskets), which can be raised and lowered independently in groups, or can be raised and lowered simultaneously in three groups (six baskets). |
| Permission management | Three levels, multiple users (login method: username + password) |
| Test data audit trail | record and save the traceability data of drug disintegration tests in a timely and accurate manner. Compliant audit records can be traced back by date or number, and can also be printed selectively or in full. |
| Print content | Print content: sample identification, name, number, water temperature, timing of each basket, number of lifts, disintegration and dissolution ratio: (actual disintegration state ratio of 3 pipelines), tester, supervisor, start test time, end time , test date...... |
| Working modes | A. Basic test, the time is counting up, timing can be paused and continued, which is convenient for research tests.<br>B. Program-controlled test, the time is countdown, can be preset and saved to facilitate routine repetitive testing. |
| Timing range | Any setting within 24 hours (display resolution, hours: minutes: seconds) |
| Temperature range | 5C~50°C |
| Temperature accuracy | 0.01°C |
| Temperature deviation | ≤±0.3°C |
| Temperature control sensor | 1/3B high-precision Pt1000 |
| Hanging basket lifting frequency | 30~32 times/minute |
| Hanging basket lifting amplitude | (55+0.5) mm |
| Lifting amplitude accuracy | ≤±0.5mm |
| Screen cup bottom spacing | 25±1mm |
| Sieve aperture | 2mm (standard), optional 0.425mm, 0.71mm, 1mm |
| Number of lifting baskets | six baskets are displayed independently in real time |
| Dimensions | length 830mm, width 350mm, height 550mm |
| Weight | 30kgs |
| Language | Chinese or English |

## System configuration

- DP-BJ-4DF Intelligent Disintegration Apparatus 1set
- Lifting basket 4 sets
- Water bath 1 pc

- 1000ml beaker 4 pcs
- Baffle 24 pcs
- Micro Printer 1set

# Dissolution Tester

## 1. DP-RC-1 Drug Tablet Dissolution Tester

DP-RC-1 Dissolution Tester is used for detecting velocity and extent of pharmic dissolution from tablet, capsule etc. in prescriptive menstruum.

### Applicable standards:
National standard( Chinese codex ) /2010
Corporate standard(Dissolution tester )Q/12XQ0187-2010

### Features:
• It has one vessels and one poles arranged on one line.
• The head part of the instrument can be artificially turned over smoothly and flexibly.
• The basket units and paddle units are made of imported stainless steel (SUS316L).
• The magnetism-pumped circular water current can heat the system evenly, and the bath liquid can achieve an equal temperature.
• A MPU is used in dissolution tester to automatically control the temperature, rotational speed and time, and the parameters can be preset at any time.
• It can be operated conveniently by keystroke. The measurement result is displayed by LED. The preset and real data can be displayed alternately in time.
• Automation: auto-test, auto-diagnose, auto-alarm.

## Specifications:
Speed range (20~200)rpm
Speed accuracy ±2rpm
Temperature range ambient to +45.0°C
Temperature Stability ±0.3°C
Preset timing nine points (5~900)min
Time accuracy ±0.5mm
Paddle radial run-out ±0.5mm
Basket radial run-out ±1.0mm
Power 220V/50Hz/600W or 110V/60Hz/600W
Dimension (260*300*480) mm3

## 2. DP-RC-3 Drug Tablet Dissolution Tester



## Application:

Dissolution Tester DP-RC-3 consisted of the cabinet, control systems, electrical systems, water bath system, transmission system, sensors, paddle lever member, basket parts and other components, adopted the single-chip microcomputer control system to control precision components for centralized control; high degree automation, high precision control, high sensitivity, small error, low noise, easy to operate.

DP-RC-3 series of instruments are used for detecting velocity and extent of pharmic dissolution from tablet, capsule etc in prescriptive menstruum.

## Applicable standards:

National standard (Chinese codex) /2010
Corporate standard (Dissolution tester) Q/12XQ0187-2010

## Features:

- It has three vessels and three poles arranged on one line.
- The head part of the instrument can be artificially turned over smoothly and flexibly.
- The basket units and paddle units are made of imported stainless steel (SUS316L).
- The magnetism-pumped circular water current can heat the system evenly, and the bath liquid can achieve an equal temperature.
- A MPU is used in dissolution tester to automatically control the temperature, rotational speed and time, and the parameters can be preset at any time.
- It can be operated conveniently by keystroke. The measurement result is displayed by LED. The preset and real data can be displayed alternately in time.
- Automation: auto-test, auto-diagnose, auto-alarm.

## Technical parameters:

| Specification | Temperature control range | 20~40°C |
|---|---|---|
| | Temperature control accuracy | ±0.3°C |
| | Speed control range | 20~200RPM |
| | Speed control accuracy | ±2RPM |
| | Numbers timing control segment | 6 |
| | Timing control range | 0~999min |
| | Timing control accuracy | ±0.5min |
| | Radial rotation err of remiform parts | ±0.5mm |
| | Radial rotation err of basket parts | ±1.0mm |
| | Homocentric err of rotation axes | ±2.0mm |
| | Electric heater power | 1000W |
| | Continuous working hour | >24hours |
| | Electric source | 220V/50Hz |
| | Power | 1200W |
| | Size | 553248cm |
| | Weight | 50KG |
| Environment requirement | Usage temperature | +18°C~+28°C |
| | Store temperature | -10°C~+50°C |
| | Humidity | 20%~80% |
| Power supply | Rage of input power supply | 220V±10%V AC 50Hz |
| | Max input power | 1200W |
| Remarks | Power supply by international high quality single-phase AC power socket with three jacks, and reliable earthing is guaranteed. | |

# 3. DP-RC-6 Series Automatically Dissolution Tester



## Introduction:

DP-RC-6 series of instruments are used for detecting velocity and extent of pharmic dissolution from tablet, capsule etc in prescriptive menstruum.

## Features:

1. It has six vessels and six poles arranged on one line.
2. The head moves up/down automatically.
3. The basket units and paddle units are made of imported stainless steel (SUS316L).
4. The magnetism-pumped circular water current can heat the system evenly, and the bath liquid can achieve an equal temperature.
5. A MPU is used in dissolution tester to automatically control the temperature, rotational speed and time, and the parameters can be preset at any time.
6. It can be operated conveniently by keystroke. The measurement result is displayed by LED. The preset and real data can be displayed alternately in time.
7. Automation: auto-test, auto-diagnose, auto-alarm.
8. It can test by self and alarm automatically. The dissolution parameters of' Chinese codex 2010' are stored in and can be taken out at anytime.
9. Time can be preset at many points. The beeper sounds automatically to any point, and then the tester automatically runs to the next one.

## Specifications:

| Model | DP-RC-6D | DP-RC-6 |
|---|---|---|
| Position | 6 cups & 6 poles | 6 cups & 6 poles |
| Lift | Electric | Manual |
| Speed range | (20~200)rpm | (20~200)rpm |
| Speed accuracy | ±2rpm | ±2rpm |
| Temperature range | ambient to +45.0°C | ambient to +45.0°C |
| Temperature Stability | ±0.3°C | ±0.3°C |
| Preset timing | nine points (1~999)min | nine points (1~999)min |
| Time accuracy | ±0.5mm | ±0.5mm |
| Paddle radial run-out | ±0.5mm | ±0.5mm |
| Basket radial run-out | ±1.0mm | ±1.0mm |

| Power | 220V/50Hz/1200W<br>110V/60Hz/1200W | or | 220V/50Hz/1200W<br>110V/60Hz/1200W | or |
|---|---|---|---|---|
| Dimension | 960*400*480 mm | | 960*320*480 mm | |

# 4. DP-RC-8G Drug Dissolution Tester



The DP-RC-8G dissolution tester is a practical new drug dissolution tester developed based on the successful experience in producing dissolution testers over the years. It is more convenient for testing enteric-coated preparations.

## Performance features:

• Can install 8 dissolution vessels
• Can install 6 paddle poles or basket poles
• Working parameters can be preset and automatically stored, so there is no need to repeat settings next time you turn on the machine.
• Adopting a new temperature control system, the temperature rises quickly and the accuracy is high, making it easy to correct the temperature.
• The timer has three working states to choose from (timing/timing/period)
• It has automatic protection function and multiple fault alarms.

## Technical Specifications:

Stirring paddle swing range: ≤0.5mm

Basket swing range: ≤1mm

Axis deviation between basket and dissolution vessel: ≤2mm

Speed adjustment range: 25-200 rpm

Speed resolution: 1 rpm

Temperature adjustment range: room temperature~45.0℃

Temperature control accuracy: ≤±0.3

Total time: 99 hours and 59 minutes, counting

Sampling period: up to 9 different sampling periods

Power supply: AC220V.50HZ. 1350W

Working environment: 5-37℃, relative humidity <80%

## 5.  DP-RC-3ST Drug Dissolution Tester



With dual functions of electric head lift and head flip

The DP-RC-3ST dissolution tester is used to check the dissolution rate and extent of solid preparations such as pharmaceutical tablets or capsules in specified solvents. It is a practical new drug dissolution tester developed and produced by shuoboda. It adopts a classic design and is cost-effective, stable and reliable, easy to operate and durable.

### Main Features:

DP-RC-3ST is a dual-function machine with electric head lift and head flip. When replacing the pulp rod or basket rod, you only need to operate the keyboard, and the machine head will automatically rise. You can also continue to flip the machine head while the machine head is raised. Make pulp changing operation more convenient and handier.

- Can install 3 basket poles or paddle poles.
- Can install three new dissolution vessels with a height of 185mm.
- Friendly human-machine interface, simple and convenient operation.
- All working parameters can be preset and automatically stored, so there is no need to repeat settings next time the machine is turned on.
- Accurate speed, smooth operation and low energy consumption.
- The constant temperature water bath adopts a built-in integrated temperature sensor and new software and hardware temperature measurement and control methods. It heats up quickly and has high accuracy. The temperature deviation can be easily corrected with software.
- The test timing can be started, paused and reset independently.
- Has automatic protection functions such as self-check fault alarm and overheating protection.
- The pulp rod, basket rod and rotating basket body are made of high-quality stainless steel materials, and their quality and performance meet the requirements of the Chinese Pharmacopoeia.

## Main technical specifications:

- Swing range of mixing paddle: ≤0.3mm
- Swing range of basket: ≤0.8mm
- Deviation of rotating rod and dissolution vessel axis: ≤1mm
- Speed adjustment range: 20-200 rpm
- Speed resolution: 1 rpm
- Water bath temperature adjustment range: room temperature-45℃
- Temperature resolution: 0.1℃
- Temperature control accuracy: ≤±0.3℃
- Number of sampling cycles: 9 different sampling cycles can be preset.
- Sampling cycle time: You can choose from 1 to 999 minutes per cycle, and the 9 sampling cycles can be counted down in stages.
- Timing error: ±0.5min
- Pharmacopoeia parameter calling: 300 dissolution test parameters of the "Chinese Pharmacopoeia" are stored in the machine and can be called randomly.
- Large-screen LCD display and intelligent menu-based operation.
- The machine head can be raised and lowered automatically and comes with a flip function (a model that is particularly convenient to operate).
- Electronic sensors can monitor the temperature at various points in the water bath.
- Standard configuration: 3 pulp and 3 cups
- Electric heating power: 500W

## 6. DP-RC-6ST Drug Dissolution Tester



With dual functions of electric head lift and head flip

The DP-RC--6ST dissolution tester is used to check the dissolution rate and extent of solid preparations such as pharmaceutical tablets or capsules in specified solvents. It is a practical new drug dissolution tester developed and produced by our company. It adopts a classic design and is cost-effective, stable and reliable, easy to operate and durable.

### Main features:

- DP-RC--6ST is a dual-function machine with electric head lifting and head flipping. To replace the pulp rod or basket rod, you only need to operate the keyboard, and the machine head will automatically rise. You can also continue to flip the machine head while the machine head is raised, making the pulp changing operation more convenient and handy.
- Can install 6 basket poles or paddle poles.
- Can install 6 new dissolution vessels with a height of 185mm.
- Friendly human-machine interface, simple and convenient operation.
- All working parameters can be preset and automatically stored, so there is no need to repeat settings next time the machine is turned on.
- Accurate speed, smooth operation and low energy consumption.
- The constant temperature water bath adopts a built-in integrated temperature sensor and new software and hardware temperature measurement and control methods. It heats up quickly and has high accuracy. The temperature deviation can be easily corrected with software.
- The test timing can be started, paused and reset independently.
- Has automatic protection functions such as self-check fault alarm and overheating protection.
- The pulp rod, basket rod and rotating basket body are made of high-quality stainless steel materials, and their quality and performance meet the requirements of the Chinese

Pharmacopoeia.

## Main technical specifications:

- Swing range of mixing paddle: ≤0.3mm
- Swing range of basket: ≤0.8mm
- Deviation of rotating rod and dissolution vessel axis: ≤1mm
- Speed adjustment range: 20-200 rpm
- Speed resolution: 1 rpm
- Water bath temperature adjustment range: room temperature -45℃
- Temperature resolution: 0.1℃
- Temperature control accuracy: ≤±0.3℃
- Number of sampling cycles: 9 different sampling cycles can be preset.
- Sampling cycle time: You can choose from 1 to 999 minutes per cycle, and the 9 sampling cycles can be counted down in stages.
- Timing error: ±0.5min
- Pharmacopoeia parameter calling: 300 dissolution test parameters of the "Chinese Pharmacopoeia" are stored in the machine and can be called randomly.
- Large-screen LCD display and intelligent menu-based operation.
- The machine head can be raised and lowered automatically and comes with a flip function (a model that is particularly convenient to operate)
- Electronic sensors can monitor the temperature at various points in the water bath.
- Standard configuration: 6 pulp and 6 cups
- Electric heating power: 1100W

# 7. DP-RC-8ST Drug Dissolution Tester



With 4 cups in front, 4 cups behind

The DP-RC-8ST dissolution tester is used to check the dissolution rate and extent of solid preparations such as pharmaceutical tablets or capsules in specified solvents. It is a practical new drug dissolution tester developed and produced by our company. It adopts a classic design and is cost-effective, stable and reliable, easy to operate and durable.

## Main features:

- DP-RC-8ST is a dual-function machine with electric head lifting and head flipping. To replace the pulp rod or basket rod, you only need to operate the keyboard, and the machine head will automatically rise. You can also continue to flip the machine head while the machine head is raised, making the pulp changing operation more convenient and handy.
- Can install 8 basket poles or paddle poles.
- Eight new dissolution vessels with a height of 185mm can be installed, and light-shielding dissolution vessels can also be installed.
- Friendly human-machine interface, simple and convenient operation.
- All working parameters can be preset and automatically stored, so there is no need to repeat settings next time the machine is turned on.
- Accurate speed, smooth operation and low energy consumption.
- The constant temperature water bath adopts a built-in integrated temperature sensor and new software and hardware temperature measurement and control methods. It heats up quickly and has high accuracy. The temperature deviation can be easily corrected with software.
- The test timing can be started, paused and reset independently.
- Has automatic protection functions such as self-check fault alarm and overheating protection.
-

- The pulp rod, basket rod and rotating basket body are made of high-quality stainless-steel materials, and their quality and performance meet the requirements of the Chinese Pharmacopoeia.

## Main technical specifications:

- Stirring paddle swing range: ≤0.3mm
- Basket swing range: ≤0.8mm
- Deviation of rotating rod and dissolution vessel axis: ≤1mm
- Speed adjustment range: 20-200 rpm
- Speed resolution: 1 rpm
- Water bath temperature adjustment range: room temperature -45℃
- Temperature resolution: 0.1℃
- Temperature control accuracy: ≤±0.3℃
- Number of sampling cycles: 9 different sampling cycles can be preset.
- Sampling cycle time: You can choose from 1 to 999 minutes per cycle, and the 9 sampling cycles can be counted down in sections.
- Timing error: ±0.5min
- Pharmacopoeia parameter calling: 300 dissolution test parameters of the Chinese Pharmacopoeia are stored in the machine and can be called randomly.
- Large-screen LCD display and intelligent menu-based operation.
- The machine head can be raised and lowered automatically and comes with a flip function (a model that is particularly convenient to operate).
- Electronic sensors monitor the temperature at various points in the water bath.
- Standard configuration: 8 pulp and 8 cups
- Optional small cup method accessories.
- Electric heating power: 1100W

# 8. DP-RC-12S Drug Dissolution Tester



With 6 cups in front, 6 cups after behind

DP-RC-12S drug dissolution tester is a model with electric lifting machine head function. To replace the pulp rod or basket rod, you only need to operate the keyboard, and the machine head will automatically rise, making the pulp changing operation more convenient and handier.

## Main features:

- Can install 12 basket poles or paddle poles.
- Can install 12 new dissolution vessels with a height of 185mm.
- Friendly human-machine interface, simple and convenient operation.
- All working parameters can be preset and automatically stored, so there is no need to repeat settings next time the machine is turned on.
- Accurate speed, smooth operation and low energy consumption.
- The constant-temperature water bath adopts a built-in integrated temperature sensor and new software and hardware temperature measurement and control methods. It heats up quickly and has high accuracy. The temperature deviation can be easily corrected with software.
- The test timing can be started, paused and reset independently.
- Has automatic protection functions such as self-check fault alarm and overheating protection.
- The pulp rod, basket rod and rotating basket body are made of high-quality stainless steel materials, and their quality and performance meet the requirements of the Chinese Pharmacopoeia.

## Main technical specification:

- Stirring paddle swing range: ≤0.3mm
- Swing range of basket: ≤0.8mm
- Deviation of rotary rod and dissolution vessel axis: ≤1mm
- Speed adjustment range: 20-200 rpm
- Speed resolution: 1 rpm
- Water bath temperature adjustment range: room temperature -45º C
- Temperature resolution: 0.1º C

- Temperature control accuracy: $\leqslant\pm0.3°C$
- Number of sampling cycles: 9 different sampling cycles can be preset.
- Sampling cycle time: You can choose from 1 to 999 minutes per cycle, and the 9 sampling cycles can be counted down in stages.
- Timing error: $\pm0.5$min
- Pharmacopoeia parameter calling: 300 dissolution test parameters of the "Chinese Pharmacopoeia" are stored in the machine and can be called randomly.
- Large-screen LCD display and intelligent menu-based operation.
- The machine head can be raised and lowered automatically and comes with a flip function (a model that is particularly convenient to operate).
- Electronic sensors can monitor the temperature of various points in the water bath.
- Standard configuration: 12 pulps and 12 cups
- Electric heating power: 1100W

# 9. DP-RC-806 Drug Dissolution Tester



The DP-RC-806 dissolution tester is a new type of drug dissolution tester developed using advanced technology and components based on years of successful experience in producing dissolution testers in accordance with the requirements of the Chinese Pharmacopoeia and the United States Pharmacopoeia. The instrument adopts double rows of 8 cups and 8 rods, with an electric lifting structure for the machine head. The LCD screen displays menu operations and preset program control.

## Main features:

- The machine head is electrically lifted and lowered, using linear bearings, with good movement repeatability and high degree of automation.
- The dissolution vessel lid is fully sealed, which can effectively prevent the evaporation of the dissolution medium
- The rotary rod and dissolution vessel are automatically centered, eliminating the need for manual adjustment.
- Adopts new touch LCD screen, menu-based operation, friendly human-machine interface, and easier to use
- The constant temperature water bath uses a built-in integrated temperature sensor, and software is used to correct the temperature deviation.
- Programmable test function, 10 sets of preset programs can be set and executed, suitable for routine repetitive tests
- Basic test functions allow you to change operating parameters at any time to facilitate research

tests.

- The user-preset programs and test parameters are automatically stored in the device, and there is no need to repeat the settings next time it is turned on.
- The "scheduled shutdown" function can automatically terminate the dissolution test when unattended.
- The "automatic preheating" function can start preheating the water bath at regular intervals without being attended, saving manpower and time.
- The instrument has an ultra-high temperature alarm (>47℃) and automatically cuts off heating.
- The paddle shaft, blue pole and basket body are made of high-quality 316 stainless steel, and the quality and performance meet the requirements of the new "Chinese Pharmacopoeia".
- Use SD card to store data, which can be transferred to computer for backup
- With user rights management function

## Technical Parameters:

1. Number of rotating lever positions: 8
2. Number of dissolution cups: 8
3. Paddle shaft swing amplitude ≤±0.5mm
4. The swing range of the basket is ≤±1mm
5. The coaxiality between the rotating rod and the dissolution vessel is ≤2mm
6. Speed adjustment range: 25~250 rpm
7. Speed resolution: 1 rpm
8. Stable speed error ≤±4%
9. Temperature adjustment range: 5.0 (room temperature) ~ 45.0℃
10. Temperature resolution: 0.1℃
11. Temperature measurement and control error ≤±0.3℃
12. Program-controlled sampling times: ≤ 12 times (each group). The instrument can set 10 groups of program-controlled sampling parameters, and each group can set 12 sampling points.
13. Programmable single sampling cycle: ≤24 hours and 59 minutes
14. The instrument configuration storage SD card has the functions of storing, transferring and printing test data through a computer printer.
15. Continuous working time: 48 hours

# 10.DP-RC-8MD Drug Dissolution Tester



DP-RC-ND/MD/HD are three series of dissolution testers, which are brand-new dissolution testers developed by shuoboda. Each series of dissolution testers has 8 cups and Two models of 16 cups (including 4 rehydration cups) fully comply with the requirements of the Chinese Pharmacopoeia and generic drug quality and efficacy consistency evaluation, and the technical indicators have reached the international advanced level!

   N stands for "Normal" regular model, M stands for "Middle" mid-range model, H stands for "High" high-end model, and D stands for consistency evaluation.

## DP-RC-8MD parameters:

- Number of devices: 8 cups
- Special rehydration cup: 0 cups
- Applicable methods: basket method, paddle method, small cup method, dish method (large and small dish), rotating drum method (long and short rotating drum)
- Mixing system:
  Area: Single area, single control
  Range: 25RPM-250RPM
  Direction: clockwise, counterclockwise
  Resolution: 0.1RPM
  Accuracy: ±4%
  Swing amount: ≤1mm
- Circulatory system:
  Area: Single area, single control
  Range: room temperature-45℃
  Resolution: 0.01℃
  Accuracy: 37℃±0.5℃
- Dosing system:
  Dosing power: electric, automatic

Dosing method: Horizontal plate

Dosing mode: simultaneous dosing, sequential dosing

Sequential dosing and stirring pause function: optional

- Lighting system: white light, red light, three-speed PWM dimming lighting
- Lifting system: Bamboo single column lifting

# 11.DP-RC-8HD Drug Dissolution Tester



DP-RC-ND/MD/HD are three series of dissolution testers, which are brand-new dissolution testers developed by shuoboda. Each series of dissolution testers has 8 cups and Two models of 16 cups (including 4 rehydration cups) fully comply with the requirements of the Chinese Pharmacopoeia and generic drug quality and efficacy consistency evaluation, and the technical indicators have reached the international advanced level!

   N stands for "Normal" regular model, M stands for "Middle" mid-range model, H stands for "High" high-end model, and D stands for consistency evaluation.

## DP-RC-8HD technical parameters:

- Number of devices: 8 cups
- Special rehydration cup: 0 cup
- Applicable methods: basket method, paddle method, small cup method, dish method (large and small dishes), rotating drum method (long and short rotating drum)
- Stirring system:

   Area: Single area, single control

   Range: 25RPM-250RPM

   Direction: clockwise, counterclockwise.

   Resolution: 0.1RPM

   Accuracy: ±4%

   Speed detection: single channel

   Swing amount: ≤1mm
- Circulatory system:

   Area: Single area, single control

   Range: room temperature-45℃

   Resolution: 0.01℃

Accuracy: 37℃±0.5℃

Solvent temperature detection: 8 cups

- Dose delivery system:

Dosing power: electric, automatic; independent 8 channels

Dosing method: lower flap

Dosing mode: simultaneous dosing, sequential dosing

Sequential dosing and stirring pause function: optional

Multiple dosing of granules: supported

- Lighting system: white light, red light, three-speed PWM dimming lighting
- Sampling system:

Range: 100ml-1000ML

Resolution: 1ml

Accuracy: ±1mm

- Lifting system: Bamboo single column lifting

## 12.DP-RC-12MD Drug Dissolution Tester
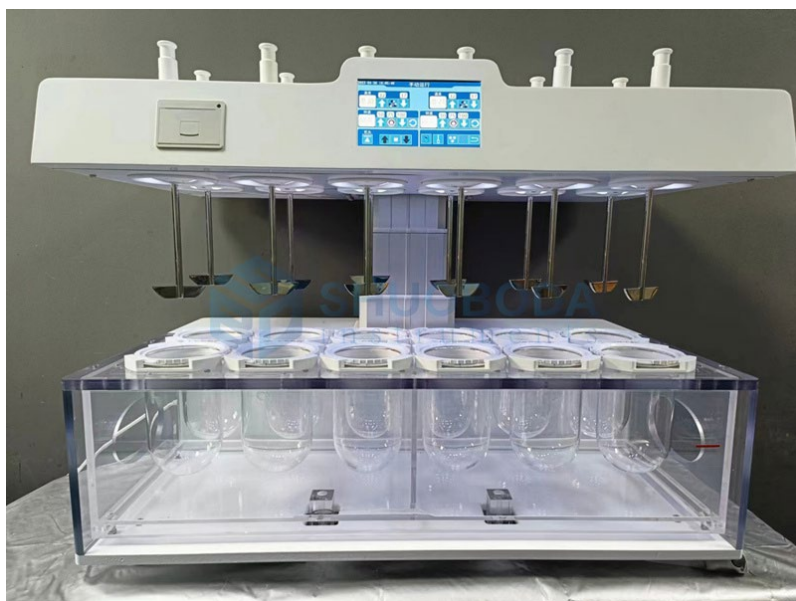


The DP-RC-12MD dissolution tester is a high-performance 12-cup and 12-bar dissolution test device designed and manufactured strictly in accordance with the regulations of the Chinese Pharmacopoeia and the United States Pharmacopoeia. It has high intelligence, advanced structure, accurate control, and reliability. good. The integrated design of the PC cup plate and the water bath box has a beautiful appearance and is convenient for observing the test process from multiple angles. High temperature resistance, corrosion resistance, extended service life.

### Technical Parameters:

- Number of devices: 12 cups and 12 rods. (An isothermal rehydration cup can be added)
- Speed zone: (6+6) 2 working areas, 2 batches of dissolution tests can be completed at the same time
- Applicable methods: Method 1 (basket method), method 2 (paddle method), method 3 (small cup method), method 4 (paddle-disk method), and method 5 (rotating drum method) of the Chinese Pharmacopoeia.
- Stirring speed: 25RPM-250RPM. (The stirring speed can be adjusted to 300RPM)
- Stirring direction: clockwise, counterclockwise.
- Stirring paddle swing range: ≤0.3mm
- Stirring speed resolution: 0.01RPM.
- Speed error: ≤0.5%.
- Basket swing range: ≤0.5mm
- Deviation of rotating rod and dissolution vessel axis: ≤0.5mm
- Water bath temperature: room temperature -45.00℃. (The heating temperature can be selected to 55℃)
- Temperature resolution: 0.01℃.
- Water bath temperature control accuracy: 0.2℃.
- Dissolution medium temperature control accuracy: 0.2°C.
- Dosing mode: automatic and synchronous dosing.
- Lifting system: Bamboo square column lifting.
- Permission management: three levels, seven users.

- Audit trail: 128 × 366 days.
- Working noise: <60db
- Environmental conditions: ambient temperature 5-37℃, relative humidity ≤80%
- Safety performance: in line with national industry standards, with self-check and automatic protection functions
- Power supply: 220V, 50Hz
- Additional equipment and optional items need to be purchased separately.

## 13.DP-RC-12HD Drug Dissolution Tester
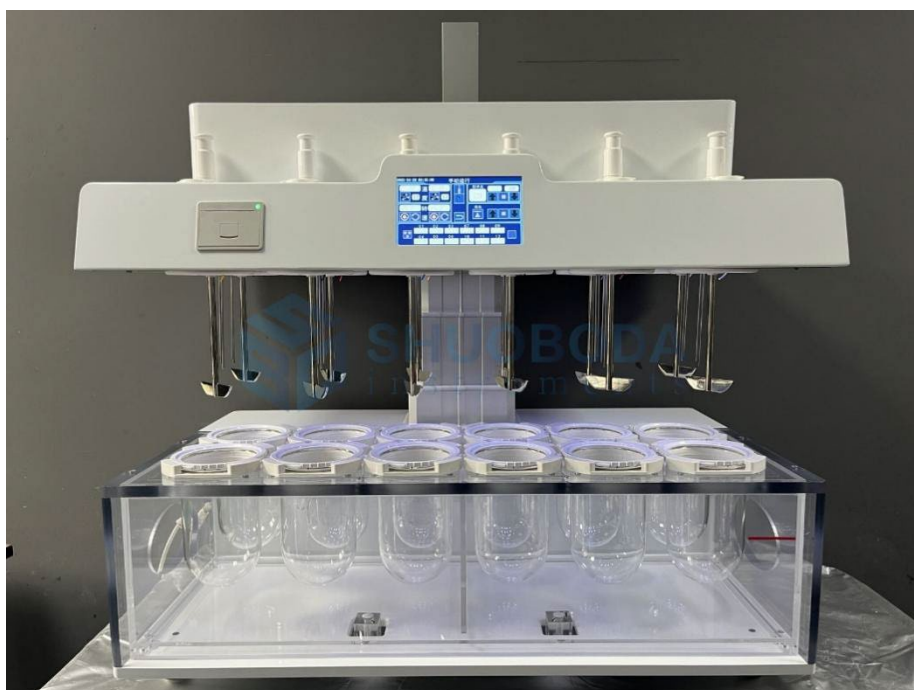


DP-RC-12HD dissolution tester is a high-performance 12-cup and 12-bar dissolution test device designed and manufactured strictly in accordance with the provisions of the Chinese Pharmacopoeia and the United States Pharmacopoeia. It has high intelligence, advanced structure, accurate control and reliability. good. The integrated design of the PC cup plate and the water bath box has a beautiful appearance and is convenient for observing the test process from multiple angles. High temperature resistance, corrosion resistance, extended service life.

### Performance and technical parameters:

- Number of devices: 12 cups and 12 rods. (An isothermal rehydration cup can be added).
- Speed zone: (6+6) 2 working areas, which can complete 2 batches of dissolution tests at the same time.
- Dosing methods: simultaneous dosing and sequential dosing.
- The intelligent sampling rack can automatically rise and fall according to the volume of the solvent, and has functions such as real-time monitoring of the temperature in the cup.
- Applicable methods: Method 1 (basket method), method 2 (paddle method), method 3 (small cup method), method 4 (paddle-disk method), and method 5 (rotating drum method) of the Chinese Pharmacopoeia.
- The specifications of the stirring paddle and rotating basket comply with the pharmacopoeia regulations.
- Stirring paddle swing range: ≤0.3mm
- Stirring speed: 25RPM-250RPM. (The stirring speed can be adjusted to 300RPM)
- Stirring direction: clockwise, counterclockwise.
- Stirring speed resolution: 0.01RPM.
- Speed error: ≤0.5%.
- Basket swing range: ≤0.5mm
- Deviation of rotating rod and dissolution vessel axis: ≤0.5mm
- Water bath temperature: room temperature -45.00℃. (The heating temperature can be selected

to 55℃)

- Temperature resolution: 0.01℃.
- Water bath temperature control accuracy: 0.2℃.
- Dissolution medium temperature control accuracy: 0.2°C.
- Dosing mode: simultaneous dosing.
- Lifting system: Bamboo square column lifting.
- Permission management: three levels, seven users.
- Audit trail: 128 × 366 days.
- Working noise: <60db
- Environmental conditions: ambient temperature 5-37℃, relative humidity ≤80%
- Safety performance: in line with national industry standards, with self-check and automatic protection functions
- Power supply: 220V, 50Hz
- Additional optional items need to be purchased separately.

# 14.DP-RC-Y8 /Y12 Dissolution Automatic Sampling System



DP-RC-Y8 (8 channels)/Y12 (12 channels) dissolution automatic samplers are equipped with 8\12 pipeline interfaces and are fully compatible with dissolution apparatus from most manufacturers. WiFi, RS232, RS485, LAN, and Bluetooth data interfaces can be upgraded. The entire system uses a 26ml high-precision syringe as the sampling power. The sampling speed is fast and the accuracy is high. The whole system has primary filtrate and distribution functions, which can realize the waste of primary filtrate and the distribution and retention of continued filtrate. And samples can be collected directly into ampoules. An 8/12-channel precision syringe pump is used to achieve high-precision automatic filtration, sampling and rehydration. It has advanced structure, accurate control and high degree of intelligence.

## Performance features:

- Fully corrosion-resistant and high-pressure resistant pipelines.
- The syringe pump uses grinding-grade ball screw + three-phase stepper motor.
- Permission management, supports level 3 and 7 users.
- Audit trail functionality.
- Support fingerprint login.
- Support online printing.
- The tubes come with silicone caps.
- Synchronous filtering can be achieved.
- Can be collected into ampoules.
- Compatible with dissolution apparatus from most manufacturers.
- 3Q verification is available.
- Full 24V DC power supply system.

## Technical Parameters:

- Syringe specifications: 26ml, 1% accuracy.
- Sampling accuracy: RSD±1%@10ml.
- Sampling channel: 8/12.
- Sampling interval: minimum 1 minute.

- Sampling times: 16 times.
- Single sampling volume: 1ml~100ml.
- Test tube collection volume: 15ml.
- Distribution function: Yes.
- Fluid replenishment function: equal volume of fluid replenishment.
- Sampling mode: precision, speed.
- Initial filtration volume: 0ml~10ml.
- Primary filtration: 10µm cylindrical filter head.
- Secondary filter: φ25mm syringe filter, pore size material is optional.
- Permission management: three levels, seven users.
- Audit trail: 128 entries × 366 days.
- Login method: username + password, fingerprint.
- Online printing: supported.

## 15.DP-RC-8STA Drug tablet dissolution tester



### Instrument structure and features:

- DP-RC-8STA is a dual-function model for electric lift head and head reversal. The operation space is large, which is convenient for medicine, cup change and rehydration operation.
- The water tank is arranged in a single row. It can be installed with 6 baskets or pulp poles and can be installed with 8 vessels.
- Dissolution cup and water tank have no gap design to ensure automatic center positioning. Eliminate system errors.
- Removable electronic temperature sensor can display and monitor the temperature of each point water bath.
- friendly man-machine interface, the instrument uses color large-screen liquid crystal display, intelligent menu operation.
- The time system consisting of a new architecture ensures smooth and accurate timing of the instrument.
- With self-test function and automatic protection function, it can give a variety of fault alarm signals.
- The installation position of the water bath can be adjusted and locked, and the vertical axis of the pulp bar, the rotating basket and the dissolution cup is automatically centered.
- The pulp rod, basket and basket made of high quality imported 316L stainless steel material meet the requirements of Chinese Pharmacopoeia.
- The instrument provides "program control test" function to execute 12 sets of preset sampling program combinations, suitable for routine repeatability test.
- The instrument provides "basic test" function to change the test parameters at any time during the test, which is convenient for research tests.
- The instrument provides "automatic warm-up" function to start preheating bath at unattended time, saving manpower and time.
- Optional standard cup method accessories

### Applicable standards:

★ "Pharmacopoeia of the People's Republic of China" 2015 edition.
★ Food and Drug Administration, "Guidelines for Mechanical Verification of Dissolution Apparatus"
★ Industry standard "Drug dissolution tester" JB/T20076-2005

## Main Specifications:

- Level: inclination ≤0.5° (measured in two vertical directions after installation)
- Basket paddle (axis) verticality: ≤0.5° off vertical
- Dissolution cup verticality: ≤1° deviation from the vertical direction
- Coaxiality between the vessel and the basket (paddle) axis: Offset axis ≤1.0mm
- Basket (paddle) shaft swing: swing ≤ 0.3mm
- Basket swing: swing ≤0.5mm
- Depth of basket (paddle): 25±2mm
- Basket (paddle) shaft speed: ±4%mm
- Medium temperature in each vessel: 37°C ± 0.3°C
- Vibration: ≤0.1mi1
- Speed range: 25-250 rpm
- Speed resolution: 1 rev / min
- Water bath temperature range: room temperature -45°C
- Temperature resolution: 0.1°C
- Temperature control accuracy: ≤ ± 0.3°C
- Cumulative time: 99 hours, 59 minutes and 59 seconds. (Basic experiment timing)
- Number of sampling cycles: 1-12 different sampling periods can be preset.
- Sampling cycle time: 99 hours and 59 minutes per cycle can be set arbitrarily, 12 sampling cycles can be counted down in stages, or continuous countdown.
- Timed on/off time: up to 99 hours and 59 minutes
- Standard: 6 pulp 8 cups
- Working noise: <60dB
- Power maximum power: 1350W
- Dimensions: length * width * height 910mm * 440mm * 510mm

## The following is a brief introduction to a set of control interfaces:
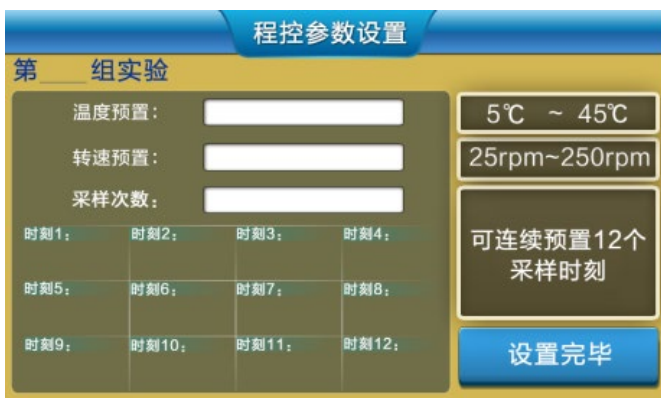


**Program control parameter setting interface**          **Program control test real-time interface**
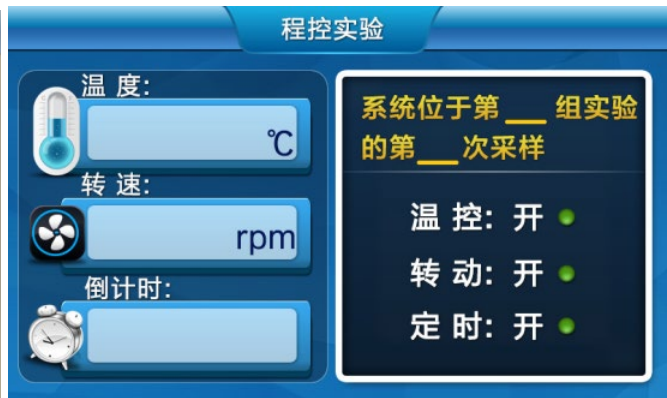
**Automatic warm-up monitoring interface**
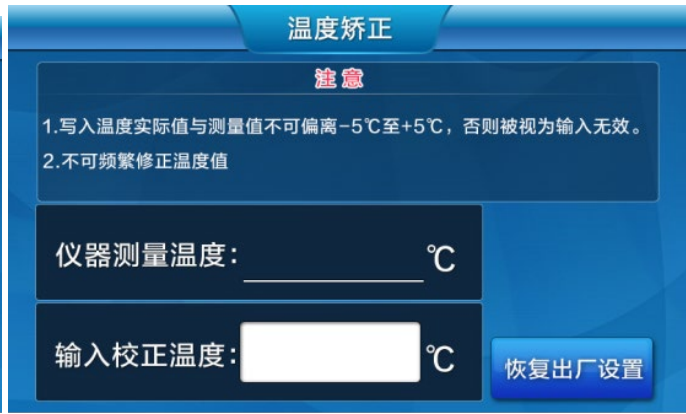


**Correction temperature interface**

# 16.DP-RC-6FT Drug Tablet Dissolution Tester



## Instrument structure and features:

- The water tank is arranged in a single row. It can be installed with 6 baskets or pulp poles and can be installed with 6 vessels.
- Dissolution cup and water tank have no gap design to ensure automatic center positioning. Eliminate system errors.
- Electronic temperature sensor can display and monitor the temperature of each point water bath.
- The time system consisting of a new architecture ensures smooth and accurate timing of the instrument.
- The human-machine interface is friendly. The instrument adopts a large-screen color LCD screen. Users can enjoy intelligent menu-style operation according to the screen prompts. Each operation process gives Chinese character prompts and quantitative indicators.
- With self-test function and automatic protection function, it can give a variety of fault alarm signals.
- The installation position of the water bath can be adjusted and locked, and the vertical axis of the pulp bar, the rotating basket and the dissolution cup is automatically centered.
- The pulp rod, basket and basket made of high quality imported 316L stainless steel material meet the requirements of Chinese Pharmacopoeia.
- The instrument provides "program control test" function to execute 12 sets of preset sampling program combinations, suitable for routine repeatability test.
- The instrument provides "basic test" function to change the test parameters at any time during the test, which is convenient for research tests.
- The instrument provides "automatic warm-up" function to start preheating bath at unattended time, saving manpower and time.

