# 3nh®
## Focus on Color

# YOUR CHIEF COLOR EXPERTS

# SPECTROPHOTOMETER NS820

3nh D/8 NS820 spectrophotometer is equipped with SQC8 software,which is also comply with CIE No.15,GB/T 3978. It not only can measure L*ab value and delta E value accurately, but also can display spectral reflectance curve which can realize color matching function and calculate the real parameters of various color formulas.

D/8 structure     Ergonomic design     Touch screen     More accurate

## PRODUCT FEATURES

1. Elegant appearance combines ergonomic design.

2. D / 8° (diffuse uniform illumination 8° reception) in accordance with standard CIE No. 15, GB / T 3978   8°.

3. 3.5" ultra-large touch-screen makes the operation interface quite friendly.

4. 15° oblique angle screen, in line with the human eye observation.

5. Oversized integrating sphere, more effective homogenization ray of lights.

6. Two kind of standard observer angles,multiple light source,color spaces and color diffence fomulas,which is fit for all kinds of color measurement requests.

7. Repeatability ΔE*ab within 0.04, inter-instrument ΔE*ab within 0.2, super stable and reliable performance.

8. Large capacity storage, more than 15000 data.

9. PC  software with powerful extension functions.

10. High hardware configuration with a number of innovative technologies.
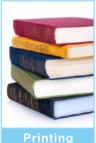
## APPLICATION INDUSTRY

NS820  is widely used in plastic, electronic, paint, ink, textile, garment, printing and dyeing, food, medical, cosmetic, industries, scientific research institutes, schools and laboratories etc.

| Plastics | Paints | Printing | Automobile | Textile | Medicine | Others |
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## SPECIFICATION PARAMETER

**Illumination/observation system**: d/8 (diffused illumination, 8-degree viewing angle) Conforms to CIE No.15, GB/T 3978

**Integrating sphere Size**:Φ58mm

**Light Source**:Combined LED sources

**Sensor**:Silicon photodiode array

**Color Space**:CIE LAB, XYZ, Yxy, LCh, CIE LUV,LAB&WI&YI

**Color difference Formula**:ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE*cmc(l:c),CIE2000ΔE*00,ΔE(h)

**Wavelength range**:400~700nm

**Wavelength pitch**:10nm

**Reflectance range**:0~200%

**Measuring Aperture**:Φ4mm

**Other Chromaticity Data** :Whiteness - WI(ASTM E313,CIE/ISO,AATCC,Hunter),Yellowness-YI(ASTM D1925, ASTM 313),  TI(ASTM E313,CIE/ISO),Metamerism Index (Mt)Colour Stain, Color Fastness, Color Strength, Opacity

**Observer**:2°/10°

**Illuminant**:D65,D50,A,C,D55,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12

**Display Data**:Spectral Value/Graph, Colorimetric Value, Color Difference Value/Graph, PASS/FAIL Result, Color Offset, Color Simulation, color index setting(ΔE*94, ΔE*cmc, ΔE2000), tolerance prompt, reverse prompt, time setting,    language setting, restore factory setting

**Measurement Time**:1.5s

**Dimension**:L*W*H=90*77*230mm

**Inter Instrument Agreement**:Within Delta E*ab 0.2 (Average for 12 BCRA Series II color tiles)

**Repeatability**:Spectral Reflectance: standard deviation within 0.1%(400~700nm: within 0.2%)
 Colorimetric Value: Standard deviation within DeltaE*ab 0.04
 (Measurement conditions: white calibration plate  measured 30 times at 5 seconds intervals after white calibration was performed)

**Weight**:600g

**Battery**:Li-ion battery. 2800 times within 8 hours.

**Lamp Life**:5 years, more than 1.6 million measurements

**Display Screen**:TFT 3.5inch, Capacitive Touch Screen

**Interface**:USB/RS-232

**Data Memory**:1000 Standards, 15000 Samples

**Operating Temperature**:0~40°C(32~104°F)

**Storage temperature**:-20~50°C(-4~122°F)

**Standard Accessory**:Power Adapter, Li-ion Battery, Operating Instruction, SQC8 software, White and Black Calibration Cavity, Protective Cover and Wrist Strap

**Optional Accessory**:Universal Test Components, Micro Printer, Powder Test Box

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