

< Compatible spectrophotometers >

| | |
|-----------|---------------------------------------------------|
| Model(*1) | CM-17d/CM-16d, CM-700d/CM-600d, CM-2600d/CM-2500d |
|-----------|---------------------------------------------------|

< Major specifications >

| | |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Skin data display | Melanin Index Hb Index [Total hemoglobin (oxidized + reduced) index] Hb SO ₂ Index (%) [Hemoglobin oxygen saturation index (%)] ITA° [Individual Typology Angle](*2), ITA° Classification |
| Colorimetric value display | L*, a*, b*, C*, h, Munsell value (Hue, Value, Chroma)(*3) |
| Graph display | Hue-Value graph, Hb Index-Melanin Index graph, ITA° graph, 2D user-specified axis graph(*4) |
| Observer(*5) | 2°, 10° |
| illuminant(*5) | C, D65 |
| Data Handling | Saving / reading data in CM-SA2 original format Saving data in text (CSV) format [Melanin Index, Hb Index, Hb SO ₂ Index (%), L*, a*, b*, C*, h, Munsell value (Hue, Value, Chroma), ITA°, Spectral reflectance (400-700 nm)(*6)] |
| Display languages | Japanese, English, Chinese (Simplified and Traditional), Korean |
| Other | Save and display viewfinder images CM-17d(*7) |

< Minimum computing requirements(*8) >

| |
|-------------------------------------------------------------------|
| OS: Windows® 10 Pro 64 bit Version 1903 or higher/Windows® 11 Pro |
| CPU: Intel® Core i5 2.7 GHz or higher processor (recommended) |
| Memory: 2 GB or more (4 GB or more recommended) |
| Storage: 10 GB or more |
| USB port: Required for connection to instrument |
| Connection to external network: Required for activation |

Spectrophotometer must be connected to the CM-SA2 software in order to collect and process data at the time of measurement. It is not possible to upload measurement data into CM-SA2 software for processing after being collected by the instrument if it was not connected to CM-SA2 software during measurement.

- *1: Instruments with new firmware versions only. Instruments with old firmware versions may not be supported. Click here for firmware versions of compatible instruments. <https://www.konicaminolta.com/instruments/download/software/color/cmsa2/index.html>
- *2: ITA° values are calculated for a 2° observer and Standard Illuminant D65.
- *3: Munsell data are calculated for 2° observer and Standard Illuminant C.
- *4: Colorimetric values for each axis can be selected from L*, a*, b*, C*, and h.
- *5: Illuminant / Observer can be selected from one of the four conditions. (2°/C, 2°/D65, 10°/C, 10°/D65)
- *6: The spectral reflectance data that are output are the reflectance obtained in SCI (Specular component included) mode.
- *7: CM-17d viewfinder images will be saved only when measurements are taken with Save Viewfinder Image enabled. Saved images are linked with measurement data for later display.
- *8: The hardware of the computer system must meet or exceed the greater of the recommended system requirements for the compatible OS being used or the above specifications.

- Please do not use this software to assist in cosmetics sales at retail stores.
- This software and the spectrophotometer that can be connected to this software are not medical devices. The results output by this software cannot be used for diagnosis, treatment, or any other medical purposes.
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- Intel® is a trademark or registered trademark of Intel Corporation in the USA and other countries.
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- The specifications given here are subject to change without prior notice.
- Displays shown are for illustration purposes only.