## Applicable standards:

★ Food and Drug Administration, "Guidelines for Mechanical Validation of Drug Dissolution Apparatus".

★ "Pharmacopoeia of the People's Republic of China" 2015 edition.

★ Industry standard "Drug dissolution tester" JB/T20076-2005.

## Main Specifications:

- Level: inclination ≤0.5° (measured in two vertical directions after installation)
- Basket paddle (axis) verticality: ≤0.5° off vertical
- Dissolution cup verticality: ≤1° deviation from the vertical direction
- Coaxiality between the vessel and the basket (paddle) axis: Offset axis ≤1.0mm
- Basket (paddle) shaft swing: swing ≤ 0.3mm
- Basket swing: swing ≤0.5mm
- Depth of basket (paddle): 25±2mm
- Basket (paddle) shaft speed: ±4%mm
- Medium temperature in each vessel: 37°C ± 0.3°C
- Vibration: ≤0.1mi1
- Speed range: 25-250 rpm
- Speed resolution: 1 rev / min
- Water bath temperature range: room temperature -45°C
- Temperature resolution: 0.1°C
- Temperature control accuracy: ≤ ± 0.3°C
- Number of sampling cycles: 1-12 different sampling periods can be preset.
- Sampling cycle time: 1-99 hours per cycle optional, 12 sampling cycles can be counted down in stages, or continuous countdown.
- Large screen Color LCD display, intelligent menu operation.
- A removable electronic temperature sensor monitors the temperature at each point of the water bath.
- Standard: 6 pulp 6 cups
- Power maximum power: 1200W
- With self-test and automatic protection, it can give a variety of fault alarm prompts and secondary overheat protection.
- Dimensions: length * width * height 910mm * 400mm * 510mm

## The following is a set of control interfaces for reference:
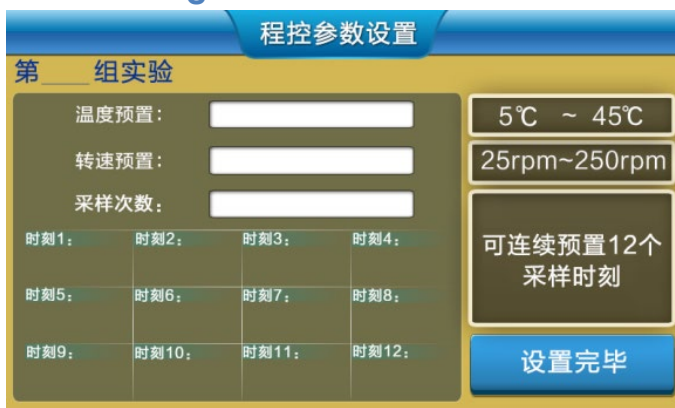


**Program control parameter setting interface**
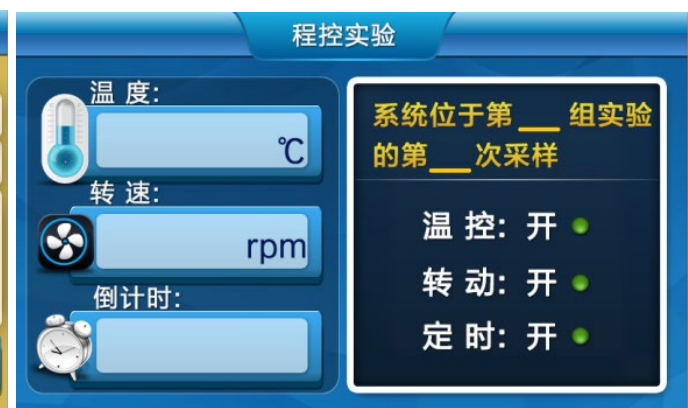
**Program control test real-time interface**

**Automatic warm-up monitoring interface**
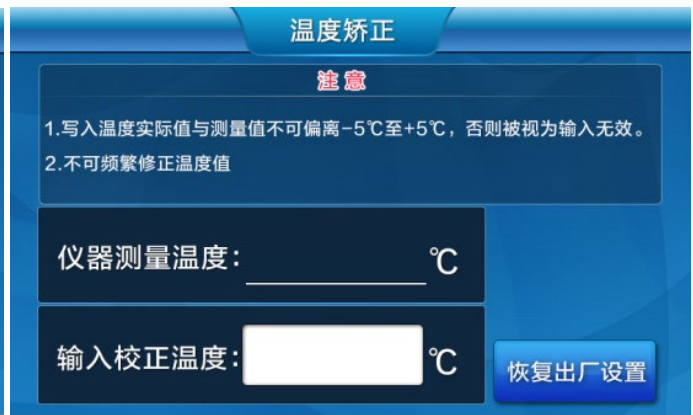


**Correction temperature interface**

# 17.DP-RC-6D drug tablet dissolution tester



The DP-RC-6D drug dissolution tester complies with the 2015 edition of the Chinese Pharmacopoeia and complies with the Food and Drug Administration's Guideline for Mechanical Validation of Drug Dissolution Apparatus. In line with current Chinese GMP regulations. The instrument is in the form of an eight-cup, six-blade built-in electric lift structure. The newly designed electrical control and operating system are powerful, easy to operate and stable in performance.

## Instrument structure and features:

* DP-RC-6D adopts high-resolution color touch screen, which is convenient and quick to operate, precise in control and friendly in human-computer interaction interface. Users can enjoy intelligent operation according to the screen prompts.
* DP-RC-6D dissolution apparatus adopts high head structure design form; the space between the lower edge of the machine head and the water tank is larger than the conventional model. Conducive to drug administration, sampling or rehydration operations, and easy access to the dissolution cup.
* DP-RC-6D provides user management permission function, setting two program entries of administrator account and general account. Enter the general account and perform routine repetitive testing operations. Log in to the administrator account to enter the system through password identification, and perform various parameter settings and actual operations.
* Dissolution cup and water tank have no gap design to ensure automatic center positioning. Eliminate system errors.
* The instrument provides "basic test" and "program test" options. The basic test function can change the test parameters at any time as needed to facilitate research tests. The program test function can perform 16 sets of preset test procedures, which is convenient for routine repeatability tests.
* The instrument provides intelligent temperature correction function, which allows users to perform temperature calibration and calibration through interactive operation easily, simply and reliably.

- The operation monitoring interface of the instrument provides users with 7 real-time data display windows; real-time temperature display, real-time display of speed, cumulative timing display, current waiting sampling times, current "n" sampling time, waiting for the current "n" The remaining time of the sub-sampling (countdown), the current "year, month, day", and "hour, minute, and second" are displayed.
- The instrument provides a standard 232 output interface for an external printer. Print real-time test data such as time, temperature and speed during the test.
- You can choose to provide two kinds of operation interface in Chinese and English, one-button switching.
- The instrument provides timed shutdown and timed automatic warm-up function.
- The instrument provides Chinese characters, numbers and English editing functions. It can provide data such as test number, test name, test parameters and test method for print output.
- With self-test and automatic protection function, it can give a variety of fault alarm prompts and secondary overheat protection.
- DP-RC-6D built-in head electric lifting structure form, not only beautiful in appearance, but also can avoid the rust and corrosion of the lifting machine exposed to the air, and reduce the motion noise.
- Dissolution cup lid that prevents evaporation of the dissolution medium.
- The instrument complies with the 2015 edition of the Chinese Pharmacopoeia
- The instrument complies with the "Guidelines for Mechanical Validation of Drug Dissolution Apparatus"
- Provide 3Q documents and 3Q verification services and physical properties verification (mechanical verification) services of the dissolution apparatus according to user requirements.

## Applicable standards:
Chinese Pharmacopoeia 2015 Edition
Current regulations of China GMP

## Main Specifications:
- Level: inclination ≤0.5° (measured in two vertical directions after installation)
- Basket paddle (axis) verticality: ≤0.5° from the vertical direction
- Dissolution cup verticality: ≤1° deviation from the vertical direction
- Coaxiality of the vessel and the basket (paddle) axis: off-axis ≤1.0mm
- Basket (paddle) shaft swing: swing ≤ 0.3mm
- Basket swing: swing ≤0.5mm
- Basket (paddle) depth: 25 ± 1mm
- Basket (paddle) shaft speed error: <±4%
- Medium temperature in each vessel: 37°C ± 0.3°C
- Vibration: ≤0.1mil
- Speed range: 25-250 rpm
- Speed accuracy resolution: 0.1 rev / min
- Water bath temperature range: 5°C (room temperature) -50°C
- Temperature display resolution: 0.01°C
- Temperature control accuracy: ≤ ± 0.3°C
- Cumulative time: 99 hours, 59 minutes and 59 seconds. (Basic experiment timing)
- Program-controlled sampling times: 1-24 different sampling periods can be preset.

- Sampling cycle time: arbitrarily set for 99 hours and 59 minutes per cycle, 24 sampling cycles can be counted down in stages, or continuous countdown.
- Print interval setting: ≤ 1-60 minutes
- Continuous working time: 100h
- Working noise: <60db
- Working environment: 5-35°C relative humidity; ≤80%
- Electric heating power: 1500W

# 18. DP-RC-8D 8 Cups Drug tablet dissolution tester



## Instrument structure and features:

• DP-RC-8D adopts high-resolution color touch screen, which is convenient and quick to operate, precise in control and friendly in human-computer interaction interface. Users can enjoy intelligent operation according to the screen prompts.

• DP-RC-8D dissolution apparatus adopts high head structure design form; the space between the lower edge of the machine head and the water tank is larger than the conventional model. Conducive to drug administration, sampling or rehydration operations, and easy access to the dissolution cup.

• DP-RC-8D provides user management permission function, setting two program entries of administrator account and general account. Enter the general account and perform routine repetitive testing operations. Log in to the administrator account to enter the system through password identification, and perform various parameter settings and actual operations.

• Dissolution cup and water tank have no gap design to ensure automatic center positioning. Eliminate system errors.

• The instrument provides "basic test" and "program test" options. The basic test function can change the test parameters at any time as needed to facilitate research tests. The program test function can perform 16 sets of preset test procedures, which is convenient for routine repeatability tests.

• The instrument provides intelligent temperature correction function, which allows users to perform temperature calibration and calibration through interactive operation easily, simply and reliably.

• The operation monitoring interface of the instrument provides users with 7 real-time data display windows; real-time temperature display, real-time display of speed, cumulative timing display, current waiting sampling times, current "n" sampling time, waiting for the current "n" The remaining time of the sub-sampling (countdown), the current "year, month, day", and "hour,

minute, and second" are displayed.

- The instrument provides a standard 232 output interface for an external printer. Print real-time test data such as time, temperature and speed during the test.
- The instrument provides two kinds of operation interface in Chinese and English, one button to switch.
- The instrument provides timed shutdown and timed automatic warm-up function.
- The instrument provides Chinese characters, numbers and English editing functions. It can provide data such as test number, test name, test parameters and test method for print output.
- With self-test and automatic protection function, it can give a variety of fault alarm prompts and secondary overheat protection.
- DP-RC-8D built-in head electric lifting structure form, not only beautiful in appearance, but also can avoid the rust and corrosion of the lifting machine exposed to the air, and reduce the motion noise.
- Dissolution cup lid that prevents evaporation of the dissolution medium.
- The instrument complies with the 2015 edition of the Chinese Pharmacopoeia
- The instrument complies with the "Guidelines for Mechanical Validation of Drug Dissolution Apparatus"
- Provide 3Q documents and 3Q verification services and physical properties verification (mechanical verification) services of the dissolution apparatus according to user requirements.

## Applicable standards:

Chinese Pharmacopoeia 2015 Edition
Current regulations of China GMP

## Main Specifications:

- Level: inclination ≤0.5° (measured in two vertical directions after installation)
- Basket paddle (axis) verticality: ≤0.5° off vertical
- Dissolution cup verticality: ≤1° deviation from the vertical direction
- Coaxiality between the vessel and the basket (paddle) axis: Offset axis ≤1.0mm
- Basket (paddle) shaft swing: swing ≤ 0.3mm
- Basket swing: swing ≤0.5mm
- Depth of basket (paddle): 25±1mm
- Basket (paddle) shaft speed error: <±4%
- Medium temperature in each vessel: 37°C ± 0.3°C
- Vibration: ≤0.1mil
- Speed range: 25-250 rpm
- Speed accuracy resolution: 0.1 rev / min
- Water bath temperature range: 5°C (room temperature) -50°C
- Temperature display resolution: 0.01°C
- Temperature control accuracy: ≤ ± 0.3°C
- Cumulative time: 99 hours, 59 minutes and 59 seconds. (Basic experiment timing)
- Program-controlled sampling times: 1-24 different sampling periods can be preset.
- Sampling cycle time: arbitrarily set for 99 hours and 59 minutes per cycle, 24 sampling cycles can be counted down in stages, or continuous countdown.
- Print interval setting: ≤ 1-60 minutes
- Continuous working time: 100h

- Working noise: <60db
- Working environment; 5-35°C relative humidity; ≤80%
- Electric heating power: 1500W

# 19.DP-RC-8DA Drug tablet dissolution tester



## Instrument structure and features:

- DP-RC-8DA adopts industrial grade high resolution color touch screen, 32bit 400MHz MCU, easy to operate, precise control, friendly interface and human interface. Users can enjoy intelligent operation according to the screen prompts.

- DP-RC-8DA dissolution apparatus adopts high head structure design form, and the space between the lower edge of the machine head and the water tank is larger than that of the conventional model. Conducive to drug administration, sampling or rehydration operations, and easy access to the dissolution cup.

- DP-RC-8DA provides user management permission function, setting two program entries of administrator account and general account. Enter the general account and perform routine repetitive testing operations. Log in to the administrator account to enter the system through password identification, and perform various parameter settings and actual operations.

- Dissolution cup and water tank have no gap design to ensure automatic center positioning. Eliminate system errors.

- The instrument provides "basic test" and "program test" options. The basic test function can change the test parameters at any time as needed to facilitate research tests. The program test function can perform 16 sets of preset test procedures, which is convenient for routine repeatability tests.

- The instrument provides intelligent temperature correction function, which allows users to perform temperature calibration and calibration through interactive operation easily, simply and reliably.

- The operation monitoring interface of the instrument provides users with 7 real-time data display windows; real-time temperature display, real-time display of speed, cumulative timing display, current waiting sampling times, current "n" sampling time, waiting for the current "n" The remaining time of the sub-sampling (countdown), the current "year, month, day", and "hour, minute, and second" are displayed.

- The instrument provides USB real-time information download and massive test data storage. Completely save all data for the test process. Support for audit trails. The instrument also provides a standard 232 output interface for an external printer. Print real-time test data such as time, temperature and speed during the test.
- The instrument provides two kinds of operation interface in Chinese and English, one button to switch.
- The instrument provides timed shutdown and timed automatic warm-up function.
- The instrument provides the function of electronic message board. The user can make a message or data backup of the handover message through the Chinese character input interface of the touch screen.
- The instrument provides Chinese characters, numbers and English editing functions. It can be used for USB storage or printout, and provides data such as test number, test name, test parameters, and test methods.
- With self-test and automatic protection function, it can give a variety of fault alarm prompts and secondary overheat protection.
- DP-RC-8DA built-in head electric lifting structure form, not only beautiful in appearance, but also can avoid the rust and corrosion of the lifting machine exposed to the air, and reduce the motion noise.
- Dissolution cup lid that prevents evaporation of the dissolution medium.
- The instrument complies with the 2015 edition of the Chinese Pharmacopoeia
- The instrument complies with the "Guidelines for Mechanical Validation of Drug Dissolution Apparatus"
- Provide 3Q documents and 3Q verification services and physical properties verification (mechanical verification) services of the dissolution apparatus according to user requirements.

## Applicable standards:

Chinese Pharmacopoeia 2015 Edition
Current regulations of China GMP

## Main Specifications:

- Level: inclination ≤0.5° (measured in two vertical directions after installation)
- Basket paddle (axis) verticality: ≤0.5° off vertical
- Dissolution cup verticality: ≤1° deviation from the vertical direction
- Coaxiality of the vessel and the basket (paddle) axis: off-axis ≤1.0mm
- Basket (paddle) shaft swing: swing ≤ 0.3mm
- Basket swing: swing ≤0.5mm
- Depth of basket (paddle): 25±1mm
- Basket (paddle) shaft speed error: <±4%
- Medium temperature in each vessel: 37°C ± 0.3°C
- Vibration: ≤0.1mil
- Speed range: 25-250 rpm
- Speed accuracy resolution: 0.1 rpm
- Water bath temperature range: 5°C (room temperature) -50°C
- Temperature display resolution: 0.01°C
- Temperature control accuracy: ≤±0.3°C
- Cumulative time: 99 hours, 59 minutes and 59 seconds. (Basic experiment timing)

- Program-controlled sampling times: 1-24 different sampling periods can be preset.
- Sampling cycle time: arbitrarily set for 99 hours and 59 minutes per cycle, 24 sampling cycles can be counted down in stages, or continuous countdown.
- USB data download, print interval setting: ≤ 1-60 minutes
- Continuous working time: 100h
- 8 185mm high-dissolution cups can be placed, or they can be placed in the shading-dissolving cup.
- The machine head is electrically lifted. With a new built-in protective lifting structure.
- Working noise: <60db
- Working environment: 5-35°C relative humidity; ≤80%
- Electric heating power: 1300~1500W

# 20.DP-RC-8DF 8 Cups Tablet Drug Dissolution Tester
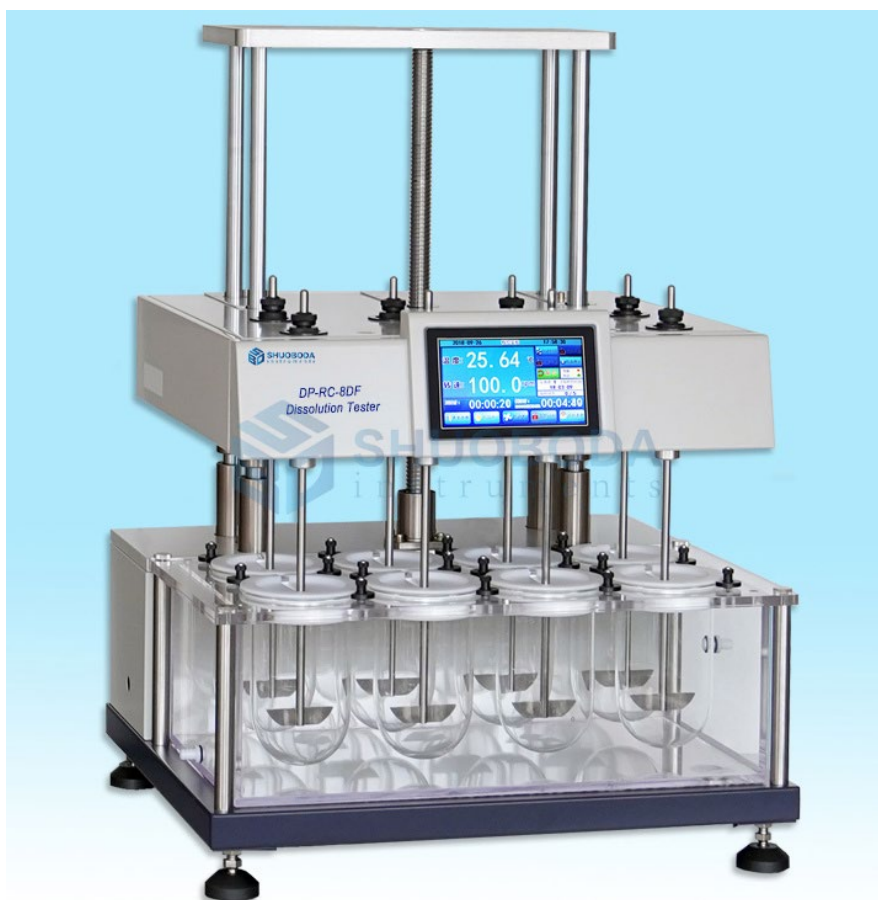


## Instrument structure and features:

- DP-RC-8DF adopts industrial grade high resolution color touch screen, 32bit 400MHz MCU, easy to operate, precise control, friendly interface and human interface. Users can enjoy intelligent operation according to the screen prompts.

- DP-RC-8DF provides user hierarchical management authority function, setting two program entries for administrator account and general account. Enter the general account and perform routine repetitive testing operations. Log in to the administrator account to enter the system through password identification, and perform various parameter settings and actual operations.

- Dissolution cup and water tank have no gap design to ensure automatic center positioning. Eliminate system errors.

- The instrument provides "basic test" and "program test" options. The basic test function can change the test parameters at any time as needed to facilitate research tests. The program test function can perform 16 sets of preset test procedures, which is convenient for routine repeatability tests.

- The instrument provides intelligent temperature correction function, which allows users to perform temperature calibration and calibration through interactive operation easily, simply and reliably.

- The operation monitoring interface of the instrument provides users with 7 real-time data display windows; real-time temperature display, real-time display of speed, cumulative timing display, current waiting sampling times, current "n" sampling time, waiting for the current "n" The remaining time of the sub-sampling (countdown), the current "year, month, day", and "hour, minute, and second" are displayed.

- The instrument provides USB real-time information download and massive test data storage.

Completely save all data for the test process. Support for audit trails. The instrument also provides a standard 232 output interface for an external printer. Print real-time test data such as time, temperature and speed during the test.

- The instrument provides two kinds of operation interface in Chinese and English, one button to switch.
- The instrument provides timed shutdown and timed automatic warm-up function.
- The instrument provides Chinese characters, numbers and English editing functions. It can be used for USB storage or printout, and provides data such as test number, test name, test parameters, and test methods.
- With self-test and automatic protection function, it can give a variety of fault alarm prompts and secondary overheat protection.
- The head is electrically lifted.
- Dissolution cup lid that prevents evaporation of the dissolution medium.
- The instrument complies with the 2015 edition of the Chinese Pharmacopoeia
- The instrument complies with the "Guidelines for Mechanical Validation of Drug Dissolution Apparatus"
- Provide 3Q documents and 3Q verification services and physical properties verification (mechanical verification) services of the dissolution apparatus according to user requirements.

## Applicable standards:
Chinese Pharmacopoeia 2015 Edition
Current regulations of China GMP

## Main Specifications:
- Level: inclination ≤0.5° (measured in two vertical directions after installation)
- Basket paddle (axis) verticality: ≤0.5° off vertical
- Dissolution cup verticality: ≤1° deviation from the vertical direction
- Coaxiality between the vessel and the basket (paddle) axis: Offset axis ≤1.0mm
- Basket (paddle) shaft swing: swing ≤0.2mm
- Basket swing: swing ≤0.5mm
- Depth of basket (paddle): 25±1mm
- Basket (paddle) shaft speed error: <±4%
- Medium temperature in each vessel: 37°C ± 0.3°C
- Vibration: ≤0.1mil
- Speed range: 25-250 rpm
- Speed accuracy resolution: 0.1 rev / min
- Water bath temperature range: 5°C (room temperature) -45°C
- Temperature display resolution: 0.01°C
- Temperature control accuracy: ≤ ± 0.3°C
- Cumulative time: 99 hours, 59 minutes and 59 seconds. (Basic experiment timing)
- Number of sampling cycles: 1-24 different sampling periods can be preset.
- Sampling cycle time: arbitrarily set for 99 hours and 59 minutes per cycle, 24 sampling cycles can be counted down in stages, or continuous countdown.
- USB data download, print interval setting: ≤ 1-60 minutes
- Continuous working time: 100h
- Working noise: <60db

- Working environment; 5-35°C relative humidity; ≤80%
- Electric heating power: 1500W

# 21.DP-RC-12DF Drug tablet dissolution tester



## Instrument structure and features:

- 12 paddles and 14 cups (12 stirrers and 12 rotating baskets, 14 pcs 185mm height dissolution cups)

- DP-RC-12DF adopts industrial grade high resolution color touch screen, 32bit 400MHz MCU, convenient and fast operation, precise control, friendly human-machine interface, users can enjoy intelligent operation according to the screen prompts.

- DP-RC-12DF provides user management permission function, setting two program entries of administrator account and general account. Enter the general account and perform routine repetitive testing operations. Log in to the administrator account to enter the system through password identification, and perform various parameter settings and actual operations.

- The dissolution cup and the water tank have no gap design to ensure automatic center positioning. Eliminate system errors.

- The instrument provides "basic test" and "program test" options. The basic test function can change the test parameters at any time as needed to facilitate research tests. The program test function can execute 16 preset program modes to facilitate routine repeatability tests.

- The instrument provides intelligent temperature correction function, which allows users to perform temperature calibration and calibration through interactive operation easily, simply and reliably.

- The operation monitoring interface of the instrument provides users with 7 real-time data display windows; real-time temperature display, real-time display of speed, cumulative timing display, current waiting sampling times, current "n" sampling time, waiting for the current "n" The remaining time of the sub-sampling (countdown), the current "year, month, day", and "hour, minute, and second" are displayed.

- The instrument provides USB real-time information download and massive test data storage. Completely save all data for the test process. Support for audit trails. The instrument also provides a standard 232 output interface for an external printer. Print real-time test data such as time, temperature and speed during the test.

- The instrument provides two kinds of operation interface in Chinese and English, one button to switch.

- The instrument provides timed shutdown and timed automatic warm-up function.
- The instrument provides Chinese character, number and English editing functions. It can be used for USB storage or printout, and provides data such as test number, test name, test parameters, and test methods.
- With self-test and automatic protection function, it can give a variety of fault alarm prompts and secondary overheat protection.
- The electric lift of the machine head.
- Dissolution cup cover to prevent evaporation of the dissolution medium.
- The vertical axis of the pulp bar, the basket and the vessel is automatically centered.
- The instrument complies with the 2015 edition of the Chinese Pharmacopoeia
- The instrument complies with the "Guidelines for Mechanical Validation of Drug Dissolution Apparatus"
- Provide 3Q documents and 3Q verification services and physical properties verification (mechanical verification) services of the dissolution apparatus according to user requirements.

## Applicable standards:
Chinese Pharmacopoeia 2015 Edition
Current regulations of China GMP

## Main Specifications:
- Level: inclination ≤0.5°C (measured in two vertical directions after installation)
- Basket paddle (axis) verticality: ≤0.5° off vertical
- Dissolution cup verticality: ≤1° deviation from the vertical direction
- Coaxiality between the vessel and the basket (paddle) axis: Offset axis ≤1.0mm
- Basket (paddle) shaft swing: swing ≤ 0.3mm
- Basket swing: swing ≤0.5mm
- Depth of basket (paddle): 25±1mm
- Basket (paddle) shaft speed: ±4%
- Medium temperature in each vessel: 37°C ± 0.3°C
- Vibration: ≤0.1mi1
- Speed range: 25-250 rpm
- Speed accuracy resolution: 0.1 rpm
- Water bath temperature range: 5°C (room temperature) -45°C
- Temperature display resolution: 0.01°C
- Temperature control accuracy: ≤±0.3°C
- Cumulative time: 99 hours, 59 minutes and 59 seconds. (Basic experiment timing)
- Program-controlled sampling times; can preset 1-24 different sampling periods
- Program-controlled sampling period: 99 hours and 59 minutes per cycle can be set arbitrarily, 24 sampling cycles can be counted down in stages, or continuous countdown.
- USB data download and printing interval setting: ≤1-60 minutes
- Continuous working time: 100h
- Working noise: <60db
- working environment; 5-35°C relative humidity; ≤80%
- Electric heating power: 1900W

## 22.DP-RC-14DF Drug tablet dissolution tester



### Instrument structure and features:

- Can install 14 pcs 185mm height dissolution vessels, 14 stirring paddles or rotating baskets
- DP-RC-14DF adopts industrial grade high resolution color touch screen, 32bit 400MHz MCU, convenient and fast operation, precise control, friendly human-machine interface, users can enjoy intelligent operation according to the screen prompts.
- DP-RC-14DF provides user management permission function, setting two program entries of administrator account and general account. Enter the general account and perform routine repetitive testing operations. Log in to the administrator account to enter the system through password identification, and perform various parameter settings and actual operations.
- The dissolution cup and the water tank have no gap design to ensure automatic center positioning. Eliminate system errors.
- The instrument provides "basic test" and "program test" options. The basic test function can change the test parameters at any time as needed to facilitate research tests. The program test function can execute 16 preset program modes to facilitate routine repeatability tests.
- The instrument provides intelligent temperature correction function, which allows users to perform temperature calibration and calibration through interactive operation easily, simply and reliably.
- The operation monitoring interface of the instrument provides users with 7 real-time data display windows; real-time temperature display, real-time display of speed, cumulative timing display, current waiting sampling times, current "n" sampling time, waiting for the current "n" The remaining time of the sub-sampling (countdown), the current "year, month, day", and "hour, minute, and second" are displayed.
- The instrument provides USB real-time information download and massive test data storage. Completely save all data for the test process. Support for audit trails. The instrument also provides a standard 232 output interface for an external printer. Print real-time test data such as time, temperature and speed during the test.
- The instrument provides two kinds of operation interface in Chinese and English, one button to switch.
- The instrument provides timed shutdown and timed automatic warm-up function.

- The instrument provides Chinese character, number and English editing functions. It can be used for USB storage or printout, and provides data such as test number, test name, test parameters, and test methods.
- With self-test and automatic protection function, it can give a variety of fault alarm prompts and secondary overheat protection.
- The electric lift of the machine head.
- Dissolution cup cover to prevent evaporation of the dissolution medium.
- The vertical axis of the pulp bar, the basket and the vessel is automatically centered.
- The instrument complies with the 2015 edition of the Chinese Pharmacopoeia
- The instrument complies with the "Guidelines for Mechanical Validation of Drug Dissolution Apparatus"
- Provide 3Q documents and 3Q verification services and physical properties verification (mechanical verification) services of the dissolution apparatus according to user requirements.

## Applicable standards:

Chinese Pharmacopoeia 2015 Edition
Current regulations of China GMP

## Main Specifications:

| Model | DP-RC-14DF |
|---|---|
| Level | inclination ≤0.5°C (measured in two vertical directions after installation) |
| Basket paddle (axis) verticality | ≤0.5° off vertical |
| Dissolution cup verticality | ≤1° deviation from the vertical direction |
| Coaxiality between the vessel and the basket (paddle) axis | Offset axis ≤1.0mm |
| Basket (paddle) shaft swing | swing ≤ 0.3mm |
| Basket swing | swing ≤0.5mm |
| Depth of basket (paddle) | 25±1mm |
| Basket (paddle) shaft speed | ±4% |
| Medium temperature in each vessel | 37°C ± 0.3°C |
| Vibration | ≤0.1mi1 |
| Speed accuracy resolution | 0.1 rev / min |
| Water bath temperature range | 5°C (room temperature) -45°C |
| Temperature display resolution | 0.01°C |
| Temperature control accuracy | ≤±0.3°C |
| Cumulative time | 99 hours, 59 minutes and 59 seconds. (Basic experiment timing) |
| Program-controlled sampling times | can preset 1-24 different sampling periods |
| Program-controlled sampling period | 99 hours and 59 minutes per cycle can be set arbitrarily, 24 sampling cycles can be counted down in stages, or continuous countdown. |
| USB download and printing interval | ≤1-60 minutes |
| Continuous working time | 100h |
| Working noise | <60db |
| working environment | 5-35°C relative humidity; ≤80% |
| Electric heating power | 1900W |

# 23.DP-RC-6N Intelligent drug dissolution tester



DP-RC-6N Intelligent drug dissolution meter adopts international advanced design concept and manufacturing technology, the shape is smooth and beautiful, the structure is compact and stable, adhering to the advantages of highly reliable performance and simple operation. At the same time, it has the characteristics of "accurate speed", "stable operation" and "low energy consumption". This product is widely used in pharmaceutical factories, medical research, teaching and research and drug inspection departments. The technical indicators are in full compliance with the "Chinese Pharmacopoeia 2015 Edition" and generic drug conformity evaluation standards.

## Product Features

- It is in full compliance with the Chinese Pharmacopoeia 2015 Edition and generic drug conformity evaluation standards.
- Built-in user management, data management system, and long-term storage of test data.
- More accurate integrated circuit design to ensure measurement accuracy.
- More complete, simple and user-friendly operation interface and method.
- 6 baskets or paddles (optional Teflon coating) can be installed, and 6 185mm high-precision vessels can be placed.
- The system preset temperature is 37 °C, and the user can reset the preset temperature at any time.
- High-precision real-time constant temperature control, fast heating, low temperature drift, over temperature protection and temperature calibration.
- More precise temperature control system; more convenient drainage system.
- The speed is more accurate, the operation is stable, the energy consumption is low, and the reliability is high.
- With fault self-diagnosis function; detection data can be exported and printed by USB.
- Optional small cup method (for the third method of dissolution determination).

## Specifications:

| Product model | DP-RC-6N |
|---|---|

| | |
|---|---|
| Stirring paddle swing amplitude | ≤0.5 mm |
| Basket swing range | ≤1.0 mm |
| Deviation between the rotating rod and the vessel axis | ≤2.0 mm |
| Speed setting range | 10-300 rpm/min |
| turn around | Clockwise/counterclockwise |
| Steady speed error | ≤±1 rpm/min |
| Temperature range | Room temperature ~ 45.0 ° C |
| Temperature resolution | 0.1 °C |
| Temperature control accuracy | ≤±0.3 °C |
| Sampling cycle points | Up to 100 different sampling periods |
| Sampling cycle time | 1 minute ~ 99 hours 59 minutes |
| Number of paddles and baskets | 6 each |
| Number of baskets | 6 pcs |
| High precision dissolution cup specifications | Height 185mm, volume 1000ml |
| High-precision vessel number | 6 pcs |
| power supply | AC220V±10%, 50Hz |

# 24.DP-RC-8N Intelligent drug dissolution tester



DP-RC-8N intelligent drug dissolution instrument strictly follows the current Chinese Pharmacopoeia and United States Pharmacopoeia specifications and the "Guiding Principles for Mechanical Validation of Drug Dissolution Apparatus". It is an 8-channel high-performance drug dissolution test device and fully complies with data integrity specification.

## Product Features:

- It has built-in three-level user rights management, audit tracking, and test record management. Through the device interface, test reports can be printed or output via USB.
- Commonly used sample information management for easy retrieval and use.
- High-precision real-time constant temperature control, with dual over-temperature protection and temperature calibration functions.
- There is scheduled heating inside, and the user can set the system to start heating at a specified time.
- Manual synchronized dosing function.
- The dissolution vessel and stirrer are automatically centered.
- Sealed anti-evaporation cover design effectively reduces medium evaporation.
- Use a more convenient water circulation pipeline design and professional medical grade quick connectors.
- IQ/OQ certification documents are provided free of charge.
- Optional small cup method accessories (for the third method of dissolution determination).

