DiFluid SD101 Omni Professional Roast Particle Analyzer 2 in 1

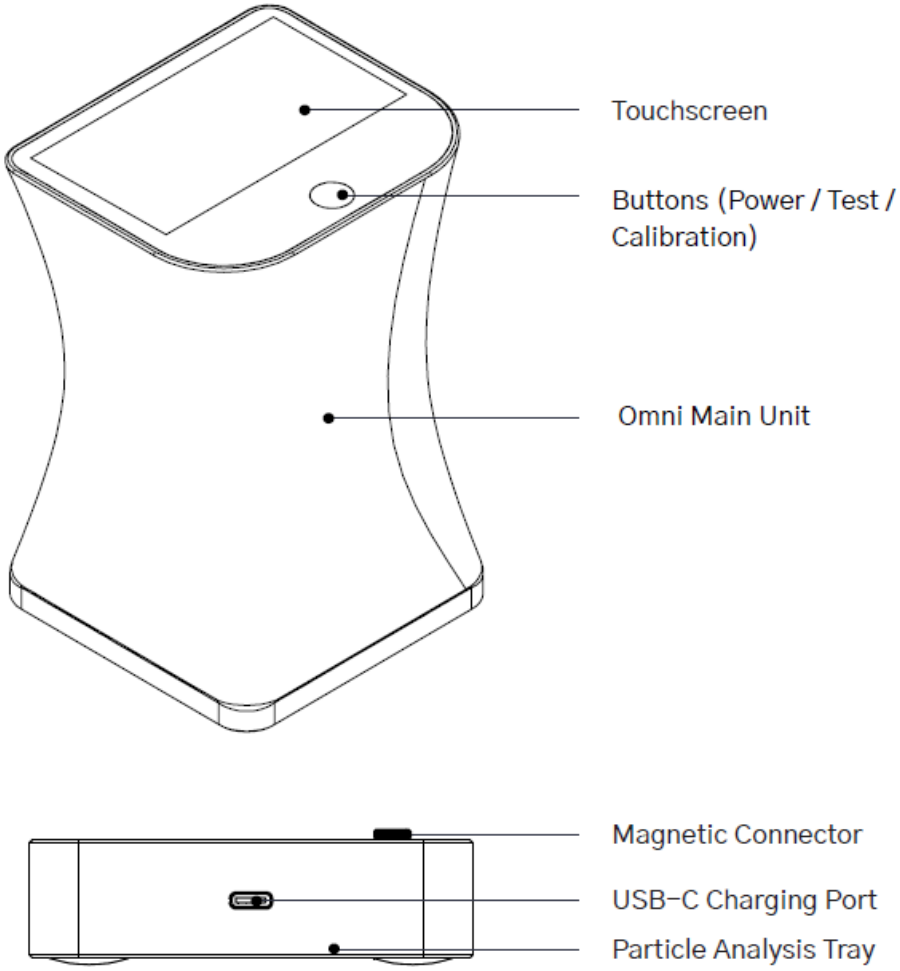
DiFluid SD101 Omni Professional Roast Particle Analyzer 2 in 1 User Manual

Contents

DiFluid

DiFluid SD101 Omni Professional Roast Particle Analyzer 2 in 1

Know Your Omni



Product Parameters

Specs

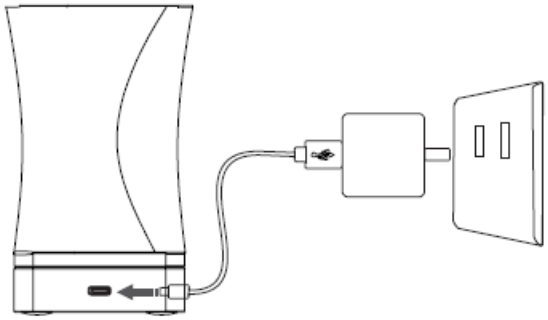
Name	Professional Roast / Particle Analyzer (2-in-1)
Model	DFT – SD101
Dimensions (Main Unit)	109*79*72mm L*W*H
Weight (Main Unit)	290g
Screen	2.8-inch HD touchscreen
Battery	2500mAh rechargeable lithium battery
Light Source (Roast Analysis)	Multi-band NIR light source (850nm, 940nm)
Optical Sensor	Two-dimensional imaging sensor
Data Records	500 Roast Analysis Records / 500 Particle Analysis Records
Operating Temperature	0-45℃
Charging Port	USB-C
Charging Parameters	5V 1A

