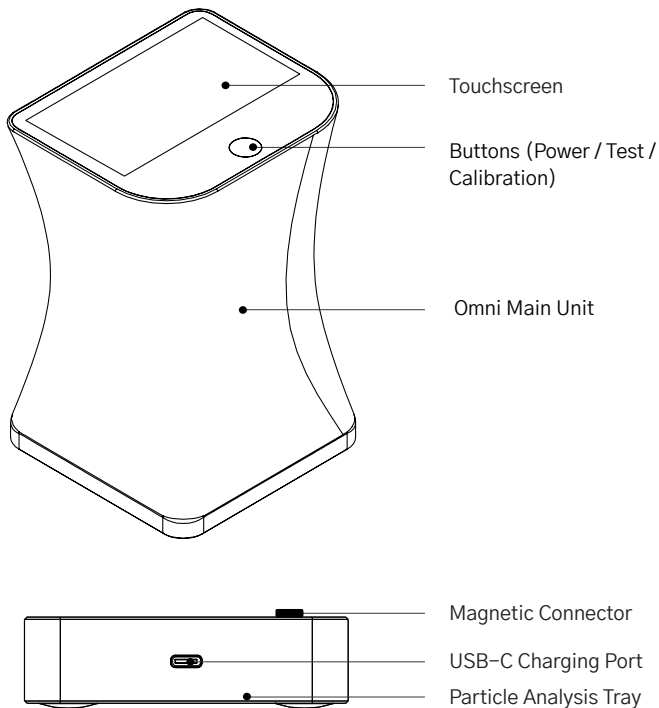


# DiFluid Omni

User Manual · 使用手册

# 1. Know Your Omni



# 2. 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 $\overline{=}$ 1A

## Accessories

### Omni Main Unit \*1

Particle Analysis Tray \*1

Roast Analyzer Tray\*1

Tray \*1

Velvet Bag \*1

Coffee Bean Spoon\*1

Brush\*1

Scraper \*1

Toolbox\*1

Coffee Ground Spoon\*1

USB-C Charging Cable \*1

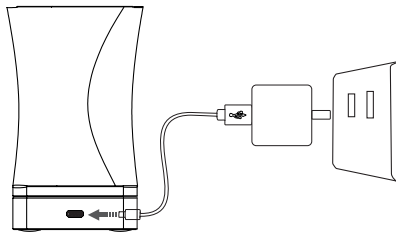
Calibration Plate \*1

User Manual, Warranty Card, Test Report\*1

## 3. 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.



## 4. 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

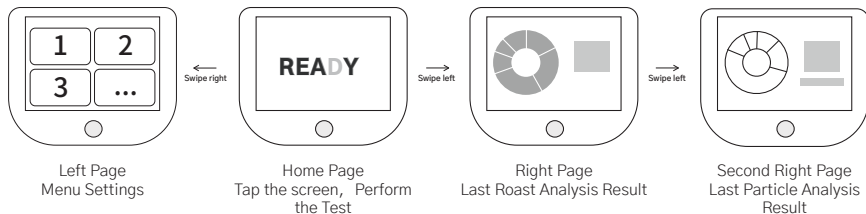
**Short click:** Perform the test.

**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 Touch screen



### 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.**

# 5. 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

### 1. 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.

### 2. Analysis Result (Table1)

### 3. 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**

### **1. Recommended Procedure**

- 1) Take an appropriate amount of coffee powder with a small spoon (refer to sampling recommendations) and place them 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.

