KONICA MINOLTA

ColorReader **CR-14**
Whiteness Index

Check the whiteness of foods or raw materials. Measure solids, pastes, or powders.

Whether a food's color is good or bad can influence consumer purchases. Since color variations of white are especially obvious, it has become increasingly important to control color from raw materials through the manufacturing process. Furthermore, there is a growing need to quantify what effect storage during transportation has on the whiteness of a product.

- *Fits in the Palm of your Hand*
- *Battery Operated*
- *Lightweight*
- *Low Price*
- *Simple to Use*

The essentials of imaging

Color Reader Whiteness Index **CR-14**

Simple operation

Only the functions necessary for use are provided. Even first-time users operate it easily.

1 Switch on the power.

2 Select the displav mode.

3 Perform white calibration.

4 Place on sample and press button.

5 Measurement results are shown in the display.

Compact size and light weight

The compact design fits in the palm of your shand. The CR-14 is also battery operated, so you can take it almost anywhere.

Functions for convenient measurements

● Protective Cap allows direct measurements of powders or pastes without the need for filling a cell.
● Serial Printer Output
● Either four AA-size batteries or AC adapter can be used
● Vinyl Cover (optional accessory) protects CR-14 against dust.

Display examples

CIE Whiteness index.

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CIE
W 92.3  T-2.05
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An international method for expressing whiteness. The W value indicates the degree of whiteness, and the T value indicates the tint.
Yxy values can also be displayed in CIE Mode.

Hunter Whiteness Index.

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HUNTER
W 88.2
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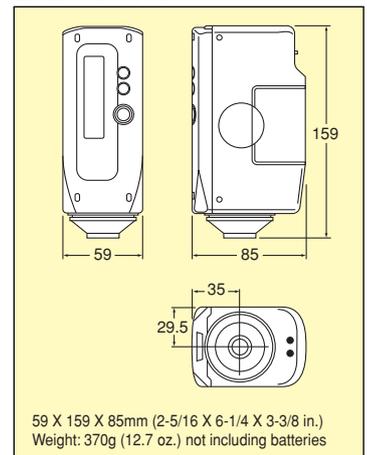*ASTM D1925 Yellowness Index and ASTM E313 Whiteness and Yellowness Indices can also be displayed.*

Specifications

Illuminating/viewing geometry	8/d (8˚ illumination angle/diffuse viewing: specular component excluded)
Measuring area	Approx. Ø8mm
Display modes	Whiteness Index: CIE, Hunter, ASTM E313
	Yellowness Index: ASTM E313, ASTM Dl925
	Yxy (Displayable in CIE display mode)
Repeatability	Standard deviation of Whiteness Index: CIE: 0.5, Hunter: 0.1
	(Measurement conditions: When measuring white calibration plate)
Minimum interval between measurements	Approx. 1 sec.
Power source	Four AA-size batteries or optional AC Adapter AC-A12
Battery life	Alkaline-manganese batteries: Approx.2000 measurements at10-sec. Intervals
	Ni-Cd batteries: Approx. 600 measurements at 10-sec intervals
Operating temperature/humidity range	Temperature: 0 to 40˚C;relative humidity 85% or less (at 35˚C) with no condensation
Storage temperature/humidity range	-20 to 55˚C; relative humidity 85% or less (at 35˚C) with no condensation
Standard accessories	White Calibration Plate CR-A74, Soft Case CR-A68; Protective Cap CR-A79;
	Wrist Strap CR-A73; AA-size batteries (4)
Optional accessories	AC Adapter AC-A12; AC Adapter AC-A21 (for Korea); Printer Cable CR-A75: Vinyl Cover CR-A80

Specifications are subject to change without notice.
*Measurements of specimens which include fluorescent materials are not recommended.

Dimensions

159
59
85
35
29.5

59 X 159 X 85mm (2-5/16 X 6-1/4 X 3-3/8 in.)
Weight: 370g (12.7 oz.) not including batteries