Accessories

- Omni Main Unit *1
- Particle Analysis *1
- Roast Analyzer Tray*1
- Tray *1
- Velvet Bag *1
- Coffee BeanSpoon*1
- Brush*1
- Scraper *1
- Toolbox*1
- Coffee Ground Spoon*1
- USB-C Charging Cable *1
- Calibration Plate *1
- User Manual Warranty Card Test Report*1

Preparation before use

1. Please ensure that the battery is fully charged. Attach the Omni Main Unit to the Particle Analysis Tray and connect the included charging cable to the USB-C port on the side of the Particle Analysis Tray for charging.



Note: If you turn on the device during charging, the device will first display the “DiFluid” page, and then enter the charging status page. You need to short-press the button again to enter the “READY” page.

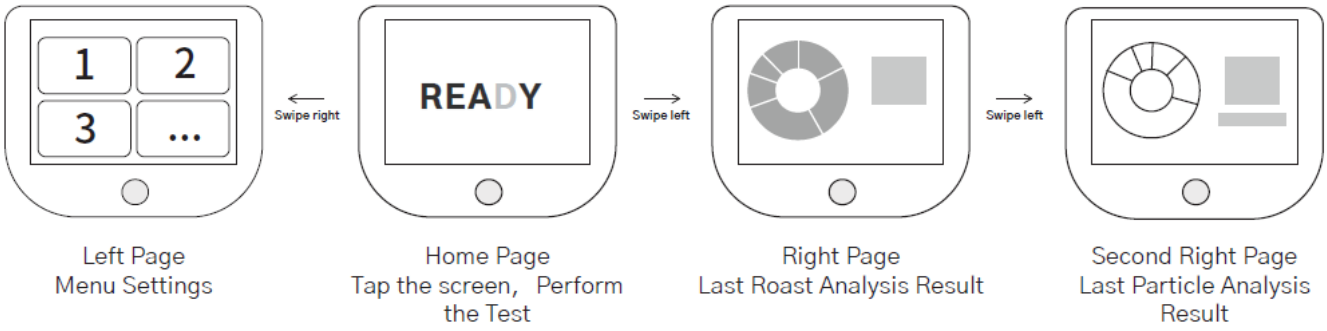
2. Scan the QR code on the left to download the DiFluid Café App.

Basic Operation

Operate with Button

- **Power-off State**
  Press the button once to start the device. When the screen displays “READY” the device has finished booting up.
- **Power-on State**
- **Short click:** Perform the test.
- **A short click followed by a long press:** Roast degree calibration.
- **Quick double-click:** View device information.
- **Long press:** Press and hold the button, and the screen will display “Power Off”. Release the button to complete the shutdown operation.

Operate with a touchscreen



Swipe right to access the menu page

1. Roast: Perform roast analysis.
2. Particle: Perform particle analysis.
3. Calibration: Perform the calibration.
4. Settings: Access more settings for Omni.

Swipe left to access the analysis history page

1. View Roast Analysis History: Swipe left from the Home Page to view the last roast analysis result, and swipe

down to access all roast analysis history.
2. View Particle Analysis History: Swipe left twice from the Home Page to view the last particle analysis result, and swipe down to access all particle analysis history.

On the Home Page, tap to perform the test. On a sub-page, swipe right to return to the previous level page.

Function operation

Test

There are three methods to start the test

1. **Click the button:** In smart test mode, the system will automatically determine whether to perform roast analysis or particle analysis.
2. **Tap the screen on the Home Page**: In smart test mode, the system will automatically determine whether to perform roast analysis or particle analysis.
3. **Click the <Roast Analysis> or <Particle Analysis> option on the menu page:** The system will directly execute the corresponding analysis.