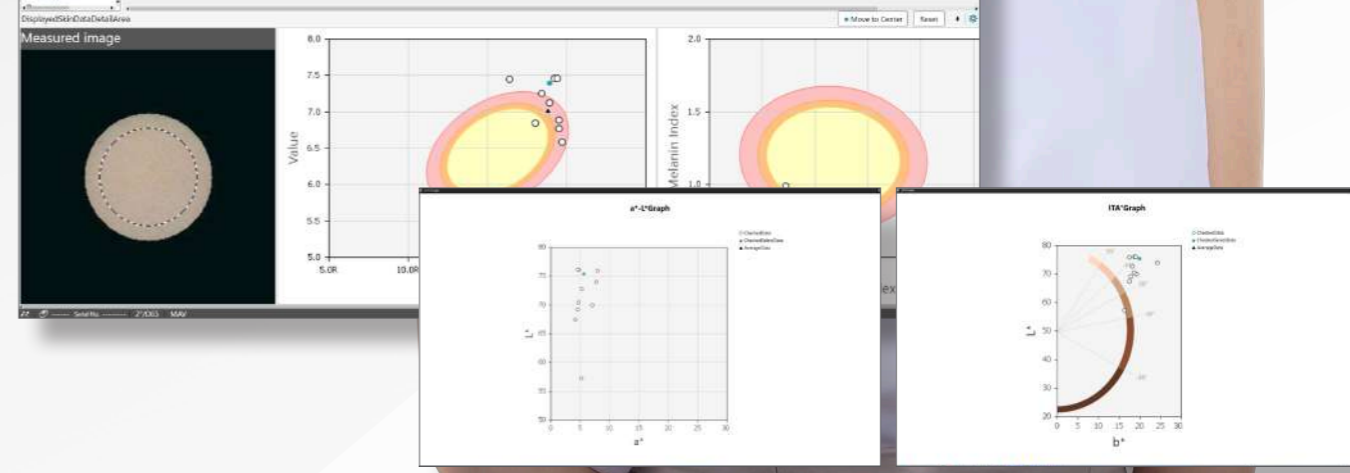
KONICA MINOLTA

Skin Analysis Software
CM-SA2

Software for analyzing skin color and melanin index measurements



| Group | Item | Data Name | Comment | Melanin Index | Hb Index | Hb SO ₂ Index (%) | Hue | Value | Chroma | L* | a* | b* | C* | h | ITA° | ITA° Classification | Observer / Illuminant |
|----------|-------------|---------------------|---------|---------------|----------|------------------------------|------|-------|--------|-------|-------|-------|-------|-------|------|---------------------|-----------------------|
| Group 1 | Average | | | 0.007 | 0.099 | 90.0 | 88.9 | 7.01 | 3.11 | 71.63 | 5.62 | 16.79 | 19.91 | 75.26 | 49.0 | | |
| Group 2 | Right cheek | 2023/02/12 14:37:41 | 0.758 | 0.793 | 67.0 | 8.96 | 7.13 | 2.99 | 22.79 | 5.29 | 16.12 | 16.08 | 25.24 | 51.5 | | Light | 2°/D65 |
| Group 3 | Left cheek | 2023/02/12 14:37:33 | 0.749 | 0.642 | 60.9 | 9.20 | 7.46 | 3.02 | 16.08 | 4.75 | 16.73 | 16.32 | 25.70 | 54.3 | | Light | 2°/D65 |
| Group 4 | Right cheek | 2023/02/12 14:37:32 | 0.801 | 0.559 | 109.0 | 6.47 | 7.45 | 3.25 | 15.36 | 7.30 | 17.40 | 19.11 | 49.26 | 56.2 | | Very light | 2°/D65 |
| Group 5 | Left cheek | 2023/02/12 14:37:26 | 0.992 | 0.710 | 89.2 | 8.07 | 8.94 | 5.32 | 19.85 | 7.01 | 19.14 | 26.28 | 46.00 | 46.2 | | Light | 2°/D65 |
| Group 6 | Left cheek | 2023/02/12 14:37:44 | 0.960 | 0.719 | 110.0 | 6.49 | 7.26 | 4.88 | 14.64 | 7.70 | 24.17 | 28.57 | 22.32 | 44.8 | | Light | 2°/D65 |
| Group 7 | Right cheek | 2023/02/12 14:37:48 | 0.749 | 0.554 | 96.9 | 6.10 | 6.77 | 2.86 | 19.33 | 4.59 | 17.83 | 18.41 | 25.57 | 47.2 | | Light | 2°/D65 |
| Group 8 | Right cheek | 2023/02/12 14:37:43 | 0.909 | 0.408 | 88.0 | 6.10 | 6.57 | 2.49 | 17.33 | 5.16 | 16.33 | 17.02 | 22.26 | 38.3 | | tan | 2°/D65 |
| Group 9 | Right cheek | 2023/02/12 14:37:57 | 0.730 | 0.509 | 88.5 | 6.40 | 7.46 | 3.01 | 18.57 | 4.30 | 18.94 | 19.49 | 24.41 | 54.0 | | Light | 2°/D65 |
| Group 10 | Right cheek | 2023/02/12 14:38:01 | 0.802 | 0.522 | 74.2 | 6.70 | 6.59 | 2.77 | 17.40 | 4.39 | 13.44 | 13.33 | 26.40 | 45.0 | | Light | 2°/D65 |
| Group 11 | Left cheek | 2023/02/12 14:38:00 | 0.844 | 0.445 | 85.1 | 6.10 | 6.89 | 2.96 | 19.46 | 4.70 | 18.63 | 18.21 | 25.84 | 47.7 | | Light | 2°/D65 |
| Group 12 | Left cheek | 2023/02/12 14:38:20 | 0.852 | 0.545 | 97.5 | 6.90 | 7.39 | 3.27 | 17.59 | 5.61 | 18.85 | 20.06 | 26.26 | 51.9 | | Light | 2°/D65 |