## Specifications:

| Product model | DP-RC-8N |
| --- | --- |
| Stirring paddle swing amplitude | ≤0.5 mm |
| Basket swing range | ≤1.0 mm |
| Deviation between the rotating rod and the vessel axis≤1.0 mm | |
| Speed setting range | 10-300 rpm/min |
| turn around | Clockwise/counterclockwise |
| Steady speed error | ≤±1 rpm/min |
| Temperature range | Room temperature ~ 45.0 ° C |

| | |
|---|---|
| Temperature resolution | 0.1 °C |
| Temperature control accuracy | ≤±0.3 °C |
| Sampling cycle points | Up to 100 different sampling periods |
| Sampling cycle time | 1 minute ~ 99 hours 59 minutes |
| Number of paddles and baskets | 8 each |
| Number of baskets | 8 pcs |
| High precision dissolution cup specifications | Height 185mm, volume 1000ml |
| High-precision vessel number | 8 pcs |
| power supply | AC220V±10%, 50Hz |

## 25.DP-RC-8A Intelligent drug dissolution tester



The DP-RC-8A intelligent drug dissolution instrument strictly follows the current Chinese Pharmacopoeia and United States Pharmacopoeia specifications and the "Guiding Principles for Mechanical Validation of Drug Dissolution Apparatus". It is an upgraded and developed 8-channel high-performance drug dissolution test device that fully complies with Data integrity specifications.
Can be matched with DP-RC-Y8A sampling system to form a dissolution automatic sampling system.

### Product Features:

- It has built-in three-level user rights management, audit tracking, and test record management. Through the device interface, test reports can be printed or output via USB.
- Commonly used sample information management for easy retrieval and use
- Commonly used test plans are managed for easy retrieval and use.
- High-precision real-time constant temperature control, independent temperature measurement for each dissolution vessel, dual over-temperature protection and temperature calibration functions.
- There is scheduled heating inside, and the user can set the system to start heating at a specified time.
- Manual and automatic synchronized dosing functions.
- Manual and automatic sampling dual modes.
- Split agitator design, quick replacement.
- The dissolution vessel and stirrer are automatically centered.
- Sealed anti-evaporation cover design effectively reduces medium evaporation.
- Use a more convenient water circulation pipeline design and professional medical grade quick connectors.
- IQ/OQ certification documents are provided free of charge.

### Specifications:

| Product model | DP-RC-8A |
|---|---|
| Dissolution channel | 8 channels |

| | |
|---|---|
| Stirring paddle swing range | ≤0.5mm |
| Basket swing range | ≤1.0mm |
| Deviation of rotary rod and dissolution vessel axis | ≤1.0mm |
| Speed setting range | 10~300RPM |
| Steady speed error | ≤+1% |
| Temperature range | Room temperature~45.0°C |
| Temperature resolution | 0.1°C |
| Temperature control accuracy | ≤±0.3°C |
| Sampling times | ≤100 times |
| Sampling timing time | ≤999 hours, 59 minutes and 59 seconds |
| power supply | AC220V±10% 50Hz |

# 26.DP-RC-12A Intelligent drug dissolution tester
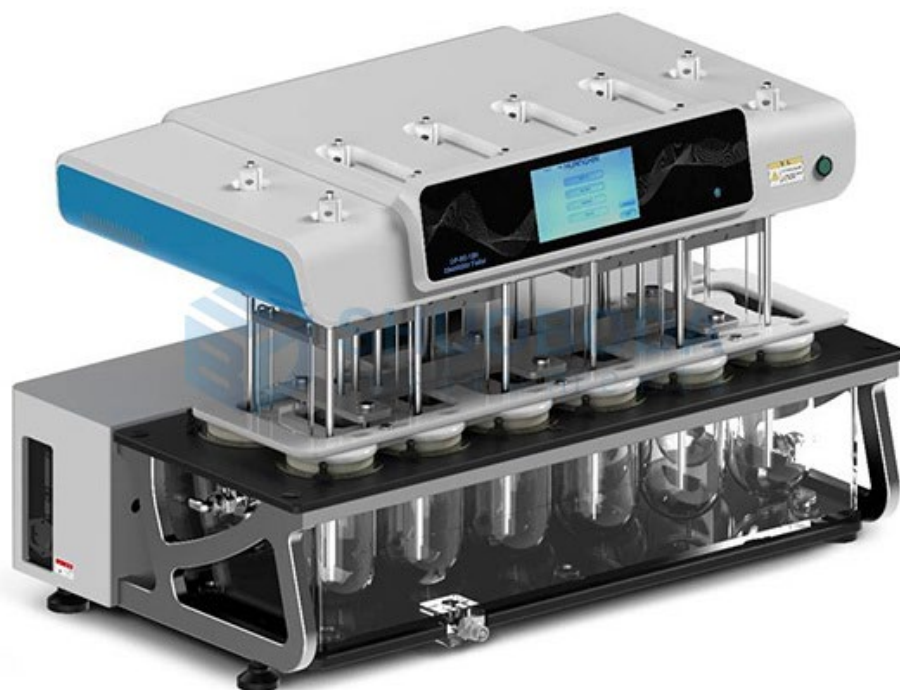
The DP-RC-12A intelligent drug dissolution instrument strictly follows the current Chinese Pharmacopoeia and United States Pharmacopoeia specifications and the "Guiding Principles for Mechanical Validation of Drug Dissolution Apparatus". It is an upgraded and developed 12-channel high-performance drug dissolution test device that fully complies with Data integrity specifications.
Can be equipped with DP-RC-Y12A sampling system to form a dissolution automatic sampling system.

## Product Features:
- It has built-in three-level user rights management, audit tracking, and test record management. Through the device interface, test reports can be printed or output via USB.
- Commonly used sample information management for easy retrieval and use
- Commonly used test plans are managed for easy retrieval and use.
- High-precision real-time constant temperature control, independent temperature measurement for each dissolution vessel, dual over-temperature protection and temperature calibration functions.
- There is scheduled heating inside, and the user can set the system to start heating at a specified time.
- Manual and automatic synchronized dosing functions.
- Manual and automatic sampling dual modes.
- Split agitator design, quick replacement.
- The dissolution vessel and stirrer are automatically centered.
- Sealed anti-evaporation cover design effectively reduces medium evaporation.
- Use a more convenient water circulation pipeline design and professional medical grade quick connectors.

• IQ/OQ certification documents are provided free of charge.

## Specifications:

| Product model | DP-RC-12A |
|---|---|
| Dissolution channel | 12 channels |
| Stirring paddle swing range | ≤0.5mm |
| Basket swing range | ≤1.0mm |
| Deviation of rotary rod and dissolution vessel axis≤1.0mm | |
| Speed setting range | 10~300RPM |
| Steady speed error | ≤+1% |
| Temperature range | Room temperature~45.0°C |
| Temperature resolution | 0.1°C |
| Temperature control accuracy | ≤±0.3°C |
| Sampling times | ≤100 times |
| Sampling timing time | ≤999 hours, 59 minutes and 59 seconds |
| power supply | AC220V±10% 50Hz |

# 27.RCZ-Y8A Automatic dissolution sampling system



The RCZ-Y8A automatic dissolution sampling system is composed of shuoboda DP-RC-8A intelligent drug dissolution tester and DP-RC-Y8A automatic sampling system. It is upgraded and developed in strict compliance with the current "Chinese Pharmacopoeia" and "Guiding Principles for Mechanical Validation of Drug Dissolution Instruments" An 8-channel high-performance drug dissolution testing device that fully complies with data integrity specifications.

## Product Features:

- It has built-in three-level user rights management, audit tracking, and test record management. Through the device interface, test reports can be printed or output via USB.
- Commonly used sample information management for easy retrieval and use.
- Commonly used test plans are managed for easy retrieval and use.
- High-precision real-time constant temperature control, independent temperature measurement for each dissolution vessel, dual over-temperature protection and temperature calibration functions.
- There is scheduled heating inside, and the user can set the system to start heating at a specified time.
- Manual and automatic synchronized dosing functions.
- Manual and automatic sampling dual modes.
- Split agitator design, quick replacement.
- The dissolution vessel and stirrer are automatically centered.
- Sealed anti-evaporation cover design effectively reduces medium evaporation.
- Use a more convenient water circulation pipeline design and professional medical grade quick connectors.
- Use high-precision syringe pump.
- When sampling, the sampling needle enters the dissolution vessel to avoid disturbing the flow.

- The sample is replenished isothermally.
- Secondary filtering can be performed.
- The system automatically rinses the pipeline before sampling and automatically empties the pipeline after sampling.
- IQ/OQ certification documents are provided free of charge.

## Specifications:

| | Product model | RCZ-Y8A |
|---|---|---|
| **Dissolution apparatus parameters** | Dissolution channel | 8 channels |
| | Stirring paddle swing range | ≤0.5mm |
| | Basket swing range | ≤1.0mm |
| | Deviation of rotary rod and dissolution vessel axis | ≤1.0mm |
| | Speed setting range | 10~300RPM |
| | Steady speed error | ≤±1% |
| | Temperature range | Room temperature~45.0°C |
| | Temperature resolution | 0.1°C |
| | Temperature control accuracy | ≤±0.3° C |
| **Sampler parameters** | sampling channel | 8 channels |
| | Sampling times | ≤15 times |
| | Sampling timing time | ≤999 hours, 59 minutes and 59 seconds |
| | Sampling volume, replenishment volume | ≤10ml |
| | Sampling accuracy | ≤±1%, sampling volume 10ml, average value of each channel |
| | Sampling interval | 1 minute for the first time, 2~5 minutes thereafter (depending on the sampling volume) |
| | sample collection bottle | 120 |
| **Power** | | AC220V±10% 50HZ |

# 28.RCZ-Y12A Automatic dissolution sampling system



The RCZ-Y12A automatic dissolution sampling system is composed of shuoboda DP-RC-12A intelligent drug dissolution tester and DP-RC-Y12A automatic sampling system. It is upgraded and developed in strict compliance with the current "Chinese Pharmacopoeia" and "Guiding Principles for Mechanical Validation of Drug Dissolution Instruments" A 12-channel high-performance drug dissolution testing device that fully complies with data integrity specifications.

## Product Features:

- It has built-in three-level user rights management, audit tracking, and test record management. Through the device interface, test reports can be printed or output via USB.
- Commonly used sample information management for easy retrieval and use.
- Commonly used test plans are managed for easy retrieval and use.
- High-precision real-time constant temperature control, independent temperature measurement for each dissolution vessel, dual over-temperature protection and temperature calibration functions.
- There is scheduled heating inside, and the user can set the system to start heating at a specified time.
- Manual and automatic synchronized dosing functions.
- Manual and automatic sampling dual modes.
- Split agitator design, quick replacement.
- The dissolution vessel and stirrer are automatically centered.
- Sealed anti-evaporation cover design effectively reduces medium evaporation.
- Use a more convenient water circulation pipeline design and professional medical grade quick connectors.
- Use high-precision syringe pump.
- When sampling, the sampling needle enters the dissolution vessel to avoid disturbing the flow.
- The sample is replenished isothermally.

- Secondary filtering can be performed.
- The system automatically rinses the pipeline before sampling and automatically empties the pipeline after sampling.
- IQ/OQ certification documents are provided free of charge.

## Specifications:

| | Product model | RCZ-Y12A |
|---|---|---|
| **Dissolution apparatus parameters** | Dissolution channel | 12 channels |
| | Stirring paddle swing range | ≤0.5mm |
| | Basket swing range | ≤1.0mm |
| | Deviation of rotary rod and dissolution vessel axis | ≤1.0mm |
| | Speed setting range | 10~300RPM |
| | Steady speed error | ≤±1% |
| | Temperature range | Room temperature~45.0°C |
| | Temperature resolution | 0.1°C |
| | Temperature control accuracy | ≤±0.3°C |
| **Sampler parameters** | sampling channel | 12 channels |
| | Sampling times | ≤15 times |
| | Sampling timing time | ≤999 hours, 59 minutes and 59 seconds |
| | Sampling volume, replenishment volume | ≤10ml |
| | Sampling accuracy | ≤±1%, sampling volume 10ml, average value of each channel |
| | Sampling interval | 1 minute for the first time, 2~5 minutes thereafter (depending on the sampling volume) |
| | sample collection bottle | 180 |
| **Power** | | AC220V±10% 50HZ |

# Drug Tablet Clarity Tester

## 29.DT-YB-2A/2B Drug Tablet Clarity Tester with Illumination correction



DP-YB-2 Clarity Tester is our company developed inspection apparatus based on People's Republic of China Pharmacopoeia 2010 edition of Appendix "visible foreign matter test" in light of the provisions of law. Meet the subject "Chinese Pharmacopoeia" requirement, the instrument uses a visual light inspection method for all types of injection, infusion and bottled liquid medicine clarity detect.

DP-YB-2A is improved base on DT-YB-2, the operation panel changes into touch buttons, the brand-new circuit design, built-in chip and multi-functional, performance operation easier. Illumination detection using the new chip, the unique external luminance calibration design, the user can self-calibrate the degree of illumination, for the domestic original, which greatly improves the accuracy of the instrument.

DP-YB-2B is made of stainless steel

## Specifications:
* Illuminance range: 1000 ~ 6000LX
* Power: AC220V ± 10% 50HZ
* Lamp: 20W (with fluorescent tubes)
* Total power: 22W
* Time Range: 1 ~ 99S arbitrarily set
* Dimensions: 703mm × 175mm × 513mm
* Instrument Weight: about 12.5Kg

# 30.DT-YB-3A/3B Double Side Drug Tablet clarity tester

DT-YB-3A Double Side Drug Tablet clarity tester is our company developed inspection apparatus based on People's Republic of China Pharmacopoeia 2010 edition of Appendix "visible foreign matter test" in light of the provisions of law. Meet the subject "Chinese Pharmacopoeia" requirement, the instrument uses a visual light inspection method for all types of injection, infusion and bottled liquid medicine clarity detect.

DP-YB-3B is made of 304 stainless steel shell

## Features:

- The traditional timing dial is removed and replaced with chip integrated control and full touch buttons. The service life of the instrument is increased by 3 times.
- Users can calibrate the illumination of the instrument by themselves according to the standard illuminance meter, which means the self-correction function is added
- Increased the length of the bottom whiteboard to enable side-by-side inspection of infusion bags
- The detection lamp is upgraded to a Class A precision pharmaceutical detection lamp, with a service life that is twice as long as that of traditional lamps.
- Added voltage stability control circuit, detection light path system eliminates stroboscopic, adjustable illumination, improves visual resolution and reduces visual fatigue.
- Using a digital electronic illuminance meter, the reading is intuitive, stable and reliable, the detection time can be set arbitrarily, and it has an audible and visual alarm function.

## Technical Parameters:

- This instrument is for double-sided detection
- Illuminance range: 1000-6000LX
- Power supply: AC220V±10% 50Hz
- Power: 22W

- Lamp tube: 20W (dedicated Class A refined three-primary color fluorescent lamp, electronic ballast)
- Time limit range: 1-99S can be set arbitrarily
- Overall dimensions: 703mm×345mm×513mm
- Weight: about 25 Kg

# 31.DT-YB-4A Clarity Tester



The DT-YB-4A Clarity Tester is developed and designed in accordance with the standards of the National Ministry of Health and is suitable for clarity testing of various injections, large infusions and bottled medicinal solutions. The instrument's illumination indicators, black background and detection white reflector all comply with the current "Chinese Pharmacopoeia" regulations. The optical path system is composed of three primary color fluorescent lamps, electronic ballasts and shading devices, which eliminates stroboscopic and adjustable illumination, improves detection resolution and reduces visual fatigue. The readings are intuitive, stable and reliable, the detection time can be set, and it has a prompt function.

## Features:

- The operation is simple and the readings are intuitive and clear.
- High-definition digital tube display.
- Eliminate flicker and adjust the illumination.
- Stable and reliable, the detection time can be set.
- Has prompt function.

## Main Specifications:

| MODEL | DT-YB-4A |
|---|---|
| lamp | 20W (special fluorescent lamp) |
| Illumination range | 1000~4000LX |
| Timing range | 1~99 seconds |
| Overall dimensions (length, width and height) | 68X23X51cm |
| Total power | 30W |
| power supply | AC220V±10% 50Hz |

# Friability Brittleness Tester

## 1. DP-CS-2 Tablet Friability Tester



Friability is an important indicator reflecting tablet quality and has a direct impact on tablet production, packaging, transportation and other aspects. The CS-2 friability tester is a specialized instrument for checking the friability of tablets. It has complete functions, is easy to operate, and its performance indicators fully comply with the relevant requirements of the Chinese Pharmacopoeia and the United States Pharmacopoeia. When the charging drum of the instrument rotates, the sample in the drum continuously rolls, rotates or slides under the action of the baffle, and repeatedly falls from the axis to the drum wall or other samples that have fallen first, so that the sample continuously Friction, vibration and impact occur on the ground. After the specified time, take out the sample to observe the damage and weigh it accurately to calculate the weight loss percentage.

The internal structure is fully mechanical gear transmission, no belts, no loss parts, and long service life.

## Technical Specifications:

- Number of turns of the turntable: 10-990 turns, adjustable (default 100 turns)
- Turntable rotation speed: 25 rpm
- Turntable speed accuracy: ±1 rpm
- Turntable cylinder diameter: φ286mm
- Turntable cylinder depth: 39mm
- Sample falling height: 155.5mm
- Power supply: 220V/50Hz/20W
- Appearance size: 370×300×340mm
- Weight: 10kg

## 2. DP-CS-2A Tablet Friability Tester
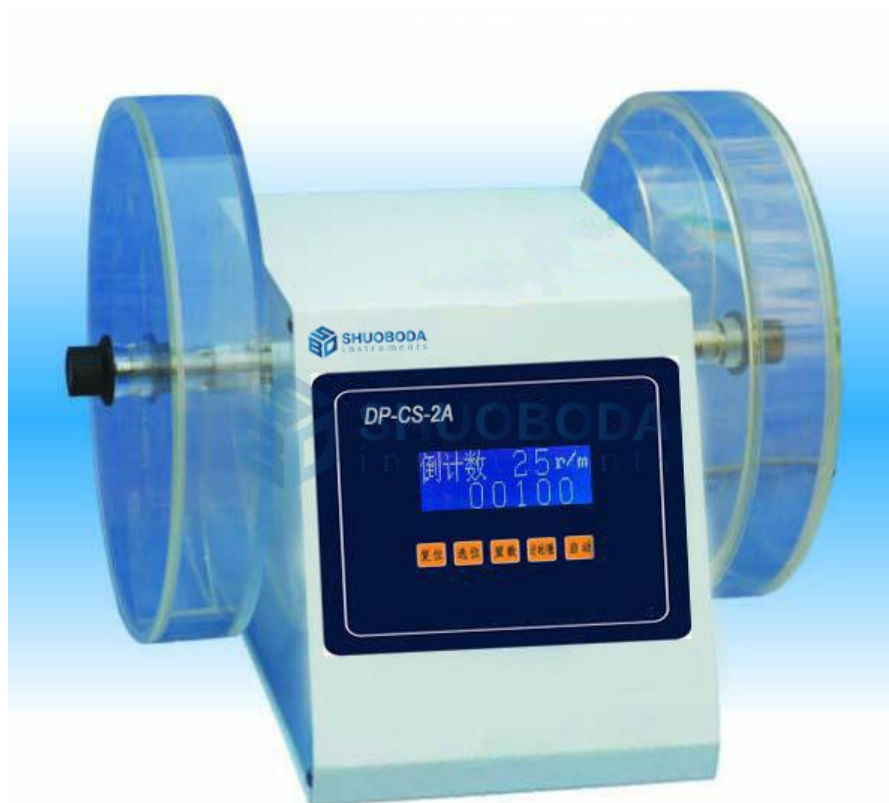


Tablet friability tester DP-CS-2A is a testing instrument used to check the friability of non-coated tablets and other physical strengths, such as crushing strength.

### Performance features:

- Two working modes: timing and counting
- With repeated experiment function
- With pause function
- Full LCD screen display

### Technical Parameters:

- Speed range: 25rpm±1rpm
- With "timing" mode, timing range is 0-9 hours, 59 minutes and 59 seconds, and countdown can be selected
- Features "Count" mode, 0 - 99999 times, with optional countdown
- Drum size: inner diameter approximately 286 mm, depth 39 mm
- Working power supply: 220V±10% V, 50Hz
- Ambient temperature: 5 - 35 ℃
- Relative humidity: less than 80%
- Machine power: 15w

## 3. DP-CS-2A+ Tablet Friability Tester



The DP-CS-2A+ tablet friability tester is composed of a control system, a transmission system, a turntable component, etc., and a precision control system composed of a single-chip microcomputer to centrally control the components; the instrument has a reasonable structure, a high degree of automation, and control It has high progress, high sensitivity, easy operation and reliable work.

The internal motor is a high-precision stepper motor with adjustable speed, accurate rotation, stable and reliable.

### Technical Parameters:

- Speed is adjustable range: 20-90 rpm (default 25 rpm)
- With "timing" mode, timing range is 0-9 hours, 59 minutes and 59 seconds, and countdown can be selected
- With "counting" mode, 0 - 99999 times, with optional countdown
- Drum size: inner diameter approximately 286 mm, depth 39 mm
- Working power supply: 220V±10% V, 50Hz
- Ambient temperature: 5 - 35 ℃
- Relative humidity: less than 80%
- Complete power: 15w

## 4.  DP-CS-2HD Tablet Friability Tester



The DP-CS-2HD friability tester has complete functions and is easy to operate. It can realize fixed number of turns measurement or continuous measurement. The use of DSP high subdivision driver makes the speed more stable, precise and adjustable. Equipped with thermal printer for online printing. Equipped with a large-size color touch screen, the data display is more intuitive and clearer. Its performance indicators comply with the relevant regulations of the Chinese Pharmacopoeia and the United States Pharmacopoeia. It can meet the needs of major pharmaceutical companies, drug testing institutes and drug research units.

### Performance features:

- High resolution DSP driver.
- Wiring redundancy design ensures stable and reliable connection.
- Permission management: three-level permissions.
- Number of accounts: 7.
- Audit trail: 128 entries x 366 days.
- Color touch screen.
- Print online.

### Technical Parameters:

- Speed range: 10-90 rpm (factory default 25 rpm)
- Speed resolution: 0.1 rpm
- Speed accuracy: ±1 rpm
- Counting range: 1-99999 circles
- Chronograph measurement range: 99 hours and 59 minutes
- Timing resolution: 1S
- Timing accuracy: ±1S

# 5. DP-CS-3 Tablet Friability Tester
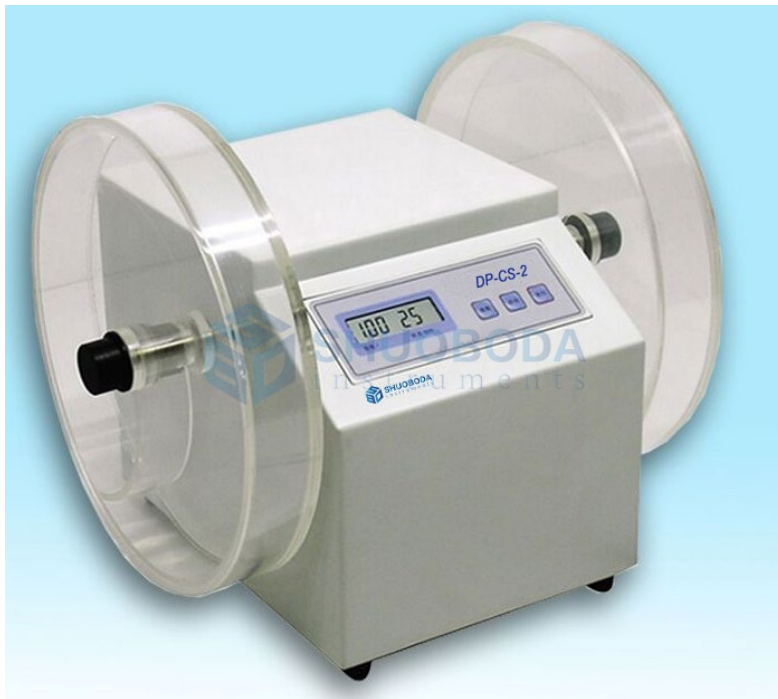


## Introduction:

DP-CS-3 Friability Tester is a drug testing instrument used to measure the mechanical stability, abrasion resistance, and collision resistance of tablets. Tablet friability is an important indicator that reflects the level of tablet production technology and controls tablet quality. Correctly reflecting and testing the friability of tablets has practical guiding significance that cannot be ignored for tablet production and scientific research, and ensuring the accuracy of clinical medication.

## Standards

"Chinese Pharmacopoeia" 2020 Edition

## Main Specifications

- Digital display, double cylinders running synchronously, automatic shutdown
- Pure mechanical transmission ensures accurate wheel speed, smooth rotation, long life, no swing and no noise
- wheel speed: 25 rpm
- Rotation accuracy: 1 rpm
- laps can be preset: 0~99999, counting down. Continuous timing range: >12 hours
- Cylinder inner diameter: 286mm
- Round depth: 39mm
- Sliding height: 156mm
- Dimensions: length*width*height 440mm*310mm*340mm

## 6. DP-CS-4 Intelligent Tablet Friability Detector



### Introduction:

The DP-CS-4 Intelligent Friability Tester is a drug testing instrument used to check the friability of non-coated tablets and test the mechanical stability, abrasion resistance, collision resistance and other physical strengths of tablets, such as crushing strength. The DP-CS-4 intelligent friability tester complies with the 2020 edition of the Chinese Pharmacopoeia and the relevant regulations of the 2020 edition of the national "Measures for the Supervision and Administration of Drug Production".

### Standards

"Chinese Pharmacopoeia" 2020 Edition
"Measures for the Supervision and Administration of Drug Production"

### Main technical specifications

- High-definition color touch screen; interactive control and intelligent management.
- Three-level rights management; password login (username + password).
- Unlimited audit trail records + retrospective display and printing functions
- Quantitative output of sample friability test results: weight loss percentage; record, store, display and print.
- Printing function: can print sample name, logo, number, tester, supervisor, test timing, lap accumulation, real-time speed, weight loss percentage of samples on both sides, test start time, end time, test date...
- Timing range: 0~86400 seconds (arbitrarily set within 24 hours).
- Timing display accuracy: seconds
- Timing mode:
  Basic test; the time is positive, the timing can be paused, and the timing can be continued,

which is convenient for research experiments.

Programmed test; the time is a countdown and can be preset and saved to facilitate routine repeated tests.

- Counting range: 0~99999 circles, set arbitrarily. Can be paused and resumed.
- Counting display accuracy: circles
- Counting mode:

Basic test; the number of circles is positive accumulation, counting can be paused or continued, which is convenient for research tests.

Programmed test; the number of turns decreases in reverse direction and can be preset and saved to facilitate routine repetitive testing.

- Hub speed: 25 rpm
- Pure mechanical transmission ensures smooth wheel rotation, long service life, no swing and no noise
- Cylinder inner diameter: 286mm
- Cylinder depth: 39mm
- Drop height: 156mm
- 17 Power supply: 220V±10% V, 50-60 Hz
- Overall dimensions: length*width*height 440mm*310mm*340mm

# 7. DP-CS-5 Intelligent Tablet Friability Detector



## Advantages

- DP-CS-5C intelligent friability detector is a high-end model that can adjust the speed sleeplessly.
- DP-CS-5C intelligent friability detector is a model that can quantitatively record and output the measured sample weight loss percentage (calculated separately for both wheels)
- Provides editing functions for Chinese characters, English, and numbers.
- Provides standard 232 serial port printing.

## Standards

"Chinese Pharmacopoeia" 2020 Edition
"Measures for the Supervision and Administration of Drug Production"

## Main Specifications

- High-definition color touch screen, interactive control and intelligent management.
- Three-level authority management; password login, (username + password).
- Unlimited audit trail recording + traceability function
- Can quantitatively output sample friability test results: weight loss percentage; realize recording, storage, display and printing.
- Printing function: can print sample name, logo, number, tester, supervisor, test timing, lap accumulation, real-time rotation speed, quantified weight loss percentage of samples on both sides, test start time, end time, test date...
- Timing range: 0~86400 seconds (arbitrarily set within 24 hours).
- Timing mode:
  Basic test: The time is positive, the timing can be paused, and the timing can be continued, which is convenient for research experiments.
  Programmed test: The time is a countdown and can be preset and saved to facilitate routine

repeatable tests.

- Timing display accuracy: seconds
- Counting range: 0~99999 circles, set arbitrarily
- Counting display accuracy: 1 circle
- Counting mode:

  Basic test: The number of circles is accumulated in forward direction, counting can be paused or continued, which is convenient for research tests.

  Programmed test: The number of turns decreases in reverse direction and can be preset and saved to facilitate routine repetitive testing.
- The rotation speed of the wheel hub can be adjusted steplessly: it is convenient for research, expansion and extreme testing of multiple types of samples.
- Speed adjustment range: 10 rpm ~ 80 rpm
- Speed control accuracy: ≤0.01 rpm (guaranteed by closed-loop servo motor)
- Factory default speed: 25 rpm
- Hub rotation direction: can be set clockwise or counterclockwise
- Pure mechanical transmission ensures smooth wheel rotation, long service life, no swing, and no noise.
- Cylinder inner diameter: 286mm
- Cylinder depth: 39mm
- Drop height: 156mm
- Power supply: 220V10%V, 50-60 Hz
- Overall dimensions: length, width and height 440mm*310mm*340mm

## 8. DP-CS-3E Intelligent Tablet Friability Detector



The DP-CS-3E tablet friability tester strictly follows the current "Chinese Pharmacopoeia" specifications and is suitable for tablet manufacturers, drug testing institutes, hospitals and other units to test the stability, abrasion resistance and rolling resistance of pharmaceutical tablets. Collision resistance, as well as other physical strengths (such as crushing strength, etc.), are indispensable in drug testing.

### Features:

- Touch human-computer interaction interface, easy to operate.
- The Chinese and English dual-language operation interface can meet the needs of more users.
- The speed and direction of rotation are adjustable and the number of turns can be set.
- Smooth operation, low energy consumption and strong reliability.
- DC 12V working voltage, using global universal voltage adapter, convenient and reliable.
- IQ/OQ certification documents are provided free.

### Specifications:

| Product model | DP-CS-3E |
|---|---|
| Number of drums | 2 |
| Drum size | Inner diameter approximately 286mm, depth 39mm |
| Default speed | 25RPM |
| Speed setting range | 20~50RPM |
| Default number of laps | 100 laps |
| Turn number setting range | 1~1000 laps |
| Turn Direction | clockwise/counterclockwise |
| power supply | DC12V 3.0A |

# Particle Analyzer

## 1. DP-GF-9D Particle Analyzer



## Performance features:

- Meet the requirements of the Chinese Pharmacopoeia, determination of insoluble particles in packaging materials, USP, BP, EP, JP and GB 8368 infusion set and other medical device standards
- High-performance laser light source and light energy compensation circuit ensure the testing accuracy of various colorless and colored clear samples.
- The sampling slit and pipeline are made of imported 316L and PTFE materials, which can directly detect weak acid and alkali corrosive special solutions such as organic solvents and oil bases.
- Precision three-dimensional robotic arm can fully automatically complete the testing of multiple samples, operate intelligently, and save manpower.
- Adopt dual-channel sampling system, with continuous sampling, high precision and fast speed
- High-performance processor with nearly 10,000 counting channels to achieve high-precision data collection.
- Fully automatic calibration to improve calibration efficiency and ensure accurate and reliable test data.
- The instrument can be calibrated and calibrated according to Chinese Pharmacopoeia, United States Pharmacopoeia, ISO21501 and other standards to meet drug import and export testing requirements.
- Automatic cleaning function to realize fully automatic testing.
- Optional dilution function to meet different testing requirements.
- Equipped with permission management function to ensure data security.
- Optional scanner gun to automatically identify sample numbers.

## Technical Parameters:

- Channel settings: Display 64 particle size channels at the same time, thousands of particle sizes can be customized, with an accuracy of 0.01μm
- Particle size range: 1～500μm (segment selection)

- Counting range: 0～9999999 grains
- Injection volume: 0.2～6500ml (accuracy 0.1ml)
- Injection volume accuracy: <±0.5%
- Injection speed: 5～80ml/min
- Counting accuracy: <±5% of specified value
- Channel resolution: >95%
- Relative standard deviation: RSD<1.5% (standard particles ≥1000 particles/ml)
- Limit detection concentration: 18000 capsules/ml
- Test quantity: 1~20 cups
- Stirring speed: 0~1000 rpm, adjustable in sections.
- Working temperature: 10～40℃
- Power supply: 100-240VAC; 50/60Hz; <80W
- Data output: dot matrix printer, RS232 interface, USB storage interface

## 2. DP-WP-1 particulate pollution testing platform



GB 8368 Disposable Infusion Set The gravity infusion standard makes clear requirements for the detection method of particle contamination of the infusion set. This method requires the preparation of an eluent and then testing the eluent. However, the process of preparing the eluent takes a long time, the operation is cumbersome, labor-intensive, and it is easy to fail to prepare the eluent due to improper human operation.

The DP-WP-1 particulate pollution testing platform can complete the elution, collection, and detection of 10 infusion sets at one time, realizing intelligent one-stop operation. The platform is easy to operate and does not require personnel to wait during the test process, which greatly saves labor costs, improves detection efficiency, and effectively standardizes operating behavior to ensure the consistency of the test process between each infusion set and avoid human factors affecting the authenticity of the test data.

### Main feature

- Meets the detection requirements of particulate contamination of infusion equipment according to GB 8368-2018 standard
- Easy to operate, complete standard testing with one click without personnel participation, saving manpower
- It has customized standard testing functions to meet the testing needs of different users.
- Fully enclosed pipeline to prevent external contamination from affecting test results
- Strong versatility, can be installed with infusion tubes of different types of connectors and puncture devices
- Using Windows operating system, it has strong human-computer interaction capabilities and can

be connected to multiple peripherals for expansion.

- The built-in database has massive storage and can be used for retrieval, analysis and statistics based on a variety of conditions.
- Supports multi-level account management, permission settings, and provides in-software reporting functions to facilitate internal review and processing
- Supports scan input and can choose multiple (portable and desktop) ways to print test reports

## Technical Parameters:

- Test quantity: 1-10 pieces
- Counting channels: 64 channels, thousands of particle sizes can be customized, accuracy 0.1um
- Particle size range: 10~100μm
- Injection volume: 2~500ml
- Injection volume accuracy: ±0.5% (500ml)
- Counting accuracy: ±10% of specified value
- Standard deviation: <2% (standard particle concentration ≥ 1000 particles)
- Limit detection concentration: 10000 capsules/ml
- Power supply: AC220V, 50Hz, 110W

# 3. DP-GF-DS1 Particle Analyzer



## Performance characteristics

- DP-GF-DS1 is an upgraded product based on DP-GF-8JDS. It meets the requirements of many national standards for medical devices such as the 2020 version of the "Chinese Pharmacopoeia", "United States Pharmacopeia", "Standards for Pharmaceutical Packaging Materials" and infusion equipment GB8368-2018.
- High-performance laser light source and light energy compensation circuit ensure the testing accuracy of various colorless and colored clear samples.
- The sampling slit and pipeline are made of imported 316L and PTFE materials, which can directly detect weak acid and alkali corrosive special solutions such as organic solvents and oil matrices.
- Automatic lifting system and bendable sampling needle design, suitable for inspection of irregularly packaged products
- High-performance processor and nearly 10,000 counting channels enable high-precision data collection.
- Fully automatic calibration improves calibration efficiency and ensures accurate and reliable test data.
- The instrument can be calibrated and calibrated according to the 2020 version of the Chinese Pharmacopoeia, the United States Pharmacopoeia, ISO21510 and other standards, and can meet the drug import and export testing requirements.
- The audit trail function ensures the integrity of electronic data, and equipment usage information and current detection data can be retrieved at any time.
- Multi-level authority management ensures data security and meets the requirements for data audit tracking in computerized systems.
- Using Android operating system, humanized interactive experience and simple operation.
- Built-in database with massive storage and data statistical analysis function.
- RS232 and USB interface can be connected to an external computer to store test results and

facilitate data classification and retrieval.

* Visual dust-proof door design prevents environmental contamination of samples.

## Technical Parameters:

* Channel settings: Sixty-four particle size channels, thousands of particle sizes can be customized, accuracy 0.1μm
* Diameter range: 1～500μm
* Counting range: 0~9999999 grains
* Injection volume: 0.2～1000ml (accuracy 0.1ml)
* Injection volume accuracy: <±0.5%
* Injection speed: 5～80ml/min
* Counting accuracy: <specified value ±5%
* Channel resolution: >95%
* Relative standard deviation: RSD<1.5% (standard particles ≥1000 particles/ml)
* Limit detection concentration: 18000 capsules/ml
* Stirring speed: 0~1000 rpm
* Working temperature: 10～40℃
* Power supply: 100-240VAC; 50/60Hz; <80W
* Data output: dot matrix printer, RS232 interface, USB storage interface

# 4. DP-GF-8JDS Particle Analyzer
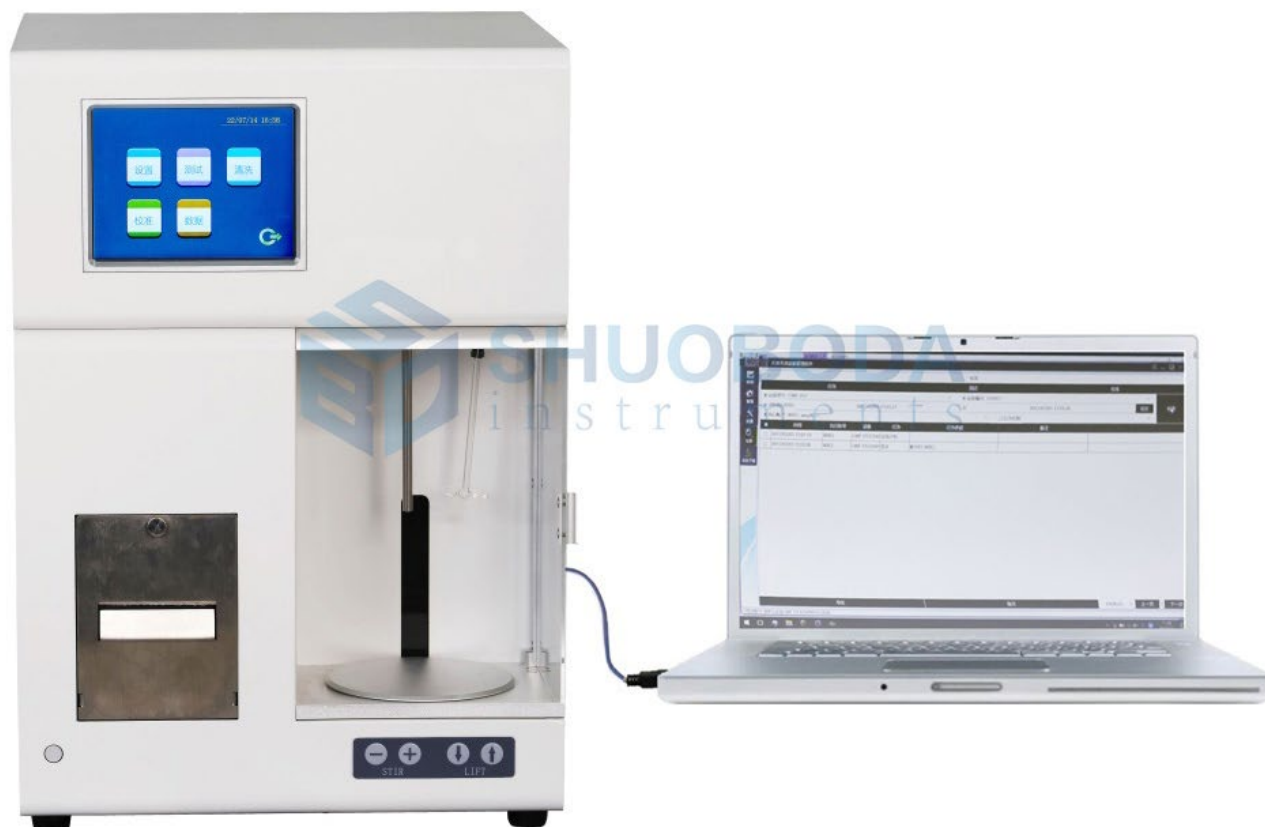
## Main Features:

- It meets the requirements of the 2020 version of the "Chinese Pharmacopoeia", "United States Pharmacopoeia" and infusion equipment GB8368 and other national standards. It has a variety of standard special testing procedures that can directly detect the size and size of insoluble particles in injections, sterile powders and infusion equipment. quantity.