Roast Analysis

Recommended Procedure

1. It’s recommended to use the deeper side of Coffee Beans while the Coffee Grounds can use either side of it.
2. Evenly spread the coffee beans or ground coffee on the Roast Analysis Tray and use the Scraper to make them level with the brim of the tray.
3. Place the Main Unit over the tray and start the test.
4. Wait for the test to be completed.

Analysis Result Table1

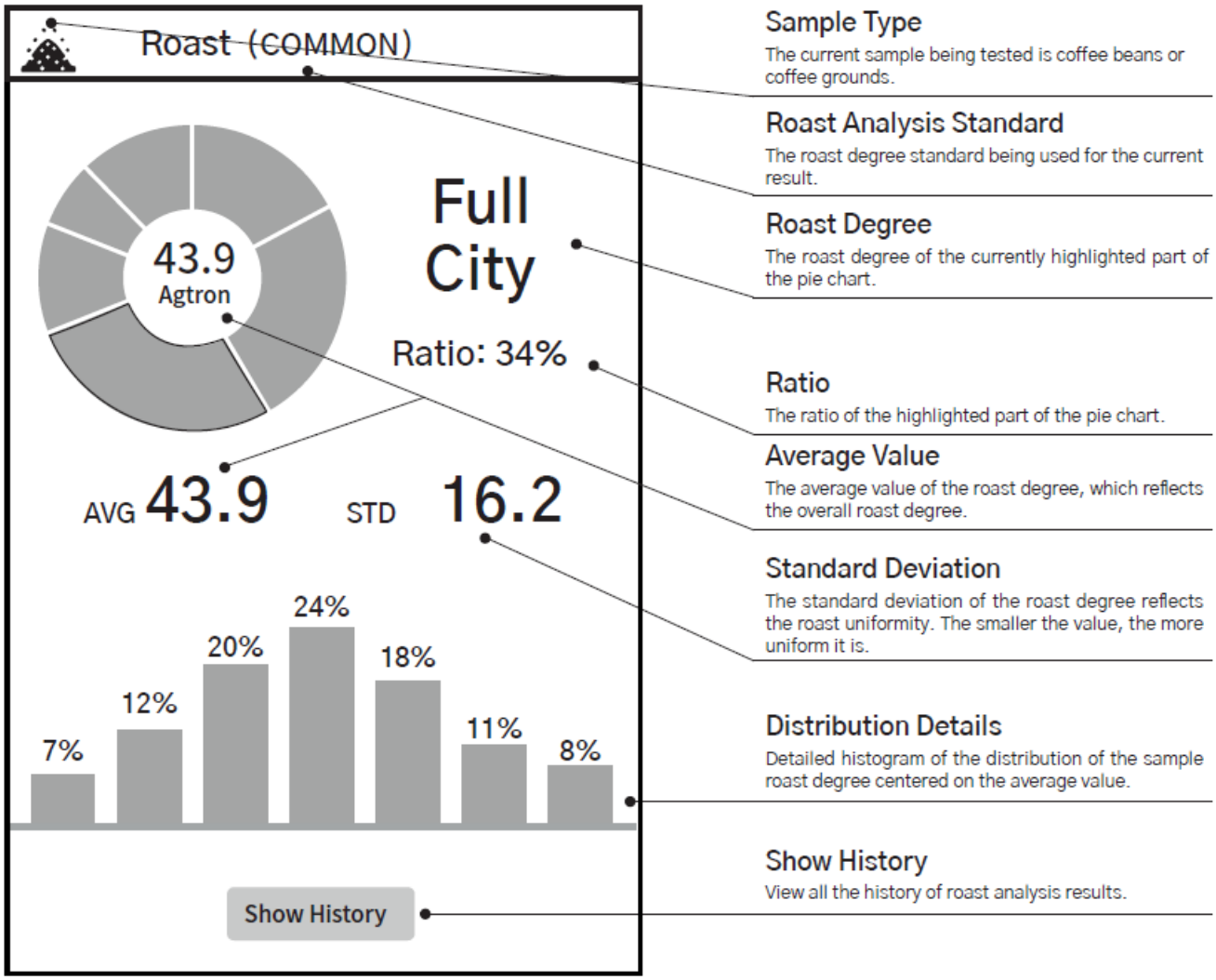