### **2. Analysis Result (Table 2)**

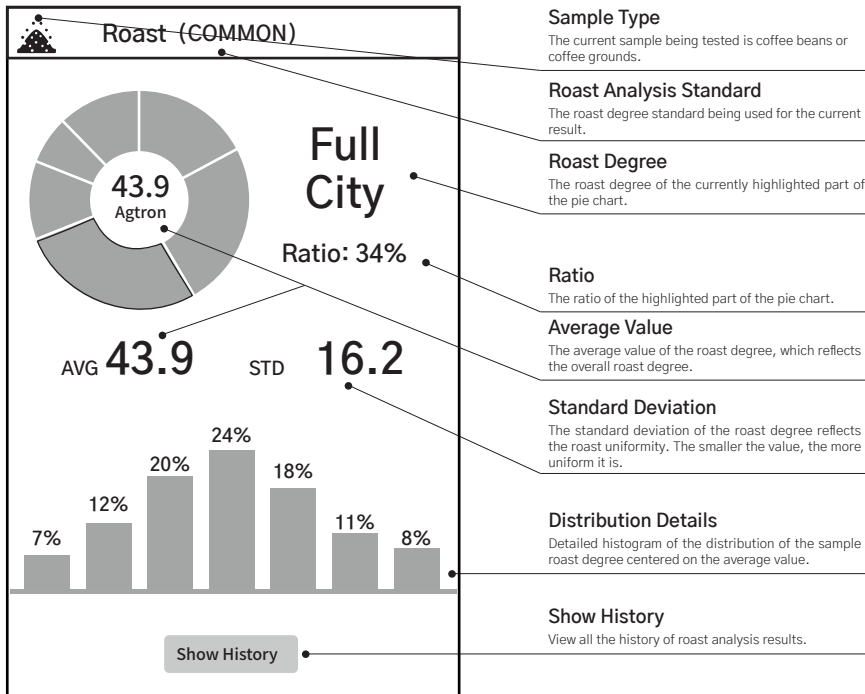
### **3. Cautions**

- 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 Diffuser 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.

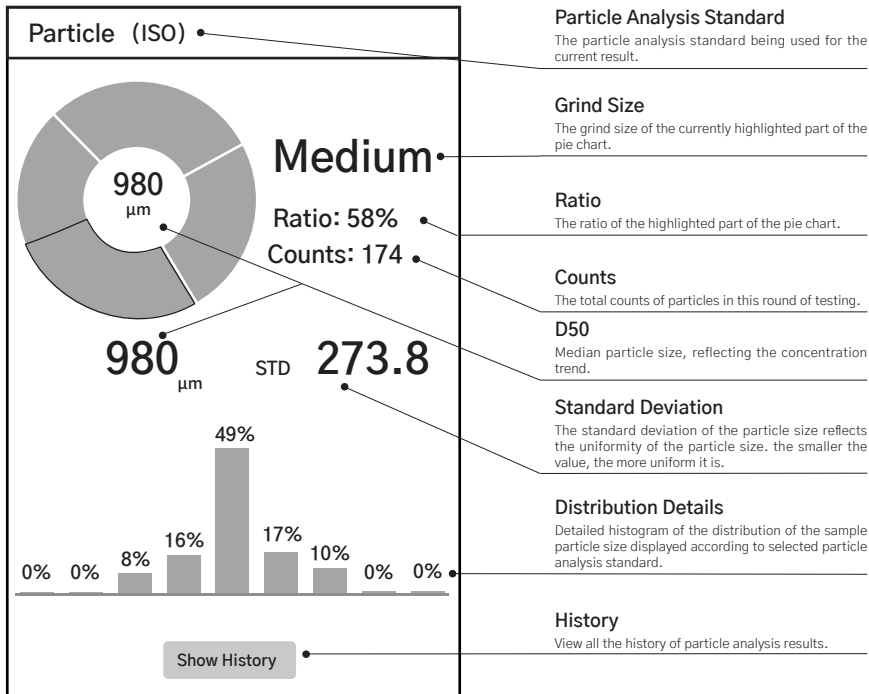
### **4. Sampling Recommendations**

- 1) For coarse grind, please take two-thirds of a spoonful of fine powder.
- 2) For 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.





