



3D True Color Multiscale Imaging



2022 V1

For customized projects please Contact us:

info@simtrum.com

TRICHROME Series pre-clinical SD-OCT

Ultrahigh resolution and collagen fibre contrast

Simtrum is proud to release TRICHROME SD-OCT which provides unprecedented spatial resolutions and tissue contrast. It is the highest resolution Optical Coherence Tomography device for preclinical use and is equipped with the unique capability of detecting collagen fiber by capturing their natural colour.

Features

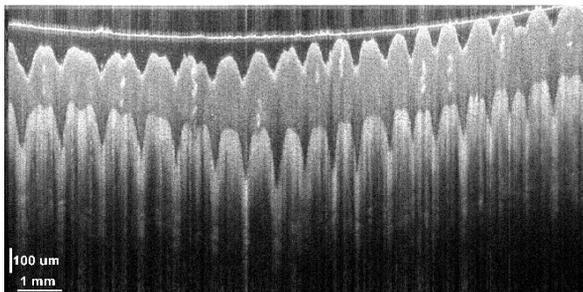
- Ultrahigh axial resolution (2.5 μm in air and 1.8 μm in water);
- Unique collagen fiber imaging capability based on intrinsic colour;
- Handheld dermatoscopy for pre-clinical use;
- Quick switch between the objective lens of various magnifications.

TRICHROME -2x OCT	Specification
Typical application	Research and Pre-clinical (dermatology)
Centre wavelength	850 nm
Penetration depth	1 mm
Axial resolution	2.5 μm air and 1.8 μm in water
A-line rate	68 kHz
Sensitivity	105 dB @ 20 kHz scan rate A-line
Pixel number	2048 or 4096
Compatible scanner	Desktop scanner or handheld dematoscope

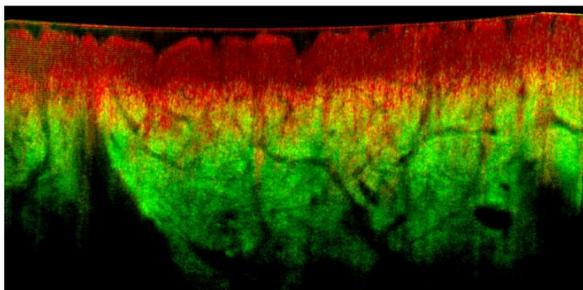
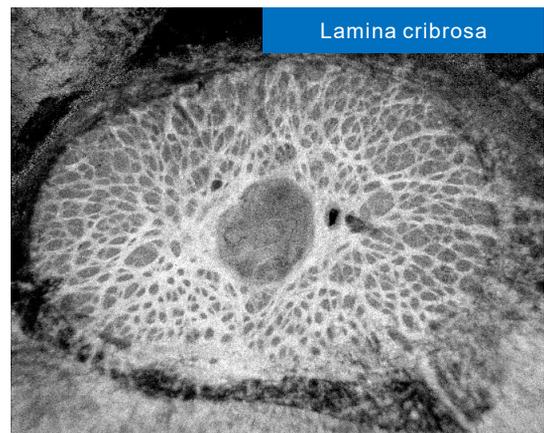
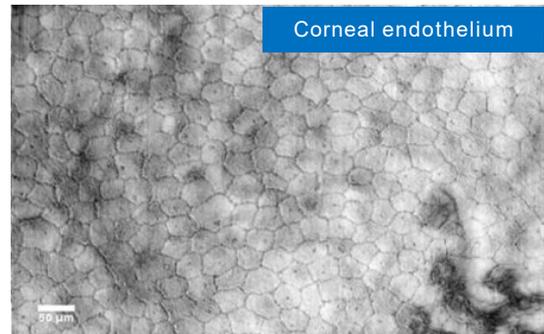
TRICHROME -2x OCT Objective lens selection guide				
Focal length	Working distance	Spot size	Max. field of view	Effective field of view
4X anti-reflection coated achromat (650 - 1050 nm)				
50 mm	40 mm	6.3 μm	13 X 13 mm ²	5 X 5 mm ²
10X NIR Long working distance Apochromat (400 - 1100 nm)				
20 mm	30 mm	2.5 μm	5 x 5 mm ²	2 X 2 mm ²
20X NIR Long working distance Apochromat (400 - 1100 nm)				
10 mm	20 mm	1.3 μm	2.5 X 2.5 mm ²	1 X 1 mm ²

Applications

Optical coherence tomography (OCT) is a non-invasive imaging technology, that provides real-time and cross-sectional images or fast 3D images of samples. OCT works similar to B-mode ultrasonic imaging. However, spatial resolutions of OCT can be as good as 1-2 μm , which is two orders of magnitude higher than those of ultrasound. The penetration depth of OCT is in the range of 2-3 mm. The non-contact and non-invasive nature makes OCT a perfect tool for diagnosing diseases in mucosa and surface inspection of products.



Human skin in vivo



OCT colour image of human skin in vivo

■ Collagen fibres
 ■ Epidermis

