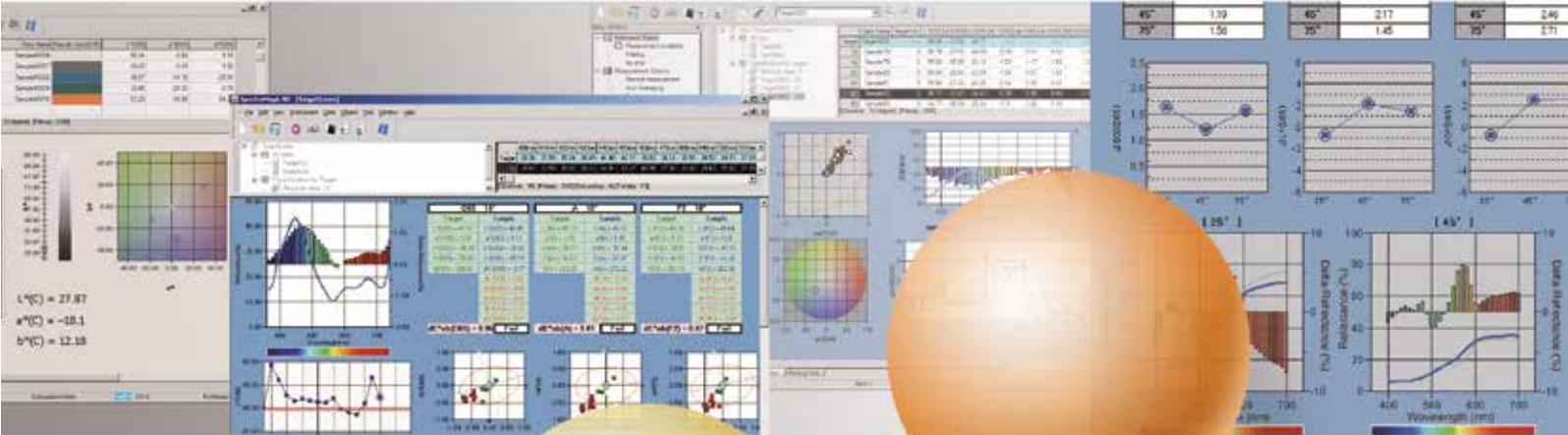# KONICA MINOLTA

Color Data Software CM-S100w

SpectraMagic™ NX

Professional Edition
**Lite Edition**

Color quality control like never before:

- Unprecedented ease of use
- Pre-defined and user-definable templates
- Step-by-step navigation help
- Customized screens and reports including digital images
- Includes "Precise Color Communication" tutorial
- Available in 7 languages

Giving Shape to Ideas

Total flexibility for designing screen and print layouts that meet your QC needs
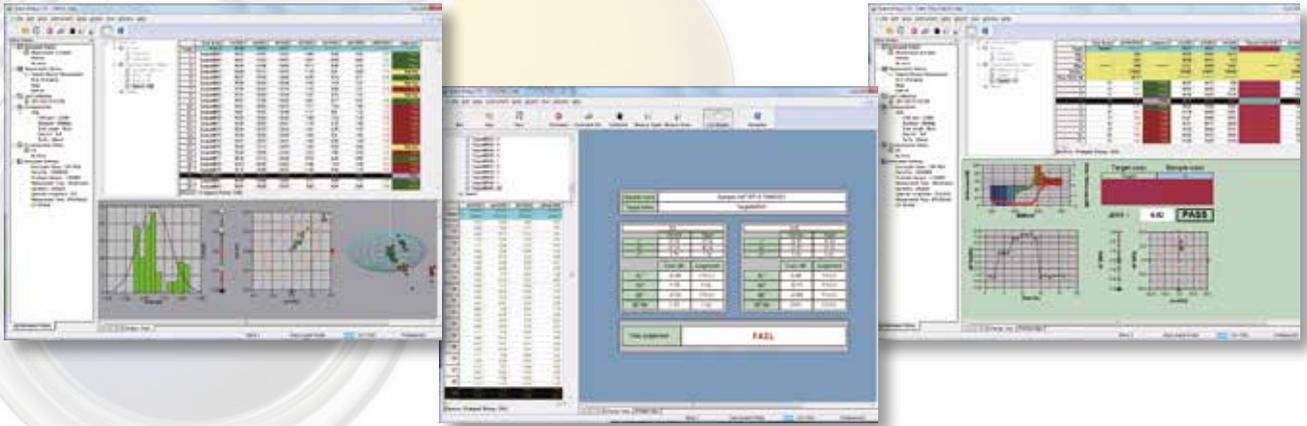
Layouts for screen displays and printed reports vary by application, from simple pass/fail assessment or statistical process control for production lines to detailed analysis for R & D work.

