

## HAG-3000 基准级光泽度仪

### HAG-3000 benchmark glossmeter

- HAG-3000是实现基准级光泽度绝对和相对测量的科学级仪器，主要用于光泽度标准板检定，光泽标准数据量值传递。可精确测量 $20^{\circ}$ 、 $45^{\circ}$ 、 $60^{\circ}$ 、 $75^{\circ}$ 、 $85^{\circ}$ 的光泽度值，以及绝对镜面反射率分布曲线。绝对测量方式避免了相对测量中因标准板和被测板镜面反射率空间分布差异所导致的测量误差，测量更加可靠，系统角度精度高、测量重复性好。

HAG-3000 is a scientific instrument for absolute and relative measurement of benchmark glossiness. It is mainly used for the calibration of glossiness standard plate and the transmission of glossiness standard data. It can accurately measure the glossiness values of  $20^{\circ}$ ,  $45^{\circ}$ ,  $60^{\circ}$ ,  $75^{\circ}$  and  $85^{\circ}$  and the absolute specular reflectance distribution curve. The absolute measurement method avoids the measurement error caused by the spatial distribution difference of the specular reflectance of the standard plate and the tested plate in the relative measurement. The measurement is more reliable, the system angle accuracy is high, and the measurement repeatability is good.



## 特点与优势 Characteristics and advantage

- 光泽度测量不确定度 $U \leq 0.7$ , ( $k=3$ ), 满足JJG 2069光泽度基准要求;  
Uncertainty of glossiness measurement  $U \leq 0.7$ , ( $k=3$ ), meeting the requirements of JJG 2069 glossiness reference;
- 光泽度绝对和相对测量可选;  
Absolute and relative measurement of glossiness is optional;
- 采用精密对准装置实现角度精确定位, 角度精度高达0.01°;  
Precise alignment device is used to achieve accurate angle positioning, with angle accuracy up to 0.01°;
- 探测器接收立体角参考ISO, ASTM, GB, TAPPI, JIS等国际标准的测量几何要求设计, 精确接收镜面反射光;  
The solid angle received by the detector is designed according to the measurement geometric requirements of ISO, ASTM, GB, TAPPI, JIS and other international standards, and accurately receives specular reflected light;
- 内置标准校准装置, 可随时校正和校零, 使测试更精确;  
Built in standard calibration device, which can be calibrated and zeroed at any time to make the test more accurate;
- 光源与探测器通过滤色片精确匹配CIE C光源和CIE光视效率函数 $V(\lambda)$ ;  
Light source and detector accurately match CIE C light source and CIE luminous efficiency function  $V(\lambda)$  through color filter ( $\lambda$ );
- 扫描各角度的反射率分布曲线, 还可以比较标准和被测样品的表面分布差异。  
Scan the reflectance distribution curve at various angles, and compare the surface distribution difference between the standard and the tested sample.

## 技术参数 Specifications

型号	HAG-3000 基准级光泽仪
测量角度	20°、45°、60°、75°、85°
接收角度精度	$\pm 0.01^\circ$
测量范围	0.1-2000GU
测量误差	$\leq 1.0$ GU
零值误差	0.1
分辨率	0-100: 0.1; 100-1000: 1
测量重复性	0-100: $\leq 0.2$ GU; >100: $\leq 0.2\%$