- It adopts high-performance laser light source and light energy compensation circuit to ensure the testing accuracy of various colorless and colored clear samples.

- Using a high-precision and high-pressure syringe pump sampling system, the injection volume and injection speed can be set according to the sample variety and sample viscosity to be tested. The injection accuracy is high, meeting the detection requirements of high-viscosity samples, and is not affected by factors such as location. , to meet the usage requirements in different altitude areas.

- The sampling slit and pipeline are made of imported 316L and PTFE materials, which can directly detect special solutions such as organic solvents and oil matrices.

- The channels can be set arbitrarily, the accuracy can reach 0.1μm, and it has multiple counting methods such as cumulative value and differential value to meet the particle detection requirements in different fields.

- Multiple built-in calibration curves can simultaneously meet the calibration and verification requirements of the instrument in the 2020 version of the Chinese Pharmacopoeia, the United

States Pharmacopoeia, ISO21501 and other standards. It can automatically calibrate the channel and injection volume to ensure that the sampling volume, The accuracy of particle counting and sensor resolution ensures the accuracy of instrument testing.

- There is a special test program for small-volume injections (small injections). The input amount can be set according to the labeled filling volume of small injections, and after the test is completed, it will automatically be converted into the size and quantity of particles per container, in line with the 2020 version of the "Chinese Pharmacopoeia" and international general requirements.

- The rotary paddle frictionless mixer with adjustable speed is used to ensure the uniformity of particle distribution in containers of different shapes, avoid particle contamination caused by friction, and improve the accuracy of data.

- Color touch screen operation, Chinese input, easy and fast operation, powerful functions. Multi-channel test data and histogram information can be displayed simultaneously.

- It has the function of presetting the names of drugs and medical devices. It has a built-in 2020 version of the "Chinese Pharmacopoeia" injection drug name database and the names of medical devices, making the operation easy and fast.

- It has hierarchical (fourth-level) management, data backup and recovery, storage and retrieval functions, and records all device and user actions and behavioral events in real time. Meet the requirements for data audit trails in computerized systems.

## Technical Parameters:

- Channel settings: sixteen channels, thousands of particle sizes can be customized, accuracy 0.1μm
- Test range: 1～500μm
- Technical number range: 0~9999999 pills
- Injection volume: 0.2ml～1000ml (accuracy 0.1ml)
- Injection volume accuracy: <±0.5% (0.2ml～1000ml)
- Syringe volume: 1ml, 2.5ml, 5ml, 10ml, 25ml optional
- Injection speed: 2~100ml/min, set arbitrarily
- Counting accuracy: <specified value ±5%
- Channel resolution: >95%
- Relative standard deviation: RSD<1.5% (standard particles ≥1000 particles/ml)
- Detection concentration: 0~18000 capsules/ml
- Stirring speed: 0~2000 rpm, adjustable propeller type
- Working temperature: 10～40℃
- Power supply: AC220V±10%; 50Hz; <80W
- Data output: large color LCD touch screen; built-in dot matrix micro printer; RS232 interface.

## 5. DP-GF-D1 Particle Analyzer



## Main Features:

- Meet the requirements of national standards of China Pharmacopeia、America Pharmacopeia、Pharmaceutical package standard、infusion devices GB8368.
- Full volume test, simulated clinical infusion process with objective and true data.
- Original packing and completely closed sampling to ensure no pollution in the process.
- It adopts new type of injection pump to ensure continuous sampling, high precision and fast speed.
- The liquid level automatic recognition function can distinguish the end point test without setting the sampling volume.
- The high-performance laser light source and light energy compensation circuit, ensure the test precision of various samples of colorless, colored sample.
- The high-performance processor, nearly 10000 counting channels, realize high precision data acquisition.
- The fully automatic calibration, built-in kinds of calibration curves, meet the requirements of different standards.
- The multi-level rights management for data security.
- Android operating system, built-in huge storage, data statistical analysis function.
- You can access the laboratory operation platform, network management.

## Main Technical Parameters：

- Channel Set up:64 Channel, thousands of different particle sizes can be free set up, accuracy 0.1μm
- Test Range:1~500μm

- Count Range:0~9999999 particle
- Sample Volume:1ml~full volume, accuracy 0.1ml
- Accuracy of Sample Volume: <0.5%
- Sample Speed: 5~80ml/min, arbitrary set up
- Counting accuracy: < required value5%
- Channel Resolution: >95%
- Relative Standard Deviation: RSD<1.5% (standard particle1000 particle/ml)
- The best detection concentration: 0~18000 particle/ml
- Mixing Speed: 0~1000r/min, impeller mixer of adjustable
- Work Temperature:10~40℃
- Power: AC220V10%; 50Hz; <80W
- Data output: Built-in Pin mini-printer; RS232 interface can connect computer; USB saved interface.

# 6. DP-GF-D2 Large capacity particle analyzer

## Main Features:

• Meets the requirements of the 2020 version of the "Chinese Pharmacopoeia", "United States Pharmacopeia", "Standards for Pharmaceutical Packaging Materials" and GB8368 for infusion equipment.

• Full volume test simulates the clinical infusion process, and the data is objective and true.

• The original packaging is fully enclosed for sampling to ensure a pollution-free process.

• A new syringe pump is used to ensure continuous sampling, high precision and fast speed.

• The liquid level automatic recognition function can determine the test end point by itself without setting the sampling volume.

• High-performance laser light source and light energy compensation circuit ensure the testing accuracy of various colorless and colored clear samples.

• High-performance processor and nearly 10,000 counting channels enable high-precision data collection.

• Fully automatic calibration with multiple built-in calibration curves to meet the requirements of different standards.

• Multi-level permission management ensures data security.

• Android operating system, built-in database mass storage, with data statistical analysis function.

• It can be connected to the laboratory operation platform for network management.

## Technical Parameters:

• Channel settings: Sixty-four particle size channels, thousands of particle sizes can be customized, accuracy 0.1μm

• Particle size range: 1～500μm

• Counting range: 0~9999999 grains

• Injection volume: 1ml ~ full volume (accuracy 0.1ml)

• Injection volume accuracy: <±0.5%

• Injection speed: 5～80ml/min

• Counting accuracy: <specified value ±5%

• Channel resolution: >95%

• Relative standard deviation: RSD<1.5% (standard particles ≥1000 particles/ml)

• Limit detection concentration: 18000 capsules/ml

• Stirring speed: 0~1000 rpm

• Working temperature: 10～40℃

• Power supply: 100-240VAC; 50/60Hz; <80W

• Data output: dot matrix printer, RS232 interface, USB storage interface

# 7. DP-GF-A2 Particle Analyzer

## Performance features:

- Meets the requirements of many national standards for medical devices such as GB8368 for infusion equipment, precision infusion equipment, filtration rate, anesthesia equipment, "Pharmaceutical Packaging Material Standards", etc.
- High-performance laser light source and light energy compensation circuit ensure the testing accuracy of various colorless and colored clear samples.
- The injection slit and pipeline are made of imported 316L and PTFE materials, which can directly detect weak acid and alkali corrosive special solutions such as organic solvents and oil matrices.
- Automatic lifting system, suitable for inspection of irregularly packed products.
- High-performance processor and nearly 10,000 counting channels enable high-precision data collection.
- Fully automatic calibration to improve calibration efficiency and ensure accurate and reliable test data.
- Can be calibrated according to Chinese Pharmacopoeia, United States Pharmacopoeia, ISO21510 and other standards to meet drug import and export testing requirements.
- Equipped with multi-level permission management functions to ensure data security.
- Using Android operating system, humanized interactive experience and simple operation.
- Built-in database with massive storage and data statistical analysis function.
- RS232 and USB interface can be connected to an external computer to store test results and facilitate data classification and retrieval.

## Technical Parameters:

- Channel settings: Display 48 particle size channels at the same time, thousands of particle sizes can be customized, with an accuracy of 0.1μm

- Particle size range: 1～500μm (can be selected in sections)
- Counting range: 0～9999999 grains
- Injection volume: 0.2～1000ml (accuracy 0.1ml)
- Injection volume accuracy: <±1%
- Injection speed: 5～150ml/min (arbitrary setting)
- Counting accuracy: <±5% of specified value
- Channel resolution: >95%
- Relative standard deviation: RSD<1.5% (standard particles ≥1000 particles/ml)
- Detection limit concentration: 18000 capsules/ml
- Stirring speed: 0～1000 rpm
- Working temperature: 10～40℃
- Power supply: 100-240VAC; 50/60Hz; <80W
- Data output: dot matrix printer, RS232 interface, USB storage interface

# 8. DP-GF-A1 Particle Analyzer



## Performance features:

- It meets the requirements of many national standards such as the Chinese Pharmacopoeia, the United States Pharmacopeia, and the Standards for Pharmaceutical Packaging Materials.

- High-performance laser light source and light energy compensation circuit ensure the testing accuracy of various colorless and colored clear samples.

- The sample slits and pipelines are made of imported 316L and PTFE materials, which can directly detect weak acid and alkali corrosive special solutions such as organic solvents and oil bases.

- Visual dust-proof door design and automatic lifting system make it safe and convenient to pick up and place samples.

- High-performance processor and nearly 10,000 counting channels enable high-precision data collection.

- Fully automatic calibration improves calibration efficiency and ensures accurate and reliable test data.

- It can be calibrated according to Chinese Pharmacopoeia, United States Pharmacopoeia, ISO21510 and other standards to meet drug import and export testing requirements.

- It has multi-level permission management functions to ensure data security.

- Using Android operating system, humanized interactive experience and simple operation.

- Built-in database with massive storage and data statistical analysis function.

- RS232 and USB interface can be connected to an external computer to store test results and facilitate data classification and retrieval.

## Technical Parameters:

- Channel settings: Display 48 particle size channels at the same time, thousands of particle sizes can be customized, with an accuracy of 0.1μm
- Particle size range: 1～500μm (can be selected in sections)
- Counting range: 0~9999999 grains
- Injection volume: 0.2～1000ml (accuracy 0.1ml)
- Injection volume accuracy: <±0.5%
- Injection speed: 5～80ml/min (arbitrary setting)
- Counting accuracy: <specified value ±5%
- Channel resolution: >95%
- Relative standard deviation: RSD<1.5% (standard particles ≥1000 particles/ml)
- Limit detection concentration: 18000 capsules/ml
- Stirring speed: 0~1000 rpm
- Working temperature: 10～40℃
- Power supply: 100-240VAC; 50/60Hz; <80W
- Data output: dot matrix printer, RS232 interface, USB storage interface

## 9. DP-GF-RS Particle Analyzer



**Performance features:**

- Meets the insoluble particle detection requirements of the Chinese Pharmacopoeia and the United States Pharmacopoeia, and can directly detect the size and quantity of insoluble particles in injections, sterile powders and infusion equipment

- There is a special test program for fat emulsion injection, which meets the requirements of the "Chinese Pharmacopoeia" and "Drug Standards of the Ministry of Health of the People's Republic of China" for fat emulsion injection. The emulsion injection is measured by the photoresist method and the test results are given directly.

- High-performance laser light source and light energy compensation circuit ensure the testing accuracy of various colorless and colored clear samples

- The sampling slit and pipeline are made of imported 316L and PTFE materials, which can directly detect weak acid and alkali corrosive special solutions such as organic solvents and oil matrices.

- High-performance processor and nearly 10,000 counting channels enable high-precision data collection

- Fully automatic calibration to improve calibration efficiency and ensure accuracy and reliability of test data

- The instrument can be calibrated and calibrated according to CHP, USP, ISO21510 and other standards, and can meet the import and export testing requirements of pharmaceuticals.

- The audit trail function ensures the integrity of electronic data, and equipment usage information and current detection data can be retrieved at any time.

- Multi-level authority management ensures data security and meets the requirements for data audit tracking in computerized systems.

- Using Android operating system, humanized interactive experience, simple operation

- Built-in database mass storage, with data statistical analysis function
- RS232 and USB interface can be connected to an external computer to store test results and facilitate data classification and retrieval.

## Technical Parameters:

- Channel settings: Sixty-four particle size channels, thousands of particle sizes can be customized, accuracy 0.1μm
- Particle size range: 1~500μm (sensors can be selected in sections)
- Counting range: 0~9999999 grains
- Injection volume: 0.2～1000ml (accuracy 0.1ml)
- Injection volume accuracy: <±0.5%
- Injection speed: 5～80ml/min
- Counting accuracy: <specified value ±5%
- Channel resolution: >95%
- Relative standard deviation: RSD<1.5% (standard particles ≥1000 particles/ml)
- Limit detection concentration: 18000 capsules/ml
- Stirring speed: 0~1000 rpm
- Working temperature: 10～40℃
- Power supply: 100-240VAC; 50/60Hz; <80W
- Data output: dot matrix printer, RS232 interface, USB storage interface

# Gelatin Gel Strength Test System

## 1. DP-JS-2 Drug Tablet Freezing force meter for Gelatin freezing strength



### System composition:

- 1 set DP-JS-2 Freezing force meter host
- 1 set DP-HW-3A precision constant temperature cold water tank
- 1 set DP-ZL-3 refrigerator
- 16 sets of standard frozen bottles
- 1 set of frozen screen bracket
- 2 sets of insulated water pipe connecting pipe

### Applicable standards:

- Chinese Pharmacopoeia 2015 Edition
- National Standard "Food Additive Gelatin" GB6783-2013
- National standard "medicine gelatin hard capsule" GB13731
- Light industry standard "edible gelatin" QB/T4087-2010
- in line with current Chinese GMP regulations

### System structure and features:

- The DP-JS-2 chassis adopts a new structure of the new chassis, the horizontal adjustment function is added to the ground, and the new 3-stage damping structure eliminates the measurement error caused by the mechanical transmission.
- High-brightness digital tube display, simple, practical, cost-effective models.
- Use high-speed microprocessors to ensure your measurements are faster, more accurate, and more reliable.
- Provide 5 sampling speeds; 0.1mm/s 0.2mm/s 0.5mm/s 1mm/s 2mm/s
- Provides 3 sampling modes; single-step measurement mode, cyclic measurement mode and hold measurement mode.

- Provide 2 kinds of sampling result selection; final value peak
- The sampling depth can be preset.
- Automatic error overrun protection.
- Sensor over-range protection.
- The user can correct the measurement accuracy by himself. (with standard weight)
- The user can correct the depth travel error by himself. (using standard dial gauge)
- System set of 3 sets (Freezing force meter host, precision constant temperature cold water tank (including monitoring), refrigerator)
- Automatic fault diagnosis alarm, automatic overrange protection, automatic error correction prompt.

## Main Specifications:

- High-speed measurement time computer dynamic monitoring probe presses into the rubber surface depth error
- Test range: 5-1000g
- Test accuracy: ≤±0.5%
- Reading resolution: 1g
- Repeat measurement error: ≤±3g
- Effective stroke: 1-75mm
- Measuring stroke error: ≤±0.1mm
- Measured unit: Bioom g
- Temperature control accuracy: ≤10°C±0.1°C
- Temperature control range: 5°C -65°C
- Cooling time: 20°C~10°C < 20min
- Refrigerant: Environmentally friendly R406a
- Freezing force meter model: DP-JS-2
- Dimensions: length * width * height (mm) 285 * 270 * 500
- Box size: length 440mm*390mm* height 560mm
- Weight: 14.5Kg
- Gross weight: 17Kg
- Frozen bottle: Capacity=150ml Internal diameter=59mm Height=85mm
- Precision constant temperature monitoring cold water tank: DP-HW-3A (high quality thick stainless steel inner tank, long service life)
- Dimensions: length * width * height (mm) 400 * 430 * 380
- Box size: length 585mm* 490mm* height 455mm
- Weight: 22Kg
- Gross weight: 25Kg
- Refrigerator model: DP-ZL-3 (high quality thick stainless-steel liner, long service life)
- Dimensions: length * width * height (mm) 540 * 400 * 310
- Box size: length 700mm* 500mm* height 375mm
- Weight: 27Kg
- Gross weight: 30Kg

## 2. DP-JS-4Pro Drug Tablet Freezing force meter for Gelatin freezing strength testing



### Introduction

DP-JS-4Pro freezing strength meter is a high-precision, professional-grade gelatin freezing strength measuring instrument. The freezing strength measurement accuracy is 0.001 grams, and the deformation displacement accuracy is 0.001mm. It is the highest accuracy level of domestic gel measuring instruments at present. The dynamic mechanical architecture of DP-JS-4Pro: the imported precision motion module is preferably configured with a high-precision closed-loop servo motor to ensure displacement accuracy. The high configuration of core components ensures the high quality of the comprehensive performance of DP-JS-4Pro. The measurement accuracy, reproducibility, and consistency of measurement results in different detection modes and different detection speeds all prove the value of this instrument: it can provide professional users with authoritative, trustworthy, and verifiable measurement results.

### System Configuration

- DP-JS-4Pro freezing force meter (real-time display: real-time measurement characteristic curve of load force, displacement and time function) 1 unit
- Cylindrical probe: diameter 12.700±0.010mm 1 pc
- DP-HW-3A precision constant temperature cold water tank (providing a gel environment of 10℃ ±0.1℃) (food grade thickened stainless steel liner) 1 set
- DP-ZL-3A Refrigerator (can work continuously for more than 72 hours) (stainless steel evaporator) 1 set
- Freeze bottle (capacity=150ml, inner diameter=59mm, height=85mm) 16 sets
- Disc retractable abutment (optional multi-purpose clamp platform) 1 set

### Applicable standards:

- "Chinese Pharmacopoeia" 2020 Edition

- Comply with current Chinese GMP regulations.
- National Standard "Food Additive Gelatin" GB6783-2013
- National Standard "Medicinal Gelatin Hard Capsules" GB13731
- Light industry standard "Edible Gelatin" QB/T4087-2010

## Main technical indicators and characteristics

- Instrument screen display characteristics: 7-inch high-definition touch screen, interactive intelligent control. Switch between Chinese and English operating systems with one click
- Real-time accurate mapping: measurement characteristic curves of freezing force, displacement and time functions. (The curve contains a scale and automatically zooms in and out. It visually describes the freezing strength, brittleness, viscosity, toughness, work, creep recovery characteristics, stress relaxation characteristics and other physical properties of the sample)
- Quickly, arbitrarily and accurately set the starting point of probe measurement. (The only model among domestic cryogenic force meters that has this function)
- Dynamic mechanical architecture: imported original precision motion module + high-precision closed-loop same-service motor to ensure displacement accuracy of 0.001mm (real-time display).
- Instrument safety settings: emergency braking + upper and lower limit control + force sensing element overload protection
- System authority management: multi-level, multi-user. (Login with username + password).
- Audit trail records: can be queried by date or entry, and can be printed selectively or in full
- Measurement data storage: USB mass storage and export: automatically record all measurement processes and results
- Value expansion interface: dairy product testing module, carrageenan testing module, codran gum testing module, surimi gel testing module...
- Can be preset: trigger point, deformation amount, pre-test rate, mid-test rate, post-test rate, probe starting zero point, creep characteristic measurement holding time cycle test number.
- Freeze intensity measurement accuracy verification measurement: The instrument is equipped with a standard measurement operation interface; it provides 5 continuous standard sample detection, automatically reads and displays the measurement data, and directly determines whether it is qualified or out of tolerance. Verification measurement results are printed in real time and stored synchronously via USB.
- Deformation displacement accuracy and accuracy verification measurement: The instrument comes standard with a 1~10mm displacement accuracy measurement operation interface, which automatically reads and displays measurement data and directly determines whether it is qualified or out of tolerance. Verification measurement results are printed in real time and stored synchronously via USB.
- Automatic calibration accuracy function: If the calibration result determines that a certain item is out of tolerance, you can press the automatic calibration correction key to automatically calibrate the accuracy and save it (calibration accuracy 0.01 grams).
- Freezing force measurement range: 0~2000g (optional 0~500g, 0~1000g, 0~2000g, 0~5000g)
- Measurement accuracy: 0.001g (real-time display)
- Deformation displacement range: 0~120mm
- Displacement accuracy: 0.001mm (real-time display of the depth of the probe pressed into the rubber surface) 3.18 Measurement speed range: 0.1mm/s~15mm/s (arbitrarily set according to detection needs)

- Speed analysis accuracy: 0.1mm/s
- Bloom-freezing strength test: real-time peak load, peak deformation, final load, work, cumulative standard deviation.
- Normal-single compression test: real-time load force, brittleness, toughness, hardness, recovery force, adhesion.
- Hold Time-Compression Hold Test: Test the end change recovery characteristics of the sample, peak load, final value load, and real-time countdown.
- Cycle Count-multiple compression tests: real-time maximum value, minimum value, average value, last peak value, real-time standard deviation, remaining times
- Measurement unit (gram/N) can be switched with one click
- Output: RS232 serial printing interface, USB serial port (mass detection data storage)

# 3. DP-JS-3C Drug Tablet Freezing force meter for Gelatin freezing strength testing



## Introduction

DP-JS-3C Freezing Strength Meter is a precision-grade gelatin freezing strength measuring instrument. It has been in production and sales for 17 years and is a mainstream classic model. The instrument comes standard with a 5-inch high-definition touch screen, the freezing intensity measurement accuracy is 0.1 grams, and it provides hierarchical authority management (password login). Provides automatic zero-point drift correction equipped with freezing intensity measurement accuracy verification metrology procedures, and deformation displacement measurement accuracy verification metrology procedures. Optional USB mass access function is available.

## System Configuration

- DP-JS-3C freezing force meter (measuring accuracy 0.1 grams) 1set
- Cylindrical probe: diameter 12.700±0.010mm (clear corner of bottom edge) 1pc
- DP-HW-3A precision constant temperature cold water tank (food grade thickened stainless steel liner) 1set

  Temperature control range: 3°C~65°C

  Temperature control accuracy: ≤±0.1C

  Can display set temperature and real-time temperature
- DP-ZL-3 Refrigerator (can work continuously for more than 72 hours) (stainless steel evaporator) 1set
- Freezing bottle (capacity=150ml inner diameter=59mm height=85mm) 16 pcs
- Disc retractable abutment 1set

## Applicable standards:

- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations.
- National Standard "Food Additive Gelatin" GB6783-2013
- National Standard "Medicinal Gelatin Hard Capsules" GB13731
- Light industry standard "Edible Gelatin" QB/T4087-2010

## Main technical indicators and characteristics

- Instrument screen display features: 5-inch high-definition touch screen, interactive intelligent control.
- System authority management: multi-level, multi-user. (Login with username + password)
- Easy to control, just press the "start button", and all parameters such as peak Bloomg, final value Bloomg, mean Bloomg, penetration depth, standard deviation, and cumulative number of measurements will be displayed.
- In order to adapt to different sample properties, the system provides a full range of preset measurement parameters: trigger point, deformation amount, measurement rate, creep characteristic retention time, number of continuous cycle measurements, etc.
- Upper and lower limit distance protection, force sensing element overload protection, measurement data protection
- Freeze intensity measurement accuracy verification measurement: The instrument is equipped with a standard measurement operation interface, which provides 5 continuous standard sample detection, automatically reads and displays measurement data, and directly determines whether it is qualified or out of tolerance. Verification measurement results are printed in real time.
- The instrument has an automatic correction function for freezing intensity measurement accuracy deviation. Calibration accuracy is 0.001g.
- Deformation displacement accuracy and accuracy verification measurement: The instrument comes standard with a 1~10mm displacement accuracy measurement operation interface, which automatically reads and displays the measurement data to directly determine whether it is qualified or out of tolerance. Verification measurement results are printed in real time.
- The instrument is equipped with high-quality imported shock-absorbing coupling structure, and the measurement operation is vibration-free and noise-free.
- The instrument provides an interactive interface for quick probe replacement, and the probe is automatically zeroed after replacement. (Supports agar, carrageenan testing, unit switching/cm2
- Freezing force analysis accuracy: 0.1g
- Freezing force measurement range: 0~2000 Bloom g
- Freezing force measurement accuracy: $\leqslant \pm 0.1\%$
- Deformation displacement range (arbitrarily set sampling depth): 0~75mm
- Displacement analysis accuracy: 0.01mm (real-time display)
- Conventional measurement rate displacement accuracy error: $\leqslant \pm 0.05$mm
- High-speed measurement rate displacement accuracy error: $\leqslant \pm 0.1$mm
- Measuring speed selection range: 0.1mm/s~5mm/s (stepless speed adjustment can make the measurement process easier and the measurement results more accurate)
- Speed analysis accuracy: 0.1mm/s
- Speed travel error: $\leqslant 0.1\%$ (set speed)

- The instrument provides six test modes:

  Bloom-freezing strength test: real-time peak load, peak deformation, final load, peak average, standard deviation, cumulative number of measurements.

  Normal-single compression test: real-time load force, positive peak value, peak deformation amount, negative peak value, final value load, duration

  Hold Time compression holding test: peak load, peak deformation, final value load, real-time countdown

  Cycle Count-Multiple compression tests: maximum peak, minimum peak, peak average, last peak, standard deviation, remaining times

  Freeze intensity measurement accuracy verification measurement: The instrument automatically measures the measurement accuracy and automatically determines whether it is out of tolerance. If there is any deviation, it can be automatically corrected by the system.

  Deformation displacement accuracy precision verification measurement: can measure 0~10mm shape and position error at conventional measurement speed, can measure 0~10mm shape and position error at high-speed measurement speed, automatically determine whether it is out of tolerance, automatically store and print measurement results

- Measurement units (Bloom g, grams, N, g/cm2) can be switched with one click.

- Output: RS232 serial printing interface. (Optional USB access, optional measurement result audit tracking module)

# 4. DP-JS-3Pro Drug Tablet Freezing force meter for Gelatin freezing strength testing

## Introduction

DP-JS-3Pro freezing strength meter is a cost-effective, professional grade gelatin freezing strength measuring instrument. The load force measurement accuracy is 0.01 grams, and the deformation displacement structural accuracy is 0.001mm. The main mechanical transmission structure of DP-JS-3Pro adopts precision motion module, which has high precision, fast speed, no noise and good stability, ensuring the accuracy and reproducibility of measurement results. The main control circuit of DP-JS-3Pro uses an embedded ARM'Cortex-M7 core processor and a super-performance mechanical A/D module to ensure high-speed acquisition and lossless processing of measurement data.

## System Configuration

- DP-JS-3PRO freezing force meter (measurement accuracy 0.01g) 1 set
- Cylindrical probe: diameter 12.700±0.010mm 1 pc
- DP-HW-3A precision constant temperature cold water tank (temperature range 3°C~70°C, temperature control accuracy ±0.1) (food grade thickened stainless steel liner) 1 set
- DP-ZL-3A Refrigerator (can work continuously for more than 72 hours) (stainless steel evaporator) 1 set
- Freeze bottle (capacity=150ml, inner diameter=59mm, height=85mm) 16 sets
- Disc retractable abutment 1 set

## Applicable standards:

- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations.

- National Standard "Food Additive Gelatin" GB6783-2013
- National Standard "Medicinal Gelatin Hard Capsules" GB13731
- Light industry standard "Edible Gelatin" QB/T4087-2010

## Technical indicators and characteristics

- Instrument screen display features: 5-inch high-definition touch screen, interactive intelligent control. One-click switching between Chinese and English operating interfaces
- Real-time accurate mapping: measurement characteristic curves of freezing force, displacement and time functions. (The curve contains a scale and automatically zooms in and out. It visually describes the freezing strength, brittleness, viscosity, toughness, work, creep recovery characteristics, stress relaxation characteristics and other physical properties of the sample)
- Dynamic mechanical architecture: imported precision motion module, deformation displacement accuracy 0.001mm. Ensure mobile measurement accuracy.
- Instrument safety settings: emergency braking + upper and lower limit control + force sensing element overload protection
- The system has permission management + audit tracking functions, and can trace back or print all historical measurement data records.
- The instrument provides USB mass access function, which is convenient for storage or export, and traceability of measurement data or the instrument's own precision measurement data.
- The instrument provides a comprehensive measurement preset solution: the force sensing element trigger point, probe deformation amount, measurement rate (without range adjustment), number of repeated tests, creep characteristic retention time, and units between grams ~ Newton ~ Bloom g can be preset Conversion, printing parameter editing, switching between Chinese and English
- The instrument provides an optional USB mass access function to facilitate saving and tracing measurement data or the instrument's own precision measurement data.
- Freeze intensity measurement accuracy verification measurement: The instrument is equipped with a standard measurement operation interface; it provides 5 continuous standard sample detection, automatically reads and displays the measurement data, and directly determines whether it is qualified or out of tolerance. Verification measurement results are printed in real time and stored synchronously via USB.
- Deformation displacement accuracy and accuracy verification measurement: The instrument comes standard with a 1~10mm displacement accuracy measurement operation interface, which automatically reads and displays the measurement data and directly determines whether it is qualified or out of tolerance. Verification measurement results are printed in real time and stored synchronously via USB
- Automatic calibration accuracy function: If the calibration result determines that a certain item is out of tolerance, you can press the automatic calibration correction key to automatically calibrate the accuracy and save it (calibration accuracy 0.01 grams).
- Freezing force measurement range: 0~2000g
- Measurement accuracy: 0.01g (real-time display)
- Deformation displacement range: 0~110mm
- Displacement accuracy: 0.001mm (real-time display)
- Measuring speed range: 0.1mm/s~10mm/s
- Speed analysis accuracy: 01mm/s

- Bloom g-freezing strength test: real-time display of peak freezing strength, peak deformation, final freezing strength, work (toughness), and cumulative standard deviation.
- Normal-single compression test: real-time load force, brittleness, toughness, hardness, recovery force, adhesion Hold Time-compression retention test: end-change recovery characteristic test, peak load, final value load, real-time countdown
- Cycle Count - multiple compression tests: real-time maximum value, minimum value, average value, last peak value, real-time standard deviation, remaining times.
- Measurement unit (gram/N/Bloom g) one-click switching
- Output: RS232 serial printing interface, USB serial port

# 5. DP-JS-4U Drug Tablet Freezing force meter for Gelatin freezing strength testing



## Introduction

DP-JS-4U freezing strength meter is a professional grade gelatin freezing strength measuring instrument. It has been in production and sales for 13 years and is a classic model with a large number of users. DP-JS-4U is already the Nth upgrade of this model. The upgraded measurement accuracy is 0.01 grams. Real-time measurement characteristic curves of freezing force, displacement and time functions have been added to accurately display the freezing strength, brittleness, viscosity, toughness, creep recovery characteristics, stress relaxation characteristics and other physical property indicators of gelatin samples.

## System Configuration

- DP-JS-4U freezing force meter (real-time display: real-time measurement characteristic curve of load force displacement and time function) 1 set
- Cylindrical probe: diameter 12.700±0.010mm 1 piece
- DP-HW-3A precision constant temperature cold water tank (temperature range 3°C~70°C, accuracy ±0.1°C) (food grade thickened stainless steel liner) 1 set
- DP-ZL-3 refrigerator (can work continuously for more than 72 hours, 20°C~10°C1 2min) (stainless steel evaporator) 1 set
- Freeze bottle (capacity=150ml inner diameter=59mm height=85mm) 16 sets
- Disc retractable base 1 set

## Applicable standards:

- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations.
- National Standard "Food Additive Gelatin" GB6783-2013
- National Standard "Medicinal Gelatin Hard Capsules" GB13731
- Light industry standard "Edible Gelatin" QB/T4087-2010

## Technical indicators and characteristics

- Instrument screen display features: 7-inch high-definition touch screen, interactive intelligent control. Switch between Chinese and English operating systems with one click.
- Real-time accurate mapping: measurement characteristic curves of freezing force, displacement and time functions. (The curve contains a scale and automatically zooms in and out. It visually describes the freezing strength, brittleness, viscosity, toughness, work, creep recovery characteristics, stress relaxation characteristics and other physical properties of the sample)
- System authority management: three levels, multiple users. (Login with username + password)
- Audit trail records can be queried by date or entry, and can be printed selectively or in full.
- Value expansion interface: dairy product testing module, carrageenan testing module
- Can be preset: trigger point, deformation amount, measurement rate, creep characteristic measurement holding time, number of cycle tests
- Instrument safety settings: upper and lower limit control + force sensing element overload protection.
- Freeze intensity measurement accuracy verification measurement: The instrument is equipped with a standard measurement operation interface, which provides 5 continuous standard sample detection, automatically reads and displays measurement data, and directly determines whether it is qualified or out of tolerance. Verification measurement results are printed in real time.
- Deformation displacement accuracy and accuracy verification measurement: The instrument comes standard with a 1~10mm displacement accuracy measurement operation interface, which automatically reads and displays measurement data and directly determines whether it is qualified or out of tolerance. Verification measurement results are printed in real time.
- Automatic calibration accuracy function: If the calibration result determines that a certain item is out of tolerance, you can press the automatic calibration correction key to automatically calibrate the accuracy and save it (calibration accuracy 0.01g)
- Freezing force measurement range: 0~2000g
- Measurement and analysis accuracy: 0.01g
- Deformation displacement range: 0~75mm
- Displacement analysis accuracy: 0.01mm
- Measuring speed range: 01mm/s~10mm/s
- Speed analysis accuracy: 0.1mm/s
- Bloom-freezing strength test: real-time peak load, peak deformation, final load, work, cumulative standard deviation.
- Normal-single compression test: real-time load force, brittleness, toughness, hardness, recovery force, adhesion
- Hold Time-Compression hold test: Creep recovery characteristic test, peak load, final load, real-time countdown
- Cycle Count - multiple compression tests: real-time maximum value, minimum value, average

value, last peak value, real-time standard deviation remaining times.

- Equipped with extended function module interface (for example: carrageenan, cordran gum, surimi gel...)
- Measurement unit (gram/N) can be switched with one click
- Output: RS232 serial printing (USB storage export module can be added)

# 6. DP-JS-2C Drug Tablet Freezing force meter for Gelatin freezing strength testing



## Introduction

DP-JS-2C Freezing force meter is a mainstream classic model. The measurement accuracy is 0.1g. The display screen is upgraded to a high-definition touch screen to provide automatic zero-point drift correction. For the first time, it is equipped with a freezing intensity measurement accuracy verification measurement program (measurable and correctable).