SpectraMagic™ *NX* comes with several pre-defined templates to let you get started immediately, but you can also create your own screen and print layouts according to your needs and application with total freedom and flexibility and save them as templates for later use.

Objects such as graphs (color, spectral, 2D/3D color-difference, or trend), data list, pass/fail indication, color patches, images, etc. can be positioned where desired and scaled as needed.

Design your own screens to show the data you need during measurements, and then design print layouts to prepare easy-to-read reports, shipment slip formats, etc. Multiple pieces of data can even be printed on a single sheet.
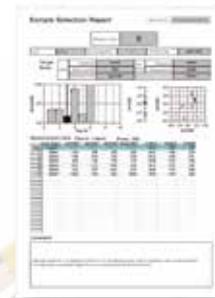
Example of printed shipping slip

Available in 7 languages

To allow global companies to use SpectraMagic™ *NX* in their branches throughout the world, SpectraMagic™ *NX* is available in 7 languages: English, Japanese, German, French, Spanish, Italian, and Chinese (Simplified and Traditional). Program menus, messages, etc. as well as the Navigation and Precise Color Communication tutorial will all be shown in the installed language.


⊿E₀₀ (CIE DE2000) display

Color differences can be displayed using the ΔE_{00} (CIE DE2000) color-difference equation, an improved color-difference equation based on the L*a*b* color space which provides better correlation between the calculated color-difference value and visual color-difference evaluation for subtle color differences.

Navigation function for total workflow control plus color measurement tutorial

Professional
Lite

With the exclusive Navigation function, you have total control of the flow of operations with online step-by-step instructions including picture illustrations. You can even customize this unique feature to match your individual measurement processes. The Navigation window also includes a link to the HTML version of "Precise Color Communication", a color-measurement tutorial with numerous illustrations and explanations that contribute to a clearer understanding of the basics and technical terms related to color and color-measurement technology.
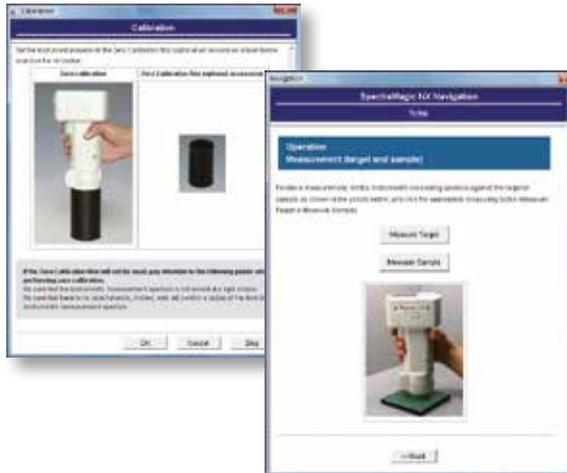
Navigation window
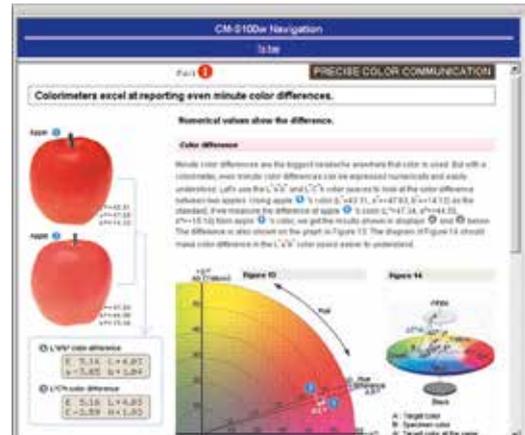
Precise Color Communication

Comprehensive ease of use from various color-difference assessments to report creation

Professional
Lite

SpectraMagic™*NX* makes color quality control easy and comprehensive at the same time. You can choose from several types of graphs to display your measurement data and also select from among the latest color-difference equations such as CIE 1994 or CIE DE2000 for pass/fail assessments or various industry-related indices. SpectraMagic™*NX* even lets you input the equations for up to 8 user indices for your special evaluation needs. And in addition to the user-definable printing layout, objects such as graphs, data lists, etc. on the display screen can be copied directly into Excel® to provide even more flexibility.

