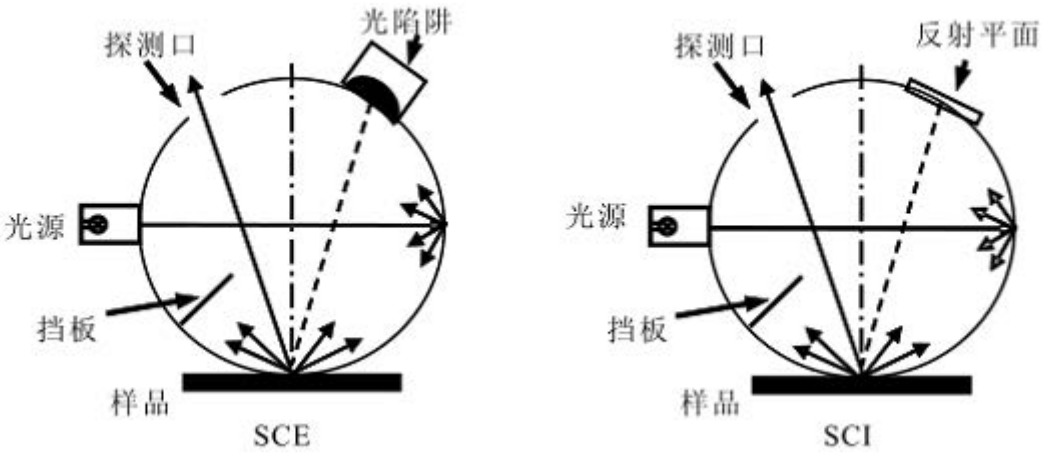
HACA-3800 高精度分光测色仪（高精度型）
HACA-3800 high-precision spectrophotometer (high-precision type)

- HACA-3800高精度颜色分析仪采用先进的光谱测量技术、双光束反馈光学系统，适用于纺织，塑料，染料，涂料和消费电子等行业的物体颜色和各类荧光色的高精度测量，是反射和透射测量的高端机型。

HACA-3800 high-precision color analyzer adopts advanced spectral measurement technology and double beam feedback optical system, which is suitable for high-precision measurement of object color and various fluorescent colors in textile, plastic, dye, paint, consumer electronics and other industries. It is a high-end machine for reflection and transmission measurement.

特点与优势 Characteristics and advantage

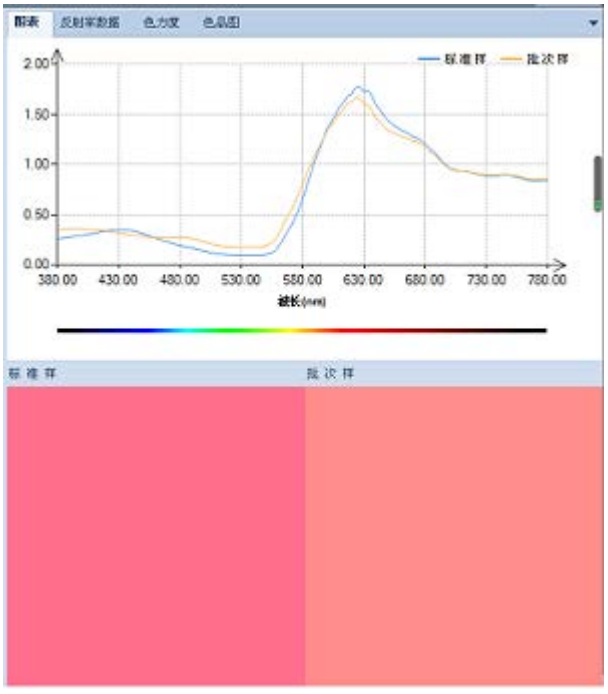
- 照明观测几何：兼顾反射测量和透射测量，照明观测几何完全符合CIE、ISO、ASTM、DIN、JIS、GB/T等国际及国内测色标准要求；
  Lighting observation geometry: give consideration to reflection measurement and transmission measurement, and the lighting observation geometry fully complies with the requirements of CIE, ISO, ASTM, DIN, JIS, GB/T and other international and domestic color measurement standards;
- 反射：d/8（漫射照明/8°接收）SCI/SCE同步测量
  Reflection: d/8 (diffuse illumination/8 ° reception) SCI/SCE synchronous measurement
- 透射：d/0（漫射照明/0°接收）
  Transmission: d/0 (diffuse illumination/0 ° reception)



