

# Restore True Color, Enjoy Color Matching



ISO 9001  
Certified

CE QAK TÜV RoHS FCC

## YS3020 Customized Aperture Spectrophotometer

YS3020 is independently developed by 3nh, who has complete intellectual property rights. With variety of light sources, single customized aperture (8 or 4 or 1 \*3 mm), USB/Bluetooth dual modes, it has high accuracy and standard storage, very suitable for lab color analysis and transmission. It can accurately measure the SCI and SCE reflectance data of samples/fluorescent samples, and can accurately measure various color difference formulas and color indexes under multiple color spaces.



Con-cave Grating



USB/Bluetooth



LED light



Camera Locating



Automobile



Leather



Plastics



Paint



Foodstuff



Laboratory



Others

## PRODUCT FEATURES

- 1.D/8 geometrical optics, conforms with CIE No.15,GB/T 3978,GB2893, GB/T 18833, ISO7724/1, ASTM E1164, DIN5033 Teil
- 2.Use long life and low power consumption combined LED light source
- 3.Single 8mm aperture, support both SCI and SCE at the same time;
- 4.Measure sample spectra, accurate Lab data , can be used in color matching and accurate color transmission;
- 5.High electronic hardware configuration: 3.5-inch TFT color LCD, Capacitive Touch Screen, concave grating, 256 Image Element Double Arrays CMOS Image Sensor;
- 6.Super stain-resistant and stable standard white calibration plate;
- 7.Large capacity storage space, over 20,000 measurement data;
- 8.Two standard observer angles, a variety of illuminant, a variety of color indexes, conforms with a variety of standard colorimetric data, meet a variety of customers' demand for color measurement;
- 9.Camera Locating Function, better position;
- 10.PC software has a powerful function extension.

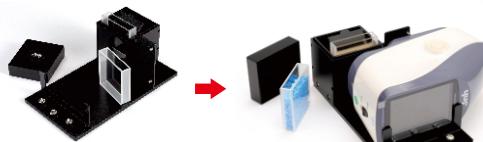


## OPTIONAL ACCESSORIES

The instrument is equipped with various accessories; Such as micro printer, powder test box, etc.; Meet the needs of more measurement samples.



Powder test box: Easy to use, focusing on powdered target measurement.



Multifunctional test components: can be used to test liquid reagents, sauces (such as ketchup, paint), powders (such as coffeeBrown), color masterbatch, etc.



Micro printer: easy to carry, without computer can continuously print out the measurement of various parameters, easy to save.

## SPECIFICATION PARAMETERS

**Model:** YS3020 (Customized Aperture)

**Optical Geometry:** Reflect: di:8°, de:8°(diffused illumination, 8-degree viewing angle)

**Integrating Sphere Size:** 48mm

**Light Source:** Combined LED Light

**Spectrophotometric Mode:** Concave Grating

**Sensor:** 256 Image Element Double Array CMOS Image Sensor

**Wavelength Range:** 400-700nm

**Wavelength Interval:** 10nm

**Semiband Width:** 10nm

**Measured Reflectance Range:** 0-200%

**Customized measuring aperture:** φ4mm/φ8mm/1x3mm

**Specular Component:** SCI&SCE

**Color Space:** CIELAB,XYZ,Yxy,LCh,CIELUV,s-RGB,HunterLab,βxy,DINLab99,Munsell(C/2)

**Color Difference Formula:** ΔE\*ab,ΔE\*uv,ΔE\*94,ΔE\*cmc(2:1),ΔE\*cmc(1:1),ΔE\*00,DINΔE99,ΔE(Hunter)

**Other Colorimetric Index:** Spectral reflectance, whiteness (ASTM E313-00, ASTM E313-73, CIE/ISO, AATCC, Hunter, Taube-Berger-Stensby), yellowness (ASTM D1925, ASTM E313-00, ASTM E313-73), metameric index Mt, colorfastness to crocking, colorfastness to light, strength (dye strength, tinting strength), opacity, 8-degree gloss, 555 hue classification, blackness (My, dM), color density CMYK (A, T, E, M), tint (ASTM E313-00), color density, Munsell (some functions realized through a higher-level computer).

**Illuminant:** D65,A,C,D50,D55,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,DLF,TL83,TL84,TPL5, U30,B,U35,NBF,LD50,LD65,LED-B1,LED-B2,LED-B3,LED-B4,LED-B5,LED-BH1,LED-RGB1,LED-V1, LED-V2,LED-C2,LED-C3,LED-C5(A total of 41 light sources (some functions realized through a higher-level computer))

**Displayed Data:** Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset

**Observer Angle:** 2°/10°

**Software Support:** Android, iOS, Windows, WeChat Mini Program, HarmonyOS

**Measuring Time:** Approx.1.0s(while testing SCI/SCE) Approx.2.6s

**Repeatability:** Spectral reflectance: MAV/SCI, standard deviation within 0.1%(400~700nm: within 0.2%)

**Chromaticity value:** MAV/SCI, within  $\Delta E^*$  ab 0.04(After calibration, measure the average value of the white board 30 times each 5S.)

**Inter-instrument agreement:** MAV/SCI, within  $\Delta E^*$  ab 0.2(Average value for 12 BCRA series II color tiles)

**Measurement mode:** single measurement, average measurement(2-99 times)

**Locating Method:** Camera Locating

**Battery:** Li-ion battery.

**Dimension:** L\*W\*H=184\*77\*105mm

**Weight:** 600g

**Illuminant Life Span:** 5 years, more than 3 million times measurements

**Display:** 3.5-inch TFT color LCD, Capacitive Touch Screen

**Data Port:** USB / Bluetooth

**Data Storage:** Standard 1000 Pcs, Sample 20000 Pcs

**Language:** English, Chinese, Traditional Chinese, Russian, Italian, French, Portuguese, Spanish, German

**Operating Environment:** 0~40°C, 0~85%RH (no condensing), Altitude < 2000m

**Storage Environment:** -20~50°C, 0~85%RH (no condensing)

**Standard Accessory:** Power Adapter, Built-In Li-ion Battery, User Guide, PC Software, White and Black Calibration Cavity, Dust Cover

**Optional Accessory:** Micro Printer, Powder Test Box ,Multifunctional test components

# GUANGDONG THREENH TECHNOLOGY CO., LTD.



Spectrophotometers



Colorimeters



Haze Meters



Gloss Meters



Test Charts



Light Booths

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