

# ac1-3

**Hazen color number (APHA),  
Gardner color number,  
ASTM color and Saybolt  
color can be measured.**



Exclusive use for transmittance measurement

### Related Standards

Color : JIS Z8722,  
ASTM E308, ASTM E313, Other  
Color of petroleum products :  
JIS K2580, Other

### Option



**3 types of measuring items  
you can choose to display.**

**Spectral  
transmittance,  
OD**

**Transmittance Color**  
Yxy, L\*a\*b\*, ΔE\*ab, YI

**Color of petroleum products**

Hazen color number (APHA),  
Gardner color number,  
ASTM color, Saybolt color

### Features

- Spectrophotometer which adopts white LED.
- Transmittance color can be measured under the Standard illuminants and other illuminants.
- Adopts Sliding door which is easy to set the cell up to the size of 100mm.
- Adopts 5.7" TFT color LCD which is easy to see screen display. The display using a touch panel allows a user to intuitively perform operation.
- The measurement data can be saved into USB memory stick.

### Specifications

Illumination & light receiving condition	Color measurement : 0:di (compliant with JIS Z8722)
Size of integration Sphere	φ150mm
Measuring method	Double beam system Back end spectroscopy method
Spectrum method	Diffraction grating
Photodetector	CMOS linear image sensor
Range of measuring Wavelength	400nm to 700nm 10nm
interval of output	
Light Source Lamp	White LED
Display panel	5.7 inch TFT color LCD
Measuring time	Approx. 6sec.
Operation switches	Touch panel, Membrane switch
Transmission sample chamber	Adopts large sliding door A cell up to the size of 100mm can be set with exclusive liquid cell holder Measurement is possible by test tube (option)
Display on the screen	Various color values, Color difference values, Target values, Metamerism, Spectral values, Spectral graphs, Lab graphs, Color deviation criterion chart, Pseudo color, Xyy graph
Illuminant observation	A, C, D65, F6, F8, F10
Observation condition	2° observer, 10° observer

Measuring items	Color : XYZ, Yxy, L*a*b*, L*C*h*, Lab, LCh, HVC, YI (ASTM E313-05), YI (ASTM D1095), MI, ΔE*ab, ΔE, ΔE*94, ΔE00, CMC Color of Petroleum : Hazen color number (APHA), Gardner Color number, ASTM color, Saybolt color * The Optical path length of a cell recommended by the measurement item of petroleum products changes
Averaging	2 to 99 times, settable arbitrarily
USB memory	Saving measurement data (CSV) Saving screen image Measurement data stores in the OME7700 internal data memory can be copied and saved (CSV) Saving and reading the user setting (File system FAT32)
Interface	USB port (for communication with PC) USB memory (for file system: FAT32) parallel port (for printer)
Environment for use	Temperature: 15°C to 35°C, Humidity: 80% R.H or less, No condensation
Power supply	AC100V to 240V, 50/60Hz
Dimensions & weight	540(W) × 378(D) × 255(H) mm, Approx. 1.7kg
Option	Thermal Printer (Printy2), Data management software, Exclusive liquid cell holder, Various sample cell, etc.

\* The above specifications are subject to change without pre-notice in the future due to technical improvement.

# Measurement examples

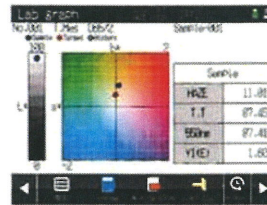
## Evaluation for Color of petroleum products

Transmittance color, Spectral transmittance and Color of the petroleum products can be measured simultaneously by one measurement.  
 Measuring items : Hazen color number (APHA), Gardner color number, ASTM color, Saybolt color,  $L^*a^*b^*$ , Spectral transmittance, etc.

\*The Optical path length of a cell recommended by the measurement item of petroleum products changes



Measurement with 100mm cell



Measurement by test tube (option)

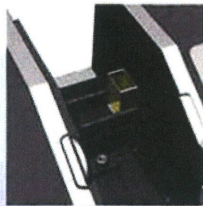


Petroleum

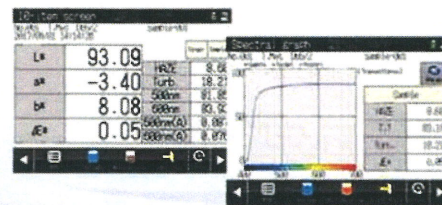
## Evaluation for Cosmetic and Drinking water

Transmittance color and OD can be measured simultaneously by one measurement.

Measuring items :  $L^*a^*b^*$ ,  $\Delta E^*ab$ , Spectral transmittance, OD, etc.



Measurement with 20mm cell



Liquid

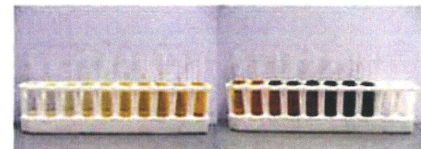
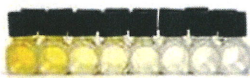
## Standard liquid examples

Saybolt standard liquid

ASTM standard liquid

Hazen standard liquid

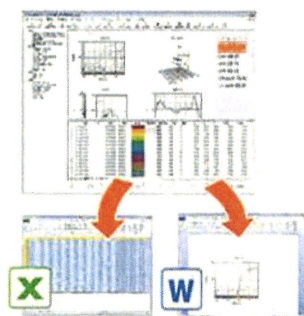
Gardner standard liquid



## Option

### Data management software

Using Data management software, analysis of measurement data and various graph are possible on the display of your personal computer. By copying each screen, you can paste it to a spread sheet software and word processing software.



### Specification

Environment for operation	O.S. : Windows10, Windows8.1, Windows8, Windows7 PC : CPU (Pentium 2GHz or faster), Memory (2GB or more), HDD (100MB or more vacant memory), Optical drive (CD-ROM), Display (1366 × 768 pixels of more/full colors recommended), Interface: (USB port)
Display/Print	Data list, Spectral curve graph, 3D Lab graph, etc.
Measuring items	XYZ, Yxy, $L^*a^*b^*$ , $L^*C^*h^*$ , Lab, LCh, HVC, Haze, Total light transmittance, Diffuse transmittance, Parallel transmittance, Turbidity, Hazen color number (APHA), Gardner Color number, ASTM color, Saybolt color, YI (ASTM E313-05), YI (ASTM D1095), MI, $\Delta E^*ab$ , $\Delta E$ , $\Delta E^*94$ , $\Delta E00$ , CMC, etc.

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