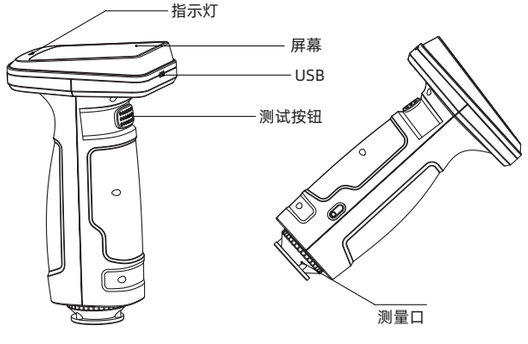


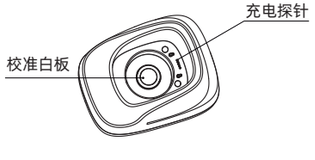
# 分光测色仪
# 使用说明书

## 产品介绍

使用产品前请仔细阅读本说明书，并妥善保管



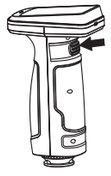

主机




校准充电底座

## 快速使用教程

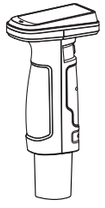
### 1.开机及校准



开机

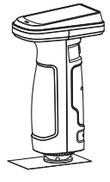


将仪器放到校准底座
进行白校准

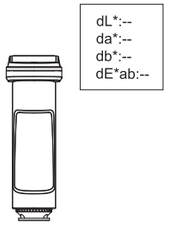


将仪器放到黑校准盒上
进行黑校准

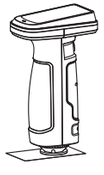
### 2.如何测色差



测标准

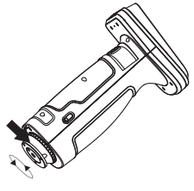



切换到色差测量界面

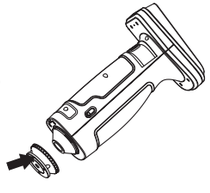


测样品，得出色差

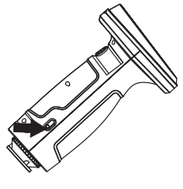
### 3.口径切换



旋转并取下测量口径

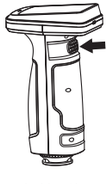


将替换的
测量口径旋转扣准



根据口径
选择对应的MAV或SAV模式

### 4.关机



长按3秒

## 基础参数

| | |
|---|---|
| 照明/受光系统： | D/8，SCI+SCE |
| 传感器： | 阵列传感器 |
| 分光方式： | 光栅 |
| 积分球尺寸： | Φ40mm |
| 测量波长范围： | 400-700nm |
| 测量波长间隔： | 10nm |
| 反射率测定范围： | 0-200%，分辨率：0.01% |
| 照明光源： | 全波段均衡LED光源 |
| 测量时间： | 约2秒 |
| 测量口径： | 稳定型：Φ11mm，Φ6mm；灵巧型：▽11mm，▽6mm |
| 重复性※： | ΔE*ab≤ 0.025 |
| 台间差※※： | ΔE*ab≤0.25 |
| 语言模式： | 简体中文，英语 |
| 显示精度： | 0.01 |
| 标准观察者： | 2°，10° |
| 观察光源： | A,B,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U30,U35,DLF,NBF,TL83,TL84,ID50,ID65,LED-B1,LED-B2,LED-B3,LED-B4,LED-B5,LED-BH1,LED-RGB1,LED-V1,LED-V2 |
| 测量指标： | 光谱反射率,CIE-Lab,CIE-LCh,HunterLab,CIE-Luv,XYZ,Yxy,RGB,色差(ΔE*ab,ΔE*cmc,ΔE*94,ΔE*00),白度(ASTM E313-00,ASTM E313-73,CIE/ISO,AATCC,Hunter,TaubeBergerStensby),黄度(ASTM D1925,ASTM E313-00,ASTM E313-73),黑度（My,dM）,沾色牢度,变色牢度,Tint(ASTM E313-00),色密度CMYK(A,T,E,M),同色异谱指数Milm,孟塞尔,遮盖力,力份(染料强度,着色力) |
| 存储： | 仪器：标样100条，试样10000条；APP：海量存储 |
| 端口： | USB，蓝牙 |
| 电池容量： | 单次充电可连续测量8000次，7.2V/3000mAh |
| 校准： | 智能自动校准 |
| 软件支持： | Andriod，IOS，Windows，微信小程序 |
| 准确性保证： | 保证一级计量合格 |
| 符合标准： | 符合标准CIE No.15，GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7 |
| 屏幕： | IPS全彩屏幕，3.5英寸 |
| 光源寿命： | 10年100万次 |