Table1

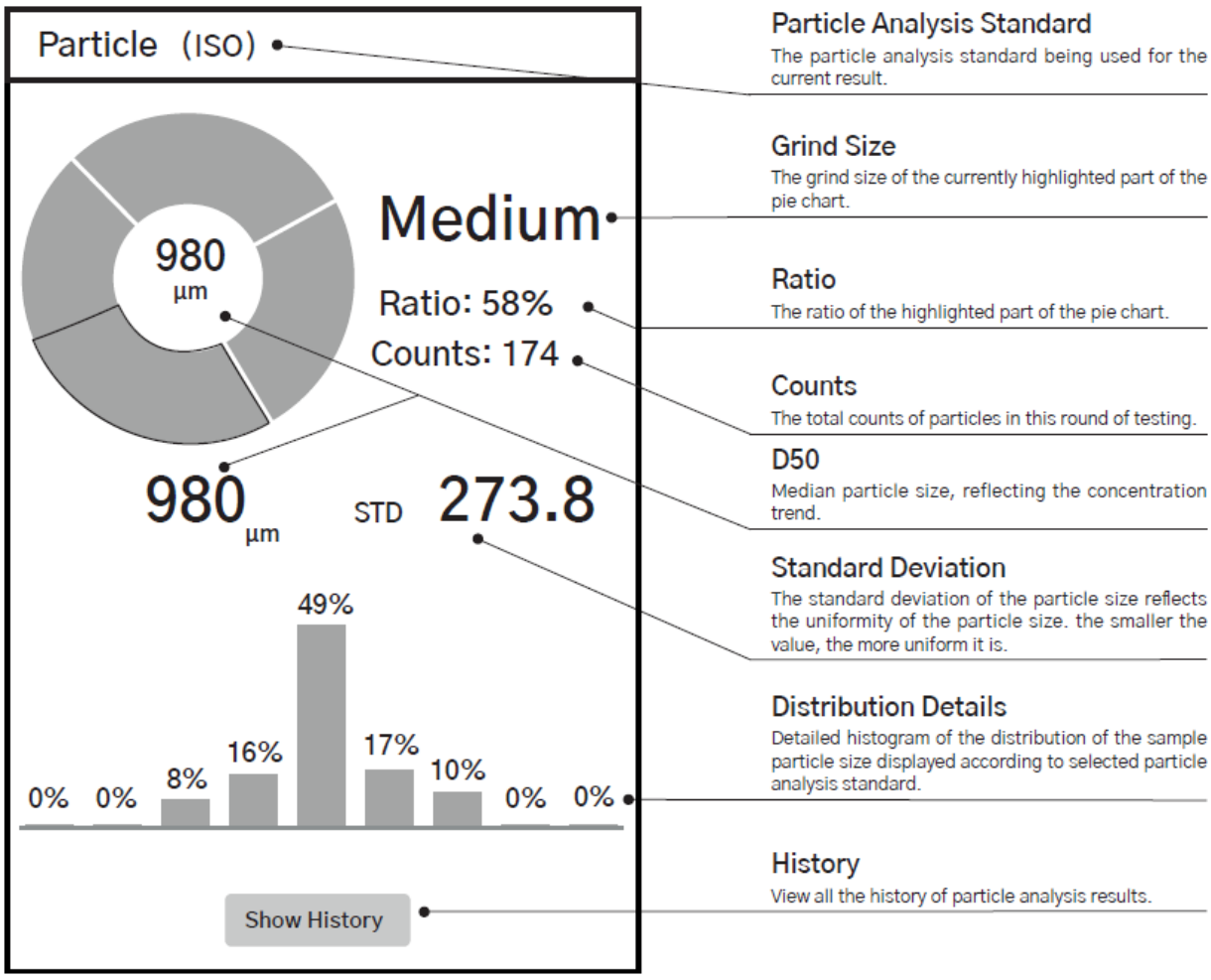
Cautions

1. Light Source: Roast analysis utilizes near-infrared light sources (850nm, 940nm) for testing and analysis. White light is used for auxiliary functions such as smart tests and silver skin detection.
2. Silver Skin Detection: You can choose whether to enable the silver skin detection function for coffee beans or coffee grounds in the settings. You can also adjust the sensitivity of it.