CM-17d

Ergonomically designed to be easy to grip. It can be used in a wide range of measurement scenarios, including one-handed work, vertical orientation, and measurement of small objects and curved surfaces. Stress-free hardware design includes easy positioning with the camera viewfinder, improved visibility with a slight tilt of the operation screen, and a comfortable workspace with wireless connectivity.*

* Wireless LAN/ Bluetooth module (option) is required.



SAFETY PRECAUTIONS

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

- Always connect the instrument to the specified power supply voltage. Improper connection may cause a fire or electric shock.

ISO Certifications of KONICA MINOLTA, Inc., Sakai Site

ISO 9001
JQA-QMA15888
Design, development, manufacture/ manufacturing management, calibration, and service of measuring instruments

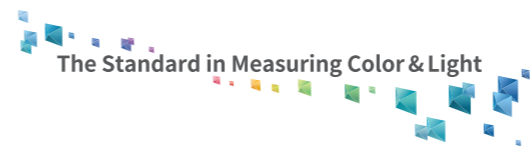
ISO 14001
JQA-E-80027
Design, development, manufacture, service and sales of measuring instruments

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|---------------------------------------------------|----------------------|--------------------------------------------------------------|-----------------------------|-----------------------------------------------|
| KONICA MINOLTA, INC. | Osaka, Japan | | | |
| Konica Minolta Sensing Americas, Inc. | New Jersey, U.S.A. | PHONE: (888)473-2656 (in USA), +1(201)236-4300 (outside USA) | FAX: +1(201)785-2480 | E-Mail: marketing.us@konicaminolta.com |
| Konica Minolta Sensing Europe B.V. | European HQ/ BENELUX | Nieuwegein, Netherlands | PHONE: +31(0)30 248-1193 | E-Mail: info.benelux@seu.konicaminolta.eu |
| | German Office | München, Germany | PHONE: +49(0)89 4357 156 0 | E-Mail: info.germany@seu.konicaminolta.eu |
| | French Office | Roissy CDG Cedex, France | PHONE: +33(0)1 80 11 10 70 | E-Mail: info.france@seu.konicaminolta.eu |
| | UK Office | Warrington, United Kingdom | PHONE: +44(0)1925 467300 | E-Mail: info.uk@seu.konicaminolta.eu |
| | Italian Office | Cinisello Balsamo, Italy | PHONE: +39 02849488.00 | E-Mail: info.italy@seu.konicaminolta.eu |
| | Swiss Office | Dietikon, Switzerland | PHONE: +41(0)43 322-9800 | E-Mail: info.switzerland@seu.konicaminolta.eu |
| | Nordic Office | VÄSTRA FRÖLUNDA, Sweden | PHONE: +46(0)31 7099464 | E-Mail: info.nordic@seu.konicaminolta.eu |