**Table1**

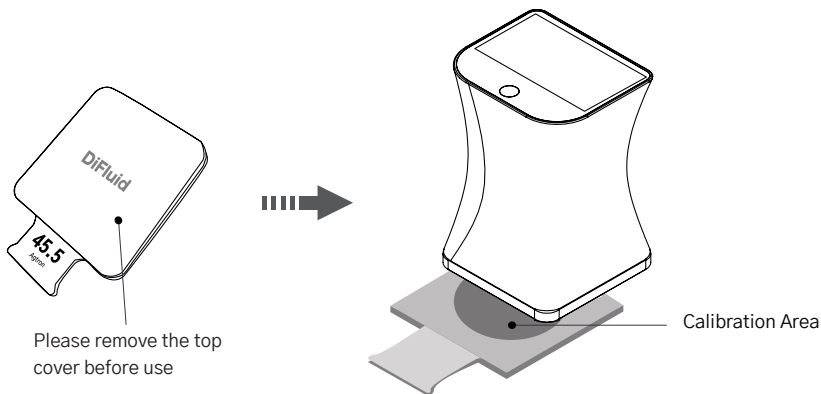


**Table2**

# Roast Degree Calibration

## Instructions

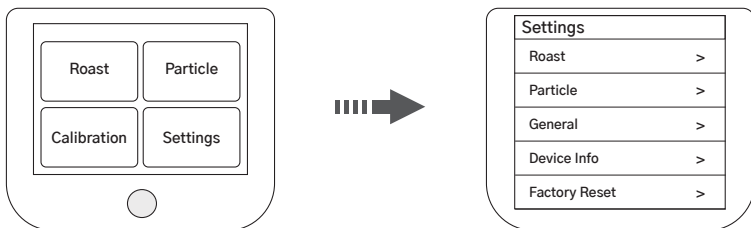
1. Remove the cover on the Roast Degree Calibration Plate first ( Be aware not to scratch the calibration area ).
2. Place the calibration plate under the Main Unit and make sure the handle is facing the direction of the button.
3. Enter Calibration Mode and tap <Start> to start the calibration.
4. You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



NOTE: Each Omni has its unique calibration plate. If you lost the original calibration plate, you could contact our online store to purchase a new one.



# 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).

# 7. Standards Specifications

## Summary of Roast Analysis Standards

AGTRON Values	COMMON	SCAA
$0 \leq \text{AGTRON} \leq 30$	Espresso Roast	Very Dark
$30 < \text{AGTRON} \leq 40$	French Roast	Dark
$40 < \text{AGTRON} \leq 50$	Full City Roast	Medium–Dark
$50 < \text{AGTRON} \leq 60$	City Roast	Medium
$60 < \text{AGTRON} \leq 70$	Dark Roast	Medium–Light
$70 < \text{AGTRON} \leq 80$	Medium Roast	Light
$80 < \text{AGTRON} \leq 90$	Cinnamon Roast	Very Light
$90 < \text{AGTRON} \leq 150$	Light Roast	Extra Light

## Summary of Particle Analysis Standards

<b>International Standard ISO Sieve Pore Size (µm)</b>	<b>American Society for Testing and Materials Sieve Specifications (ASTM)</b>	<b>American Sieve Society Sieve Specification (TYLER)</b>
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( $\mu\text{m}$ )	Grind Size
$100 \leq \text{Particle Size} < 500$	Fine
$500 \leq \text{Particle Size} < 800$	Medium Fine
$800 \leq \text{Particle Size} < 1100$	Medium
$1100 \leq \text{Particle Size} < 1400$	Medium Coarse
$1400 \leq \text{Particle Size} \leq 2500$	Coarse

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, pursuant 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:

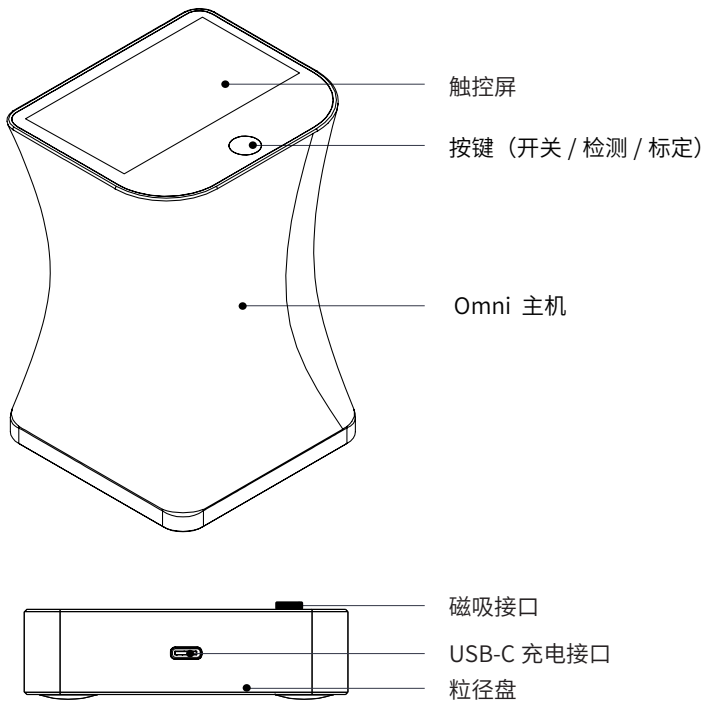
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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 averaged over one gram of tissue. Device types DFT-SD101(FCC ID: 2A26IDFT-SD101) has also been tested against this SAR limit.



