



KONICA MINOLTA

# Spectrophotometer CM-5

## For Pharmaceutical Industry

- Reflectance and transmittance measurement in 360 to 740nm wavelength range.
- L\*a\*b\* and other various colorimetric outputs.
- Transmittance liquid color indices specific to pharmaceutical industry: US Pharmacopeia and EU Pharmacopoeia.



The CM-5 complies with various sample measurement needs.



Pills and tablets



Powders and pastes



Transparent liquids and solids



### Wide color scale options

Color is one of the key factors in product development and quality control. CM-5 offers a wide range of color scale options to meet various needs.



T 0002 20:53:25 Liq		
S 0219 12/07/2009 20:53:13 Liq		
Difference LIST		
$\Delta L^*$	0.34	Lighter
$\Delta a^*$	-0.50	-Red
$\Delta b^*$	-0.77	-Yellow
$\Delta E^*_{ab}$	0.98	2°/C
		Pass
T0002		



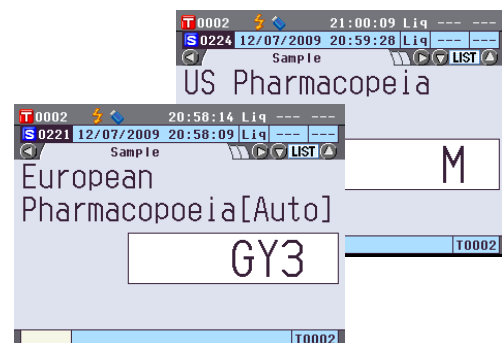
### Color evaluation by setting target

Target color can be set in the CM-5 so that samples can be compared with the target to see color difference. Tolerance from the target color can also be set in the CM-5 for simple and quick evaluation of samples. The CM-5 can store up to 1000 target data and 4000 measurement data.



### Pharmacopoeia

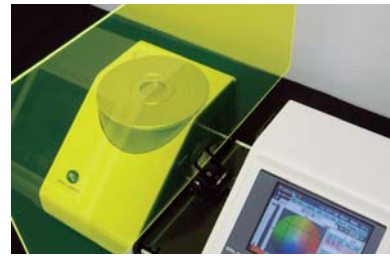
Liquid measurement in both US Pharmacopeia and EU Pharmacopoeia is available. No preparation of physical color standards is necessary, since calibration curves are built into the CM-5. Thus, measurement is simple for anyone, anywhere.



## **【Main features】**

### **1 Innovative operation with fast measurement speed**

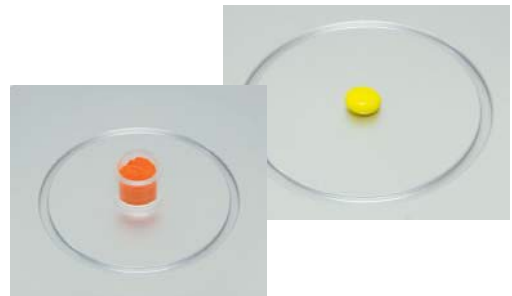
CM-5 has a large LCD display and operation buttons on its body. It is compact and takes less space while offering a large transmittance chamber for easy positioning of transparent liquid and solid samples. Display and output of measurement data takes only 1sec.



### **2 Answering a wide range of measurement needs**

Various forms of samples can be measured with the CM-5: Solids, liquids, pastes, powders, etc.

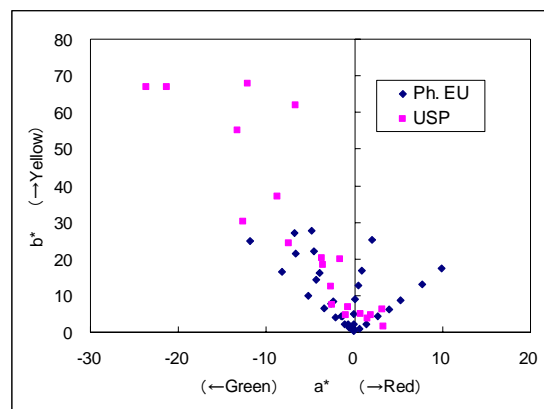
Target mask options (standard Ø30mm, optional Ø8mm and Ø3mm) are available for different sizes of measuring samples. A Mini Petri Dish (custom item) is also available for measurement of costly materials.



In addition to reflectance and transmittance measurement in the 360 to 740nm wavelength range, colorimetric data such as CIE L\*a\*b\* and color indices commonly used in pharmaceutical and chemical industries are available.

Available industry color indices are: Gardner, Hazen/APHA, Iodine Color, US Pharmacopeia and EU Pharmacopoeia.

The graph on the right shows data correlation between CIE L\*a\*b\* and EU Pharmacopoeia/US Pharmacopoeia.



### **3 10mm commercially available cells can be used for transmittance measurement**

10mm-wide cells (12.5mm outside width) can be used with the 10mm Transmittance Specimen Holder. Both plastic disposable cells and glass cells can be used. Optical path lengths of 10mm, 20mm, and 50mm can be chosen depending on transparency of the liquid sample (CM-5's built-in calibration curves are based on 10mm optical path length).

### **4 PC data management with SpectraMagic NX**

With Color Data Software SpectraMagic™ NX CM-S100w Ver.2.0 (optional accessory), the CM-5 can be controlled by PC and individual CM-5 operation keys can be enabled or disabled to set the access level of an operator and protect measurement conditions and other settings.

The software has a user index feature in which a user's original formula based on colorimetric values can be stored and data output can be made.

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