| | Polish Office | Wrocław, Poland | PHONE: +48(0)71 73452-11 | E-Mail: info.poland@seu.konicaminolta.eu |
| Konica Minolta (CHINA) Investment Ltd. | SE Sales Division | Shanghai, China | PHONE: +86-(0)21-6057-1089 | E-Mail: hcn_sensing@gcp.konicaminolta.com |
| | Beijing Office | Beijing, China | PHONE: +86-(0)10-8522 1551 | E-Mail: hcn_sensing@gcp.konicaminolta.com |
| | Guangzhou Office | Guangzhou, China | PHONE: +86-(0)20-3826 4220 | E-Mail: hcn_sensing@gcp.konicaminolta.com |
| | Chongqing Office | Chongqing, China | PHONE: +86-(0)23-6773 4988 | E-Mail: hcn_sensing@gcp.konicaminolta.com |
| | | | +86-(0)23-6794 9512 | |
| | Qingdao Office | Shandong, China | PHONE: +86-(0)532-8079 1871 | E-Mail: hcn_sensing@gcp.konicaminolta.com |
| | Wuhan Office | Hubei, China | PHONE: +86-(0)27-6885 0586 | E-Mail: hcn_sensing@gcp.konicaminolta.com |
| | Shenzhen Office | Shenzhen, China | PHONE: +86-(0)755-2868 7535 | E-Mail: hcn_sensing@gcp.konicaminolta.com |
| | Xiamen Office | Xiamen, China | PHONE: +86-(0)592-7107 3999 | E-Mail: hcn_sensing@gcp.konicaminolta.com |
| Konica Minolta Sensing Singapore Pte. Ltd. | Singapore | | PHONE: +65 6563-5533 | E-Mail: ssg@gcp.konicaminolta.com |
| Konica Minolta Sensing Korea Co., Ltd. | Korean HQ | Goyang-si, Korea | PHONE: +82(0)2-523-9726 | E-Mail: se.korea@konicaminolta.com |
| | Cheonan Office | Cheonan-si, Korea | PHONE: +82(0)41-556-9726 | E-Mail: se.korea@konicaminolta.com |

Addresses and telephone/fax numbers and e-mail address are subject to change without notice. For the latest contact information, please refer to KONICA MINOLTA Worldwide Offices web page.

<https://konicaminolta.com/instruments/network>

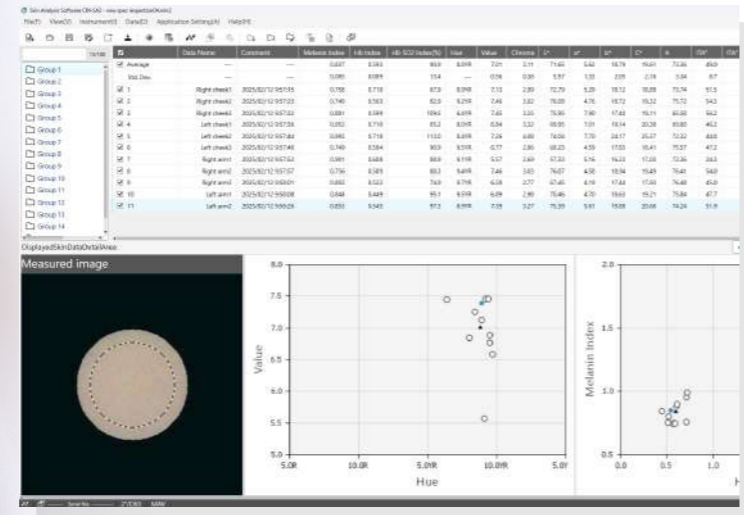
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Solutions for Easy Analysis of Skin Color, Melanin Index and Hb Index

Positioning and Image Saving of Measurement Points via Camera Viewfinder

When used with the CM-17d, the Camera Viewfinder allows you to easily align the measurement position while confirming the area and avoiding moles or spots. Furthermore, the image taken at the time of the measurement will be saved with the measured data, allowing you to verify the measured spot by checking the image.



The spectrophotometer must be connected to the CM-SA2 software at the time of measurement to process data and save images. If not connected, these functions are unavailable.