※ 仪器校正后，以5秒间隔测量白色校正板30次以MAV口径测量结果标准偏差

※※ BCRA系列 II 12块色板测量平均值

*参数如有修改，恕不另行通知

## 保修说明

本产品售后服务严格依据《中华人民共和国消费者权益保护法》、《中华人民共和国产品质量法》实行售后三包服务，服务内容如下：

1、自您签收日起7日内，本产品出现《产品性能故障表》所列性能故障的情况经由本司售后服务中心检测确定，可免费享受退货或换货服务；

2、自您签收日起8-15日内，本产品出现《产品性能故障表》所列性能故障的情况，经由本司售后服务中心检测确定，可免费享受换货或维修服务；

3、由您签收日起至保修期结束,本产品出现《产品性能故障表》所列性能故障的情况，经由本司售后服务中心检测确定，可免费享受维修服务。

### 提示信息

因运输过程中需用包装箱保证产品运输安全，建议自签收日起至少保留包装箱30天。

### 非保修条例

1、未经授权的维修、误用、碰撞、疏忽、滥用、进液、事故、改动、使用非本产品配件，或撕毁涂改标签、防伪标记；

2、已超过三包有效期；

3、因不可抗力造成的破坏；

4、不符合《产品性能故障表》所列性能故障的情况；

5、因人为原因导致非本产品及其配件产生《产品性能故障表》所列性能故障。

## 警告

·请勿尝试拆卸或更换仪器内部零件，如需服务请联系代理商或官方客服。

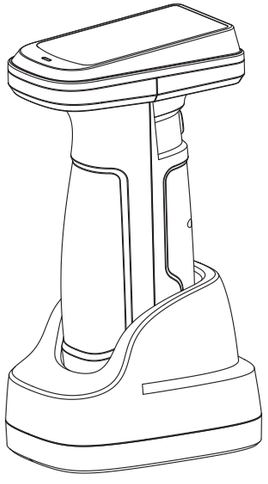
·请勿将仪器放置于热源或直接暴露在炉火旁。

·若任何液体不小心进入仪器，请立即关闭仪器电源。

·本产品及内部零件，如被儿童误食可能导致窒息等危险。

## 性能故障表

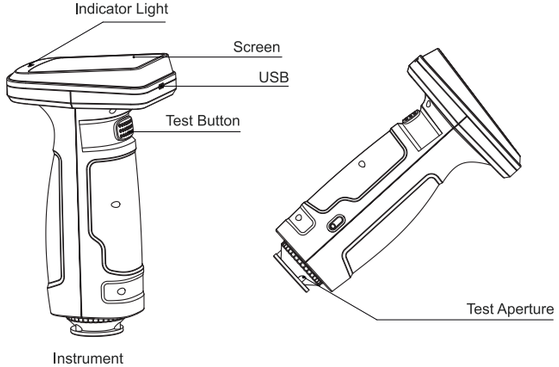
| 名称 | 性能故障 |
|---|---|
| 分光测色仪 | 1、电源指示灯不亮（电池没电除外）；<br>2、仪器开关卡滞，不能正常开关；<br>3、仪器显示器无法正常显示；<br>4、测量光源不亮；<br>5、蓝牙无法连接。 |



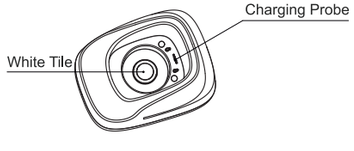
# Spectrophotometer Operation Instruction

## Product introduction

Please read this manual carefully before using the product.



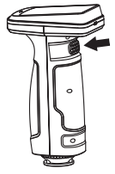

Instrument




Calibration and Charging Base

## Quick Start

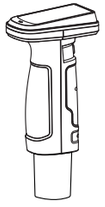
### 1. Power on and Calibration



Power on

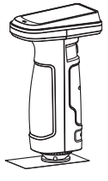


Put the instrument into the calibration base for white calibration.

