

## Benchtop liquid colorimeter



DS-810N



DS-812N



DS-816N

# DS-810N/812N/816N

## Product Features

- More than 30 color indicators, including platinum cobalt index, Gardner, Saybolt, China, the United States, European Pharmacopoeia standards
- Intelligent zero calibration ensures accurate measurement of  $\Delta E^*ab \leq 0.01$
- The minimum liquid addition is reduced to 1ml, 10mm and 50mm cuvettes are standard, and 33mm and 100mm cuvettes are optional
- The measurement speed is fast, and a single measurement takes only 1.5 seconds
- The thermostatic sample tank (up to 90 ° C) design ensures sample fluidity
- The 7-inch touch screen provides friendly human-machine interaction and the instrument can store more than 100,000 pieces of data

**Benchtop liquid colorimeter**
**Technical Data**

Model	DS-810N	DS-812N	DS-816N
Measurement condition	d/0(scattered light source, 0 degree viewing Angle) Comply with CIE No.15, ISO 7724/1, ASTM E1164, DIN 5033 Teil7, JIS Z8722 Condition c, ASTM D1209, ASTM D5386, ASTM D6045, ASTM D6166, ASTM D1502		
Stand-alone operation	/		Support
Integrating sphere	Φ40mm, Avian-D fully diffuse surface coating		
Lighting source	CLEDs(Full Band Balanced Led Light Source)		
Inductor	Dual optical sensor array sensor		
Wavelength range	360-780nm		
Wavelength interval	10nm		
Half-band width	5nm		
Measuring range	0~200%		
Resolution	0.0001		
Observer Angle	2°/10°		
Observation light source	A,B,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U30,U35,DLF,NBF,TL83, TL84,ID50,ID65,LED-B1,LED-B2,LED-B3,LED-B4,LED-B5,LED-BH1,LED-RGB1,LED-V1,LED-V4		
Reveal	Pharmacopoeia color number, transmission map/data, sample chromaticity value, color difference value/map, pass/fail result, color bias, color simulation, color simulation Historical data color simulation, standard sample manual input, test report		
Measuring time	≤1.5 seconds		
Measuring optical path	Standard: 10mm glass colorimetric dish, 50mm glass colorimetric dish (optional 33mm and 100mm glass colorimetric dish)		
Color space	CIE Lab,LCh,CIE Luv,XYZ,Yxy, transmissibility, Hunter Lab Munsell, MI,CMYK		
Color difference formula	$\Delta E^*ab, \Delta E^*CH, \Delta E^*uv, \Delta E^*cmc(2:1), \Delta E^*cmc(1:1), \Delta E^*94, \Delta E^*00$		
Other indicators	Pharmacopoeia (Chinese Pharmacopoeia, European Pharmacopoeia, The United States pharmacopoeia), WI (ASTM E313-20, ASTM E313-73, CIE, ISO2470 / R457, Hunter, Taube Berger Stensby), YI (ASTM D1925, ASTM E313-20, ASTM E313-73),Tint(ASTM E313-20), Isochromic Index Milm,APHA, Hazen,Pt-Co (platinum-cobalt index), Gardner (Gardner Index), iron-Cobalt Index,Saybolt (Saybolt Index), ASTM Color,EBC (Beer Color),ICUMSA Color(sugar color)		
Repeatability *	Transmittance: standard deviation ≤0.08% Colorimetric value: $\Delta E^*ab \leq 0.015$ standard deviation, maximum ≤0.04		Transmittance: standard deviation ≤0.08% Chroma value: $\Delta E^*ab \leq 0.01$ standard deviation, maximum ≤0.03
Interstation error	$\Delta E^*ab < 0.25$		$\Delta E^*ab < 0.2$
Heating function	/		yes
Heating temperature range	/		From ambient temperature to 90°C
Audit trail	/		Yes (as required by FDA and CFDA)
Special function	Intelligent zero calibration		
Screen size	/		7 inch capacitive touch screen
Store data	Over 100,000 pieces of data		
Software support	ColorExpert, Color QC2		

\* After correction, measure the air standard deviation and maximum 30 times at an interval of 5s