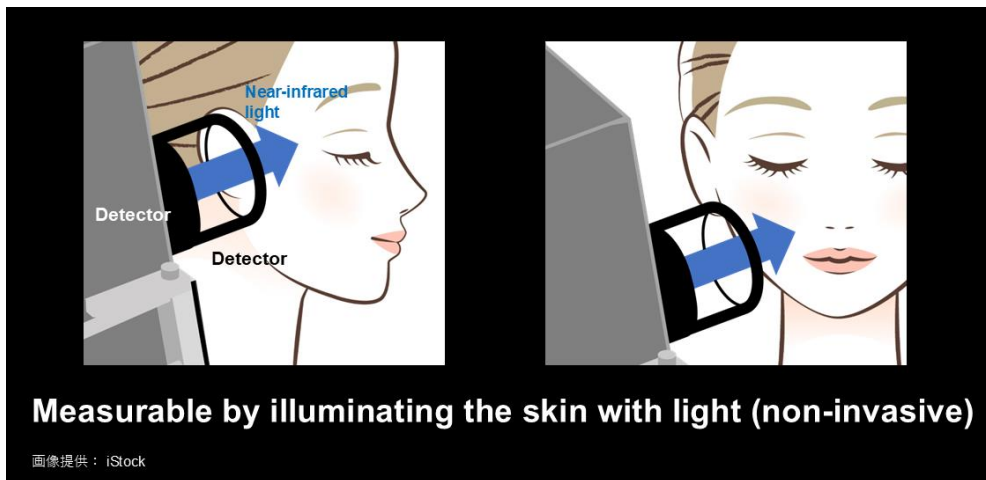


CT-Skin Skin Analysis Technology

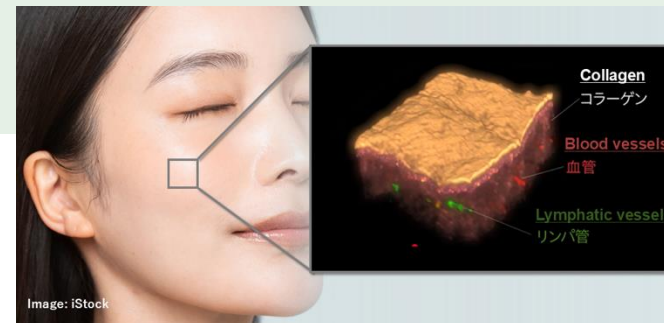
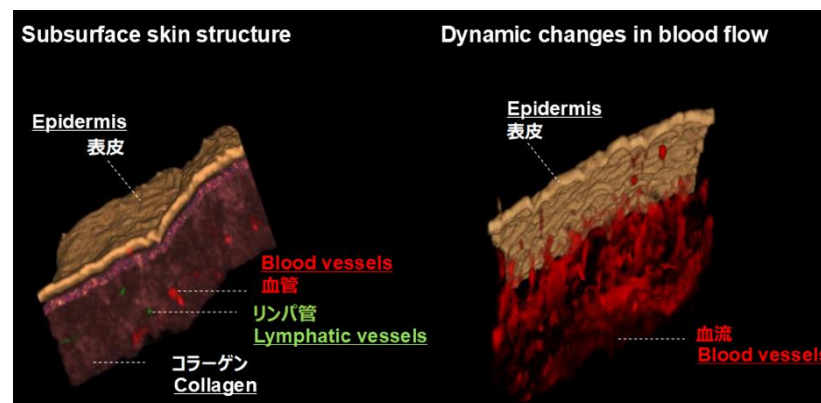
A technology that applies Kao's proprietary algorithms and 3D reconstruction techniques to data measured by JM-OCT (Jones matrix optical coherence tomography)—a noninvasive method for visualizing structures within the skin—enabling realistic visualization of the skin's internal features.

<Unique Points>

JM-OCT acquires spatial data on the skin's internal tissue structures and condition by illuminating the skin and analyzing characteristics of the reflected light, such as phase and polarization. For example, it can visualize dermal structures associated with deep wrinkles, as well as the condition of collagen fibers and structures such as blood vessels and lymphatic vessels.



From the measured light reflection patterns, 128 cross-sectional images are acquired to reconstruct the skin's interior as a realistic 3D space. Multiple structures that previously could only be observed separately can now be integrated and visualized together.



Because the measurement is noninvasive and does not damage the skin, the same area can be observed repeatedly. For example, it can visualize dynamic changes in blood vessels like a video, enabling the continuously changing condition of the skin to be captured as it is.

CT-Skin: A Future Technology for Seeing Deep Inside the Skin—Without Damage (Japanese only)



<https://www.youtube.com/watch?v=rvR1CClofB0&t=2s>

CT-Skin Skin Analysis Technology

<Key Benefits>

- By enabling direct observation of internal skin structures such as collagen fibers, it supports aging research and helps identify new targets and insights for skincare development.
- In addition to surface assessments, it enables evaluation of how skincare ingredients work by simultaneously tracking changes inside the skin—accelerating the development of cosmetics that act on the living functions of the skin.

<Link to Other Contents>

- Kao Research Report: [Research Report] Measured in 7 Seconds—See This Much Inside the Skin Without Cutting (Japanese only)
<https://www.kao.com/jp/newsroom/news/release/2022/20220120-002/>

<Concerned Research Areas>

- Product Development Research:
 - Skin Care
<https://www.kao.com/global/en/innovation/research-development/product-development/skin-care/>
- Fundamental Research:
 - Analytical Science
<https://www.kao.com/global/en/innovation/research-development/fundamental/analytical-science/>