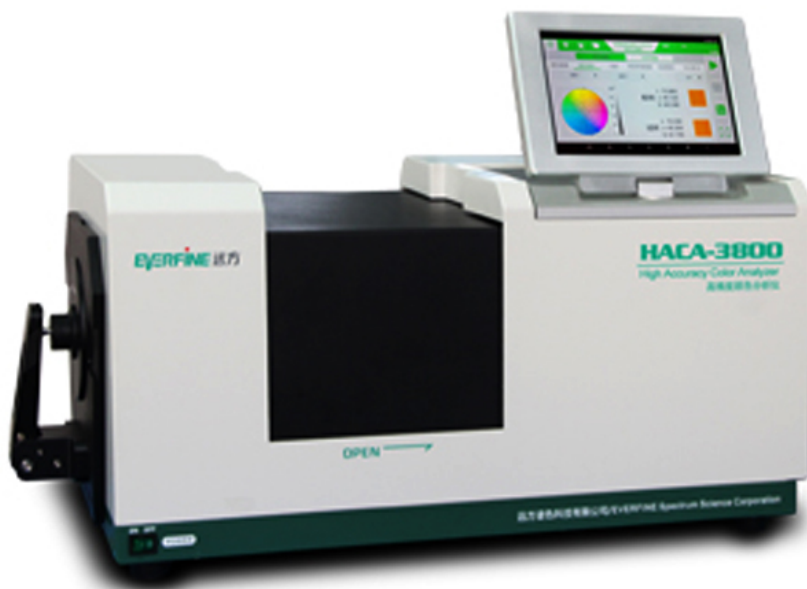


HACA-3800高精度颜色分析仪 HACA-3800 high-precision color analyzer

- HACA-3800高精度颜色分析仪采用先进的光谱测量技术及双光束反馈光学系统，光源模拟匹配CIE D65标准照明体，具有业界领先的测量精度；可实现物体表面光谱反射率、光谱透射率及颜色坐标等数据的高精度测量，符合CIE、ISO、ASTM、DIN、JIS等国际标准和GB/T国家标准的颜色测量要求，是材料颜色匹配测量的最佳解决方案。

HACA-3800 high-precision color analyzer adopts advanced spectral measurement technology and double beam feedback optical system, and the light source is simulated to match CIE D65 standard illuminant, with industry-leading measurement accuracy; It can realize high-precision measurement of object surface spectral reflectance, spectral transmittance, color coordinates and other data, and meet the color measurement requirements of CIE, ISO, ASTM, DIN, JIS and other international standards and GB/T national standards. It is the best solution for material color matching measurement.



特点与优势 Characteristics and advantage

- 测量重复性 ΔE^*_{ab} 小于 0.01，器间一致性可达 ΔE^*_{ab} 平均 0.08；
Measurement repeatability ΔE^*_{ab} is less than 0.01, and the consistency between devices can reach ΔE^*_{ab} average 0.08;
- 双光束反馈系统，实时监控和补偿光源波动；
Double beam feedback system, real-time monitoring and compensation of light source fluctuation;
- 内置高性能快速光谱仪，实现高精度快速测量；
Built in high-performance fast spectrometer to achieve high-precision and fast measurement;
- 自动变焦功能，可根据不同的测量孔径，实现自动变焦；
Automatic zoom function, which can realize automatic zoom according to different measuring aperture;
- 兼容反射和透射测量，提供 SCI 和 SCE 两种测试模式可选；
Compatible with reflection and transmission measurement, and two test modes, SCI and SCE, are available;
- 光源模拟 CIED65 标准照明体，无须 UV 校正，实现荧光材料的精确测量，且亮度高、寿命长、稳定性好；
The light source simulates CIED65 standard illuminant without UV correction, realizing accurate measurement of fluorescent materials with high brightness, long service life and good stability;
- 极优深色域测量表现，在测量低反射率或透射率材料时，仍具有较高的精度和重复性；
Excellent deep color gamut measurement performance, with high accuracy and repeatability when measuring low reflectivity or transmissivity materials;
- 超大透射测量腔体：有效兼容各类尺寸的固体和液体测量；
Super large transmission measurement chamber: effectively compatible with solid and liquid measurement of various sizes;
- 自带校正及标定功能，方便用户自行校零和定标；
With calibration and calibration functions, it is convenient for users to calibrate and calibrate by themselves;
- 超大触摸屏显示：轻松实现定标和测量，无需外接电脑；
Large touch screen display: easy calibration and measurement without external computer;
- 多功能管理分析软件：包含颜色、反射率、透射率、遮盖率测量以及统计分析功能。
Multifunctional management and analysis software: including color, reflectivity, transmittance, coverage measurement and statistical analysis functions.