Particle Analysis
Recommended Procedure

1. Take an appropriate amount of coffee powder with a small spoon (refer to sampling recommendations) and place they are located in the central area of the particle analysis tray.
2. Connect the main unit to the particle analysis tray, making sure that the magnetic connection between the tray and the main unit is properly connected.
3. Start the test.
4. Wait for the test to be completed.

Analysis Result Table2



Cautions

1. If the amount of coffee ground taken is more than one flat spoon, the analysis of finer particles may be affected.
2. After the Smart Diffusor function is turned on, it can automatically conduct diffusion according to the current particle distribution. If the particles have already been evenly distributed, the diffusion will not be carried out again.

Sampling Recommendations

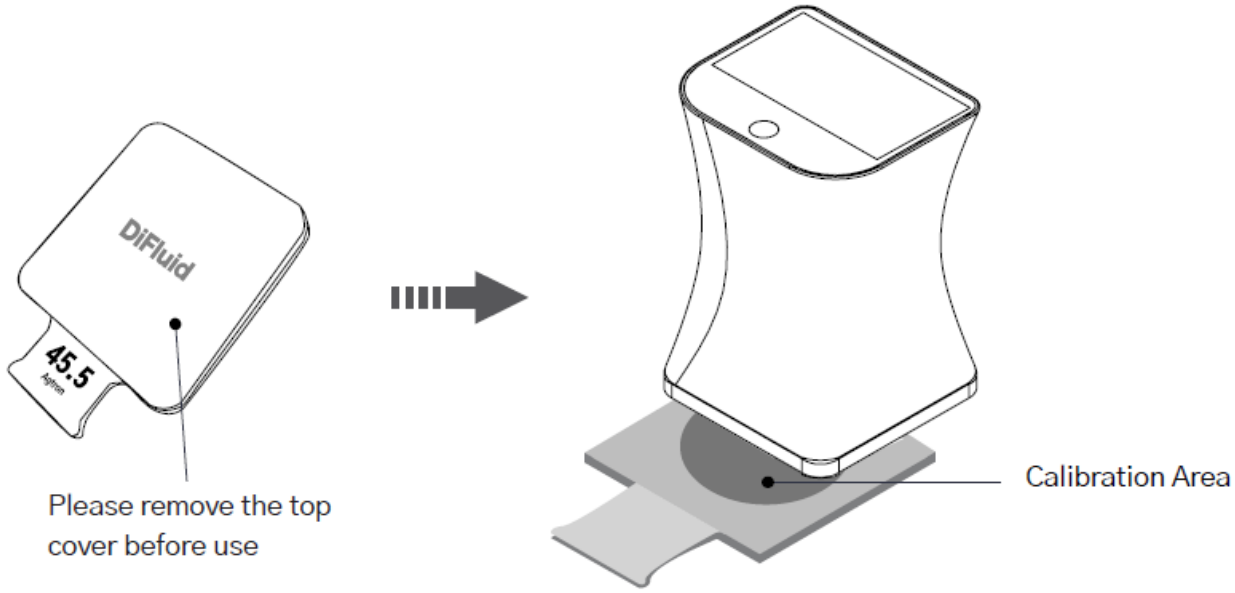
1. For a coarse grind, please take two-thirds of a spoonful of fine powder.
2. For a fine grind, please control it to one-third of a spoonful of fine powder.
3. If the grind cannot be determined, please take half a spoonful of fine powder.
4. You can adjust the sampling amount according to the actual situation to achieve better dispersion and uniformity.