# 1. 认识部件



## 2. 规格说明

### 参数

产品名称	专业级烘焙色度 / 粒径分析仪（二合一）
型号	DFT - SD101
尺寸（主机）	109*79*72mm（长 * 宽 * 高）
重量（主机）	290g（主机机身）
屏幕	2.8 寸高清触控屏
电池	2500mAh 可充电锂电池
光源（烘焙分析）	多波段近红外光源（850nm、940nm）
光学传感器	二维成像传感器
数据记录	烘焙 500 条 / 粒径 500 条
工作温度	0-45°C
充电接口	USB-C
充电参数	5V $\equiv$ 1A

## 配件

### Onmi 主机 \*1

粒径盘 \*1

色度盘 \*1

托盘 \*1

色值标定卡 \*1

豆勺 \*1

粉刷 \*1

刮尺 \*1

微量粉勺 \*1

绒布袋 \*1

工具箱 \*1

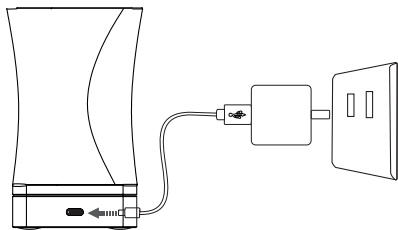
USB-C 充电线 \*1

说明书、保修卡、检测报告 \*1

## 3. 使用前准备

1. 确保**电池电量充足**。将 Omni 主机与粒径盘扣合，并使用附带的充电线连接粒径盘侧面的 USB-C 接口进行充电。

**⚠ 注意：**如果您在充电过程中开机，机器会先出现“DiFluid”页面，再进入充电状态页面，需要再次短按按键，才能进入“READY”页面。



2. 扫描左侧二维码，即可下载右侧 **DiFluid Café 应用程序**。



## 4. 基础操作

### ■ 按键操作

#### 关机状态下

短按按键：启动设备，当屏幕显示 "READY" 时表示**开机**完成。

#### 开机状态下

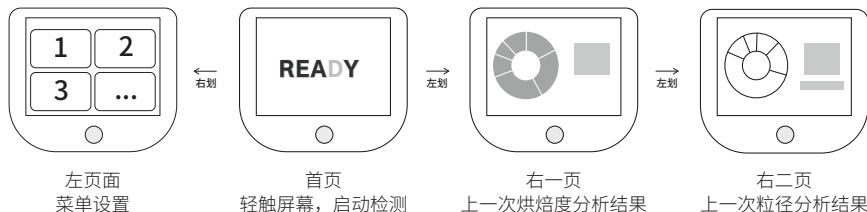
短按按键：进行**检测**操作。

短按、再长按按键：进行**色卡**校准。

快速双击按键：查看**设备信息**。

长按按键：屏幕将显示 "**关机**"，松开按键即可完成关机操作。

## 触屏操作



### 往右滑动，出现菜单页面

1. 烘焙分析：进行烘焙分析操作。
2. 粒径分析：进行粒径分析操作。
3. 色卡校准：对色度值进行校准操作。
4. 参数设置：访问更多的 Omni 设置。

### 往左滑动，出现历史记录页面

1. 查看烘焙历史记录：从主界面上向左滑动可查看上一次的历史记录，向下滑动可查看全部历史记录。
2. 查看粒径历史记录：从主界面上向左滑动**两次**可查看上一次的历史记录，向下滑动可查看全部历史记录。

### 主界面直接轻触，进行检测分析

### 在子页面，往右滑动，返回上一级页面

# 5. 功能操作



## 检测操作

### 触发检测方法

1. 短按按键：智能检测模式，系统自动判断进行烘焙分析或粒径分析。
2. 在主界面轻触屏幕：智能检测模式，系统自动判断进行烘焙分析或粒径分析。
3. 菜单页面轻触 < 烘焙分析 > 或 < 粒径分析 > 选项：系统会直接执行相应的分析。

### 烘焙分析

#### 1. 操作方法

- 1) 将咖啡豆放置在**色度盘较深的一侧**，而粉则可以放置在**色度盘的任意一侧**。
- 2) 将豆或粉均匀覆盖在色度盘上，并**使用刮尺**使其与色度盘**表面平齐**。
- 3) 根据 < 触发检测方法 > 之一，进行触发检测。
- 4) 在检测结果页面上，通过上下滑动切换多种数据图表展示模式。

#### 2. 结果页面（详见表格 1）

#### 3. 注意事项

- 1) 光源：烘焙色度分析使用近红外光源（850nm、940nm）进行探测分析。白光则用于智能检测判断和银皮检测等辅助功能。
- 2) 银皮检测：您可以在设置中选择是否开启咖啡豆粉的银皮检测功能，并进行灵敏度设置。