## System Configuration

- DP-JS-2C freezing force meter (accuracy 0.1g) 1 set
- Cylindrical probe: diameter 12.700±0.010mm (bottom edge clear corner) 1 set
- DP-HW-3A precision constant temperature cold water tank (food grade thickened stainless steel liner) 1 set
  Temperature range: 3°C ~65°C
  Temperature accuracy: <±0.1°C
  Can display set temperature and real-time temperature
- DP-ZL-3A Refrigerator (can work continuously for more than 72 hours) (stainless steel evaporator)
- Freeze bottle (capacity=150ml inner diameter=59mm height=85mm) 16 sets
- Disc retractable abutment 1 set

## Applicable standards:

- ''Chinese Pharmacopoeia'' 2020 Edition

- Comply with current Chinese GMP regulations.
- National Standard "Food Additive Gelatin" GB6783-2013
- National Standard "Medicinal Gelatin Hard Capsules" GB13731
- Light industry standard "Edible Gelatin" QB/T4087-2010

## Main technical indicators and characteristics

- Instrument screen display features: 5-inch high-definition touch screen, interactive intelligent control.
- Easy to control, just press the "start button", and all parameters such as peak Bloom g, final value Bloom g, mean Bloom g, penetration depth, standard deviation, and cumulative number of measurements will be displayed.
- Freeze strength measurement accuracy verification measurement: The instrument is equipped with a standard measurement operation program, which can automatically read and display the meter based on the detection of 5 consecutive standard samples.
- Quantitative data can be used to directly determine whether it is qualified or out of tolerance. Verification measurement results are printed in real time.
- In order to adapt to different sample properties, the system provides a full range of preset measurement parameters: trigger point, deformation amount, measurement rate, creep characteristic retention time, number of continuous cycle measurements.
- The instrument is equipped with a high-quality shock-absorbing coupling structure, and the measurement operation is vibration-free and noise-free.
- Up and down displacement limit distance protection, force sensing element overload protection, measurement data protection 3.7 freezing force measurement range: 0~2000 Bloomg
- Measurement and analysis accuracy: 0.1g
- Freezing force measurement accuracy: ≤±0.1%
- Deformation displacement range (arbitrarily set sampling depth): 0~75mm
- Displacement analysis accuracy: 0.01mm (real-time display)
- Conventional measurement rate displacement accuracy error: ≤±0.05mm
- High-speed measurement rate displacement accuracy error: ≤±0.1mm
- Measuring speed range: 0.1mm/s~3mm/s (stepless speed adjustment can make the measurement process easier and the measurement results more accurate)
- Speed analysis accuracy: 01mm/s
- Speed travel error: ≤0.1% (set speed)
- The instrument provides five measurement modes:
  Bloom-freezing strength test: real-time peak load, peak deformation, final load, peak average, standard deviation, cumulative number of measurements.
  Normal-single compression test: real-time load force, positive peak, peak deformation, negative peak, final load, duration.
  Hold Time-Compression hold test: peak load, peak deformation, final load, real-time countdown.
  Cycle Count-Multiple compression tests: maximum peak, minimum peak, peak average, last peak, standard deviation, remaining times
  Freeze intensity measurement accuracy verification measurement: The instrument automatically measures the measurement accuracy and automatically determines whether it is out of tolerance. If there is any deviation, it can be automatically corrected by the system.
- Measurement units (Bloom g, g, N) can be switched with one click
- Output: RS232 serial printing interface. USB access module can be added

# Bloom Viscosity Tester

## 1. DND-5 Gelatin Brinell viscometer

**Product introduction:**

The DND-5 Blair viscometer is a professional model suitable for high-precision measurement of Blair viscosity (convertible Engler viscosity). DND-5 adopts an industrial-grade high-definition color touch screen and a 32-bit 400MHz central processor. It provides independent monitoring and real-time display of the water bath temperature and the temperature of the measured sample, provides interactive temperature accuracy measurement and calibration methods, and provides interactive viscosity tubes. Measurement and calibration methods with volumetric accuracy, providing arbitrary temperature settings and a constant environment, supporting viscosity measurements of samples with different specific gravity at different temperatures, and providing data comparison switching between Blair viscosity and kinematic viscosity, and Bradford viscosity and Engler viscosity (in switch directly on the display).

**Application:**

It is suitable for viscosity performance testing of all gelatins such as edible gelatin, medicinal gelatin, bone glue, industrial gelatin, and gelatin-like liquids that can submit specific gravity parameters.

**Applicable standards for DND-5 Boehm viscosity tester:**
- "Chinese Pharmacopoeia" 2020 Edition
- National Standard "Food Additive Gelatin" GB6783
- National Standard "Medicinal Gelatin Hard Capsules" GB13731
- Light industry standard "Edible Gelatin" QB/T4087-2010
- Industry Standard "Medicinal Gelatin" QB2354

- Industry standard "Industrial Gelatin" QB/T1995
- Industry Standard "Bone Glue" QB/1996
- Industry Standard "Photographic Gelatin" QB1997

## Product advantages

- The instrument is equipped with a 5-inch high-definition touch screen, interactive interface, and intelligent control
- Instrument configuration system permission management: three levels, multiple users. (Login with username + password)
- The instrument provides measurement data audit tracking function: (in line with current Chinese GMP certification specifications)
- The instrument supports viscosity measurement of samples with different specific gravity at different temperatures, and provides a specific gravity writing function for gelatin-like liquids.
- The instrument has interactive viscosity tube volume parameter self-measurement and automatic calibration functions.
- The instrument has interactive temperature accuracy parameter self-measurement and automatic calibration functions;
- Provides comparison and switching of data between Blair's viscosity and kinematic viscosity, Blair's viscosity and Engler's viscosity (direct switching on the display screen)
- Provide both Chinese and English operating systems
- The built-in micro printer can print the current measurement process and results, and can also trace and print historical measurement records and results by date or by operator query.
- **The DND-5PRO is equipped with dual temperature sensors for temperature control, which can measure the real-time temperature of the water bath and sample respectively.**

## DND-5 Boehm viscosity tester specifications:

| Model | DND-5 |
|---|---|
| Viscosity measuring range | 0-999.99 mPa.s |
| Viscosity value display accuracy | 0.01mPa.s |
| Instrument measurement deviation | ≤+0.015mPa.s |
| Time measurement range | 0-5000s |
| Time display accuracy | 0.01s |
| Sample temperature display accuracy | 0.01°C |
| Water bath temperature display accuracy | 0.01°C |
| Water bath temperature control range | 5°C~70°C |
| Viscometer volume | 100ml |
| Viscometer volume error | +0.2ml |
| Dimensions | 365x215x535mm (length* width*height) |
| Total Weight | About 12kg |

## 2. DND-3S Gelatin Boehm viscosity tester



### Product introduction:

The DND-3s Boehmite Viscometer is an upgraded and improved product based on the original DND-3 Boehmite viscosity tester. The DND-3s increases the temperature and temperature of the test tube from the two aspects of the accuracy and convenience of the measurement. Accurate calibration of a 1/3B precision mobile electronic package in 316 stainless steel. Standard temperature sensor (replaces a glass mercury thermometer that requires manual visual inspection and is fragile). DND-3s uses industrial grade high resolution color touch screen, 32bit 400MHz MCU, provides two-way monitoring of bath temperature and temperature of the tested product, provides interactive temperature calibration and calibration, provides correction and calibration of interactive viscosity tube correction factor, and provides any Temperature setting and constant environment. It also has a print function option.

### Scope of application:

It is suitable for the viscosity performance test of all gelatin such as edible gelatin, medicinal gelatin and industrial gelatin.

### The main technical indicators of the DND-3s Boehm viscosity tester:

- Viscosity measurement range: 0-999.99 mPa.s
- Viscosity value display resolution: 0.01 mPa.s
- Instrument measurement accuracy: ±0.02 mPa.s
- Time measurement range: 0-5000 seconds
- Time measurement accuracy: ≤0.01 seconds
- Time display resolution: milliseconds

- System real-time date and time display: 24 hours error ≤ 3 seconds
- Water bath temperature control range: room temperature - 70°C
- Water bath temperature setting resolution: 0.1°C
- Water bath temperature control accuracy: ±0.1°C
- Water bath temperature display resolution: 0.01°C
- Tested product temperature display resolution: 0.01°C
- Viscometer volume: 100 ml
- Viscometer volume error: ±0.5 ml
- Longitudinal center moment of the measuring device: 152 mm ± 0.5 mm
- Working power supply: AC 220V±10% 50Hz ≤500W
- Environmental conditions: room temperature 10 ~ 30 ° C humidity <75%
- Dimensions: 365 × 215 × 535mm (length * width * height)
- Machine weight: about 12 kg

## System structure and characteristics of DND-3S Boehm viscosity tester:

- DND-3s adopts high-performance embedded intelligent touch screen, which is convenient and quick to operate, precise in control, friendly in human-computer interaction interface, and users can enjoy intelligent operation according to the screen prompts.
- The main control interface of the instrument is shown in the following figure:
- DND-3s's instrument settings are powerful and can provide users with multi-faceted use options.
- DND-3s provides real-time date and time functions. Press the system time setting button to easily correct the date and time.
- DND-3s provides interactive intelligent temperature correction.
- DND-3s provides interactive viscosity tube parameter correction.
- DND-3s Boehm viscosity tester's measurement range from room temperature to 70°C is optional, which has great advantages for research and analysis of quality control in gelatin production process.
- The capillary viscometer configured by the DND-3s Boehm viscosity tester is strictly calibrated according to the national standards before leaving the factory. And the error compensation coefficient has been written into the microcomputer program to bring the viscosity value into the operation process.
- DND-3s Boehm viscosity tester provides more stringent automatic fault detection, automatic fault repair, and automatic fault alarm.

## Applicable standards for DND-3s Boehm viscosity tester:

- National Standard "Food Additive Gelatin" GB6783
- National standard "medicine gelatin hard capsule" GB13731
- Light industry standard "edible gelatin" QB/T4087-2010
- Industry standard "medicinal gelatin" QB2354
- Industry standard "Industrial Gelatin" QB/T1995
- Industry standard "Bone Glue" QB/1996
- Industry standard "Photographic Gelatin" QB1997

# 3. DND-2 Gelatin Brinell viscometer



## Product introduction:

The DND-2 uses an industrial-grade high-resolution color touch screen and an advanced architecture such as a 32-bit 400MHz CPU to significantly improve the reliability, accuracy and reproducibility of the instrument. For the first time, the RS232 serial print interface is provided, and the preset and constant functions of any temperature are added for the first time, providing a feasible environment for the determination of specific samples.

## Scope of application:

It is suitable for the viscosity performance test of all gelatin such as edible gelatin, medicinal gelatin and industrial gelatin.

## System structure and characteristics of DND-2 Boehm viscosity tester:

• DND-2 adopts high-performance embedded intelligent touch screen, which is convenient and quick to operate, precise in control, friendly in human-computer interaction interface, and users can enjoy intelligent operation according to the screen prompts.

• DND-2's instrument settings are powerful and can provide users with multi-faceted use options. The instrument's setting function interface is shown in the following figure:

• DND-2 provides real-time date and time function, press the system time setting button to easily complete the date and time correction.

• DND-2 provides interactive intelligent temperature correction function. The control interface is shown in the following figure:

• DND-2 provides interactive viscosity tube parameter correction.

• DND-2 Boehmia viscosity tester measurement range from room temperature to 70°C, which is of great advantage for the research and analysis of quality control in gelatin production process.

• DND-2 type Brinell viscosity tester provides more stringent automatic fault detection, automatic fault repair, and automatic fault alarm.

## The main technical indicators of the DND-2 Boehm viscosity tester:

- Viscosity measurement range: 0-999.99 mPa.s
- Viscosity value display resolution: 0.01 mPa.s
- Instrument measurement accuracy: ±0.02 mPa.s
- Time measurement range: 0-5000 seconds
- Time measurement accuracy: ≤0.01 seconds
- Time display resolution: milliseconds
- System real-time date and time display: 24 hours error ≤ 3 seconds
- Water bath temperature control range: room temperature - 70°C
- Water bath temperature setting resolution: 0.1°C
- Water bath temperature control accuracy: ±0.1°C
- Water bath temperature display resolution: 0.01°C
- Viscometer volume: 100 ml
- Viscometer volume error: ±0.5 ml
- Longitudinal center moment of the measuring device: 152 mm ± 0.5 mm
- Working power supply: AC 220V±10% 50Hz ≤500W
- Environmental conditions: room temperature 10 ~ 30 ° C humidity <75%
- Dimensions: 365 × 215 × 535mm (length * width * height)
- Machine weight: about 12 kg

# 4. DND-1 Gelatin Brinell viscometer



## Product introduction

DND-1 Brinell viscometer adopts industrial grade high resolution color touch screen, advanced architecture such as 32bit 400MHz CPU, temperature display accuracy is improved from 0.1°C to 0.01 °C, timing display resolution is increased from 0.1 second to 0.01 second, measurement range Covers all gelatin and adds the ability to interactively calibrate viscosity tube parameters for the first time.

## Scope of application:

It is suitable for the viscosity performance test of all gelatin such as edible gelatin, medicinal gelatin and industrial gelatin.

## System structure and characteristics of DND-1 Brinell viscometer

DND-1 Brinell viscometer adopts high-performance embedded intelligent touch screen, which is convenient and quick to operate, precise in control, friendly in human-computer interaction interface, and users can enjoy intelligent operation according to the screen prompts. (See the picture below)

## Main technical indicators of the DND-1 Brinell viscometer

- Viscosity measurement range: 0-999.99 mPa.s
- Viscosity value display resolution: 0.01 mPa.s
- Instrument measurement accuracy: ±0.02 mPa.s
- Time measurement range: 0-5000 seconds
- Time measurement accuracy: ≤0.01 seconds
- Time display resolution: milliseconds

- Water bath control temperature: 60°C by default
- Water bath temperature control accuracy: ±0.1°C
- Water bath temperature display resolution: 0.01°C
- Viscometer volume: 100 ml
- Viscometer volume error: ±0.5 ml
- Measuring device longitudinal center moment: 152 mm ± 0.5 mm
- Working power supply: AC 220V±10% 50Hz ≤500W
- Environmental conditions: room temperature 10 ~ 30 ° C humidity <75%
- Dimensions: 365 × 215 × 535mm (length * width * height)
- Machine weight: about 12 kg

# Tablet Multi-Purpose Tester

## 1. DP-PJ-2 Intelligent tablet dual-purpose tester

The intelligent tablet dual-purpose instrument is used to measure the hardness and friability of tablets respectively. It is an extremely ideal one-machine multi-drug testing instrument.

## Technical Parameters:

- Number of cylinders: 2
- Cylinder size: Inner diameter 286mm Depth 39mm
- Drop height: 156mm
- Cylinder speed: (25±1) rpm
- Number of cylinder turns: (100±1) turns
- Hardness range: (2～199)N±1N
- Diameter range: (3～40)mm
- Power supply: 220V/50Hz/600W

## Main feature:

- Intelligent, automatic control, automatic detection, automatic diagnosis, automatic alarm.
- The brittle crusher automatically controls the rotation speed and number of rotations of the cylinder with high precision.
- Hardness high-precision pressure sensor with digital display of hardness value.
- Continuously measure the hardness value of tablets, manually load tablets, motor control, and automatically pressurize.
- Automatic display, automatic latch, automatic reset, automatic cycle test.

# 2. DP-PJ-4 Intelligent tablet four-purpose Tester



The intelligent tablet four-purpose instrument is used to test the hardness, friability, disintegration time, and dissolution of tablets. It is an extremely ideal one-machine multi-drug testing instrument.

## Technical Parameters:

- Dissolution quantity: 3 pieces
- Temperature control range: (20~40)℃±0.3℃
- Speed adjustment range: (20~200)rpm±2rpm
- Timing range: (1～900)min±0.5min
- Paddle shaft swing: ±0.5mm
- Basket swing: ±1.0mm
- Number of hanging baskets: 2
- Round trip frequency: (30~32) times/minute
- Round trip: (55±2)mm
- Number of cylinders: 1
- Cylinder size: Inner diameter 286mm Depth 39mm
- Drop height: 156mm
- Cylinder speed: (25±1) rpm
- Number of cylinder turns: (100±1) turns
- Hardness range: (2～199)N±1N
- Diameter range: (3～40)mm
- Power supply: 220V/50Hz/600W
- Overall dimensions: (52×38×47)cm3

## Main feature:

- Intelligent, automatic control, automatic detection, automatic diagnosis, automatic alarm.
- Using a magnetic water pump circulating water flow uniform heating system, the water bath

temperature is uniform.

- Automatically control the temperature with high temperature control accuracy.
- Automatically control time and automatically stop at scheduled time.
- Parameters can be preset at will; preset values and real-time values are displayed in time.
- Dissolve three cups and three rods in a single row; the head part is manually flipped, stable and flexible.
- The dissolution blanching and paddle shafts are made of imported SUS316L stainless steel.
- The two disintegration channels run at the same time and automatically stop at a scheduled time.
- The brittle crusher automatically controls the rotation speed and number of rotations of the cylinder with high precision.
- Hardness high-precision pressure sensor with digital display of hardness value.
- Continuously measure the hardness value of tablets, manually load tablets, motor control, and automatically pressurize.
- Automatic display, automatic latch, automatic reset, automatic cycle test

# 3. DP-PJ-6 Intelligent tablet four-purpose Tester
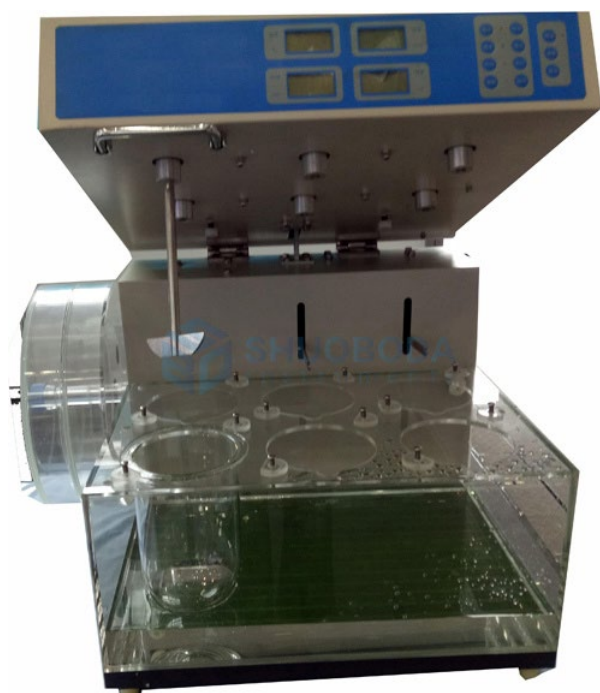


The intelligent tablet four-purpose instrument is used to test the hardness, friability, disintegration time, and dissolution of tablets. It is an extremely ideal one-machine multi-drug testing instrument.

## Technical Parameters:

- Dissolution quantity: 6 pieces
- Temperature control range: (20~40)℃±0.3℃
- Speed adjustment range: (20~200)rpm±2rpm
- Timing range: (1~900)min±0.5min
- Paddle shaft swing: ±0.5mm
- Basket swing : ±1.0mm
- Number of hanging baskets: 2
- Round trip frequency: (30~32) times/minute
- Round trip: (55±2)mm
- Number of cylinders: 2
- Cylinder size: Inner diameter 286mm Depth 39mm
- Drop height: 156mm
- Cylinder speed: (25±1) rpm
- Number of cylinder turns: (100±1) turns
- Hardness range: (2~199)N±1N
- Diameter range: (3~40)mm
- Power supply: 220V/50Hz/600W
- Overall dimensions: (52×58×47)cm3

## Main feature:

- Intelligent, automatic control, automatic detection, automatic diagnosis, automatic alarm.
- Using a magnetic water pump circulating water flow uniform heating system, the water bath temperature is uniform.

- Automatically control the temperature with high temperature control accuracy.
- Automatically control time and automatically stop at scheduled time.
- Parameters can be preset at will; preset values and real-time values are displayed in time.
- Dissolve six cups and six rods; the machine head part is manually flipped, stable and flexible.
- The dissolution blanching and paddle shafts are made of imported SUS316L stainless steel.
- The two disintegration channels run at the same time and automatically stop at a scheduled time.
- The brittle crusher automatically controls the rotation speed and number of rotations of the cylinder with high precision.
- Hardness high-precision pressure sensor with digital display of hardness value.
- Continuously measure the hardness value of tablets, manually load tablets, motor control, and automatically pressurize.
- Automatic display, automatic latch, automatic reset, automatic cycle test.

# 4. DP-PJ-6DN smart tablet four-purpose measuring instrument



The PJ series multifunctional tablet analyzer has been used in the field of drug analysis for more than 40 years and strictly follows the current "Chinese Pharmacopoeia" specifications and generic drug consistency evaluation standards. The DP-PJ-6DN intelligent four-purpose tablet tester integrates four functions: dissolution, disintegration time, tablet hardness, and tablet friability. It is widely used in pharmaceutical companies, medical research, teaching and research, and drug testing departments.

## Product Features

- Multifunctional: dissolution, disintegration time, tablet hardness, tablet friability.
- Smaller volume, reducing the area occupied by the laboratory bench.
- It has built-in three-level user rights management, audit tracking, and test record management. Through the device interface, test reports can be printed or output via USB.
- Commonly used sample information management for easy retrieval and use.
- High-precision real-time constant temperature control, with dual over-temperature protection and temperature calibration functions.
- There is scheduled heating inside, and the user can set the system to start heating at a specified time.
- The dissolution vessel and stirrer are automatically centered.
- Use a more convenient water circulation pipeline design and professional medical grade quick connectors.
- The visual window above the hardness testing chamber makes each testing process clear and intuitive.
- The hardness can be tested continuously for 1,000 times, and the interval between continuous tests is user-adjustable.
- Free IQ/OQ certification documents

## Specifications:

| | Product model | DP-PJ-6DN |
|---|---|---|
| **Dissolution** | Stirring paddle swing amplitude | ≤0.5 mm |
| | Basket swing range | ≤1.0 mm |
| | Deviation of shaft paddle, basket and vessel | ≤2.0 mm |

| | | |
|---|---|---|
| | Speed setting range | 10-300 rpm/min |
| | turn around | Clockwise/counterclockwise |
| | Steady speed error | ≤±1 rpm/min |
| | Temperature range | Room temperature ~ 45.0 ° C |
| | Temperature resolution | 0.1 °C |
| | Temperature control accuracy | ≤±0.3 °C |
| | Sampling cycle points | Up to 100 different sampling periods |
| | Sampling cycle time | 1 minute ~ 99 hours 59 minutes |
| | Number of paddles and baskets | 6 each |
| | Number of baskets | 6 pcs |
| | High precision dissolution specifications | cupHeight 185mm, volume 1000ml |
| | High-precision vessel number | 6 pcs |
| **Disintegration time limit** | Basket lifting frequency | 30~32 times/minute |
| | Basket lifting amplitude | 55mm±1mm |
| | Minimum distance from the screen to the bottom of the cup | 25mm±1mm |
| | Screen aperture | 2mm (with optional) |
| | Temperature range | Room temperature ~ 45.0 ° C |
| | Temperature resolution | 0.1 °C |
| | Temperature control accuracy | ≤±0.3 °C |
| | Sampling cycle points | Up to 100 different sampling periods |
| | Sampling cycle time | 1 minute ~ 99 hours 59 minutes |
| | Flat bottom beaker volume | 1000ml |
| | Number of flat bottom beakers | 1 |
| **Tablet hardness** | Measuring range | Hardness 10-350N, tablet diameter 2-25mm |
| | Resolution | 0.01N |
| | Precision | ±1.5%±1digit |
| | Diameter measurement range | 2.0 to 25.0mm |
| | Diameter resolution | 0.1mm |
| | Diameter measurement accuracy | ±0.1mm |
| | Hardness measurement unit | N / kg (optional) |
| | measurement method | Automatic single/continuous multiple times (up to 1000 times) |
| **Tablet friability** | Drum size | Inner diameter of about 286mm, depth 39mm |
| | Pill slip height | 156mm |
| | Default speed | 25rpm/min |
| | Speed setting range | 25-50 rpm/min |
| | Default number of circles | 100 laps |
| | Number of turns setting range | 1-1000 laps |
| | turn around | Clockwise/counterclockwise |
| | Number of drums | 1 pc |
| **Other** | power supply | AC220V±10%, 50Hz |

# Melting Point Apparatus

## 1. DP-BY-4U Intelligent melting time limiter



DP-BY-4U intelligent melting time limiter is a high-intelligence and high-precision research and production based on the Chinese Pharmacopoeia's 2015 edition of the study on the melting, softening or dissolution of solid preparations such as suppositories and vaginal tablets under specified conditions. Professional melting time limit checker.

## Main Specifications:

- Three cups, three sleeves, three metal frames, three-way synchronization, automatic flip
- Water bath temperature control range: 5 ° C ~ 50 ° C
- Temperature control accuracy of water bath: ≤±0.3°C
- Temperature control display resolution: 0.01 °C
- Temperature preset resolution: 0.1 °C
- Timing range: 1-2880 minutes (48 hours)
- Time display resolution: hour: minute: second
- Time preset resolution: 1min
- Data output: RS232 serial print interface
- Sleeve parameters: diameter 52mm, height 60mm
- Metal frame parameters: diameter 50mm, aperture 4mm, 39 holes, two plates 30mm
- Beaker volume: 5L
- Electric heating power: 1200W
- Power supply: AC220V±10% 50Hz 1300W
- Dimensions: length 720mm width 450mm height 550mm

**Features:**

- DP-BY-4U adopts high-resolution color touch screen, and the human-machine interface is friendly. Users can enjoy intelligent and interactive operation according to the screen prompts.

- The instrument is a set of 3 working positions, which can automatically complete the automatic test of 3 samples, which meets the requirements of the Pharmacopoeia.

- The water tank top cover of the instrument is turned up and down, which is stable and reliable. It can be easily raised or dropped for easy access to metal racks and test samples.

- The instrument provides pre-time automatic preheating function to save auxiliary time and improve work efficiency.

- The instrument provides intelligent temperature deviation correction function, which allows users to easily and easily and reliably perform temperature deviation correction through interactive operation.

- The instrument has temperature abnormality, temperature over limit alarm and secondary overheating automatic protection function.

- The instrument provides real-time display of "year, month, day, hour, minute, second".

- The instrument provides auxiliary operation function, and can choose the option of automatically cleaning the metal frame and automatically stirring the temperature inside the beaker.

- The instrument provides RS232 serial output port; can print the date and time of this test, the name and position of the main tester of this test, the inspection unit (or sample source), the sample number (or batch number), the sample The name, the test method of the test sample, the test environment parameters, the difference between the fatty matrix suppository, the water-soluble matrix suppository, and the vaginal tablet 3 sample; the results of the three test articles are judged...

- The instrument can be equipped with two kinds of operation interface in Chinese and English

## 2. DP-RD-2C Intelligent Melting point tester, LCD display, with data processing, self-contained printing

**Applications:**

For testing the melting points of drugs, reagents,

fragrances, dyes, and other organic crystalline materials.

## Performance profile:

The DP-RD-2C drug melting point instrument adopts the capillaries prescribed by the Pharmacopoeia as the sample tube and the liquid temperature transfer mode, and adopts the microcomputer control program to heat up, work reliably, high temperature control precision, accurate measurement, good reproducibility and easy operation. The design fully complies with the regulations and requirements of the instrument and measuring method in the melting point determination method in the Pharmacopoeia of the People's Republic of China. It also meets the requirements for melting point determination in the Pharmacopoeia of the United States, Britain and Japan. It can be widely used in medicine and chemical reagents. In the production and testing of industries such as perfumes and dyes, the melting point of organic crystalline materials is measured.

Melting point tester applicable standard: "People's Republic of China Pharmacopoeia" 2015 edition.

The melting point tester strictly carries out the verification test specified in the "Capillary Melting Point Tester" approved by the State Bureau of Technical Supervision before leaving the factory to comprehensively verify the instrument.

## Melting point measuring instrument structure and characteristics:

- DP-RD-2C adopts advanced microprocessor control technology and advanced hardware design to ensure long-term stable and reliable instrument.
- The temperature measurement adopts the imported original film A-grade platinum resistance component sensor, which has high temperature measurement accuracy, good linearity, high reliability and long service life.
- The automatic magnetic stirring system controls the high-speed rotation of the stirring rod to ensure the temperature of each point of the temperature transfer liquid is uniform. (The maximum use temperature of the stirrer is 350°C)
- The temperature heating is monitored by the microcomputer in the instrument in real time. The temperature can be quickly raised to the preset value according to the requirements, and then the melting point is measured according to the required constant temperature. When the sample is melted, the initial melting and final melting bonds can be utilized to record two melting point values. The entire system achieves full-closed automatic control.
- Using large-screen high-definition LCD screen, users can enjoy intelligent operation according to the screen prompts. Each operation process gives Chinese character prompts and quantitative indicators.

## Technical indicators of melting point tester:

- Melting point test range: room temperature to 280°C.
- Heating rate: 0.5°C/min 1°C/min 1.5°C/min 3.0°C/min fourth gear
- Linear heating rate deviation: < 10%
- Temperature rapid temperature rise preset range: any preset in the range of room temperature to 270°C
- Transmission medium: methyl silicone oil
- Transfer temperature cup: 250ml high beaker
- Melting point test accuracy: tolerance less than 200°C ± 0.5°C greater than 200°C tolerance ±

1.0°C
- Indicative resolution: 0.1°C
- Using ambient temperature: 18°C-28°C
- Power supply: AC220V±10% Frequency 50Hz Power 200W

## The instrument is divided into three working states:
- Standby state---preset temperature, select heating rate, observe the number of measurements of similar samples after starting up, and the maximum, minimum and average values of initial melting after data processing in the instrument, final melting maximum and minimum And average.
- Preparation state---Start the stirring and heating system to quickly raise the temperature of the temperature transfer liquid to the preset value. (The display dynamically shows the entire temperature change process in real time) After the preset temperature is reached and constant, the buzzer sounds prompt.
- Test status---Into the sample start test, the system will increase the temperature according to the preset heating rate. When the sample is melted, the initial melting point and the final melting point can be used to record the initial melting point and the final melting point respectively. The initial melting and final melting keys have the functions of repeating recording and covering the previous operation, which is convenient for the user.

▲ powerful data processing capability, can automatically record and display the number of tests, the initial minimum value and average value of the initial melting, the minimum value and the average value of the final melting.
▲The above performance indicators are the same as DP-RD-3.
▲DP-RD-2C is equipped with a new front paper change micro printer, the print content is as below:
Melting point measurement
sample name:
Dimension: Celsius
Preset temperature:
Heating rate:
Number of measurements:
Initial melting maximum:
Initial melting minimum:
Initial melting average:
Final melting maximum:
Final melting minimum:
Final melting average:
Surveyor:
Measurement date:

## 3. DP-RD-3 Intelligent Melting point tester, LCD display, result auto storage



**Applications:**

For testing the melting points of drugs, reagents, fragrances, dyes, and other organic crystalline materials

**Performance:**

• DP-RD-3 drug melting point instrument adopts the capillaries prescribed by the Pharmacopoeia as the sample tube and the liquid temperature transfer mode, and adopts the microcomputer control program to heat up, work reliably, high temperature control precision, accurate measurement, good reproducibility and easy operation. The design

fully complies with the regulations and requirements of the instrument and measuring method in the melting point determination method in the Pharmacopoeia of the People's Republic of China. It also meets the requirements for melting point determination in the Pharmacopoeia of the United States, Britain and Japan. It can be widely used in medicine and chemical reagents. In the production and testing of industries such as perfumes and dyes, the melting point of organic crystalline materials is measured.

- Melting point tester applicable standard: "People's Republic of China Pharmacopoeia" 2015 edition
- The melting point tester strictly carries out the verification test specified in the "Capillary Melting Point Tester" approved by the State Bureau of Technical Supervision before leaving the factory to comprehensively verify the instrument.

## Melting point measuring instrument structure and characteristics:

- DP-RD-3 adopts advanced microprocessor control technology and advanced hardware design to ensure long-term stable and reliable instrument.
- The temperature measurement adopts Japanese original film A-grade platinum resistance component sensor, which has high temperature measurement accuracy, good linearity, high reliability and long service life.
- The automatic magnetic stirring system controls the high-speed rotation of the stirring rod to ensure the temperature of each point of the temperature transfer liquid is uniform. (The maximum use temperature of the stirrer is 350°C)
- The temperature heating is monitored by the microcomputer in the instrument in real time. The temperature can be quickly raised to the preset value according to the requirements, and then the melting point is measured according to the required constant temperature. When the sample is melted, the initial melting and final melting bonds can be utilized to record two melting point values. The entire system achieves full-closed automatic control.
- Using large-screen high-definition LCD screen, users can enjoy intelligent operation according to the screen prompts. Each operation process gives Chinese character prompts and quantitative indicators.

## Main technical indicators of melting point tester:

- Melting point test range: room temperature to 280°C
- Heating rate: 0.5°C/min 1°C/min 1.5°C/min 3.0°C/min fourth gear
- Linear heating rate deviation: < 10%
- Temperature rapid preset range: Any preset within the range of room temperature to 270°C
- Transmission medium: methyl silicone oil
- Transfer temperature cup: 250ml high beaker
- Melting point test accuracy: tolerance less than 200°C ± 0.5°C; ±100°C tolerance when greater than 200°C
- Indicative resolution: 0.1°C
- Using ambient temperature: 15°C-30°C
- Power supply: AC220V±10% Frequency 50Hz Power 200W

## The instrument is divided into three working states:

- Standby state---preset temperature, select heating rate, observe the number of measurements of similar samples after starting up, and the maximum, minimum and average values of initial

melting after data processing in the instrument, final melting maximum and minimum And average.

- Preparation state---Start the stirring and heating system to quickly raise the temperature of the temperature transfer liquid to the preset value. (The display dynamically shows the entire temperature change process in real time) After the preset temperature is reached and constant, the buzzer sounds prompt.
- Test status---Into the sample start test, the system will increase the temperature according to the preset heating rate. When the sample is melted, the initial melting point and the final melting point can be used to record the initial melting point and the final melting point respectively. The initial melting and final melting keys have the functions of repeating recording and covering the previous operation, which is convenient for the user.
- powerful data processing capability, can automatically record and display the number of tests, initial melting maximum and average values, final melting maximum and average values

## 4. DP-JT Series fully automatic video melting point meter



The DP-JT Series fully automatic video melting point meter perfectly combines high-precision temperature control technology, which not only provides users with accurate, stable and reliable test results, but also provides users with an efficient and convenient testing experience. Automatically detects real-time spectrum signals to facilitate users to accurately measure the melting point and melting range of samples.

### Advantage:
1. Process 4 samples at a time;
2. High automation integration enables one-click measurement function;
3. Fully automatic recording of melting range, initial melting and final melting.

## Application:

Melting point instrument occupies an important position in the chemical industry and medical research. It is an essential instrument for the production of food, medicine, spices, dyes and other organic crystal substances.

## Features:

- Fully automatic video melting point meter equipped with Android operating system
- 8.1-inch high-definition super capacitive touch screen
- 720P high-definition camera, 8x sample detail amplification, sample detail changes are clearly visible
- Linear heating rate 0.10°C -20.00°C infinitely adjustable, can store customer experimental methods, historical measurement data videos, and charts
- Nano-layered thermal insulation design, high-precision and reliable measurement results
- Can be connected to a USB printer, thermal printer or U disk to print and export experimental reports
- Fully compliant with Pharmacopoeia GLP requirements
- Fully compliant with FDA21CFR11

## Technical Specifications:

| Model | JT35 | JT40 | JT41 |
|---|---|---|---|
| Temperature range | RT-350°C | RT-400°C | RT-400°C |
| Temperature resolution | 0.1°C | 0.1°C | 0.01°C |
| Repeatability | 0.2°C (heating rate is 0.20°C/min) | | |
| Accuracy | ±0.4C (<200°C) ±0.7°C (<300°C). | | |
| Heating rate | 0.1°C- -20°C | | |
| Standard capillary size | Inner diameter 1.0mm, outer diameter 14mm | | |
| Display method | 8-inch capacitive screen | | |
| Data interface | USBx3, RS232, Wi-Fi | | |
| Magnification | ● | ● | ● |
| processing power | ● | ● | ● |
| User management (hierarchical management possible) | 20 | 30 | 100 |
| Video continuous shooting time | 20 minutes | 20 minutes | 20 minutes |
| Manual measurement | ● | ● | ● |
| Automatic measurement | ● | ● | ● |
| Video playback function | ● | ● | ● |
| Spectrum storage capacity | 100 sets | 200 sets | 500 sets |
| Data storage capacity | 16G | 32G | 128G |
| Experimental method storage capacity | 30 sets | 80 sets | 100 sets |
| Comply with FDA21 CFR part 11 | — | ● | ● |
| Has audit trail function | — | ● | ● |
| Printer | Thermal laser printer | Thermal laser printer | Thermal laser printer |
| Standard kit | ○ | ○ | ● |

Note: "●" means they have the same technical indicators, "○" means they are optional, "—"

means they do not have this technical indicator.

# 5. DP-MP42/MP43 video melting point meter, DP-MP45/MP47/MP49 fully automatic video melting point instrument



MP42/43 video melting point meter, 45/47/49 fully automatic video melting point meter integrates image detection and video shooting technology into melting point measurement, which not only provides users with stable and reliable melting point testing functions, but also clearly and intuitively displays sample changes Curves and real-time high-definition sample images, and realizes functions such as automatic video recording, adding watermarks to videos, video playback and map synchronization, etc., and easily observes color changes and decomposition temperatures through real-time video screens. The layered insulation design not only effectively resists external environmental interference to ensure stable and accurate temperature, but also has faster heating and cooling speeds to reduce waiting time. The instrument can be widely used in chemical industry and medical research. It is one of the necessary instruments for producing drugs, spices, dyes and measuring other organic crystal substances.

## Main features

- Fully automatic video melting point meter equipped with Android operating system
- Can be connected to a wireless laser printer, thermal printer or USB flash drive to export and print experimental reports
- 720P HD camera, 8x optical magnification, sample details are clearly visible
- Can store customer experimental methods, historical data, videos, maps, traceability files, etc.
- Built-in WiFi can connect to the network wirelessly, connect to a wireless printer for remote printing, and multiple instruments share one remote printer
- Multi-level search function to quickly find target data from massive data
- With a maximum 6-point calibration function, multiple temperature points can be calibrated through standard materials
- With initial melting/final melting transmittance settings, appropriate automatic detection methods can be set according to different samples

## The main advantages

**1.** 8-inch TFT Android touch screen

The human-machine interface developed based on the Android system makes the use of the instrument closer to daily life habits, and various software functions that meet the requirements of various laboratory regulations can be added; the maximum storage capacity is 128G, which can store more than 40,000 minutes of video data.

**2.** Clear video picture

Test 4 samples at the same time, enlarge the sample testing room 8 times, and sample particles are clearly visible. Using video encoding technology, the video ensures high definition and takes up very little space.

**3.** Fully automatic measurement

The use of video imaging technology, high-resolution CCD detection, and dynamic signal analysis solves the shortcomings of traditional automatic melting point instruments that cannot detect dark-colored samples.

**4.** Audit trail

Valid operations performed on the instrument are recorded in the background and cannot be deleted; the stored videos have real-time test time and real-time temperature change watermarks, which can effectively trace the authenticity of the data and facilitate the research of exploratory unknown samples.

**5.** User hierarchical management

It has three levels of user rights management: administrator, supervisor, and operator, and you can check specific usage rights twice when creating an account.

**6.** Password protection function

It has a password aging function. Each account can set the password validity period. After expiration, it is mandatory to change the password before logging in to the instrument, which strengthens the timeliness management of operator usage rights.

The password has a complexity setting, and the password complexity can be set according to your needs. It has a screen saver function. If no operation occurs after a timeout, you need to log in to unlock it.