Roast Degree Calibration

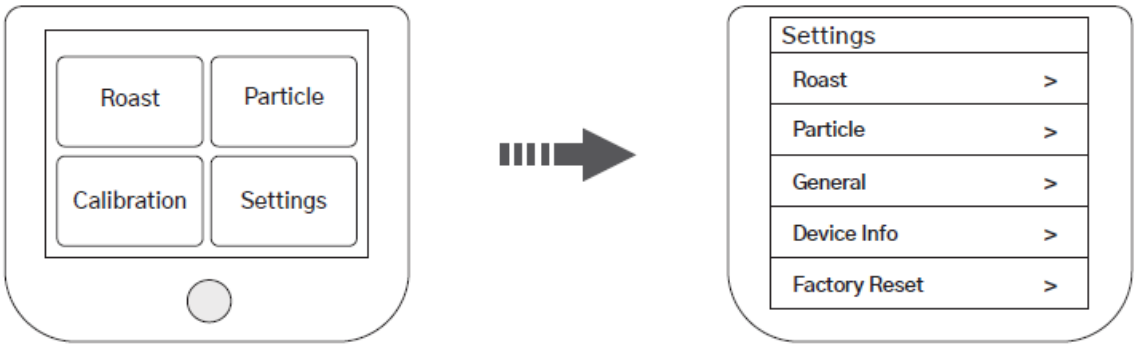
Instructions

1. Remove the cover on the Roast Degree Calibration Plate first (Be aware not to scratch the calibration area).
2. Place the calibration plate under the Main Unit and make sure the handle is facing the direction of the button.
3. Enter Calibration Mode and tap <Start> to start the calibration.

4. You can exit calibration mode after calibration success.



Settings



On the menu screen, click the <Settings> option to enter the settings page.

1. Roast: The settings related to roast analysis.
2. Particle: The settings related to particle analysis.
3. General: Device settings like language and screen brightness.
4. Device Info: See more Omni product information.
5. Factory Reset: Long-press on the reset icon and wait for the progress bar to complete filling (5 seconds). This will restore the device to its factory settings (Please note: This operation will clear all the history records, reset all settings and reboot the device).

Standards Specifications

Summary of Roast Analysis Standards

AGTRON Values	COMMON	SCALA
0 ≤ AGTRON ≤ 30	Espresso Roast	Very Dark
30 AGTRON ≤ 40	French Roast	Dark
40 AGTRON ≤ 50	Full City Roast	Medium-Dark
50 AGTRON ≤ 60	City Roast	Medium
60 AGTRON ≤ 70	Dark Roast	Medium-Light
70 AGTRON ≤ 80	Medium Roast	Light
80 AGTRON ≤ 90	Cinnamon Roast	Very Light
90 AGTRON ≤ 150	Light Roast	Extra Light

International Standard ISO Sieve Pore Size (µm)	American Society for Testing and Materials Sieve Specifications (ASTM)	American Sieve Society Sieve Specification (TYLER)
300	50	48
425	40	35
600	30	28
850	20	20
1180	16	14
1400	14	12
1700	12	10
2360	8	8

Grind Size Standard

Particle Size(μm**)**	**Grind Size**
100 ≤ Particle Size 500	Fine
500 ≤ Particle Size 800	Medium Fine
800 ≤ Particle Size 1100	Medium
1100 ≤ Particle Size 1400	Medium Coarse
1400 ≤ Particle Size ≤ 2500	Coarse

FCC STATEMENT

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment. **NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, according to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. The SAR limit of USA (FCC) is 1.6 W/kg averaging over one gram of tissue. Device types DFT-SD101(FCC ID: 2A26IDFT-SD101) have also been tested against this SAR limit.

CONTACT

- Shenzhen Digitizing Fluid Technology Co., Ltd.
- Add: Room 1602, Jinhua Building, Longhua District, Shenzhen, China.
- **Tel:** (+86) 0755-23761557
- **Web**: www.digitizefluid.com

Documents / Resources

	DiFluid SD101 Omni Professional Roast Particle Analyzer 2 in 1 [pdf] User Manual SD101 Omni Professional Roast Particle Analyzer 2 in 1, SD101, Omni Professional Roast Particle Analyzer 2 in 1, Roast Particle Analyzer 2 in 1, Particle Analyzer 2 in 1, Analyzer 2 in 1

References

- DiFluid
- User Manual