- 颜色测量精度高：近30年光谱仪研发生产经验，数十项专利技术，使系统具有优异的分光测色性能，颜色测量精度高，重复性好，器件差小。
  High color measurement accuracy: nearly 30 years of spectrometer R&D and production experience and dozens of patented technologies have enabled the system to have excellent spectral color measurement performance, high color measurement accuracy, good repeatability and small device difference.

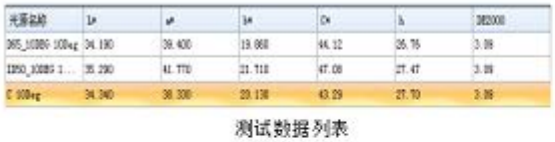
特点与优势 Characteristics and advantage

- 双光束反馈光学系统：实时监控和补偿光源波动，减少由于亮度变化或光谱特征变化引起的测量误差。
  Double beam feedback optical system: real-time monitoring and compensation of light source fluctuations to reduce measurement errors caused by changes in brightness or spectral characteristics.
- 系统灵敏度高，深色域测量重复性表现优异：以10s为间隔测量反射率1%黑板30次光谱反射率标准偏差仍可保持在0.1%以内。
  The system has high sensitivity and excellent repeatability of dark color domain measurement: the standard deviation of 30 times spectral reflectance of the blackboard with a reflectance of 1% measured at 10s interval can still be kept within 0.1%.
- 精确模拟D65标准照明体，日光匹配好，寿命长，稳定性好。
  Precise simulation of D65 standard lighting body, good daylight matching, long service life and good stability.
- 内置预览窗口，可以精确定位待测区域；
  Built in preview window, which can accurately locate the area to be measured;
- 在测量荧光材料时，无需UV校正即可实现荧光色的精确测量
  When measuring fluorescent materials, accurate measurement of fluorescent color can be achieved without UV correction



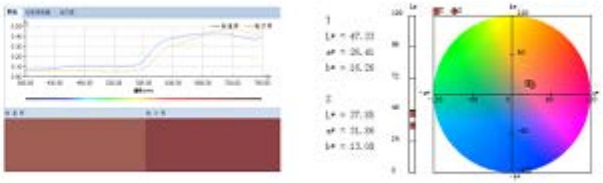
特点与优势 Characteristics and advantage

- 高精度的颜色测量与云平台管理
  High precision color measurement and cloud platform management
- 数据阅读更直观
  多功能管理分析软件：包含色差、反射率、透射率、色力度测量以及统计分析功能
  More intuitive data reading
  Multifunctional management and analysis software: including color difference, reflectivity, transmittance, color intensity measurement and statistical analysis functions



测试数据列表

测试界面菜单栏



数据及图形对比

颜色数据

色差

反射率数据及曲线

色空间

技术参数 Specifications

型号	HACA-3800
测量几何	反射：d/8(漫射照明/8°接收); 透射：d/0(漫射照明/0°接收)
观察光源	A,C,D50,D65,F1,F2,F3,F6,F7,F10,F11,F12,ID50,ID65.
测量功能	颜色、色差、光谱反射率曲线、光谱透射率曲线等
色空间	L*a*b、L*C*h、Yxy、Luv、Hunter Lab 、XYZ、RGB 等
色差	△E*ab、△E*94、△E*00、CMC（2：1）、CMC（1：1）
其他色度参数	MI、WI（ASTM313/CIE）、YI（ASTM 313/ASTM D1925）等
波长范围	360-780nm
反射率范围	0-200%，分辨率 0.01%
重复性	光谱反射率标准偏差小于 0.1%；色度标准偏差ΔE*ab 小于 0.01
台间差	0.12ΔE*ab