## Technical Specifications:

| Model | MP42 | MP43 | MP45 | MP47 | MP49 |
|---|---|---|---|---|---|
| Temperature range | RT~300℃ | RT~300℃ | RT~300℃ | RT~400℃ | RT~400℃ |

| Temperature resolution | 0.1℃ | 0.1℃ | 0.1℃ | 0.1℃ | 0.01℃ |
|---|---|---|---|---|---|
| Repeatability | 0.2℃ (heating rate is 0.20℃/min) | | | | |
| Accuracy | ±0.4℃ (<200℃) ±0.7℃ (<300℃) | | | | |
| Heating rate | 0.1℃--20℃ | | | | |
| Maximum heating and cooling speed | Room temperature rises above 350℃ ≤5min, 350℃ drops below 50℃ ≤7min | | | | |
| Standard capillary size | Inner diameter 0.9~1.1mm | | | | |
| Display method | 8-inch capacitive screen | | | | |
| Data interface | USB×3,RS232, Wi-Fi, RJ45 | | | | |
| Magnification | 8 | ● | ● | ● | ● |
| Process capability | 4 pcs/batch | ● | ● | ● | ● |
| User management (hierarchical management possible) | — | 20 | 20 | 30 | 100 |
| Video continuous shooting time | — | 40 minutes | 40 minutes | 40 minutes | 40 minutes |
| Manual measurement | ● | ● | ● | ● | ● |
| Automatic measurement | — | — | ● | ● | ● |
| Video playback function | — | ● | ● | ● | ● |
| Spectrum storage capacity | — | — | 100 sets | 200 sets | 500 sets |
| Data storage capacity | 8G | 16G | 16G | 32G | 128G |
| Experimental method storage capacity | — | 30 sets | 30 sets | 80 sets | 200 sets |
| Complies with FDA 21 CFR Part 11 | — | ● | — | ● | ● |
| Has audit trail function | — | ● | — | ● | ● |
| Available printer types | small dot matrix printer | Small dot matrix printer, wireless laser printer | | | |
| 3Q | ○ | ○ | ○ | ○ | ● |
| Standard kit | ○ | ○ | ○ | ○ | ● |
| Net weight | 3.3kg | 3.3kg | 3.4kg | 3.4kg | 3.4kg |

Note: "●" means they have the same technical indicators, "○" means they are optional, "—" means they do not have this technical indicator.

# Moisture meter

## 1. HQ series electronic moisture meter

HQ series electronic moisture meter is a new product developed by our company. This instrument is equipped with a variety of intelligent and convenient advanced functions and has a stylish appearance. It is widely used in quality management departments and laboratories in various industries.

**Features:**
- Color touch display.
- Brand new imported low-power processor.
- Obtained C3 OIMLR60 certification. Equipped with a high-precision load cell with high eccentric load compensation.
- Ultra-low noise 24Bit high-precision A/D conversion circuit.
- Brand new temperature sensor imported from Germany.
- High power halogen heating unit.
- SHARP photoelectric switch imported from Japan.
- Widely used in all walks of life.
- Comprehensive product configurations of the same level.
- A variety of smart, convenient and advanced functions.

## Technical Specifications:

| Model | HQ-21 | HQ-51 | HQ-101 | HQ-25 | HQ-55 | HQ-105 |
|---|---|---|---|---|---|---|
| Moisture accuracy | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| Temp. adjust accuracy | ±2°C | ±2°C | ±2°C | ±2°C | ±2°C | ±2°C |
| Moisture range | 0~100% | 0~100% | 0~100% | 0~100% | 0~100% | 0~100% |
| Heating temperature range | 60~160°C | 60~160°C | 60~160°C | 60~160°C | 60~160°C | 60~160°C |
| dry heat source | Heating and drying quality | Heating and drying quality | Heating and drying quality | Heating and drying quality | Heating and drying quality | Heating and drying quality |
| Measurement ending method Weighing pan diameter | Timing, automatic | Timing, automatic | Timing, automatic | Timing, automatic | Timing, automatic | Timing, automatic |
| Pan diameter | 95mm | 95mm | 95mm | 95mm | 95mm | 95mm |
| Heating time range | 0~120min | 0~120min | 0~120min | 0~120min | 0~120min | 0~120min |
| Output Interface | RS232 | RS232 | RS232 | RS232 | RS232 | RS232 |
| Dimensions | 290*180*140mm | 290*180*140mm | 290*180*140mm | 290*180*140mm | 290*180*140mm | 290*180*140mm |
| Maximum weighing | 20g | 50g | 100g | 20g | 50g | 100g |
| Graduation value | 1mg | 1mg | 1mg | 5mg | 5mg | 5mg |

# 2. DP-SF-2 Rapid Moisture Tester



DP-SF-2 Rapid Moisture Tester is used to test the free moisture contained in powder or fine granular samples such as pharmaceutical raw materials, food, tea, feed, grains, tobacco, papermaking, textile raw materials, chemical raw materials, etc.

## Applicable standards

"Pharmacopoeia of the People's Republic of China" 2020 edition.
National Standard "Food Additive Gelatin".

## Main features:

- Halogen lamps radiate heating and drying, and the heat is concentrated to quickly dry out moisture.
- High-precision temperature sensor, high temperature control accuracy.
- High-precision weighing sensor, precision weighing.
- Data output: bidirectional RS232.
- Data printing: equipped with Chinese report thermal printer interface.
- It has three heating modes: standard heating, rapid heating, and gradual heating.
- It has three analysis modes: automatic mode, timing mode and manual mode.
- Display mode: LCD window.

## Technical Specifications:

- Ring halogen lamp:300W
- Moisture test range: (0.02~100) %
- Moisture test accuracy: ±0.5%
- Setting temperature range: (50~150)℃
- Set time range: 1~199min

- Weighing range: (0.01~100) g
- Readability: 0.01%/0.001g
- Weighing accuracy ±0.01g
- Power supply: 220V/50Hz/300W
- Overall dimensions: (36×26×23) cm3
- Weight: 9 K G

# Transparency Tester

## 1. DP-TM1 Transparency Tester



Transparency tester is requisite for detecting transparency of gelation.

### Applicable standard
- National standard (Food additive Gelatin) GB6783-94
- National standard (Hard gelatin capsule for medicine) GB13731-92
- Corporate standard (Thickness tester) Q/12XQ0193-2010

### Features:
- Thoroughly eliminating the influence to results by environment and experimenter's visual error.
- Standard test tube and same capacity of sample.
- High stable light source system, equal brightness.
- High precise photoelectric transducers for testing exactly.
- Auto-testing, transparency being conversion accounted automatically.
- Automation: auto-test, auto-diagnose, auto-alarm.

### Specifications:
- Test range: (20~500)mm
- Test accuracy: ±5mm
- Volume: 400ml
- Power: 220V/ 50Hz/ 80W
- Dimension: (360×240×120) mm3
- Weight: 4.5kg

## 2. DP-TM2 Transparency Tester



Transparency tester is requisite for detecting transparency of gelation.

### Applicable standard

- National standard (Food additive Gelatin) GB6783-94
- National standard (Hard gelatin capsule for medicine) GB13731-92
- Corporate standard (Thickness tester) Q/12XQ0193-2010

### Features:

- Thoroughly eliminating the influence to results by environment.
- Sample being conveniently taken out or put in by using standard test tube.
- Airtight light source system.

### Specifications:

- Test range: (20～500)mm
- Test accuracy: ±5mm
- Power: 220V/ 50Hz/ 80W
- Dimension: (600×200×630) mm3
- Weight: 6kg

# Drug Stability Tester

## 1. DP-WD-2A Drug Stability Tester



DP-WD- 2A drug stability tester is based on "People's Republic of China Pharmacopoeia" 2010 version of the relevant provisions of two Specially developed drug stability test equipment. It is to investigate the drug or drug formulation at a specific temperature, humidity, light changes time variation law, so as to drug development, provide scientific basis for production, packaging, storage and transportation, establishment drugs validity through the drug stability test.

DP-WD-2A drug stability teste provides precise temperature controlled environment, adjustable illumination light source, and accurate 2-way humidity monitoring, can monitor75% and 92.5% two humidity environment at the same time in accordance with the requirements of the pharmacopoeia. Influence factor tests are to be completed at the same time (high temperature test, high humidity test, bright light test), as well as long-term testing and accelerated testing. It is essential equipment to implement drug stability testing.

### Technical Specifications
- The illumination range: 1000--7000Lx (with three illumination adjustable slit lamps)
- Temperature control range: room temperature --80 °C ± 1 °C (superior to other products)
- Relative humidity measuring range: 10-100% RH ± 5%
- With two US imported Honeywell humidity sensors, which can detect two sample chamber humidity value at the same time (Pharmacopoeia of 75% and 92.5% RH), saving half of experiment time (better than other products)
- Volume: 51 * 40 * 38cm (stainless steel liner, the upper and lower floor)
- Working noise: less than 50dB

# Vacuum Constant Temperature Drying oven

## 1. DP-YB-1A Vacuum constant temperature drying oven



According to the requirements of "Determination of Loss on Drying" in the "Pharmacopoeia of the People's Republic of China", it absorbs the advantages of similar products at home and abroad, and is a unique and innovative product. Its various indicators have reached the leading level of similar domestic products.

### Applicable standard

National standard (Chinese codex) /2010

### Features:

- Operate easily with slight shake buttons.
- High vacuum seal.
- It can achieve an equal temperature as heating.
- Display vacuum by a analog meter and display temperature by a digital meter.
- Observe samples by the pressure-proof glass at all hours.

### Specifications:

- Vacuum range（0～0.1）MP
- Temperature control range (30~150)℃
- Temperature control accuracy ±2.0℃
- Using ambient temperature (15～35)℃
- Heater power: 150W
- Power supply: 220V/50Hz/150W
- Exterior dimensions: (36X36X55) cm3
- Weight: 16KG

# Tablet Hardness Tester

## 1. DP-YD-1A Tablet Hardness Tester



### Introduction:
Tablet hardness testers are instruments for detecting breaking hardness of tablet.

### Applicable standards:
Corporate standard (Tablet hardness tester )Q/12XQ0186-2010

### Features:
- Manual loading and manual pressurization.
- High-precision pressure sensor, high-precision AD converter, digital display.
- It will be automatically cleared after power on and preheating.
- Fully digital calibration and zero adjustment.
- One-click N/KG hardness unit conversion.
- Can continuously measure the hardness value of tablets.
- Automatic display and automatic locking.
- Automation, automatic detection, automatic diagnosis, automatic alarm.

### Specifications:
- Hardness test range: (2~200)N / (0.2~20)KG
- Hardness test accuracy ±1.5%
- Diameter test range ( 3 ~20)m
- Continuous working time: greater than 24 hours
- Power supply: 220V/50Hz/5W
- Exterior dimensions: (32*20*10) cm3
- Weight 5KG

## 2. DP-YD-2 Tablet Hardness Tester



Tablet hardness testers are instruments for detecting breaking hardness of tablet.

### Applicable standards:

Corporate standard(Tablet hardness tester )Q/12XQ0186-2010

### Features:

* Manual loading, automatic feeding test, automatic statistical printing.
* High-precision pressure sensor with digital display.
* It can continuously measure the hardness value of tablets, and each group can test up to 100 tablets.
* Automatically detect the chip diameter to save testing time.
* Automatic display, automatic latch.
* Automatic reset, automatic cycle test.
* It can automatically print and process data. While displaying and recording the hardness value of each tested tablet, it can automatically calculate the maximum value, minimum value, average value, mean square value and discrete coefficient, and automatically print the test and statistical results.
* Automatically preset the number of pieces and automatically test the hardness value; display the preset value and real-time value in time.
* Automation, automatic detection, automatic diagnosis, automatic alarm.

### Technical indicators

* Hardness test range: (2～200)N
* Hardness test accuracy: ±1.5%
* Diameter test range: (3～40)mm
* Number of test pieces per group: ≤100 pieces
* Test time for each piece: ⪼20 seconds
* Continuous working time greater than 24 hours

- Power supply: 220V/50Hz/60W
- Overall dimensions: (50X30X16) cm3
- Weight: 12kg

# 3. DT-YD-3 TABLET HARDNESS TESTER



Tablet hardness testers are instruments for detecting breaking hardness of tablet.

## Applicable standards:
Corporate standard(Tablet hardness tester )Q/12XQ0186-2010

## Features:
- The tablet is loaded artificially and pressed automatically.
- There is high accuracy press sensor and hardness data is displayed on LED.
- It tests tablet hardness continuously. The biggest number is 100 pieces of a gang.
- Time of testing will be saved by directly measuring the diameter.
- Test data is displayed and locked automatically, so can test be reset and cycled.
- It can deal with and print out such data as: hardness of each tablet, the maximum value, the minimal value, the average value and the number of tablets.
- The parameters can be preset at any time. Either preset or real data is displayed on the LED.
- Automation: auto-test, auto-diagnose, auto-alarm.

## Specifications:
- Hardness test range (2～200)N
- Hardness test accuracy ±1.5%
- Diameter test range (3～40)mm
- Number of test pieces per group ≤100 pieces
- Test time for each piece ⇒20 seconds
- Continuous working time greater than 24 hours
- Power supply: 220V/50Hz/60W
- Overall dimensions: (40x24x15) cm3
- Weight: 10kg

## 4. DP-YD-20 Intelligent Tablet Hardness Tester



DP-YD-20 Intelligent Tablet Hardness Tester is a drug testing instrument used to measure the hardness and diameter of tablets. It is widely used in pharmaceutical factories, drug testing institutes and related scientific research institutions.

### Performance features:

- The microprocessor is used to control the operation interface, which is highly intelligent, powerful and easy to use.
- High-precision load sensor ensures measurement accuracy.
- LCD screen display, Chinese or English interface optional, rich display content and easy to use.
- The measurement data can be automatically counted, analyzed, displayed, and printed, and can be printed piece by piece.
- It has a real-time calendar clock function, which can print the detection and calibration date and time in the detection report.
- It has fault self-diagnosis function and automatically prompts certain abnormal phenomena that occur during the test.
- Parameter settings are automatically saved until reset.
- With calibration function, display and print calibration results.

### Technical indicators:

- Measuring range: hardness 1~200N
    - Resolution 0.1N
    - Accuracy ±0.03Kg
    - Diameter 2.0~30.0mm
    - Accuracy ±0.01mm
- Unit of measurement: Hardness N/Kg/Sc (optional)
    - Diameter mm/inch (optional)

- Measurement method: manual single piece/automatic continuous (the maximum number of pieces measured is 160 pieces)/optional
- Display: LCD display 4 lines × 8 columns Chinese characters or 8 lines × 16 columns English/optional

# 5. DP-YD-35 Intelligent Tablet Hardness Tester



DP-YD-35 Intelligent Tablet Hardness Tester is a drug testing instrument used to measure the hardness and diameter of tablets. It is widely used in pharmaceutical factories, drug testing institutes and related scientific research institutions.

## Performance features:

- The microprocessor is used to control the operation interface, which is highly intelligent and powerful. It uses high-precision load sensors to ensure measurement accuracy.
- LCD screen display, Chinese or English interface optional, rich display content and easy to use.
- The measurement data can be automatically counted, analyzed, displayed, and printed, and can be printed piece by piece.
- It has a real-time calendar clock function, which can print the detection and calibration date and time in the detection report.
- It has fault self-diagnosis function and automatically prompts certain abnormal phenomena that occur during the test.
- Parameter settings are automatically saved until reset.
- With calibration function, display and print calibration results.

## Technical indicators:

- Measuring range: hardness 1~350N
    - Resolution 0.1N
    - Accuracy ±0.03Kg
    - Diameter 2.0~30.0mm
    - Accuracy ±0.01mm
- Unit of measurement: Hardness N/Kg/Sc (optional)
    - Diameter mm/inch (optional)
- Measurement method: manual single piece/automatic continuous (the maximum number of

pieces measured is 160 pieces)/optional

- Display: LCD display 4 lines × 8 columns Chinese characters or 8 lines × 16 columns English/optional

## 6. DP-YD-5S Intelligent Tablet Hardness Tester



### Introduction

DP-YD-5s intelligent tablet hardness tester is a professional-grade tablet hardness measuring instrument; it has a wide measurement range of N~350N~500N and a large diameter tolerance of 2mm~40mm~60mm.

It also has a high resolution of 0.01N and can continuously adjust the tableting speed. At the same time, it provides real-time display of the measurement characteristic curve of load changes over time; standard system management permissions; USB mass storage export, measurement audit tracking and other functions. The hardware uses an embedded ARM'Cortex-M7' core processor, combined with the highest performance mechanical A/D module chip to ensure high-speed acquisition and lossless processing of measurement data, providing professional users with reliable and accurate measurement results.

### Applicable standards:

1. JB/T20104-2007.
2. Comply with current GMP regulations.

### Technical indicators and characteristics of DP-YD-5S intelligent tablet hardness tester:

- Instrument screen display characteristics: 7-hour high-definition touch screen, interactive intelligent control. Switch between Chinese and English operating systems with one click.
- Real-time accurate mapping: measurement characteristic curves of tableting force, displacement and time functions. (The curve contains a scale and automatically zooms in and out. It visually describes the crushing force of the sample (hardness, brittleness, toughness, work, and other physical property indicators).
- System authority management: two levels, multiple users. (Login with username + password) .
- Audit trail records: can be queried by date or entry, and can be printed selectively or in full.

- Measurement data storage: USB mass storage and export: automatically record all measurement processes and results. Support historical data query.
- Print content: sample name, identification, batch number, measurement method, measurement results, inspector, date, time...
- Automatic calibration accuracy function: The instrument has a measurement accuracy calibration interface, and the calibration results are displayed directly on the screen. If it is determined that a certain item is out of tolerance, you can press the automatic correction key to automatically complete the calibration and save it in the system (calibration accuracy 0.01 N).
- Hardness measurement range: 5N-350N (35Kg) and 5N-500N (50Kg) two specifications
- Hardness display accuracy: 0.01N.
- Measurement accuracy error: ≤±1%rdg±5dgt.
- Measuring diameter range: 2mm~40mm and 2mm~60mm.
- Tablet pressing speed adjustment range: 0.1mm/s~5mm/s.
- Speed regulation resolution: 0.1mm/s.
- Speed accuracy error: ±1% of setting accuracy.
- Three measurement methods
  - ◆ Single chip accumulation;
  - ◆ Continuously decreasing (the maximum number of pieces measured is 200 pieces)
  - ◆ Preset groups (maximum 10 groups, 1-20 pieces per group)
- Unit of measurement: Newton-N, Kilogram-force-Kgf (Touch the screen to achieve unit conversion).
- Output: RS232 serial printing interface, USB serial port.
- The embedded ARM'Cortex-M7' core processor, combined with the highest-performance mechanics A/D module chip, ensures high-speed acquisition and lossless processing of measurement data. Provide professional users with reliable and accurate measurement results.
- The cumulative tableting mode provides touch keys for pausing and continuing work, making it convenient to observe and analyze the rupture process curve of the sample at any time.
- Real-time display: current date and time, pressure, number of tablets, speed, average, maximum value, minimum value, variance, and standard deviation.
- provides a Chinese and English input interface for inputting Chinese characters, numbers, and English, and editing the sample name, number, and operator name.
- Automatically calculate the film ejection stroke, compress the test duty cycle, and improve work efficiency.
- Provide one-click switching between Chinese and English operation interface.
- Overall dimensions: (length*width*height) 330*290*530mm
- Weight: 14.3Kg

## System Configuration:
1. DP-YD-5s intelligent tablet hardness tester 1set
2. Standard debris collection box 1set
3. brush 1set

# 7. DP-YD-4 intelligent tablet hardness tester



DP-YD-4 Intelligent Tablet Hardness Tester is a drug testing instrument used to measure tablet hardness. Tablets should have appropriate hardness, which is an important indicator that reflects the level of tablet production technology and controls tablet quality. Correctly reflecting and testing tablet hardness has practical guiding significance that cannot be ignored for tablet production and scientific research, ensuring the accuracy of clinical medication, etc.

## Applicable standards:
JB/T20104-2007

## Main features of DP-YD-4 intelligent tablet hardness tester:
- Constant-speed automatic tableting ensures measurement accuracy and reproducibility.
- High-precision pressure sensor.
- The display uses a high-definition LCD screen with rich and friendly display content.
- Optional measurement methods: single chip/automatic continuous.
- Using microcontroller as the core control technology, it is highly intelligent, powerful and easy to use. The system can realize automatic tableting, automatic display, automatic latch, automatic reset, automatic cycle test, automatic linear error correction, and automatic fault diagnosis.
- Automatically calculate the film ejection stroke and compress the test duty time.
- One-click conversion of measurement units (Newton-Kilogram).
- Provide function keys to delete mis operations.
- Users can conveniently use standard weights to regularly calibrate the measurement accuracy of the instrument.

## Main technical indicators of DP-YD-4 intelligent tablet hardness tester:
- Automatic constant speed tableting, reproducibility and accuracy guaranteed
- Hardness test range: 15-200N

- Reading resolution: 0.1N
- High-precision mechanical sensors
- Intelligent LCD display, providing real-time multi-information data
- Optional measurement methods: single chip/automatic continuous
- Hardness measurement accuracy: reading ±0.5%
- Tablet test diameter: 2mm-40mm
- Repeated measurement error: ±1%
- Number of test pieces per group: ≤100 pieces
- Unit of measurement: Newton N Kilogram Force Kgf (one key to realize measurement unit conversion)
- Automatically calculate the film ejection stroke and shorten the duty cycle.
- Users can use standard weights to calibrate the measurement accuracy of the instrument at any time.
- Overall dimensions: length*width*height 500*300*170mm

# 8. DP-YD-4U color touch screen intelligent tablet hardness tester



## Main features of DP-YD-4U intelligent tablet hardness tester:

DP-YD-4U intelligent tablet hardness tester adopts high-performance, embedded ARM'Cortex-M3' core processor, combined with the highest-performance mechanical A/D module chip to ensure high-speed acquisition and lossless processing of measurement data. Provide professional users with reliable and accurate measurement results.

## Applicable standards:

JB/T20104-2007

## DP-YD-4U intelligent tablet hardness tester technical indicators and characteristics:

- Hardness measurement range: 10N-350N
- Resolution: 0.01N
- Accuracy: ±1%rdg±5dgt
- Real-time display of the measurement characteristic curve of load changes over time
- Allowable measurement diameter: 2mm~40mm
- Tablet pressing speed selection: 0.5mm/s, 0.8mm/s, 1mm/s, 1.5mm/s
- Accuracy: ±1% of setting accuracy
- Measurement method
    - ◆ Single chip accumulation
    - ◆ Continuously decreasing (the maximum number of pieces measured is 200 pieces)
    - ◆ Preset groups (maximum 10 groups, 1-20 pieces per group)
- Unit of measurement: Newton-N, Kilogram-force-Kgf (Touch the screen to achieve unit conversion)
- Display: 5-inch color touch screen.

- Verification: Standard weights can be used to verify the accuracy of the machine. If there is a deviation in accuracy, the user can enter the calibration interface of the instrument; follow the on-screen prompts to easily eliminate the instrument error.
- Output: RS232 serial printing interface
- The cumulative tableting mode provides touch keys for pausing and continuing work, making it convenient to observe and analyze the rupture process curve of the sample at any time.
- The entire measurement characteristic curve is displayed in real time, and the coordinates display the complete testing process, providing an intuitive basis for analyzing and evaluating the hardness of the sample.
- Real-time display: current date and time, pressure, number of slices, speed, average, maximum value, minimum value, variance, and standard deviation.
- Provides a Chinese and English input interface for inputting Chinese characters, numbers, and English, and for editing sample names, numbers, and operator names.
- Automatically calculate the film ejection stroke, compress the test duty cycle, and improve work efficiency.
- Based on user needs, hierarchical management permissions will be added for a fee.
- According to user needs, USB access function can be added for a fee.
- According to user needs, Chinese and English dual operation interface functions can be added for a fee.
- Dimensions: length 330mm, width 290mm, height 530mm.
- Weight: 14.3Kg.

## System Configuration:

1. DP-YD-4U intelligent tablet hardness tester 1 set
2. Standard debris collection box 1 piece
3. 1 brush

# 9. DP-YD-5S Intelligent Tablet Hardness Tester



## Introduction

DP-YD-5s intelligent tablet hardness tester is a professional-grade tablet hardness measuring instrument; it has a wide measurement range of N~350N~500N and a large diameter tolerance of 2mm~40mm~60mm.

It also has a high resolution of 0.01N and can continuously adjust the tableting speed. At the same time, it provides real-time display of the measurement characteristic curve of load changes over time; standard system management permissions; USB mass storage export, measurement audit tracking and other functions. The hardware uses an embedded ARM'Cortex-M7' core processor, combined with the highest performance mechanical A/D module chip to ensure high-speed acquisition and lossless processing of measurement data, providing professional users with reliable and accurate measurement results.

## Applicable standards:

1. JB/T20104-2007.
2. Comply with current GMP regulations.

## Technical indicators and characteristics of DP-YD-5S intelligent tablet hardness tester:

- Instrument screen display characteristics: 7-hour high-definition touch screen, interactive intelligent control. Switch between Chinese and English operating systems with one click.
- Real-time accurate mapping: measurement characteristic curves of tableting force, displacement and time functions. (The curve contains a scale and automatically zooms in and out. It visually describes the crushing force of the sample (hardness, brittleness, toughness, work, and other physical property indicators).
- System authority management: two levels, multiple users. (Login with username + password) .
- Audit trail records: can be queried by date or entry, and can be printed selectively or in full.

- Measurement data storage: USB mass storage and export: automatically record all measurement processes and results. Support historical data query.
- Print content: sample name, identification, batch number, measurement method, measurement results, inspector, date, time...
- Automatic calibration accuracy function: The instrument has a measurement accuracy calibration interface, and the calibration results are displayed directly on the screen. If it is determined that a certain item is out of tolerance, you can press the automatic correction key to automatically complete the calibration and save it in the system (calibration accuracy 0.01 N).
- Hardness measurement range: 5N-350N (35Kg) and 5N-500N (50Kg) two specifications
- Hardness display accuracy: 0.01N.
- Measurement accuracy error: ≤±1%rdg±5dgt.
- Measuring diameter range: 2mm~40mm and 2mm~60mm.
- Tablet pressing speed adjustment range: 0.1mm/s~5mm/s.
- Speed regulation resolution: 0.1mm/s.
- Speed accuracy error: ±1% of setting accuracy.
- Three measurement methods
  - ◆ Single chip accumulation;
  - ◆ Continuously decreasing (the maximum number of pieces measured is 200 pieces)
  - ◆ Preset groups (maximum 10 groups, 1-20 pieces per group)
- Unit of measurement: Newton-N, Kilogram-force-Kgf (Touch the screen to achieve unit conversion).
- Output: RS232 serial printing interface, USB serial port.
- The embedded ARM'Cortex-M7' core processor, combined with the highest-performance mechanics A/D module chip, ensures high-speed acquisition and lossless processing of measurement data. Provide professional users with reliable and accurate measurement results.
- The cumulative tableting mode provides touch keys for pausing and continuing work, making it convenient to observe and analyze the rupture process curve of the sample at any time.
- Real-time display: current date and time, pressure, number of tablets, speed, average, maximum value, minimum value, variance, and standard deviation.
- provides a Chinese and English input interface for inputting Chinese characters, numbers, and English, and editing the sample name, number, and operator name.
- Automatically calculate the film ejection stroke, compress the test duty cycle, and improve work efficiency.
- Provide one-click switching between Chinese and English operation interface.
- Overall dimensions: (length*width*height) 330*290*530mm
- Weight: 14.3Kg

## System Configuration:
1. DP-YD-5s intelligent tablet hardness tester 1set
2. Standard debris collection box 1set
3. brush 1set

## 10. DP-YD-350N Smart Tablet Hardness Tester

DP-YD-350N smart tablet hardness tester is a special instrument for measuring the hardness of tablet drugs. It adopts international advanced design concept and manufacturing technology. The shape is smooth and beautiful, compact and stable, and it is highly reliable and easy to operate. advantage. This product is widely used in pharmaceutical factories, medical research, teaching and research and drug inspection departments.

### PRODUCT FEATURES

- Built-in user management, data management system, and long-term storage of test data.
- More accurate integrated circuit design, automatic statistics and analysis of measured values.
- Higher precision load cell to ensure measurement accuracy.
- More efficient (10 seconds/sample) in order to complete the experiment in less time.
- Smaller size, higher precision, more complete, simple and user-friendly interface and method.
- Smooth operation, low energy consumption and high reliability.
- Weak current working voltage is safer.

- It can be tested continuously for 1000 times, and the user can adjust the continuous test interval.
- The high-definition transparent lens window above the inspection bin is clear and intuitive for each test process.
- With fault self-diagnosis function, the test data can be exported and printed by USB.

## Specifications:

| Product model | DP-YD-350N |
|---|---|
| Measuring range | Hardness 10-350N, tablet diameter 2-25mm |
| Resolution | 0.01N |
| Precision | ±1.5%±1digit |
| Diameter measurement range | 2.0-25.0mm |
| Diameter resolution | 0.1mm |
| Diameter measurement accuracy | ±0.1mm |
| Hardness measurement unit | N/kg (optional) |
| measurement method | Automatic single/continuous multiple times (up to 1000 times) |
| power supply | DC 12V |

## Operation Interface



**User Login**                    **Parameters Setting**



**Data Export**                    **Log management**

# 11.DP-YD-200C Smart Tablet Hardness Tester



The testing of tablet hardness plays a vital role in its research and development, production process and final finished product. The DP-YD-200C tablet hardness tester can automatically record and statistically detect the maximum, minimum and final values of tablets during the testing process. average value.

## Features:

- Through the interface, test reports can be printed or output via USB.
- Touch human-computer interaction interface, easy to operate.
- The Chinese and English dual-language operation interface can meet the needs of more users.
- Can be tested once or multiple times in succession.
- The visual window above the detection chamber makes each test process clear and intuitive.
- The measurement verification port can be opened conveniently and quickly.
- DC 12V working voltage, using global universal voltage adapter, convenient and reliable.
- IQ/OQ certification documents are provided free of charge.

## Specifications:

| Product model | DP-YD-200C |
|---|---|
| Hardness measuring range | 10~200N |
| resolution | 0.01N |
| Accuracy | ±1.5%±1digit |
| unit | N/kg/kgf/kp (optional) automatic single/continuous multiple times |
| measurement method | DC12V 3.0A |
| power supply | 10~200N |

# Drug Tablet Coater

# 1. Small Drug Tablet Coater (Sugar-coating pan) DP-300A



DP-300A type of small coating machine is designed for medical institutions, drug development and pharmaceutical company laboratory designed instrument, which can be observed tablets, pills, granules, an outer coating and production process of film-coated capsule particles, get accurate experimental data, it can also be used for small batch production of new drugs, is the necessary equipment of the pharmaceutical industry.

## Product Features

Simple operation, high-definition digital tube display, and intuitive reading.

Three types of sugar-coated pans are available to meet more experimental needs.

The tilting angle and speed of the sugar-coated pan are adjustable.

Smooth operation, low energy consumption and high reliability.

## Specifications

| Host | Model | DP-300A |
|------|-------|---------|
| | No.1 coating pan | 300mm 1Cr18Ni9Ti |
| | No.2 coating pan | 200mm 1Cr18Ni9Ti |
| | No.3 coating pan | 100mm 95 glass |
| | coating pan tilt | 35 ° ~ 45 ° adjustable |
| | coated pan speed | 1 ~ 80rpm adjustable |
| | Power | 220V 50Hz |
| | coating pot production | Ø300mm≤1000g/time Ø200mm≤500g/time Ø100mm≤70g/time |
| Heating device | Features | Softly rotate the wind and heat evenly to better protect the components; The temperature rises quickly and reaches the set temperature in a few minutes; Can adjust the air volume and temperature to a large extent |

| | | |
|---|---|---|
| **Air compressor** | | to adapt to Same drug requirements; The digital display indicates the temperature and the temperature control is accurate. |
| | Power consumption | 1200W |
| | Air temperature | 10～100°C |
| | Power | AC220V±10%，50Hz |
| | Cylinder(mm) | 63.7x11.8 x 2 |
| | Speed(r.p.m.) | 1380 |
| | Pressure(Bar) | 8kg |
| | Capacity(L/min) | 40 |
| | Tank(L) | 8 |
| | Power(W) | 580W |
| **Spray Gun** | Features | Easy to spray in all aspects, suitable for spraying small and medium areas, Uniform atomization, fine particles, not suitable for spraying thick, large particle coating. |
| | Air consumption | 6SCFM |
| | Paint transfer | Gravity |
| | Pressure | 43PSI |
| | Inlet port | 1/4" |
| | Spray nozzle diameter | 0.5mm |
| | Cup capacity | Around 150ml, direction adjustable |

## Configuration

Simple model: Host, 3 pans

Standard model: Host, 3 pans, 1 Spray Gun, 1 heating devices including hot air gun, 1 air compressors

# Transdermal Diffusion Tester

The transdermal diffusion meter is suitable for drug transdermal diffusion testing of transdermal preparations such as patches, suppositories, and semi-solid preparations. Dry and wet methods can be selected.

## 1. DPT-2 Intelligent Transdermal Diffusion Tester
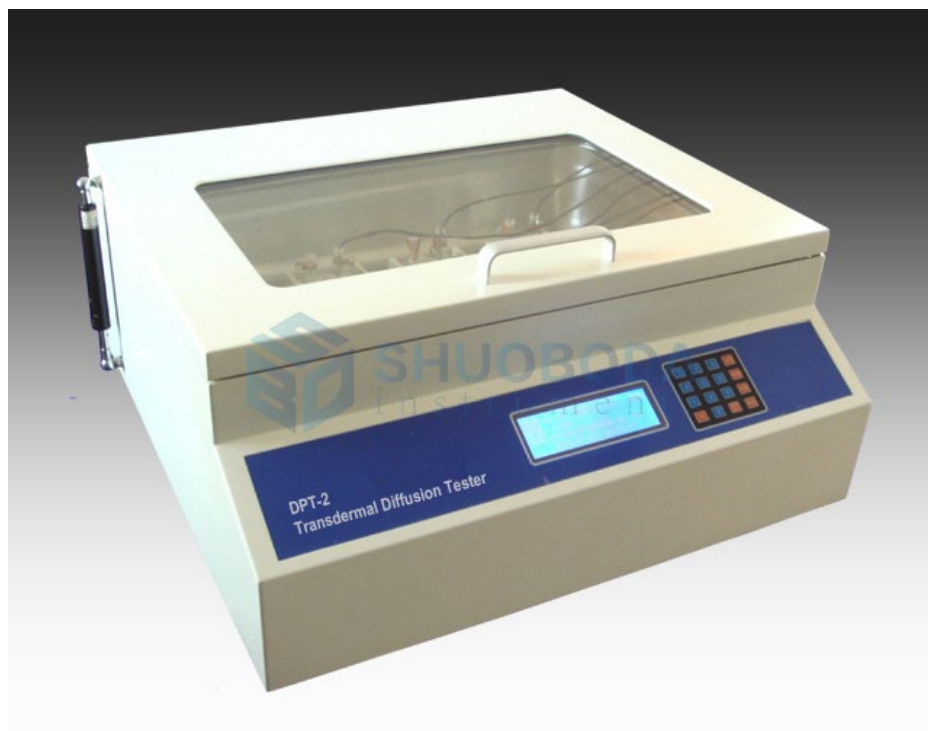


### Product details

DPT-2 tester is intelligent transdermal diffusion temperature control systems in a novel transdermal drug useful instrument, using a unique heat conduction, ensure that the test vessel for a long time constant work environment, achieve accuracy ≤ ± 0.1 in. (Experimental vessel belongs to wet or dry type) is currently the technology has been declared national patent.

### Features

- can be installed 6 horizontal diffusion cell.
- can be installed 12 vertical diffusion cell.
- Alternatively experimental vessel water heating and air thermal
- LCD display, friendly interface, simple operation
- Host operating parameters can be preset and stored automatically.
- Speed control subdivision way power driver stepper motor
- Built-in PT1000 sensors, controlled by PID
- Timer function displays the current sampling time points, cumulative total time and sampling points.
- With self-test and protection function, given a variety of fault signal.
- External micro-printer functionality.
- Having a USB storage function, the experimental data retention for viewing.

## Specifications

| Product model | DPT -2 |
|---|---|
| Vertical diffusion cell cup | 12 sets |
| Vertical diffusion cell volume | 6.5±0.1 ml |
| Horizontal diffusion cell cup | 6 sets |
| Horizontal diffusion cell volume | 7.5 ± 0.1 ml |
| Speed setting range | 100-500 rpm/min |
| Speed resolution | 1 rpm/min |
| Steady speed error | ≤±0.2% |
| Temperature range | Room temperature -45.0 ° C |
| Temperature resolution | 0.1 ° C |
| Temperature control accuracy | ≤±0.3°C |
| Sampling cycle point | Up to 10 different sampling periods, countdown |
| Sampling cycle time | Up to 99 hours, 59 minutes, 59 seconds, countdown |
| power | 800W |
| Working environment | Temperature 5-25 ° C, relative humidity ≤ 80% HR |
| power supply | AC220V±10%, 50Hz |

## 2. DPT-6 intelligent transdermal diffusion meter



The DPT-6 intelligent transdermal diffusion meter can objectively reflect the speed and degree of penetration of pharmaceutical preparations through the skin of living animals in specified solvents, and use scientific methods to screen effective drugs with transdermal absorption conditions. It is currently internationally recognized One of the standard testing methods for drug transdermal release.

DPT-6 intelligent transdermal diffusion meter adopts microcomputer measurement and control, fully digital circuit, high-precision temperature sensor and unique water bath constant temperature system. Easy to operate, reliable in performance and accurate in data. The technical indicators are fully in line with the relevant national pharmaceutical industry standards. It is widely used in pharmaceutical factories, schools, scientific research institutions and cosmetics industries to test transdermal release.