Customizable List Display Screen

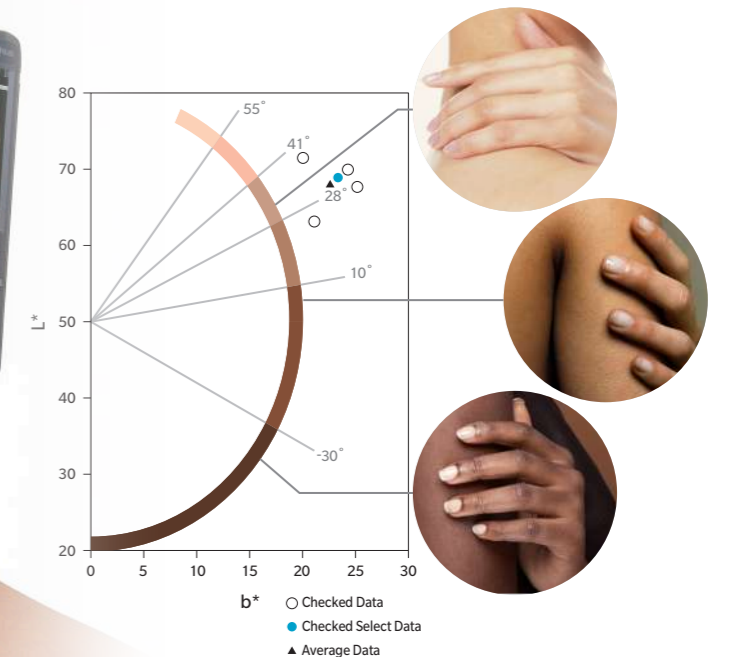
Items such as ITA° and measurement conditions can be easily added or removed, allowing you to organize them into a clear list based on the measurement items. Additionally, the measurement results can be output in CSV text format to be utilized for further analysis or data management using Excel® or other spreadsheet applications.

(Image of the list display screen)

| <input type="checkbox"/> | Data Name | Melanin Index | Hb Index | Hb SO2 Index(%) | Hue | Value | Chroma | L* | a* | b* | C* | h | ITA° | ITA° classifica | Observer/Illuminant | |
|-------------------------------------|-----------|---------------|----------|-----------------|------|-------|--------|------|-------|-------|-------|-------|-------|-----------------|---------------------|------|
| <input checked="" type="checkbox"/> | Average | --- | 1.036 | 1.653 | 67.1 | --- | 6.53 | 4.20 | 66.92 | 10.89 | 21.28 | 23.95 | 63.25 | 39.1 | Intermediate | --- |
| | Std. Dev. | --- | 0.110 | 0.295 | 7.2 | --- | 0.11 | 0.59 | 1.05 | 2.56 | 2.87 | 3.78 | --- | --- | --- | --- |
| <input checked="" type="checkbox"/> | 1 | Data #0001 | 1.032 | 1.907 | 73.8 | 4YR | 6.50 | 4.54 | 66.64 | 12.94 | 21.60 | 25.17 | 59.07 | 38.0 | Intermediate | 2°/C |
| <input checked="" type="checkbox"/> | 2 | Data #0002 | 0.862 | 1.308 | 54.5 | 6.6YR | 6.69 | 3.30 | 68.51 | 7.46 | 17.89 | 19.39 | 67.37 | 46.5 | Light | 2°/C |
| <input checked="" type="checkbox"/> | 3 | Data #0003 | 1.067 | 1.595 | 71.1 | 5.5YR | 6.54 | 4.28 | 66.98 | 10.77 | 22.07 | 24.56 | 63.98 | 38.0 | Intermediate | 2°/C |
| <input checked="" type="checkbox"/> | 4 | Data #0004 | 1.079 | 1.613 | 70.0 | 5.5YR | 6.47 | 4.28 | 66.28 | 10.79 | 22.09 | 24.59 | 63.97 | 36.8 | Intermediate | 2°/C |
| <input checked="" type="checkbox"/> | 5 | Data #0005 | 0.815 | 1.355 | 56.1 | 6.7YR | 6.73 | 3.30 | 68.86 | 7.35 | 18.07 | 19.51 | 67.88 | 46.8 | Light | 2°/C |
| <input checked="" type="checkbox"/> | 6 | Data #0006 | 1.061 | 1.641 | 71.2 | 5.4YR | 6.51 | 4.31 | 66.69 | 10.95 | 22.13 | 24.69 | 63.67 | 37.4 | Intermediate | 2°/C |
| <input checked="" type="checkbox"/> | 7 | Data #0007 | 0.964 | 1.237 | 52.5 | 6.8YR | 6.66 | 3.41 | 68.17 | 7.54 | 18.70 | 20.16 | 68.04 | 44.7 | Light | 2°/C |
| <input checked="" type="checkbox"/> | 8 | Data #0008 | 1.090 | 1.691 | 72.4 | 5.1YR | 6.51 | 4.45 | 66.72 | 11.56 | 22.52 | 25.32 | 62.83 | 37.0 | Intermediate | 2°/C |
| <input checked="" type="checkbox"/> | 9 | Data #0009 | 1.185 | 1.806 | 74.3 | 4.6YR | 6.57 | 4.90 | 67.26 | 13.24 | 24.34 | 27.71 | 61.46 | 35.7 | Intermediate | 2°/C |