List window
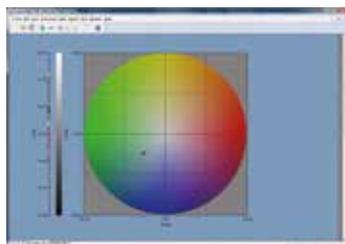
Color graph object
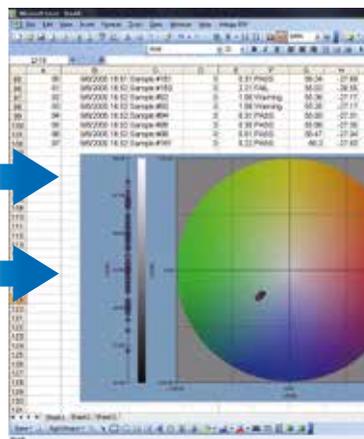
Pasted into Excel®
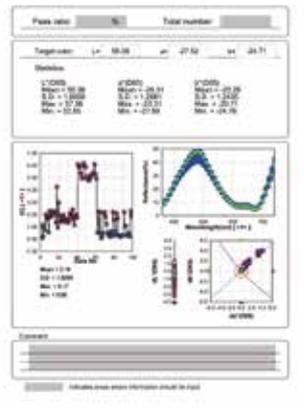
SpectraMagic™ NX print layout

Sophisticated QC applications Professional only

The target data of one master target (primary target) can be associated with two or more working targets (secondary targets). This allows for sophisticated QC application such as checking for color differences of the measured sample from the working targets and the master target simultaneously. It also enables managing the color differences of an entire product in sections by comparing the differences from the target color of each section.

Automatic tolerance setting in which the minimum tolerance setting which would enclose several samples is calculated automatically and set as the tolerance can be performed using three different color-difference equations: CMC(l:c), ΔE_{94}, and ΔE_{00}, which are considered to provide results similar to visual evaluation and which are being increasingly adopted by companies and other organizations.

In addition, the tolerances set with this function on the Professional version can be transferred to the Lite version and used for pass/fail judgments there.

Automatic tolerance setting
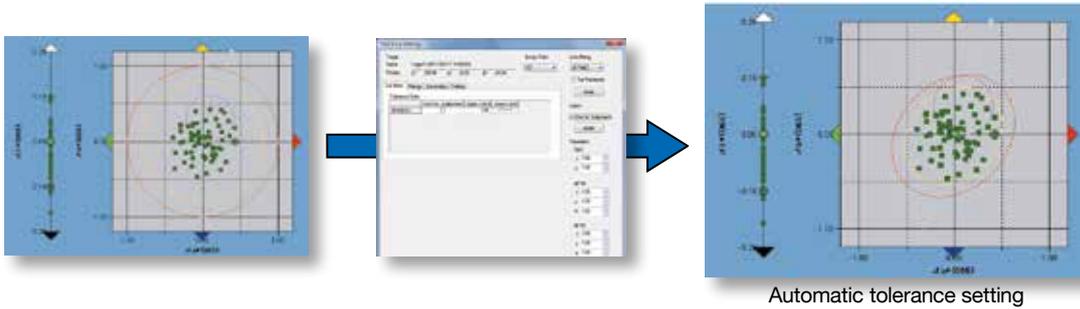
Input of additional information for measurements Professional only

Additional information can be set up for input and attached to measurement data. The additional information can be freely defined and could be information such as model name, item name, product number, code number, order number, color number, lot number, customer name, visual judgment result (pass/fail input), temperature, humidity, etc. The added items can then be used when organizing, sorting, or searching for data, and if the additional data is numerical, can also be displayed on a graph.

Macro function to automate work Professional only

Routine operation flows can be set up as macros using the menu screen and then run later to automate the work process. This reduces work time as well as prevents operation mistakes.
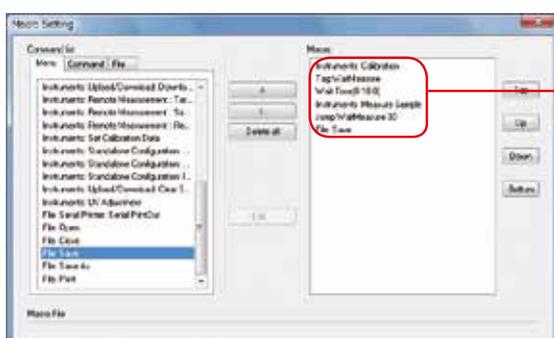
(Operation flow example)

Calibrate the instrument before measurement, repeat measurement 30 times at 10-minute intervals, and then save the data.