### Technical Parameters

- Number of transdermal cups: 6
- Receiving pool volume: 5ml (horizontal)/10ml (vertical)/15ml (vertical), choose one of three, factory standard 15ml (vertical)
- Temperature control range: 30-40℃
- Temperature control accuracy: ±0.1℃
- Stirring speed range: 100-800r/min
- Speed accuracy: ± 5%
- Power supply and power: 220V± 10% 50HZ 360W

# 3. DPT-12 intelligent transdermal diffusion meter



DPT-12 intelligent transdermal diffusion meter adopts microcomputer measurement and control, touch LCD screen display, and can simultaneously display the heating, rotation speed, timing and other working status of the instrument in real time. It has real-time data recording function and is equipped with a U disk interface to realize the export of experimental data. DC speed motor, high-precision temperature sensor and circulating water bath constant temperature system, the experimenter can calibrate the temperature by himself.

The instrument adopts touch screen operation, which is simple and flexible, has complete functions and accurate data. The technical indicators are fully in line with the relevant national pharmaceutical industry standards.

## Technical Parameters

- Number of diffusion cups: 12 (vertical)
- Receiving pool volume: 5ml (horizontal)/10ml (vertical)/15ml (vertical) Choose one of three, factory standard 15ml vertical
- Temperature control range: room temperature - 40℃ (4-10℃ when external refrigeration device is optional)
- Temperature control accuracy: ±0.3℃
- Stirring speed range: 100-1000r.p.m
- Speed accuracy: ± 5%
- Sampling settings/number of times: 1-6 times
- Timing range: 0-9 hours 59 minutes
- Continuous working: >24 hours
- Temperature calibration: Calibration can be performed in real time
- Experimental data recording and real-time recording of experimental processes
- Storage and export: Built-in storage record USB disk output

# 4. DPT-12B drug transdermal diffusion tester
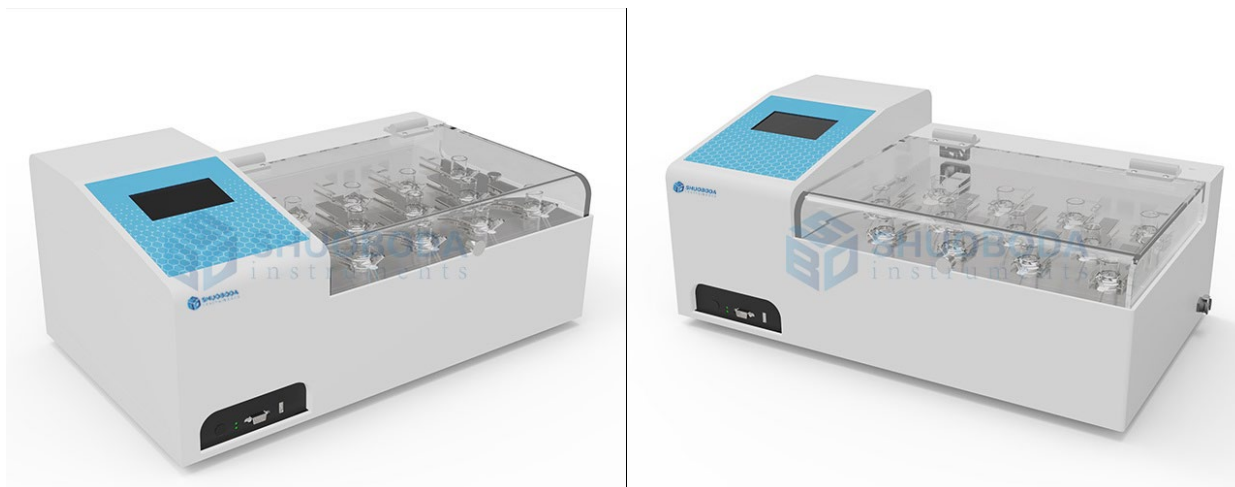


DPT-12B drug transdermal diffusion tester uses a modified vertical Franz diffusion cell. The membrane is sandwiched between the upper cover of the diffusion cell (supplier) and the diffusion cell cup (receptor). The inner surface of the membrane is immersed in the isotonic solvent. The constant-temperature circulating water bath maintains the constant-temperature working state of the diffusion pool, and the constant-speed magnetic stirring ensures the uniform distribution of the isotonic solvent. The slow penetration of the biofilm/skin and artificial membrane objectively reflects the drug penetration and release process of the transdermal preparation.

## DPT-12B Drug Transdermal Diffusion Tester Product Features

- 12 sets of improved vertical Franz vertical diffusion pools.
- Magnetic drive, stable and reliable, consistent stirring speed, ensuring uniform distribution of the concentration of exudate.
- Unique constant temperature water circulation design ensures uniform temperature throughout the infiltration system.
- Thermal insulation cover design ensures minimal temperature deviation during the entire test process.
- Through the device interface, test reports can be printed or output via USB.
- Touch human-computer interaction interface, easy to operate.
- Chinese and English dual-language operation interface.

## DPT-12B Drug Transdermal Diffusion Tester Product Features

| Product model | DPT -12B |
|---|---|
| Number of vertical diffusion pools | 12 sets |
| Vertical diffusion pool volume | 8ml |
| transdermal diffusion area | About 2.2cm2 |
| Speed setting range | 100~800RPM |
| Steady speed error | <±1% |
| Temperature range | Room temperature~45.0°C |
| Temperature resolution | 0.1°C |
| Temperature control accuracy | <± 3°C |
| Sampling times | <15 times |
| Sampling timing time | <9999 minutes |
| power supply | AC220V±10% 50Hz |

# Texture Analyzer

## 1. DP-JS-5 Tissue Analysis Freezing Force Test Gelatin Strength Tester



### Introduction

DP-JS-5 tissue analyzer freezing force meter is suitable for quality evaluation of gelatin, carrageenan, codran gum, surimi gel, pharmaceuticals, dairy products, meat products, fruits and vegetables and other items. The freezing strength, gel strength, hardness, elasticity, consistency, viscosity, brittleness, stickiness, compressibility, cohesion, tensile strength, rupture strength, and shear strength of the sample can be obtained quickly, accurately, conveniently, and objectively , milking characteristics, relaxation characteristics and other physical property indicators.

### Applicable standards:

- "Chinese Pharmacopoeia" 2020 Edition
- National standard "Food Additive Gelatin" GB6783-2013
- National standard "Medicinal Gelatin Hard Capsules" GB13731
- Light industry standard "Edible Gelatin" QB/T4087-2010
- National standard "Food Additive Gelatin Gelatin" GB28304-2012
- National standard "Frozen Surimi" GB/T36187-2018
- Agricultural industry standard "Meat Tenderness Determination Shear Force Determination Method" NY/T1180-2006
- Comply with current Chinese GMP regulations.

## Main technical indicators and characteristics of DP-JS-5 tissue analysis freezing force tester

- Instrument screen display characteristics: 7-inch high-definition touch screen, interactive intelligent control. Switch between Chinese and English operating systems with one click.
- Precision detection: The touch screen displays the measurement characteristic curve of negative cutting force and displacement over time. (The curve contains a scale and automatically zooms in and out. It visually describes the freezing strength, brittleness, viscosity, toughness, work, creep recovery characteristics, stress relaxation characteristics and other physical property indicators of the sample).
- Dynamic mechanical architecture: imported original precision motion module + German high-precision displacement sensor.
- Instrument safety settings: emergency braking + upper and lower limit control + force sensing element overload protection.
- Hierarchical authority management: (log in with username + password).
- Measurement data storage: USB mass storage and export: automatically record all measurement processes and results, and support historical data query.
- Load capacity range: 0~5000g
  Accuracy resolution: 0.01 g
  Accuracy: ±0.3%FSR
- Deformation displacement range: 0~120mm
  Displacement accuracy resolution: 0.001mm (German displacement sensor, accuracy guaranteed)
  Displacement accuracy deviation: w ±0.1 mm
- Speed adjustment: 0.1mm/s~15mm/s
  Speed regulation resolution: 0.1mm/s
  Accuracy: ±1% of setting accuracy
  The pre-test rate, mid-test rate and post-test rate can be set separately.
- Log in to the administrator mode and provide six parameter settings.
- Twelve measurement modes and two verification measurement modes
- Bloom-freezing strength test
- Normal-single test
  1) Compression test
  2) Puncture test
  3) Shear test
  4) Bending and breaking test
  5) Carrageenan gel strength test
  6) Coderan gel strength test
  7) Surimi gel strength test
- Cycle Count-Multiple compression tests
- Hold Time-loop test
- TPA-full texture TPA test
- Tension-Testile test
- Freeze intensity measurement accuracy verification measurement: The instrument is equipped with a standard measurement operation interface; it provides 5 continuous standard sample detection, automatically reads and displays the measurement data, and directly determines whether it is qualified or out of tolerance. Verification measurement results are printed in real time

and stored synchronously via USB

- Deformation displacement accuracy accuracy verification meter: The instrument comes standard with a displacement accuracy measurement operation interface, which automatically reads and displays measurement data and directly determines whether it is qualified or out of tolerance. Verification measurement results are printed in real time and stored synchronously via USB
- Output: micro printer, USB output

## 2. DP-CA-10H Touch Screen Texture Analyzer



## Product introduction

- DP-CA-10H is a texture analyzer that is directly controlled by a computer and is a popular teaching type.
- The high-definition touch screen is used as an auxiliary button, which is clear and eye-catching, easy to use, and convenient for testing.
- DP-CA-10H is equipped with professional version system software. Provides rich parameter settings and fine measurement control, implements fast data collection and professional data analysis.
- The instrument provides hierarchical authority management: three levels, multi-user, and ordinary users can add unlimited times. (Login with username + password)
- The instrument automatically completes audit trail records unconditionally: all traceable measurement results and processes are automatically protected by the system database

## Applications

- The DP-CA-10H texture analyzer can be used for physical property analysis of samples such as food, pharmaceuticals, biomedicine, dairy products, meat products, cosmetics, gels, candies, fruits and vegetables, jams, etc.;
- DP-CA-10H can quantitatively obtain the hardness, brittleness, tenderness, viscosity, elasticity, toughness, cohesion, chewiness, freezing strength, tensile strength, rupture strength, shear strength, compressive strength, and penetration of the sample. Strength, creep characteristics, relaxation characteristics and many other physical property indicators.

## Applicable standards:

- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations.
- National Standard "Food Additive Gelatin" GB6783-2013
- National standard "Medicinal Gelatin Hard Capsules" GB13731.
- National Standard "Food Additive Gelatin Gelatin" GB28304-2012
- National Standard "Frozen Surimi" GB/T36187-2018
- Light industry standard "Edible Gelatin" QB/T4087-2010
- Agricultural Industry Standard "Meat Tenderness Determination Shear Force Determination Method" NY/T1180-2006
- AACC74-09 Bread Hardness Test (American Association of Cereal Chemists)
- AOAC (American and European Gels Association)

## Main Specifications

- Load capacity range: 0~15kg (0~150N)
- A variety of force sensing elements are available: 1, 2, 5, 10, 15 kg and other specifications
- Load force detection accuracy: better than 0.01%
- Load force analysis accuracy: 0.001g
- Deformation displacement range: 0~310mm (0~410mm)
- Displacement analysis accuracy: 0.001mm
- Detection speed: 0.01mm/s~30mm/s
- Speed accuracy: ≤±0.1%
- Data collection rate: up to 4800 groups per second; optional 200, 500, 1000, 2000 groups/second after optimal filtering
- Instrument protection functions: emergency braking, upper and lower limit control, force sensing unit overload protection, detection data encryption
- Overall dimensions: length 480*width 330*height 790mm
- Weight:26Kg

## System software introduction

- Comprehensive test mode program editing functions; run, preset, repeat, cycle, clear, zero calibration, assignment, variables, formulas, calculation, playback, comparison, annotation, etc. Through the editing of these program commands, various detection modes can be realized, various test models can be built, and various required test data can be obtained.
- Graphical display editing function, the system can display three curves: force~time, force~distance, distance~time. The curve has a scale, and the graph can be scaled locally or automatically adjusted by the system. At the same time, key data points can be marked, and the area of the selected graph area can also be automatically calculated.
- Test playback: The software automatically records the entire test process, and can simultaneously turn on the instrument's built-in video and photo screenshot functions (save test videos of important samples). And provide multi-condition intelligent search. Tests of any period can be traced for data restoration, curve drawing and synchronous video playback, and the test details of the queried sample can be viewed and analyzed.
- The software can compare and analyze function curves and measurement data of 5 test results at the same time, and provide a report

- The software has a powerful result output function: it can strictly and objectively generate test reports in various data formats according to the prompts: Excel, Word, PDF. And supports A4 or A3 output and printing.
- The software operation interface is friendly: menu bar, tool bar, status bar, display bar, curve box, the experimental process is clear, and the control buttons are convenient and fast.
- The software provides two operating systems, Chinese and English, which can be switched with one click.
- The software provides more than ten test methods: single compression, cycle test, relaxation test, creep test, full texture test, tensile test, bending test, shear test, puncture test, freezing strength test, etc. The system supports custom unlimited addition of test modes.
- The software provides a program unit for metrological verification of measurement accuracy: it also has automatic measurement, automatic correction, and automatic repair functions.

# 3. DP-CA-17HD Touch Screen Texture Analyzer



## Product advantages

- DP-CA-17HD Texture Analyzer has a built-in 8-inch 1024*768 high-definition touch screen, which can be controlled directly by touch or mouse and keyboard.

- DP-CA-17HD Texture Analyzer can directly edit experimental methods, collect high-speed data, read and store test data, describe measurement curves, display, analyze, trace, store, and print test results without the need for an external computer.

- Because the DP-CA-17HD Texture Analyzer has a convenient appearance and powerful functions, this model is more suitable for various occasions such as laboratory research and development or production quality process control or monitoring on-site sampling or teaching and remote meetings.

- DP-CA-17HD Texture Analyzer can be used in the physical property analysis of samples such as food, pharmaceuticals, dairy products, meat products, cosmetics, aquatic products, gels, candies, fruits and vegetables, etc.; it can quantitatively obtain the hardness, crispness, tenderness, viscosity, and Elasticity, toughness, cohesion, chewiness, freezing strength, tensile strength, rupture strength, shear strength, compressive strength, penetration strength, creep characteristics, relaxation characteristics and other physical property indicators.

- DP-CA-17HD Texture Analyzer can optionally be equipped with a newly upgraded DP1.4 ultra-clear image quality interface (supporting 8K), which can display the video images collected by the texture analyzer and the entire real-time picture of the probe and sample from triggering to completion of the test, with rich details and pictures. The quality is clearly displayed.

- DP-CA-17HD Texture Analyzer can quickly and safely replace the force sensing element. Through the conversion of the force sensing element, the detection range can be changed, and the sensing resolution can be changed to adapt to different sample analyses.

- DP-CA-17HD Texture Analyzer can support the configuration of more than 100 universal probes

and fixtures, and is compatible with imported texture analyzers.

## Applicable standards:

- "Chinese Pharmacopoeia" 2020 edition.
- Comply with current Chinese GMP regulations.
- National standard "Food Additive Gelatin" GB6783-2013.
- National standard "Medicinal Gelatin Hard Capsules" GB13731.
- National Standard "Food Additive Gelatin-Cardan" GB28304-2012
- National Standard "Frozen Surimi" GB/T36187-2018
- Light industry standard "Edible Gelatin" QB/T4087-2010
- Agricultural Industry Standard "Meat Tenderness Determination Shear Force Determination Method" NY/T1180-2006
- AACC 74-09 Bread Hardness Test (American Association of Cereal Chemists)
- AOAC (American and European Gels Association)

## Hardware technical indicators

- DP-CA-17HD Texture Analyzer is equipped with the new 12th generation Intel Core processor, 8GB DDR4 memory, and 512GB high-speed SSD data storage disk. 6 cores, 8 threads, 4.4GHz turbo frequency, 10MB cache. Super acquisition speed, synchronized video pictures, real-time curve depiction, and massive data access without lag.
- DP-CA-17HD Texture Analyzer has built-in advanced Wi-Fi6TM8 and Bluetooth 5.29, provides extended HDMI, 4 USB3.0, and industrial nine-pin serial COM port.
- DP-CA-17HD Texture Analyzer provides as many and complete peripheral interfaces as possible, with the purpose of allowing your texture analyzer to easily achieve intelligent interconnection.
- DP-CA-17HD Texture Analyzer can be expanded to connect to a large external display screen or projection screen to facilitate video conferencing or teaching.
- Force sensor size: 20Kg (1, 2, 5, 10, 20, 25Kg optional)
- Force sensor element accuracy: 0.01% FS
- Force analysis accuracy: 0.001g
- Displacement range: 0~320mm
- Displacement analysis accuracy: 0.0001mm
- Data collection rate: up to 4800 groups per second, optional after optimization and filtering (200sps, 500sps, 1000sps, 2000sps, 3000sps, 4000sps)
- Moving speed: 0.01mm/s~40mm/s
- Speed accuracy: $\leqslant \pm 0.1\%$
- Overall dimensions: length 550mm*width 320mm*height 830mm
- Weight: about 29Kg

## Software technical characteristics

- The texture analyzer has a built-in high-definition camera module, which can record the entire test of important samples and save it together with other test data of the test into a traceable database.
- Test playback: **The software automatically records the entire test process (including synchronous video recording)** and provides multi-method intelligent retrieval. Tests of any period can be traced back to perform data restoration, curve drawing and synchronous video playback, and the test details of the queried samples can be viewed and analyzed.

- The system can display three curves: force~time, force~distance, and distance~time. The curve contains a scale, can be zoomed, can be marked with text or symbols, can automatically switch colors, and can automatically calculate relevant data points and the area of the selected graph area.
- The software provides hierarchical permission management: (username + password login).
- The software can simultaneously select five current or historical test results (function curves, measurement data, and synchronized recordings) for comparison and analysis.
- The software operation interface is friendly: menu bar, tool bar, status bar, display bar, curve box, the experimental process is clear, and the control buttons are convenient and fast. Both Chinese and English operating systems can be switched with one click.
- The software has powerful result analysis and output functions: it can strictly and objectively generate test reports in a variety of data formats: Excel, Word, and PDF based on prompts.
- **The system provides a program unit for metrological verification of measurement accuracy: it also has automatic measurement, automatic correction, and automatic repair functions.**
- The software provides more than a dozen test methods: single compression, cycle test, relaxation test, creep test, full texture test, tensile test, bending test, shear test, puncture test, meat tenderness test, freezing strength test, Gel hydrogel testing etc. The software supports quick customization and adding test modes.

# 4. DP-CA-15 Touch Screen Food Texture Tester
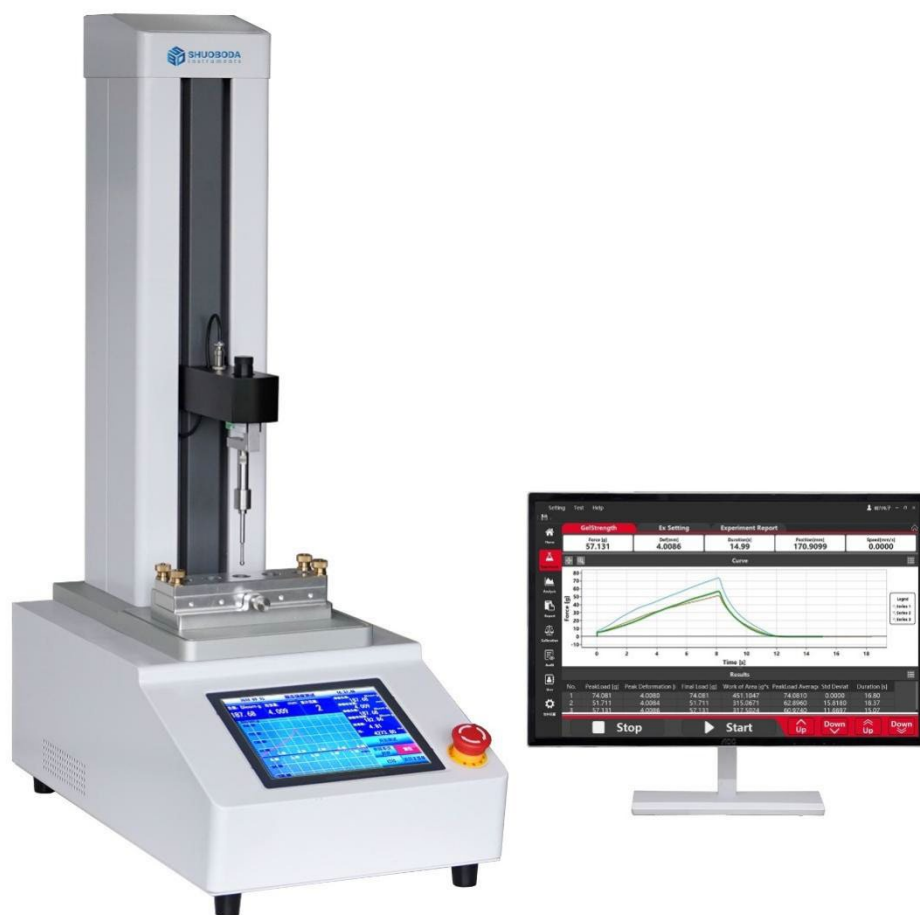


## Product introduction

- The DP-CA-15 Texture Tester equipped with an 8-inch high-definition touch screen can be separated from the computer and directly use the touch screen to control the texture analyzer, directly display the measurement curve, compile experimental methods, store test results, and print test certificates. DP-CA-15 is suitable for various occasions in the laboratory and production fields.

- DP-CA-15 Texture Tester can also be connected to a computer and configured with Texture Professional Edition system software. Provide richer parameter settings, conduct more precise measurement control, implement faster data collection, and complete more professional data analysis.

- DP-CA-15 Texture Tester can be used in the physical property analysis of samples such as food, pharmaceuticals, dairy products, meat products, cosmetics, gels, candies, fruits and vegetables, etc. It can quantitatively obtain the hardness, crispness, tenderness, viscosity, elasticity, and toughness of the samples, cohesion, chewiness, freezing strength, tensile strength, rupture strength, shear strength, compressive strength, penetration strength, creep characteristics, relaxation characteristics and many other physical property indicators.

## Applicable standards

- ''Chinese Pharmacopoeia'' 2020 Edition
- Comply with current Chinese GMP regulations
- National standard ''Food Additive Gelatin'' GB6783-2013.

- National standard "Medicinal Gelatin Hard Capsules" GB13731.
- National Standard "Food Additive Gelatin" GB28304-2012
- National Standard "Frozen Surimi" GB/T36187-2018
- Light industry standard "Edible Gelatin" QB/T4087-2010
- Agricultural industry standard "Meat Tenderness Determination Shear Force Determination Method" NY/T1180-2006
- AACC74-09 Bread Hardness Test (American Cereal Chemistry Association
- AOAC (American and European Gels Association)

## The main technical parameters

- The instrument is equipped with an 8-hour high-definition capacitive touch screen, which can be manually touched for convenient and quick sample testing when running offline.
- The instrument provides hierarchical authority management: three levels, multiple users. (Login with username + password)
- The instrument automatically completes audit trail records unconditionally: all traceable measurement results and processes are automatically protected by the system database.
- Load capacity range: 0~15kg optional
- A variety of force sensing elements are available: 0.5, 1, 2, 5, 10, 15 kg and other specifications
- Load force detection accuracy: better than 0.01 (real-time display; error less than 0.01%)
- Load force analysis accuracy: 0.001g
- Detection speed: 0.01mm/s~40mm/s
- Speed accuracy: $\leqslant \pm 0.1\%$
- Deformation displacement range: 0~310mm, 0~410mm optional, the initial point can be set arbitrarily within the displacement range
- Displacement analysis accuracy: 0.0001mm
- Data collection rate: 200, 500, 1000, 2000, 3000, groups/second optional after online optimization and filtering
- Instrument protection functions: emergency braking, upper and lower limit control, force sensing unit overload protection, detection data encryption
- Overall dimensions:560*330*800mm
- Weight:25Kg

## System software introduction

- Comprehensive test mode program editing functions; run, preset, repeat, cycle, clear, zero calibration, assignment, variables, calculations, formulas, playback, comparison, annotation, etc. Through the editing of these program commands, various detection modes can be realized, various test models can be built, and various required test data can be obtained.
- Graphical display editing function, the system can display three curves: force~time, force~distance, distance~time. The curve has a scale, and the graph can be scaled locally or automatically adjusted by the system. At the same time, key data points can be marked, and the area of the selected graph area can also be automatically calculated.
- Test playback: The software automatically records the entire test process, and can simultaneously turn on the instrument's built-in video and photo screenshot functions (save test videos of important samples). And provide multi-condition intelligent search. Tests of any period can be traced for data restoration, curve drawing and synchronous video playback, and the test details of the schedule can be viewed and analyzed.

- The software can compare function curves and measurement data of 5 test results at the same time. The 3.5 software has a powerful result output function: it can strictly and objectively generate test reports in various data formats according to the prompts: Excel, Word, PDF. And supports A4 or A3 output and printing.
- The software operation interface is friendly: menu bar, tool bar, status bar, display bar, curve box, the experimental process is clear, and the control buttons are convenient
- Chinese and English operating systems, one-click switching
- The software provides more than ten test methods: single compression, cycle test, relaxation test, creep test, full texture test, tensile test, bending test, shear test, puncture test, freezing strength test, etc. The system supports custom unlimited addition of test modes.
- The system provides a program unit for metrological verification of measurement accuracy: it also has automatic measurement, automatic correction, and automatic repair functions.

## 5. DP-CA-20HD Touch Screen Food Texture Analyzer/Tester



### Application

DP-CA-20HD is used in gelatin, carrageenan, codran gum, frozen surimi gel, agar compound hydrogel, pharmaceuticals, dairy products, meat products, cosmetics, grains, oils and cereals, fruits and vegetables, bread and biscuits Physical property analysis of baked goods, candies, jams, etc. samples.

It can accurately quantify the freezing strength, hardness, brittleness, tenderness, elasticity, toughness, cohesion, cohesion, crispness, chewiness, recovery, tensile strength, rupture strength, shear strength, and compression resistance of the sample. Strength, penetration strength, creep characteristics, relaxation characteristics and many other physical property indicators.

### Applicable standards

• "Chinese Pharmacopoeia" 2020 Edition
• Comply with current Chinese GMP regulations
• National standard "Food Additive Gelatin" GB6783-2013.
• National standard "Medicinal Gelatin Hard Capsules" GB13731.
• National Standard "Food Additive Gelatin" GB28304-2012
• National Standard "Frozen Surimi" GB/T36187-2018
• Light industry standard "Edible Gelatin" QB/T4087-2010
• Agricultural industry standard "Meat Tenderness Determination Shear Force Determination Method" NY/T1180-2006
• AACC74-09 Bread Hardness Test (American Cereal Chemistry Association
• AOAC (American and European Gels Association)

## Product advantages

- The texture analyzer has a built-in 10-hour high-definition capacitive touch industrial screen with a resolution of 1280*800. Can be flexibly touched or controlled by mouse and keyboard

- The texture analyzer has a built-in high-performance industrial computer; it is equipped with a four-core eight-thread intel-i5 or intel-7 central processor, DDR4 dual-channel 8G or 16G memory, and a 128G~512G solid-state drive.

- The texture analyzer comes standard with an HDMI high-definition interface and supports dual-screen external connection to a large monitor or projector.

- Expansion interfaces of the texture analyzer: 1 RS232 serial port, 1 Gigabit network port, 1 HDMI interface, 4 USB3.0

- Force accuracy and displacement accuracy, with functions such as measurement, correction, restoration, automatic repair or error correction.

- The texture analyzer has a built-in high-definition camera module, which can record the entire test of important samples and save it together with other test data of the test into a traceable database.

- The force sensing element can be replaced quickly and safely. Through the conversion of the force sensor element, the detection range can be changed, and the sensing resolution can be changed to adapt to different sample analysis.

- Test playback: The software automatically records the entire test process (including simultaneous video recording and photo screenshots), and provides multi-condition intelligent retrieval. Tests of any period can be traced for data restoration, curve drawing and synchronous video playback, and the test details of that period can be viewed and analyzed.

- The system can display three curves: force~time, force~distance, and distance~time. The curve can be scaled, zoomed, text or symbols can be marked, and the color can be changed. At the same time, the relevant data points and the area of the selected graph area can be automatically calculated.

- The system supports users to edit the test report form, test items, idioms and delete test items by themselves.

- The instrument has multiple protection functions: emergency braking, upper and lower limit control, force sensing element overload protection (customizable over-standard warning settings) detection data encryption

- It can accurately quantify the freezing strength, hardness, brittleness, tenderness, viscosity, elasticity, toughness, cohesion, chewiness, tensile strength, rupture strength, shear strength, compressive strength, penetration strength, and creep characteristics of the sample. , relaxation characteristics and many other physical property indicators.

- The main detection modes of the instrument: timing, positional displacement, constant load, single cycle, multiple cycles, compression, puncture, shear, bending, extrusion, gluing, compression maintenance, full texture, rupture, fracture, relaxation characteristics, creep Variable characteristics, custom modes, precision measurement, etc.

- The software provides hierarchical authority management: three levels, multiple users. (Login with username + password)

- The software can simultaneously select 5 current or historical test results (function curves, synchronous recordings) for comparison and analysis.

- The software operation interface is friendly: menu bar, tool bar, status bar, display bar, curve box, video box, experimental process are clear, and the control buttons are convenient and fast. Both

Chinese and English operating systems can be switched with one click.

## Main technical specifications

- Force sensing element: 20Kg (optional 1, 2, 5, 1020, 255Kg users can quickly replace by themselves)
- Force accuracy: 0.0001g
- Effective displacement range: 0~410mm (0~510mm can be added)
- Displacement accuracy: 0.0001mm
- Data collection rate:
  - A. Conventional configuration: up to 4800 groups per second (optional after optimized filtering: 200, 500, 1500, 2000, 3000,)
  - B. High configuration: up to 20,000 groups per second (optional after optimized filtering: 500, 1500, 2000, 5000, 10000,) 0.001mm/s~50mm/s
- Movement speed options
- Speed accuracy: ≤±0.01%
- Positioning accuracy: ±0.01mm
- Positioning accuracy: ≤±0.1%
- In addition to the standard probes, there are more than 100 kinds of measurement probes and fixtures to choose from.
- Overall dimensions: length 555mm*width 340mm*height 885mm
- Weight 29Kg

## 6. DP-CA-20HS Texture Analyzer/Tester



### Product advantages

- The force sensing element can be replaced quickly and safely. Through the conversion of the force sensing element, the detection range can be changed, and the sensing resolution can be changed to adapt to different sample analyses.

- Provides video and picture capture functions, which can record the entire test of important samples and save them simultaneously with other test data and strain curves of the test into a traceable database.

- The data collection rate of 4,000 sets per second can capture the precise moment when the sample changes, rejecting missed or misjudgments.

- The displacement analysis accuracy is 0.0001mm. Only models with this accuracy can achieve professional-level applications in detecting subtle changes in sample shape.

### Application

DP-CA-20HS Touch Screen Texture Analyzer can be used in gelatin, carrageenan, codran gum, frozen surimi gel, agar compound hydrogel, pharmaceuticals, dairy and meat products, cosmetics, grain and oil foods, jelly, candy, fruits and vegetables, jam, and other samples Physical properties analysis.

It can accurately quantify the freezing strength, hardness, brittleness, tenderness, viscosity, elasticity,

toughness, cohesion, chewiness, tensile strength, bursting strength, shear strength, compressive strength, penetration strength, and creep of the sample. properties, relaxation properties and many other physical property indicators.

## Applicable standards

- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations
- National standard "Food Additive Gelatin" GB6783-2013.
- National standard "Medicinal Gelatin Hard Capsules" GB13731.
- National Standard "Food Additive Gelatin" GB28304-2012
- National Standard "Frozen Surimi" GB/T36187-2018
- Light industry standard "Edible Gelatin" QB/T4087-2010
- Agricultural industry standard "Meat Tenderness Determination Shear Force Determination Method" NY/T1180-2006
- AACC74-09 Bread Hardness Test (American Cereal Chemistry Association
- AOAC (American and European Gels Association)

## Main technical parameters and characteristics

- Load capacity range: 0~25Kg (0~250N) (optional: 0.5, 12, 5, 1025, 50, 100Kg and other specifications)
- Force accuracy: 0.0001g
- Measuring arm range: 310mm (optional upgrade to 410mm or 510mm)
- Displacement accuracy: 0.0001mm
- Detection rate: 0.01~50mm/s
- Data collection rate: up to 4800 groups/second, adjustable after optimization: 200, 500, 1000, 2000, 4000
- The system provides hierarchical authority management: three levels, multiple users. (Login with username + password)
- The system automatically completes audit trail records: all traceable measurement results and processes are automatically protected by the system database
- System protection functions: emergency braking, upper and lower limit control, force sensing unit overload protection, detection data encryption
- Overall dimensions: length 480*width 330*height 825mm
- Weight:28Kg

## System software introduction

- Comprehensive test mode program editing functions; run, preset, repeat, cycle, clear, zero calibration, assignment, variables, formulas, calculation, playback, comparison, annotation, etc. Through the editing of these program commands, various detection modes can be realized, various test models can be built, and various test data required can be obtained.
- Graphical display editing function, the system can display three curves: force~time, force~distance, distance~time. The curve contains a scale, which can be arbitrarily scaled locally or automatically adjusted by the system. At the same time, key data points can be marked, and the area of the selected graph area can also be automatically calculated.
- Test playback: The software automatically records the entire test process, and can simultaneously turn on the video and photo screenshot functions of the instrument (save test videos of important

samples). And provide multi-condition intelligent search. Tests of any period can be traced back for data restoration, curve drawing and synchronous video playback, and test details can be viewed and analyzed.

- Customized reports and test charts can be easily created, and test data can be directly exported to Excel/Word/PDF and other formats for charting, saving, comparing, printing, and generating professional reports.
- The software can realize the overlay display of multiple texture curves in different colors, making it convenient and intuitive to compare and analyze the results of multiple experiments.
- The software operation interface is friendly: menu bar, tool bar, status bar, display bar, curve box, video box, and experimental process are clearly understood, and the control buttons are convenient and fast.
- The software provides two operating systems, Chinese and English, which can be switched with one click.
- The software provides more than ten test methods: single compression, cycle test, relaxation test, creep test, full texture test, tensile test, bending test, shear test, puncture test, freezing strength test, etc. The system supports custom unlimited addition of test modes.
- The system has the function of metrological verification of measurement accuracy: deviations in metrological verification can be automatically corrected and repaired

# 7. DP-CA-20HDF Texture Analyzer/Tester



## Product advantages

- The software and hardware performance are benchmarked against imported texture analyzers and can be adapted to imported probes, fixtures and accessories.
- The force sensing element can be quickly and safely replaced. Through the conversion of the force sensing element, the detection range can be changed, and the sensing analysis accuracy can be changed to adapt to different sample analyses.
- The software provides video collection and picture capture functions. It can record the entire test of important samples and save it to a traceable database simultaneously with other test data and strain curves of the test.
- Data acquisition rate of up to 10,000 times per second, four-channel simultaneous reading. It can capture the details of the sample detection process in real time to avoid missed judgments and misjudgments.
- The full-scale positioning accuracy of the DP-CA-20HDF texture analyzer is 0.001mm, thanks to the precision slide-rail ball screw single-axis machine module and the cooperation with high-precision and high-resolution closed-loop servo electric drive. Ensures precise detection of subtle changes in sample shape.

## Application

- **Food:** flour products, rice products, grain and oil foods, cereals, fruits and vegetables, gels, candy, dairy products, meat products, snack foods, pet food.
- **Pharmaceuticals:** tablets, capsules, sugar coatings, films, Chinese herbal medicines, Chinese patent medicines, ointments, patches, popping beads test, needle penetration test, injection needle quality test, medical tape, inhaler, biological materials, pharmaceutical packaging materials, etc.
- **Chemical industry:** cosmetics, chemical raw materials.
- **Materials:** packaging materials, films, gel films, sheets, medical materials, etc.
- **Test categories:** hardness test, strength test, biomechanical test, elasticity test, tenderness test, freshness test, peel test, creep property test, relaxation property test, compression test, tensile test, full texture test, etc.
- **Test indicators:** hardness, brittleness, tenderness, adhesion, elasticity, toughness, cohesion, chewiness, ductility, recovery firmness, tensile strength, bursting strength, shear strength, freezing strength, etc.

## Applicable standards

- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations
- National standard "Food Additive Gelatin" GB6783-2013.
- National standard "Medicinal Gelatin Hard Capsules" GB13731.
- National Standard "Food Additive Gelatin" GB28304-2012
- National Standard "Frozen Surimi" GB/T36187-2018
- Light industry standard "Edible Gelatin" QB/T4087-2010
- Agricultural industry standard "Meat Tenderness Determination Shear Force Determination Method" NY/T1180-2006
- AACC74-09 Bread Hardness Test (American Cereal Chemistry Association
- AOAC (American and European Gels Association)

## Main technical specifications:

- Load capacity range: 0~25Kg (0~250N) (optional: 125, 125, 50 Kg and other specifications)
- Force accuracy: 0.0001g
- Measuring arm range: 410mm
- Displacement accuracy: 0.0001mm
- Detection rate 0.001~50mm/s
- Data collection rate: up to 10,000 groups/second, four-channel simultaneous reading. Adjustable sampling rate: 200, 500, 1000, 2000, 5000, 8000 groups/second
- The system provides hierarchical authority management: three levels, multi-user (username + password login)
- The system automatically completes audit trail records: all traceable measurement results and processes are automatically protected by the system database
- System protection functions: emergency braking, upper and lower limit control, force sensing unit overload protection, detection data encryption
- Overall dimensions: length 480x width 330x height 825mm
- Weight:28Kg

## System software introduction

- Complete test mode editing functions: including run, preset, repeat, loop, clear, zero calibration, assignment, variables, formulas, calculation, playback, comparison, annotation, etc. Through the editing of these functions, users can build personalized test models to serve specificity detection as needed.

- With graphic display editing function, the system can display three curves: force-time, force-distance, and distance-time. The curve contains a ruler, which can be used for local scaling of the graph or automatically adjusted by the system. Key data points can be marked and the area of the selected graph area can be automatically calculated.