ITA° Graph for Confirming Skin Color Type

The ITA° (Individual Typology Angle) graph, used for evaluating skin tone and color, can be displayed. The measured data is plotted on the graph, allowing you to easily identify which group it belongs to at a glance.

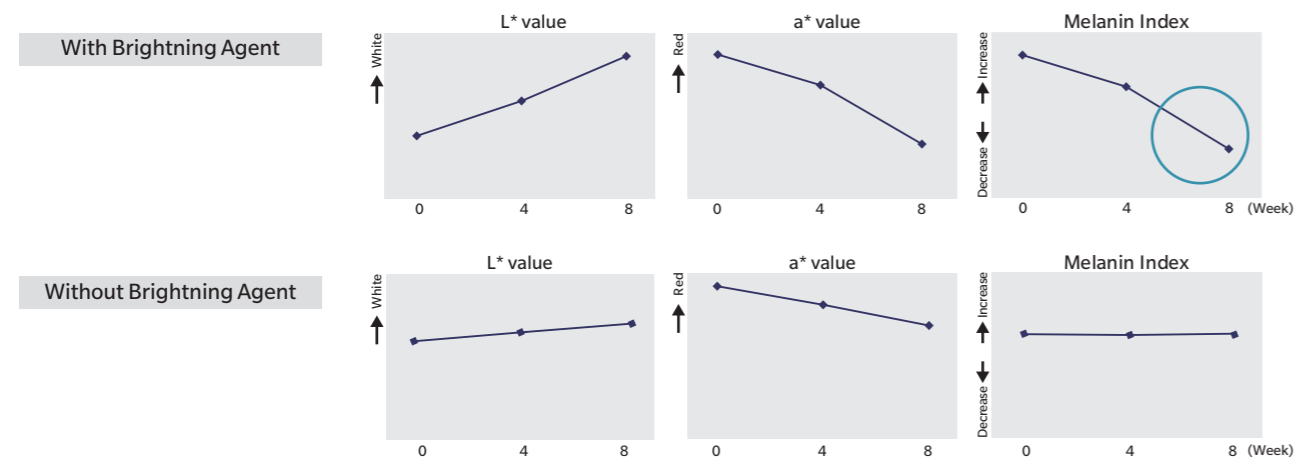


Efficacy Evaluation Based on Skin Color and Melanin Index

Example of Brightening Agent Efficacy Evaluation

L* value: An increase in whiteness, a* value: A decrease in redness. This color information alone cannot determine the efficacy of the whitening agent. Therefore, by looking at the Melanin Index data, it can be seen that the Melanin Index decreases with the use of the brightening agent.

(Example application for efficacy evaluation)



Example of Line Graph Created from Output Data Color Values: L* value, a* value, Melanin Index

For applications in the R&D divisions of cosmetics and pharmaceutical companies, skin-related testing organizations, and research institutions such as universities