# 粒径分析

## 1. 操作方法

- 1) 使用微量粉勺舀取适量咖啡粉(参考取样建议), 并将粉置于粒径盘的中心区域。
- 2) 将主机连接到粒径盘上, 确保粒径盘和主机的磁吸接口正确连接。
- 3) 开始检测。
- 4) 等待检测完成。

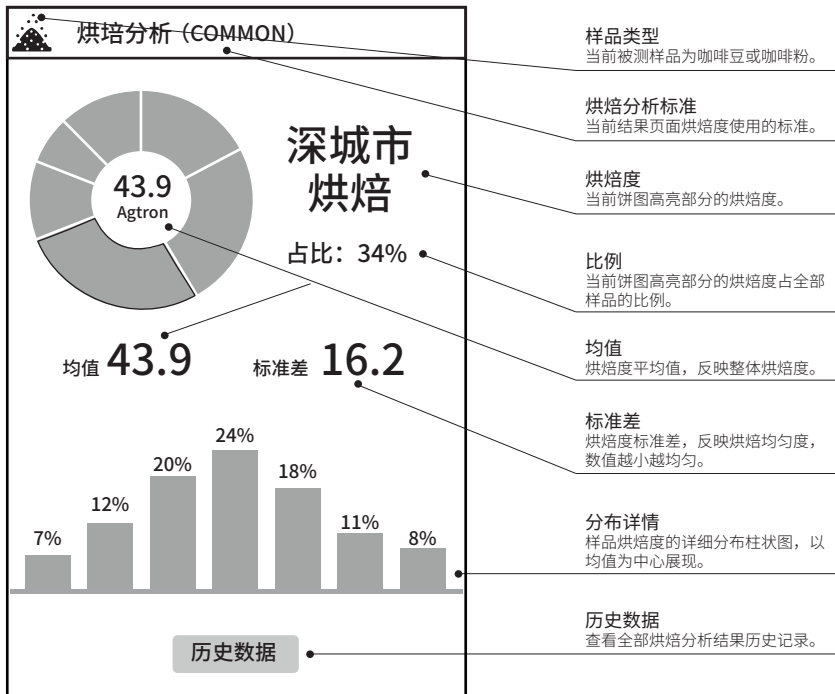
## 2. 结果页面 (详见表格 2)

## 3. 注意事项

- 1) 取粉量如多于一勺的情况下, 对于较细的颗粒分析可能造成影响。
- 2) 智能震粉模式功能开启后, 可以自动根据当前颗粒分布情况进行震粉。在颗粒均匀分布的情况下, 不会再进行震粉。
- 3) 检测过程中, 粒径盘会在震粉时发出蜂鸣声, 属于正常现象。

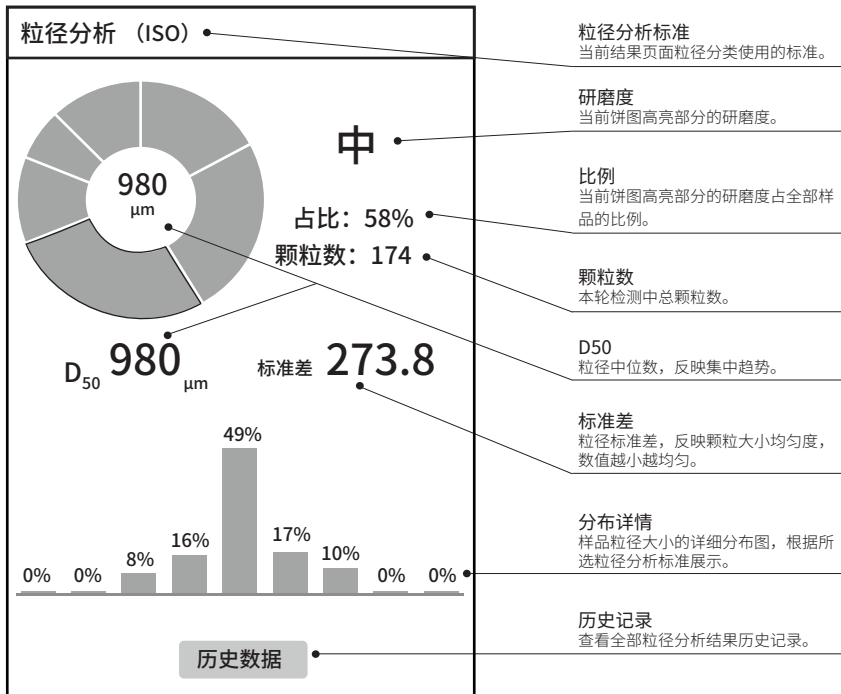
## 4. 取样建议

- 1) 对于粗研磨度, 请取三分之二勺微量粉。
- 2) 对于细研磨度, 请控制在三分之一勺微量粉。
- 3) 如果无法判断研磨度, 请取半勺微量粉即可。
- 4) 您可以根据实际情况适当调整取样量, 以达到振散和拥最均匀的目的。