Calibration → Wait for 10 minutes. → Measurement → Save data by overwriting old data. (30 times)
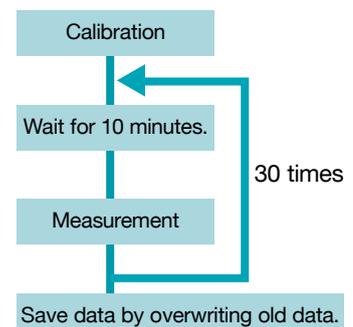
New search function Professional only

By using the search function, data meeting the search conditions can be quickly and easily extracted from large volumes of data. Plus, for dual-bank data sets from simultaneous measurement of SCI and SCE, data lists of SCI only and SCE only data can be created and displayed.
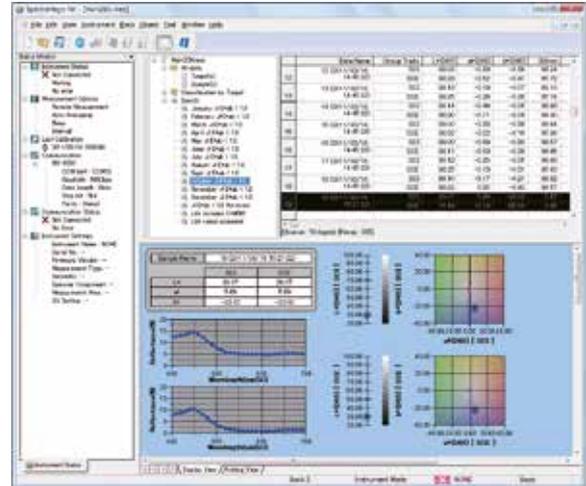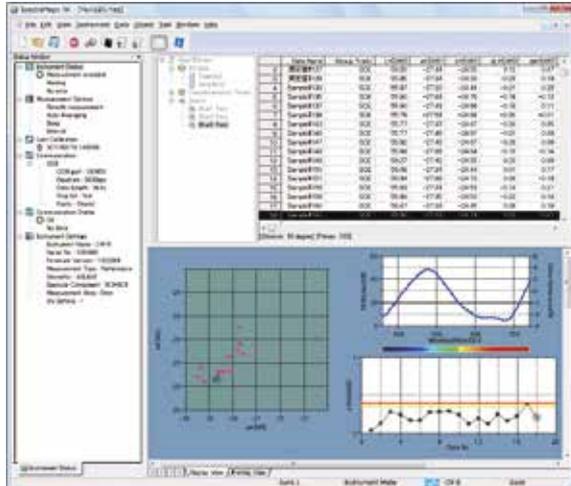
CCS (Closest Color Search) function Professional only

With the new CCS (Closest Color Search) function, the specified number of stored target colors closest to the measured sample and within the specified color-difference limit can be automatically extracted from the target color database. The extracted target colors can then be not only listed, but also shown on spectral graphs or ⊿L*⊿a*⊿b* color plots, and the desired target color can be selected from the list.

Target color database

Targets with the smallest color difference from the sample are automatically

Specifications:

Minimum Computing Requirements

OS	Windows® XP Professional 32-bit SP3, 64-bit SP2; Windows® 7 Professional 32-bit, 64-bit (English, Japanese, German, French, Spanish, Italian, Traditional Chinese, Simplified Chinese, and Hangul versions) • The hardware of the computer system to be used must meet or exceed the greater of the recommended system requirements for the compatible OS being used or the following specifications.
CPU	Pentium® III 600 MHz or higher (recommended)
Memory	128 MB (256 MB recommended)
Hard disk	450 MB of available disk space (At least 400 MB of available space is required in the system drive.)
Display	Display unit capable of showing at least 1024 x 768 dots/16-bit colors
Other	DVD-ROM drive (required for installation); one free USB port for protection key; one free port (serial port or additional USB port) for connection to instrument when connecting via cable (or USB port for USB Bluetooth® adapter when using a USB Bluetooth® adapter for performing communication with CM-700d or CM-600d via Bluetooth®); Internet Explorer Ver. 5.01 or later

Compatible Instruments

CM-3600A; CM-3610A; CM-5; CM-3700d; CM-3600d; CM-3610d; CM-3630; CM-3500d; CM-25cG;CM-700d/600d; CM-2600d/2500d/2500c; CM-512m3; CR-400/410; DP-400; FD-7; FD-5