- Test playback: The software automatically records the entire test process, can simultaneously turn on the video and photo screenshot functions of the instrument (save test videos of important samples), and provide intelligent search functions based on conditions. Tests of any period can be traced back, data restoration curves can be drawn and synchronized video playback can be realized, and the test details of the current period can be viewed and analyzed.

- Reports and test charts can be customized and created; test results can be directly exported to Excel, Word, PDF and other file formats, and support A4 or A3 printing.

- The software can realize the overlay display of multiple curves through different colors, making it convenient and intuitive to compare and analyze the results of multiple tests.

- The software operation interface is friendly: menu bar, tool bar, status bar, display bar, curve box, video box, and the experimental process is clear and convenient to control.

- The software provides two operating environments, Chinese and English, which can be switched with one click.

- The software provides more than ten test methods: single compression, cycle test, relaxation test, creep test, full texture test, tensile test, bending test, shear test, puncture test, freezing strength test, etc. The system supports custom unlimited addition of test modes.

- Force sensors and displacement sensors have sensor self-calibration functions and can measure, correct, restore, automatically repair or correct errors.

## 8. DP-CA-20VS Touch Screen Texture Analyzer/Tester

## Advantages

• DP-CA-20VS texture analyzer is tailored for tensile testing, at the same time, it fully supports other texture testing types.

• Convenient touch screen control, taking into account mouse and keyboard operations. It is suitable for application scenarios such as third-party inspection, production site and process monitoring.

• Reports and test charts can be customized and created, and test results can be directly exported to Excel, Word, PDF and other file formats, and support A4 or A3 printing.

• Strong compatibility: can be adapted to different types of probes and sensors

## Applications

The DP-CA-20VS texture analyzer can be used for physical property analysis of pharmaceuticals, dairy products, meat products, cosmetics, grains, oils and cereals, fruits and vegetables, bread and biscuit baked goods, candies, jams, etc., and can accurately quantify The sample's tensile strength, length, bursting strength, freezing strength, hardness, brittleness, tenderness, elasticity, toughness, cohesion, cohesion, crispness, chewiness, recovery, shear strength, resistance Compressive strength, penetration strength, creep characteristics, relaxation characteristics and many other physical property indicators.

## Applicable standards

• "Chinese Pharmacopoeia" 2020 Edition
• Comply with current Chinese GMP regulations
• National standard "Food Additive Gelatin" GB6783-2013.
• National standard "Medicinal Gelatin Hard Capsules" GB13731.
• National Standard "Food Additive Gelatin" GB28304-2012
• National Standard "Frozen Surimi" GB/T36187-2018
• Light industry standard "Edible Gelatin" QB/T4087-2010
• Agricultural industry standard "Meat Tenderness Determination Shear Force Determination Method" NY/T1180-2006
• AACC74-09 Bread Hardness Test (American Cereal Chemistry Association
• AOAC (American and European Gels Association)

## Main Features

• The texture analyzer has a built-in high-definition capacitive touch industrial screen with a resolution of 1024x768. Flexible touch, mouse and keyboard control
• The texture analyzer is equipped with a high-performance embedded computer. Equipped with

a four-core, four-thread central processor with a main frequency of 2.0GHz, it can collect measurement data, display test curves, complete data analysis, and save or output test files in Excel, Word, PDF and other formats.

- The texture analyzer comes standard with an HDMI high-definition interface, supporting dual displays at the same time or an external projector.
- Expansion interfaces of the texture analyzer: 1 RS232 serial port, 1 Gigabit network port, 1 HDMI interface, 4 USB interfaces, 2 of which are USB3.0
- Force accuracy and displacement accuracy, with functions such as measurement, correction, restoration, automatic repair or error correction.
- Test playback: The software automatically records the entire test process and provides intelligent retrieval under various conditions. Test data of any period can be traced, test curve playback is supported, and the test details of the sample can be viewed and analyzed.
- The system can display three curves: force-time, force-distance, and distance-time. The curve contains a ruler, which can be used for local scaling of the graph or automatically adjusted by the system. Key data points can be marked and the area of the selected graph area can be automatically calculated.
- The instrument has multiple protection functions: emergency braking, upper and lower limit control, force sensing element overload protection (customizable over-standard warning settings) and detection data encryption
- The main detection modes of the instrument: timing, positional displacement, constant load, single cycle, multiple cycles, tension, compression, puncture, shear bending, extrusion, gluing, compression maintenance, full texture, rupture, fracture, relaxation characteristics , creep characteristics, custom mode accuracy measurement, etc.
- The system provides hierarchical authority management: three levels, multi-user (username + password login)
- The system automatically completes audit trail records: all traceable measurement results and processes are automatically protected by the system database
- The software operation interface is friendly: menu bar, tool bar, status bar, display bar, curve box, video box, experimental process are clear, and the control buttons are convenient and fast. Chinese and English operating systems, one-click switching

## Main Specifications
- Force sensing element: 20Kg (optional 1, 2, 5, 10, 20, 25, 50Kg)
- Force accuracy: 0.001g
- Effective displacement range: 0~410mm, 0~510mm
- Displacement accuracy: 0.001mm
- Data collection rate: up to 4800 times per second (sampling rate optional: 200, 500, 1500, 2000, 3000)
- Movement speed options: 0.01mm/s~50mm/s
- Speed accuracy: $\leqslant \pm 0.1\%$
- In addition to the standard probes, there are more than 100 kinds of measurement probes and fixtures to choose from.
- Weight:29Kg

## 9. DP-CA-25HS Texture Analyzer/Tester



### Advantages of DP-CA-25HS texture analyzer

- The DP-CA-25HS texture analyzer is an excellent model following the DP-CA-25HPRO among the CA series texture analyzers developed and launched by shuoboda for users such as universities, scientific research institutes, food and drug companies, and quality inspection agencies.
- Probes, fixtures and accessories are interchangeable with imported texture analyzers.
- The hardware structure and software performance of DP-CA-25HS texture analyzer can benchmark against imported mainstream texture analyzer models.
- The force sensing element can be replaced quickly and safely. Through the conversion of the force sensing element, the detection range can be changed, and the sensing resolution can be changed to adapt to different sample analyses.
- The DP-CA-25HS texture analyzer is equipped with shuoboda's strain bridge input acquisition system with excellent texture performance, and the acquisition rate is configured at 20,000 groups/second. Achieve fast, accurate and reliable physical property measurement.
- The full-scale positioning accuracy of DP-CA-25HS texture analyzer is 0.001mm, which is achieved thanks to the zero-clearance slide-rail ball screw single-axis robot and high-precision and high-resolution closed-loop servo electric drive. Only this combination of precision hardware and software can ensure research-level applications in detecting subtle deformations in sample shapes.

## DP-CA-25HS Texture Analyzer Application

- **Food categories:** flour products, rice products, aquatic products, baked goods, grain and oil foods, cereals, fruits and vegetables, gels, candy, dairy products, meat products, snack foods, pet food.
- **Biopharmaceuticals:** tablets, capsules, sugar coatings, films, bioadhesives, alginate gel beads, Chinese herbal medicines, Chinese patent medicines, ointments, patches, bead test, needle penetration test, injection needle quality test, medical tape , inhalers, biological materials, pharmaceutical packaging materials, etc.
- **Chemical industry:** cosmetics, chemical materials
- **Material categories:** packaging materials, films, gel films, sheets, medical materials, etc.
- **Test categories:** hardness test, strength test, biomechanical test, elasticity test, tenderness test, freshness test, peel test, creep property test, relaxation property test, compression test, tensile test, full texture test, etc.
- **Test indicators:** hardness, brittleness, tenderness, adhesion, elasticity, toughness, cohesion, chewiness, ductility, recovery, firmness, tensile strength, rupture strength, shear strength, freezing strength, etc.

## Applicable standards

- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations
- National standard "Food Additive Gelatin" GB6783-2013.
- National standard "Medicinal Gelatin Hard Capsules" GB13731.
- National Standard "Food Additive Gelatin" GB28304-2012
- National Standard "Frozen Surimi" GB/T36187-2018
- Light industry standard "Edible Gelatin" QB/T4087-2010
- Agricultural industry standard "Meat Tenderness Determination Shear Force Determination Method" NY/T1180-2006
- AACC74-09 Bread Hardness Test (American Cereal Chemistry Association
- AOAC (American and European Gels Association)

## Main Specifications

- Load range: 0~25Kg (0~250N) (optional: 1, 25, 10, 25, 50, 100 Kg and other specifications)
- Force accuracy: 0.0001g
- Displacement range: 410mm
- Displacement analysis accuracy: 0.0001mm
- The full-scale positioning accuracy is 0.001mm; only models with this accuracy can achieve research-level applications in detecting subtle deformation of sample shapes.
- Detection rate: 0.0001~60mm/s
- Data acquisition rate: up to 20,000 groups/second, four-channel simultaneous reading. Optional after optimization and filtering: 200, 500, 2000, 5000, 10000. Such a high-level model can capture the precise moment when subtle changes occur in the sample, without missing or misjudgment.
- Accessories, fixtures, probes: more than 100 general options available. It can also be customized according to user needs.
- Overall dimensions: length 480mm, width 330mm, height 875mm
- Weight:32Kg

## System software features

- The system provides hierarchical authority management: three levels, multiple users. (Login with username + password)
- The system automatically completes audit trail records: the system database automatically protects all traceable measurement results and processes
- System protection functions: emergency braking, upper and lower limit control, force sensing unit overload protection, detection data encryption
- The instrument's force accuracy and displacement accuracy have the functions of self-calibration, self-measurement, self-correction, and self-repair.
- The texture analyzer has a built-in high-definition camera module, which can record the entire test of important samples and save it simultaneously with other test data of the test.
- Stored in a traceable database.
- Test playback: The software automatically records the entire test process (including synchronous video recording) and provides multiple intelligent searches. Tests of any period can be traced back to data restoration, curve drawing and synchronous video playback, and the recorded test details can be viewed and analyzed.
- With the graphic display editing function, the system can display three function curves: force~time, force~distance, and distance~time. The curve contains a scale that allows local scaling of the graph or automatic adjustment by the system. At the same time, key data points can be marked, and the area of the selected graph area can also be automatically calculated.

## System software features

- The system provides hierarchical authority management: three levels, multiple users. (Login with username + password)
- The system automatically completes audit trail records: all traceable measurement results and processes are automatically protected by the system database
- System protection functions: emergency braking, upper and lower limit control, force sensing unit overload protection, detection data encryption
- The instrument's force accuracy and displacement accuracy have self-calibration, self-measurement, self-correction, and self-repair functions.
- The texture analyzer has a built-in high-definition camera module, which can record the entire test of important samples and save it together with other test data of the test into a traceable database.
- Test playback: The software automatically records the entire test process (including synchronous video recording) and provides multi-condition intelligent retrieval. Tests of any period can be traced back to data restoration, curve drawing and synchronous video playback, and the recorded test details can be viewed and analyzed.
- With the graphic display editing function, the system can display three function curves: force~time, force~distance, and distance~time. The curve contains a scale that allows local scaling of the graph or automatic adjustment by the system. At the same time, key data points can be marked, and the area of the selected graph area can also be automatically calculated.
- Comprehensive test mode program editing functions; run, preset, repeat, cycle, clear, zero calibration, assignment, variables, formulas, calculation, playback, comparison, annotation, etc. Through the editing of these program commands, various detection modes can be realized, various test models can be built, and various required test data can be obtained.
- As a research-grade system software, each test has more in-depth solutions and descriptions. In

addition to the regular test mode, extended and customized program editing and practice are also prepared for users. Customized reports and test charts can be easily created; test data can be directly exported to Excel/Word/PDF and other formats, and operations such as charting, saving, comparison, and professional report generation can be performed

- The software provides two operating systems, Chinese and English, which can be switched with one click.

## Main test modes:

1. Full texture test
2. Tensile test
3. Bend test
4. Shear test
5. puncture test
6. Forward and reverse extrusion test
7. Gel strength test
8. Surimi Gel Test
9. Carrageenan test,
10. Cordran gum test
11. Meat tenderness test
12. Medical film patch and adhesive testing
13. Physical property testing of medicinal rubber shells
14. Single compression test
15. Songta performance test
16. Custom testing
17. loop test
18. Creep performance test
19. Instrument's own measurement accuracy verification and metrology

# 10.DP-CA-25HPRO Texture Analyzer/Tester



## Advantages of DP-CA-25HPRO Texture Analyzer

- DP-CA-25HPRO texture analyzer is a research-grade model of the CA series texture analyzer developed and launched by SHUOBODA for users such as universities, scientific research institutes, food and drug companies, and quality inspection agencies, with powerful functions, high measurement accuracy, and stable and reliable performance.

- The force sensing element can be replaced quickly and safely, and system parameter conversion can be completed interactively and intelligently. Through the conversion of the force sensor element, the detection range can be changed, and the sensing resolution can be changed to adapt to different sample analysis.

- The DP-CA-25HPRO texture analyzer software system has built-in video and picture capture functions, which can record the entire test of the sample and save it to a traceable database simultaneously with other test data and strain curves of the test.

- Computer controlled, equipped with Chuangxing Texture's powerful analysis software to achieve fast, precise and accurate physical property measurements

- DP-CA-25HPRO texture analyzer has complete special fixtures and accessories to meet various needs of users.

- The strain bridge input acquisition system with excellent texture performance has 4 simultaneous channels, 24-bit resolution, and a single-channel sampling rate of up to 40,000 groups/s. Such high-quality hard-core research and development results are tailor-made for DP-CA-25HPRO,

which ensures that it can capture any precise moment when the sample changes during texture measurement, without missing or misjudgment, and the measurement results are reliable. Credible.

## Application of DP-CA-25HPRO texture analyzer

- **Food categories:** flour products, rice products, aquatic products, baked goods, grain and oil foods, cereals, fruits and vegetables, gels, candies, dairy products, meat products, snack foods, pet foods.
- **Biopharmaceuticals:** tablets, capsules, sugar coatings, films, bioadhesives, alginate gel beads, Chinese medicinal materials, Chinese patent medicines, ointments, patches, bead bursting test, needle penetration test, injection needle quality test, medicine Tapes, inhalers, biological materials, pharmaceutical packaging materials, etc.
- **Chemical industry:** cosmetics, chemical materials
- **Material categories:** packaging materials, films, gel films, sheets, medical materials, etc.
- **Test categories:** hardness test, strength test, biomechanical test, elasticity test, tenderness test, freshness test, peel test, creep property test, relaxation property test, compression test, tensile test, full texture test, tensile test Tensile test, bending test, shear test, puncture test, gel test, etc.
- **Test indicators:** hardness, brittleness, tenderness, adhesion, elasticity, toughness, cohesion, chewiness, ductility, recovery firmness, tensile strength, bursting strength, shear strength, freezing strength, gel strength wait.

## Applicable standards

- "Chinese Pharmacopoeia" 2020 Edition
- Comply with current Chinese GMP regulations
- National standard "Food Additive Gelatin" GB6783-2013.
- National standard "Medicinal Gelatin Hard Capsules" GB13731.
- National Standard "Food Additive Gelatin" GB28304-2012
- National Standard "Frozen Surimi" GB/T36187-2018
- Light industry standard "Edible Gelatin" QB/T4087-2010
- Agricultural industry standard "Meat Tenderness Determination Shear Force Determination Method" NY/T1180-2006
- AACC74-09 Bread Hardness Test (American Cereal Chemistry Association
- AOAC (American and European Gels Association)

## Main technical parameters and characteristics

- Load range: 0~25Kg (0~250N) (optional: 1, 2, 5, 10, 25, 50 Kg and other specifications)
- Force analysis accuracy: 0.0001g (the force sensor unit is provided with the original factory calibration certificate corresponding to the serial number).
- Displacement range: 410mm
- Displacement analysis accuracy: 00001mm
- Full-scale positioning accuracy is 0.001mm; (models with this accuracy can meet research-level applications for detecting subtle changes in sample shape).
- Detection rate: 0001~60mm/s
- The instrument's force accuracy and displacement accuracy are equipped with self-calibration, self-measurement, self-correction, and self-repair functions.
- Data acquisition rate: up to 40,000 groups/second, four-channel simultaneous reading. (Such a

high-level model can capture the precise moment when subtle changes occur in the sample, without missing or misjudgment)

- Accessories, fixtures, probes: more than 100 general options available. It can also be customized according to user needs.
- Overall dimensions: length 480*330*875mm
- Weight:32Kg

## System software features

- The system provides hierarchical authority management: four levels, multiple users. (Login with username + password)
- The system automatically completes audit trail records: all traceable measurement results and processes are automatically protected by the system database.
- System protection functions: emergency braking, upper and lower limit control, force sensing unit overload protection, detection data encryption.
- The texture analyzer has built-in high-definition video and picture capture functions, which can record the entire test of important samples and save them simultaneously with other test data and strain curves of the test into a traceable database.
- Test playback: The software automatically records the entire test process (including synchronous video recording) and provides multi-condition intelligent retrieval. Tests of any period can be traced back to perform data restoration, curve restoration and synchronous video playback to view and analyze test details.
- The texture analyzer provides test data comparison, curve overlay comparison, and image detail comparison functions.
- With the graphic display editing function, the system can display three function curves: force~time, force~distance, and distance~time. The curve contains a scale, and the graph can be scaled locally or automatically adjusted by the system. At the same time, key data points can be marked and the area of the selected graph area can be automatically calculated.
- Comprehensive test mode program editing functions: run, preset, repeat, cycle, clear, zero calibration, assignment, variables, formulas, calculation, playback, comparison, annotation, etc. Through the editing of these program commands, various detection modes can be realized, various test models can be built, and various required test data can be obtained.
- As a research-grade system software, each test has more in-depth solutions and descriptions. In addition to the regular test mode, extended and customized program editing and practice are also prepared for users. Customized reports and test charts can be easily created; test data can be directly exported to Excel/Word/PDF and other formats, and operations such as charting, saving, comparison, and professional report generation can be performed.
- The software provides two operating systems, Chinese and English, which can be switched with one click.

## Main test modes:

1. Full texture test
2. tensile test,
3. Bend test
4. puncture test
5. Surimi gel test,
6. Cordran gum test

7. Meat tenderness test,
8. Noodle tensile strength test,
9. Evaluation of dough fermentation degree
10. Shear test,
11. Gel strength test
12. Carrageenan test
13. Determination of physical properties of hydrogel
14. Fruit and vegetable freshness and yield point testing
15. Biscuit crispness determination
16. Bread softness test
17. Homogenate dietary cohesion assay
18. Single compression test,
19. loop test,
20. Creep performance test
21. Relaxation performance testing
22. Custom testing
23. Instrument's own measurement accuracy verification and metrology

# Freezing Point Osmometer

## 1. PT-OM-30C Osmolality Tester



## Product introduction:

The PT-OM-30C osmolality tester is a testing instrument that focuses on detecting clinical human body fluids such as blood, urine, tears, sweat, etc. It also meets the requirements of the 2020 Chinese Pharmacopoeia for injections, ophthalmic preparations, osmotic diuretics and other preparations. testing requirements.

## Performance features:

- Humanized design, large touch screen LCD, Chinese interface, easy to operate.
- The probe is lifted and lowered with power.
- Adopting the freezing point depression principle and high-precision sensor, the measurement accuracy is high and the reproducibility is good.
- Adopting dual refrigeration system, the pre-cooling time is short, the detection speed is fast, and it is convenient for continuous detection.
- The measurement sample size is small and can meet the requirements of different fields.
- The osmotic pressure molar concentration value, freezing point value and molar concentration ratio of the test product can be displayed at the same time.
- Two-point or multi-point linear calibration can be performed to ensure the linearity of the instrument.
- The cooling system adopts a heat transfer fluid-free design, eliminating frequent maintenance.

- It has built-in names of hundreds of injection drugs in the 2020 version of the Chinese Pharmacopoeia, making it easy to preset inspection information.
- Microcomputer control, automatic data processing and storage functions, multiple printing formats available.

## Technical Parameters:

- Measuring range: 0~3000 mOsmol/kg H2O
- Sample volume: 50µl (50-70ul)
- Test time: < 2 minutes
- Pre-cooling time: ≤ 3 minutes
- Repeatability: RSD≤±1% (300 mOsmol/kg)
- Accuracy: ±2 mOsmol/kg (≤ 400 mOsmol/kg)
  ±1% ( > 400 mOsmol /kg)
- Resolution: 1 mOsmol/kg
- Linear: < 1 % of straight line
- Ambient temperature: 10~30℃
- Environmental humidity: 5~80%
- Power supply: AC 220V ±10% 80W
- Overall dimensions: 220×210×360mm

## 2. PT-OM-30C1 Cryoscopic Osmometer



### Performance features:

- Humanized design, large touch screen LCD, Chinese interface, easy to operate.
- The probe is lifted and lowered with power.
- Adopting the freezing point depression principle and high-precision sensor, the measurement accuracy is high and the reproducibility is good.
- Adopting dual refrigeration system, the pre-cooling time is short, the detection speed is fast, and it is convenient for continuous detection.
- The measurement sample size is small and can meet the requirements of different fields.
- The osmotic pressure molar concentration value, freezing point value and molar concentration ratio of the test product can be displayed at the same time.
- Two-point or multi-point linear calibration can be performed to ensure the linearity of the instrument.
- The cooling system adopts a heat transfer fluid-free design, eliminating frequent maintenance.
- It has built-in names of hundreds of injection drugs from the Chinese Pharmacopoeia, making it easy to preset inspection information.
- Microcomputer control, automatic data processing and storage functions, multiple printing formats available.

### Technical Parameters:

- Measuring range: 0~3000 mOsmol/kg H2O
- Sample volume: 50μl (50-70ul)
- Test time: < 2 minutes
- Pre-cooling time: ≤ 3 minutes
- Repeatability: RSD≤±1% (300 mOsmol/kg)

- Accuracy: ±2 mOsmol/kg (≤ 400 mOsmol/kg)
                    ±1% ( > 400 mOsmol /kg)
- Resolution: 1 mOsmol/kg
- Linear: < 1 % of straight line
- Ambient temperature: 10~30℃
- Environmental humidity: 5~80%
- Power supply: AC 220V ±10% 80W
- Overall dimensions: 220×210×360mm

## 3. PT-OM-30D Touch Screen Freezing Point Osmometer



### Performance features:

- Color touch LCD screen, integrated stylish design, easy to operate.
- The molar concentration value, freezing point value, and osmotic pressure molar concentration ratio are displayed on the same screen.
- Adopting dual refrigeration system, the pre-cooling time is short, the detection speed is fast, and it is convenient for continuous detection.
- The probe automatically lifts and lowers, which is convenient and fast.
- The measurement sample size is small and can meet the testing needs of different fields.
- Calibration of any concentration calibration solution can be performed to perfectly fit the measurement curve and ensure measurement accuracy.
- The cooling system adopts a heat transfer fluid-free design, eliminating frequent maintenance.
- It has built-in names of hundreds of injection drugs from the Chinese Pharmacopoeia, making it easy to preset inspection information.
- Microcomputer control, with automatic data processing and storage functions, and a variety of printing formats can be selected.
- It has permission management function to ensure data security, and can be connected to computers and laboratory platforms through RS232 interface to achieve data sharing.

### Technical Parameters:

- Measuring range: 0～3000 mOsmol/kg $H_2O$
- Sample volume: 50μl (50μl～100μl)
- Test time: < 1.5 minutes

- Pre-cooling time: ≤ 3 minutes
- Repeatability: RSD≤±1% (300 mOsmol/kg)
- Accuracy: ±2 mOsmol/kg (≤ 400 mOsmol/kg)
  ±1% ( > 400 mOsmol /kg)
- Resolution: 1 mOsmol/kg
- Linear: < 1 % of straight line
- Ambient temperature: 10～30℃
- Environmental humidity: 5~80%
- Power supply: AC 220V ±10%; 50HZ; <80W
- Overall dimensions: 250×250×370mm

# 4. PT-OM-30DS Touch Screen Freezing Point Osmometer



## Performance features:

- Color touch LCD screen, stylish design, easy to operate.
- The molar concentration value, freezing point value, and osmotic pressure molar concentration ratio are displayed on the same screen.
- Adopting dual refrigeration system, the pre-cooling time is short, the detection speed is fast, and it is convenient for continuous detection.
- You can choose to use two sampling methods: automatic lifting and lowering of the probe and manual lifting and lowering of the probe, which is convenient and fast.
- The measurement sample size is small and can meet the testing needs of different fields.
- Calibration of any concentration calibration solution can be performed to perfectly fit the measurement curve and ensure measurement accuracy.
- The cooling system adopts a heat transfer fluid-free design, eliminating frequent maintenance.
- It has built-in names of hundreds of injection drugs from the Chinese Pharmacopoeia, making it easy to preset inspection information.
- Microcomputer control, with automatic data processing and storage functions, and a variety of printing formats can be selected.
- It has hierarchical (fourth-level) management, data backup and recovery, storage and retrieval functions, and records all device and user actions and behavioral events in real time. Meet the requirements for data audit trails in computerized systems.

## Technical Parameters:

- Measuring range: 0~3000 mOsmol/kg H2O

- Sample volume: 50µl (50µl～100µl)
- Test time: < 1.5 minutes
- Pre-cooling time: ≤ 3 minutes
- Repeatability: RSD≤±1% (300 mOsmol/kg)
- Accuracy: ±2 mOsmol/kg (≤ 400 mOsmol/kg)
  ±1% ( > 400 mOsmol /kg)
- Resolution: 1 mOsmol/kg
- Linear: < 1 % of straight line
- Ambient temperature: 10～30℃
- Environmental humidity: 5~80%
- Power supply: AC 220V ±10% 80W
- Overall dimensions: 220×210×360mm

# 5. DP-OM-30FD Automatic Touch Screen Medical osmolality meter

**Performance features:**

- Android operating system, integrated fashion design, easy to operate.
- Dual refrigeration system, short pre-cooling time and fast detection speed.
- The turntable system and the automatic lifting and lowering of the probe enable multi-sample testing and facilitate continuous and grouped testing.
- The measurement sample size is small and can meet the testing needs of different fields.
- It can be calibrated at any concentration, perfectly fits the measurement curve, optimizes calculations, and ensures measurement accuracy.
- The cooling system adopts a heat transfer fluid-free design, eliminating frequent maintenance.
- It has built-in names of hundreds of injection drugs from the Chinese Pharmacopoeia, making it easy to preset inspection information.
- It has massive storage to ensure data integrity and can store test data.
- You can choose the printing format and export the file in the specified format through the USB interface.
- Barcode scanner can quickly import sample information.
- It has permission management function to ensure the security of data and operations.
- It can be connected to a computer or laboratory platform through the RS232 interface to achieve data sharing.

## Technical Parameters:

- Measuring range: 0～3000 mOsmol/kg H2O
- Sample quantity: 1-20
- Sample volume: 60μl (50μl～100μl)
- Test time: < 1.5 minutes (single)
- Pre-cooling time: ≤ 3 minutes
- Repeatability: RSD≤±1% (300 mOsmol/kg)
- Accuracy: ±2 mOsmol/kg (≤ 400 mOsmol/kg); ±1% ( > 400 mOsmol /kg)
- Resolution: 1 mOsmol/kg
- Linear: < 1 % of straight line
- Ambient temperature: 5～35℃
- Environmental humidity: 5~80%
- Power supply: AC 220V±10%; 50Hz; <80W
- Overall dimensions: 280×443×434mm
- Language: switch between Chinese and English

# 6. DP-OM-V20 Freezing Point Osmometer



## Product introduction

The freezing point osmometer DP-OM-V20 produced by SHUOBODA with independent research and development is in accordance with Raoul freezing point theory, based on the solution freezing point declined value proportional to the solution molar concentration, using high sensitivity of temperature-sensing element, to measure the freezing point of different solutions, so as to derive the osmotic pressure molar concentration. This theory has been widely used for the test and research of osmotic pressure molar concentration in the fields such as pharmaceuticals, pharmaceutical analysis, biological and food therapy.

## Product Features

- It has the functions of electronic signature and user classification management
- It can carry on single-point or multi-point linear calibration, to ensure that the instrument has the detection accuracy of each range interval in stability
- Instrument adopts the screw linear guide motor design, so that the operation just on a touch screen can complete the whole test process；
- Temperature probe adopts double refrigeration system, with a short pre-cooling time, fast detection speed, to facilitate continuous detection；
- It can simultaneously display the osmotic pressure molar concentration value, the freezing point value and the molar concentration ratio；
- The cooling system adopts the athermal transfer fluid design, to exempt from frequent maintenance;
- Built-in "Chinese pharmacopoeia" hundreds of injectable drug name can facilitate the preset information of test sample.

## Technical Parameters

- Measurement range: 0～2000 mOsmol
- Sample amount: 100μl
- Testing duration: ≤3min
- Pre-cooling time: ≤3min
- Measurement error: ≤1%
- Repeatability: ≤1%
- Linearity: ≤1%
- Environment temperature: 0～30℃ Recommended for 15～25℃
- Environment temperature: ≤60%
- Power supply: 220V～ 50Hz 150VA
- Dimensions: 223*134*360mm
- Weight: 17kg
- Resolution ratio: 0.1

# 7. DP-OM-V30 Freezing Point Osmometer



## Product introduction

The freezing point osmometer DP-OM-V30 produced by SHUOBODA with independent research and development is in accordance with Raoul freezing point theory, based on the solution freezing point declined value proportional to the solution molar concentration, using high sensitivity of temperature-sensing element, to measure the freezing point of different solutions, so as to derive the osmotic pressure molar concentration. This theory has been widely used for the test and research of osmotic pressure molar concentration in the fields such as pharmaceuticals, pharmaceutical analysis, biological and food therapy

## Product Features

- 77-inch color screen, English interface, easy operation
- It can carry on single-point or multi-point （31 points)linear calibration, to ensure that the instrument has the detection accuracy of each range interval in stability
- Suitable level management, password login, electronic signature, compliance FDA 21PART 11
- With audit trail, can record more key operation logs, as login people, test method and so on, compliance data integrity requirements
- Adopt double cooling system, short pre cool time, fast test speed
- Less test sample quantity, can compliance different industry area requirements
- It can simultaneously display the osmotic pressure molar concentration value, the freezing point value and the molar concentration ratio：
- The cooling system adopts the athermal transfer fluid design, to exempt from frequent maintenance;

## Technical Parameters

- Measurement range：0～3000 mOsmol

- Sample amount：100μl
- Testing duration：≤3min
- Pre-cooling time：≤3min
- Measurement error：≤1%
- Repeatability：≤1%
- Linearity：≤1%
- Environment temperature：0～30℃ Recommended for 15～25℃
- Environment temperature：≤60%
- Power supply：220V～ 50Hz 150VA
- Dimensions：340*300*400mm
- Weight：17kg

# Automatic Liquid Mixer & Dispenser

## 1. ZY Intelligent Liquid Dispenser



ZY intelligent liquid dispenser is an automated instrument developed and designed for reagent distribution. It can realize the distribution of different volumes of various reagents. The entire process does not require the experimenter to come into direct contact with the reagents, thus avoiding the harm of the reagents to the human body. The high-precision sampling system ensures reliable distribution and saves labor for large-dose distribution. The instrument uses Android system, corrosion-resistant PTFE pipeline, strong stability, and suitable for a variety of reagents. It can be widely used in many fields such as food, medical, chemical industry, quality inspection, colleges and universities, etc. It is a good helper for laboratory product preprocessing.

**Performance features:**

- Fully automatic reagent distribution in one step, reducing or avoiding errors caused by manual reagent distribution.
- According to the requirements of sampling accuracy and volume, sampling systems with different accuracy can be matched to greatly improve the accuracy and repeatability of distribution.
- Precision sampling system, combined with quantitative distribution methods and various distribution plans, optimizes work processes and improves work efficiency.
- Sampling pipelines are independent of each other, effectively reducing sample cross-contamination.
- High-precision three-dimensional manipulator with excellent dynamic performance can achieve distribution to any row, column or hole.
- The liquid inlet system is made of stainless steel 316L, polytetrafluoroethylene, polyvinylidene fluoride, zirconia ceramics and other corrosion-resistant materials, which are suitable for various organic and inorganic reagents.
- Sampling can be taken directly from the original reagent bottle, or a variety of preparation containers can be matched according to experimental needs, saving the consumption of

glassware and reagent bottles used for transfer during processing.

- Using Android operating system, humanized interactive experience.
- It has automatic detection, automatic diagnosis and automatic alarm functions at startup.
- Reagents and gradient dilution preparation can be set to achieve different preparation needs such as direct preparation and step-by-step preparation.

## Technical indicators:

- Preparation channels: 1-4 channels
- Sampling volume: 10μl-9999ml
- Sampling repeatability: 10-200μl: 2% 100μl-2ml: 1% ≥10ml: 0.1%
- Sampling accuracy: 10μl-200μl: 2% 100μl-2ml: 2% ≥10ml:0.1%
- Dispensing volume: 10μl-9999ml
- Sampling speed: 0.5-300ml/min
- Working power supply: 100-240VAC, 50/60Hz, 75W
- Working temperature: 10-40℃
- Suitable solvents: various organic reagents and inorganic reagents

## 2. ZY-4 Automated Liquid Dispenser



### Introduction:

ZY-4 liquid dispensing instrument is an automated liquid dispensing instrument developed and designed for the mixing and preparation of multiple reagents. It can be used with sampling systems of different precisions and speeds, and can realize the preparation of various reagents with different volumes. The instrument uses Android system, corrosion-resistant PTFE pipeline, strong stability, and suitable for various organic and inorganic reagents.

### Instrument features:

- Using Android operating system, humanized interactive experience.
- The sampling pipelines are independent of each other, effectively reducing sample cross-contamination.
- Fully automatic reagent distribution is completed in one step, reducing or avoiding errors caused by manual reagent distribution.
- The liquid inlet system uses stainless steel 316L, polytetrafluoroethylene, polyvinylidene fluoride, zirconia ceramics, etc.
- Corrosion-resistant material, suitable for various organic and inorganic reagents.
- According to the requirements of sampling volume and accuracy, different high-precision sampling systems and large-capacity
- The sampling system greatly improves the efficiency and accuracy of distribution.
- Combined with quantitative liquid dispensing methods and multiple liquid dispensing plans, the work process can be optimized and work efficiency improved.

### The main parameters:

- Configuration channels: 1-3 metering pumps and 1 peristaltic pump
- Sampling volume: 100μl-9999ml
- Sampling accuracy: Metering pump 1% (5ML) Peristaltic pump: 3%
- Dispensing volume: 10μl-9999ml
- Sampling speed: Metering pump: 0.5-200ml/min Peristaltic pump: 100-500ml/min
- Working power supply: 100-240VAC, 50/60Hz, 75W
- Working temperature: 10-40℃
- Suitable solvents: various organic reagents and inorganic reagents

# 3. ZY-8 intelligent liquid dispensing instrument



ZY-8 intelligent liquid dispensing instrument is an automatic liquid dispensing instrument. It can realize the functions of preparing multiple reagents in different proportions and volumes and single-reagent sampling. The instrument is composed of multi-channel precision sampling systems, and each channel works independently without causing cross-contamination. The preparation process is completed by the instrument itself, which improves the accuracy of reagent sampling and preparation and saves preparation time. During the entire preparation process, operators do not need to come into direct contact with reagents, which reduces the impact of toxic and harmful reagents on operators. This instrument can be widely used in various inspection institutions and laboratories.

## Instrument features:

- Preparation channel: 8 channels
- Sampling volume: 1ml-500ml
- Sampling accuracy: 0.1ml, sampling error: <1% (5ml)
- Preparation volume: 1-4000ml
- Sampling speed: 5～80ml/min
- Working power supply: 100-240VAC, 50/60Hz, 75W
- Fully enclosed automatic sampling reduces the harm of toxic and harmful reagents to operators
- High-precision plug pump sampling system to ensure accurate sampling volume
- The sampling pipelines are independent of each other and there is no cross-contamination.
- Anti-evaporation bottle cap and automatic emptying design prevent pollution to operators and the environment
- Perfluorinated pipeline, corrosion-resistant, suitable for preparation of various reagents
- Equipped with multiple automatic warning functions such as low liquid level and replacement of reagent bottles, the preparation process is safe and reliable.
- Various preparation methods can be set, and diversified preparations according to different proportions, different volumes, and different times can be achieved. Fifty thousand recipes can

be preset and stored to simplify preparation.

- Using Android operating system, supports pinyin initial letter search, humanized interactive experience

# 4. ZY-16 intelligent liquid dispensing system



ZY-16 intelligent liquid dispensing system is an automatic liquid dispensing instrument. It can realize the functions of preparing multiple reagents in different proportions and volumes and accurately sampling a single reagent. The instrument is composed of multi-channel precision sampling systems, and each channel works independently without causing cross-contamination. The preparation process is completed by the instrument itself, which improves the accuracy of reagent sampling and preparation and saves preparation time. During the entire preparation process, operators do not need to come into direct contact with reagents, which reduces the impact of toxic and harmful reagents on operators. This system can be widely used in various inspection institutions and laboratories.

## Main technical features:

- Fully enclosed automatic sampling reduces the harm of toxic and harmful reagents to operators
- High-precision metering pump sampling system, continuous sampling, short preparation time
- The sampling pipelines are independent of each other and there is no cross-contamination.
- Anti-evaporation bottle cap and automatic emptying design prevent pollution to operators and the environment
- Corrosion-resistant design, perfluorinated pipeline, suitable for preparation of various reagents
- Equipped with multiple automatic warning functions such as low liquid level and replacement of reagent bottles, the preparation process is safe and reliable.
- Multi-channel split design, high degree of configuration freedom, avoiding frequent replacement of reagents
- Multiple preparation methods can be set to achieve diversified preparations in different proportions, different volumes, and different times. Fifty thousand recipes can be preset and stored to simplify preparation.
- Using the Android operating system, it is easy to operate, easy to understand, and has a humanized interactive experience.

## Performance:

- Preparation channel: 16 channels
- Sampling volume: 0.1ml-999ml
- Sampling accuracy: 0.1ml
- Sampling error: <1% (5ml)
- Preparation volume: 0.1-8000ml
- Sampling speed: 5~80ml/min
- Working power supply: 100-240VAC, 50/60Hz, 75W

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