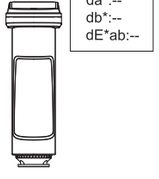


Place the instrument on the black calibration box for black calibration

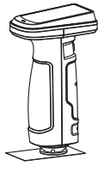
### 2. How to measure color difference



Measure Target

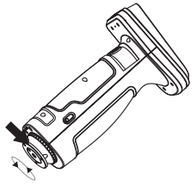



Enter into color difference measurement interface

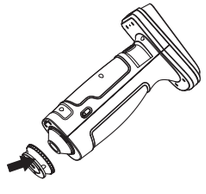


Measure sample to get the color difference

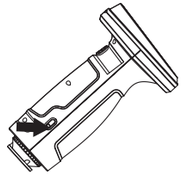
### 3. Switch Aperture



remove the aperture.

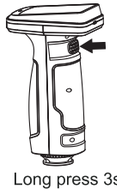


Rotate the aperture buckle



Choose MAV or SAV according to the aperture size.

### 4. Power off



Long press 3s

## Parameters

| | |
|---|---|
| Geometry: | D/8,SCI+SCE |
| Sensor: | Array sensor |
| Spectroscopic method: | Grating |
| Sphere Size: | Φ40mm |
| Wavelength Range: | 400-700nm |
| Wavelength Interval: | 10nm |
| Reflectance Range: | 0-200%, resolution 0.01% |
| Light Source: | LED(Full wavelength balanced LED) |
| Measurement Time: | About 2s |
| Measuring aperture: | 2w/ plate and 2w/o plate:Φ11mm,Φ6mm; ▽11mm,▽6mm |
| Repeatability※: | ΔE*ab ≤ 0.025 |
| Inter-instrument agreement※※: | ΔE*ab≤0.25 |
| Language: | English and Chinese |
| Display Resolution: | 0.01 |
| Observer Angles: | 2°, 10° |
| Illuminants: | A,B,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6, F7,F8,F9,F10,F11,F12,CWF,U30,U35,DLF,NBF,TL83, TL84,ID50,ID65,LED-B1,LED-B2,LED-B3,LED-B4, LED-B5,LED-BH1,LED-RGB1,LED-V1,LED-V2 |
| Color Spaces and Indices: | Reflectance, CIE-Lab, CIE-LCh, HunterLab, CIE Luv, XYZ, Yxy, RGB, Color difference(ΔE*ab, ΔE*cmc, ΔE*94,ΔE*00), WI(ASTM E313-00,ASTM E313-73,CIE/ISO, AATCC, Hunter, Taube Berger Stensby), YI(ASTM D1925,ASTM E313-00,ASTM E313-73), Blackness(My,dM),Color Fastness, Tint,(ASTM E313-00),Color Density CMYK(A,T,E,M), Milm, Munsell, Opacity, Color strength |
| Storage: | Instrument: 100 standard and 10,000 samples; APP Mass Storage |
| Interface: | USB, Bluetooth |
| Battery: | Rechargeable, 8000 times continuous tests, 7.2V/3000mAh |
| Calibration: | Intelligent auto calibration |
| Software: | Andriod,IOS,Windows |
| Accuracy: | Metrology Level I |
| Standards: | Conform to CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724-1, ASTM E1164, DIN5033 Teil7 |
| Screen: | IPS Full Color Screen,3.5 inches |
| Light Source Lifetime: | 10 years, 1 million tests |

※ When a white tile is measured 30 times at 5-seconds interval with MAV

※※ BCRA Series II , average measurement of 12 tiles

*Parameters are subject to change without notice

## Warranty

### Reminder

It is recommend that keep the packing box for at least 30 days as the packing box is required to ensure the safety of transportation.

### Non warranty regulations

1. Unauthorized repair,misuse,accident,modification,use of nonofficial accessories.
2. Instrument is out of warranty.
3. Damage caused by force.
4. Not the performance failure listed in the product performance failure table.
5. Performance failure caused by human factors.

## Warning

- Do not attempt to disassemble or replace any part of the equipment. Please contact the agent or official customer service for after sales service.
- Do not place the equipment near heat source or directly expose to the fire.
- If any liquid enters the equipment,please power off the equipment immediately.
- This product contains small parts.It may cause suffocation and other hazards,if swallowed by children.

## Product Performance Failure Table

| Name | Performance failure |
|---|---|
| Spectrophotometer | 1.The equipment can't power on.<br>2.The equipment's button can't work normally.<br>3.Equipment screen fails to work normally.<br>4.Equipment lamp fails to work normally.<br>5.Bluetooth can't connect. |

SKU:22AECP00700A