表格 1



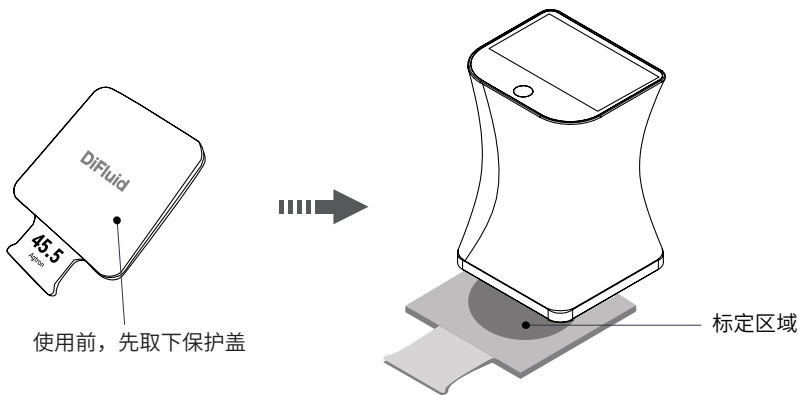


表格 2

# 烘焙度校准

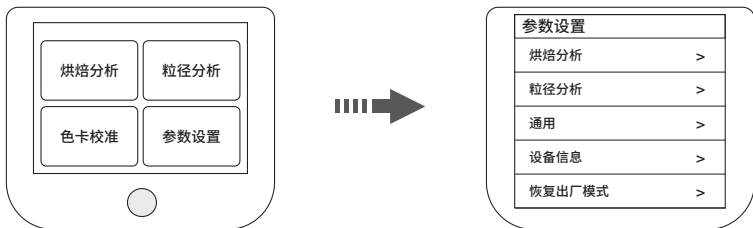
## 操作方法

1. 进行校准前**先取下保护盖**（注意不要划伤标定区域）。
2. 将标定卡置于主机下方，标定卡的**手柄朝向主机按键**所在方向。
3. 进入标定模式，点击<启动>开始标定。
4. 标定成功后即可退出标定模式。



注：色值标定卡和设备之间是一对一绑定的关系。如果不慎丢失了色值标定卡，请联系官方旗舰店再次购买色值标定卡进行绑定。

## 参数设置



### 菜单界面下，点击 < 参数设置 > 选项，进入设置页面

1. 烘焙分析参数：可以设置更多 Omni 烘焙分析的参数。
2. 粒径分析参数：可以设置更多 Omni 粒径分析的参数。
3. 通用：设备通用设置如语言和屏幕亮度。
4. 设备信息：可以查看更多 Omni 产品信息。
5. 恢复出厂模式：长按触屏，等待进度条指示完成填充，即可完成出厂设置（请注意：此操作将清空历史记录并恢复参数为出厂默认设置状态）。

# 7. 烘焙和粒径标准规范



## 烘焙标准汇总

AGTRON 数值	COMMON	SCAA
$0 \leq \text{AGTRON} \leq 30$	意式烘焙	非常深
$30 < \text{AGTRON} \leq 40$	法式烘焙	深色
$40 < \text{AGTRON} \leq 50$	深城市烘焙	中深
$50 < \text{AGTRON} \leq 60$	城市烘焙	中等
$60 < \text{AGTRON} \leq 70$	深度烘焙	中浅
$70 < \text{AGTRON} \leq 80$	中度烘焙	浅
$80 < \text{AGTRON} \leq 90$	肉桂烘焙	非常浅
$90 < \text{AGTRON} \leq 150$	浅度烘焙	极浅

## ■ 粒径标准汇总

国际标准 ISO 筛网孔径 (μm)	美国材料实验协会 筛网规格 (ASTM)	美国筛网协会 筛网规格 (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

## 研磨度标准

粒径大小 (μm)	研磨度
100 ≤直径< 500	细
500 ≤直径< 800	中细
800 ≤直径< 1100	中
1100 ≤直径< 1400	中粗
1400 ≤直径≤ 2500	粗

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