技术参数 Specifications

- 1)测量功能：光谱反射率曲线、光谱透射率曲线；
1) Measurement function: spectral reflectance curve, spectral transmittance curve;
- 2)色空间/颜色参数：L*a*b、L*C*h、Yxy、Luv、Hunter Lab、XYZ、RGB、 ΔE^*ab 、 ΔE^*94 、 ΔE^*00 、CMC (2: 1)、CMC (1: 1)、MI、WI (ASTM313/CIE)、YI (ASTM 313/ASTM D1925) 等参数；
2) Color space/color parameters: L * a * b, L * C * h, Yxy, Luv, Hunter Lab, XYZ, RGB, $\Delta E^* ab$, $\Delta E^* 94$, $\Delta E^* 00$, CMC (2:1), CMC (1:1), MI, WI (ASTM 313/CIE), YI (ASTM 313/ASTM D1925) and other parameters;
- 3)照明/接收条件：
透射：d/0（漫射照明/0°接收）符合ASTM要求，
反射：d/8（漫射照明/8°接收）符合ISO、DIN、CIE、ASTM要求；
3) Lighting/reception conditions:
Transmission: d/0 (diffuse lighting/0° reception) in accordance with ASTM requirements,
Reflection: d/8 (diffuse lighting/8° reception) meets the requirements of ISO, DIN, CIE and ASTM;
- 4)SCI/SCE同步测量：SCI（含镜面反射）/SCE（消除镜面反射）可选；
4) SCI/SCE synchronous measurement: SCI (including specular reflection)/SCE (eliminating specular reflection) optional;
- 5)测量口径：
透射测量口径：Φ20mm（Φ10mm和Φ5mm可选）
反射测量口径：LAV：Φ28mm；MAV：Φ11mm；SAV：5×7mm；
5) Measuring caliber:
Transmission measurement aperture: Φ 20mm (Φ 10mm and Φ 5mm optional)
Reflectance measurement aperture: LAV: Φ 28mm; MAV: Φ 11mm; SAV: 5 × 7mm;
- 6)波长范围：380-780nm
6) Wavelength range: 380-780nm
- 7)反射率范围：0-200%，分辨率0.01%；
7) Reflectivity range: 0-200%, resolution 0.01%;
- 8)重复性：（白板校正后，以10秒间隔测量白色校正板30次）
光谱反射率标准偏差小于0.05%，
色度值标准偏差 ΔE^*ab 小于0.01；
8) Repeatability: (After whiteboard correction, measure the whiteboard 30 times at 10 second intervals)
The standard deviation of spectral reflectance is less than 0.05%,
Standard deviation of chromaticity value $\Delta E^* ab$ is less than 0.01;
- 9)器间差：色板的平均 ΔE^*ab 值小于0.08；
9) Difference between devices: average of color swatches $\Delta E^* ab$ value is less than 0.08;
- 10)可选配多种比色皿，用于液体的测量；
10) A variety of cuvettes can be selected for liquid measurement;
- 11)通讯接口：USB；
11) Communication interface: USB;
- 12)仪器尺寸：310mm×275mm×605mm；
12) Instrument size: 310mm × 275mm × 605mm;
- 13)重量：约22kg。
13) Weight: about 22kg.