Features

Color space	L*a*b*, L*C*h, Lab99, LCh99, XYZ, Hunter Lab, Yxy, L*u'v', L*u*v* and their color differences; Munsell (C, D65)
Index	MI, WI (CIE 1982, ASTM E313-73, ASTM E313-96, HUNTER, BERGER, TAUBE, STENSBY, Ganz), Tint (CIE 1982, ASTM E313-96, Ganz), YI (ASTM D1925-70, ASTM E313-73, ASTM E313-96, DIN6167), WB (ASTM E313-73), Standard Depth (ISO 105.A06), Brightness (TAPPI T452, ISO2470), Opacity (ISO 2471, TAPPI T425 89% White Plate), Haze (ASTM D1003-97)*, Density (Status A, Status T), Dominant Wavelength, Excitation Purity, RXRYRZ, 8 degree gloss value (CM-3600A, CM-3610A, CM-5, CM-3600d, CM-700d/600d, CM-2600d/2500d only), user equation, each difference, 555, Strength, Pseudo Strength, Staining degree (ISO 105.A04E), Staining degree rating (ISO 105.A04E), Grey scale (ISO 105.A05), Grey Scale Rating (ISO 105.A05), K/S strength (Apparent (ΔE^*ab, ΔL^*, ΔC^*, ΔH^*, Δa^*, Δb^*), maximum absorption, total wavelength, user wavelength), NC#, NC# Grade, Ns, Ns Grade, Signal color index Only when measurement are taken with CM-5 connected: Gardner, Iodine Color Number, Hazen/ APHA, European Pharmacopoeia, US Pharmacopeia * With some instrument types, the illuminating/light-receiving optical system may not satisfy the definition of haze (ASTM D1003-97). However, this presents no problem as long as the value is used as a relative value.
Color difference equation	ΔE^*ab (CIE 1976), ΔE_{00} (CIE DE2000) and each component of lightness, saturation and hue, ΔE_{99} (DIN99), ΔE^*_{94} (CIE 1994) and each component of lightness, saturation and hue, ΔE (Hunter), CMC (l:c) and each component of lightness, saturation and hue, FMC-2, NBS 100, NBS 200, ΔE_c (degree) (DIN 6175-2), ΔE_p (degree) (DIN 6175-2)
Observer	2 degree, 10 degree
Illuminants	A, C, D50, D55, D65, D75, F2, F6, F7, F8, F10, F11, F12, U50, ID50, ID65, User illuminant 1 to 3
Graph display	Spectral reflectance (transmittance) and its difference, K/S and its difference, Absorbance and its difference, L*a*b* absolute value, ΔL*a*b* (2D/3D color difference distribution, MI), Hunter Lab absolute value, Hunter ΔLab (color difference distribution), xy chromaticity diagram, Trend chart and histogram of each color space and color difference equation, Pseudo color display
Image display	Link between measured value and image data (JPEG or BMP format), Insertion of custom images
Instrument control	Measurement/calibration Automatic average measurement: 2 to 999 measurements Manual average measurement: Any number of measurements (Standard deviation and average value are displayed in the color space selected during measurement.) Remote measurement (Excluding the CM-3000 Series) Instrument setting Upload of data stored in the instrument (Excluding the CM-3000 Series) List view of data stored in the instrument (Excluding the CM-3000 Series)
Target	Registration of several target colors (Automatic target color selection), Manual input and registration of colorimetric data by specifying color space, Target data download to the instrument (Excluding the CM-3000 Series)
Data list	List view and editing of target/measured data (delete, sort, averaging, copy & paste, search, file merge) Link between JPEG images, Display of statistic value and pass/fail ratio Visual judgement result input function, Additional data information inputting/listing function
External I/O	Loading/saving data files in original format (Extension: mes) (Several files can be loaded.) Loading/saving template files in original format (Extension: mtp) (Several files can be loaded.) Saving of data in text format (CSV, TXT), saving of data in XML format, Copy of listed data to the clipboard
Display languages	English, German, French, Spanish, Italian, Japanese, Chinese (Simplified and Traditional)
Help function	Navigation display, "Precise Color Communication" Tutorial, Manual

Other

Screen display	Number of files that can be opened simultaneously: 20 Number of data that can be stored in a file: Target data: 5,000, Measurement data: 5,000 Instrument status details window display
Operation	Operation is easy thanks to an operation screen with large buttons, use of function-assigned keys instead of a mouse, the Navigation function, and the Macro function.

　　　　　　　: Available on Professional Edition only

⚠️ **SAFETY PRECAUTIONS**

For correct use and for your safety, be sure to read the instruction manual before using the product.

Certificate No: YKA 0937 154
Registration Date:
March 3, 1995

Certificate No: JQA-E-80027
Registration Date:
March 12, 1997

ISO 14001

www.konicaminolta.eu

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