

derma TOP-blue RELIABLE ANALYSIS OF HUMAN SKIN

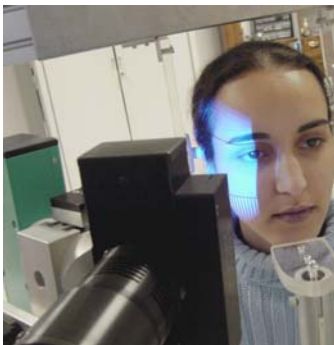
Analysis of skin roughness, wrinkles, cellulitis, wound healing:

Our in-vivo-3D-Scanner **derma TOP-blue** was specially optimized for dermatological and cosmetic purposes and enables a precise measurement and examination of human skin without the need of replicas.

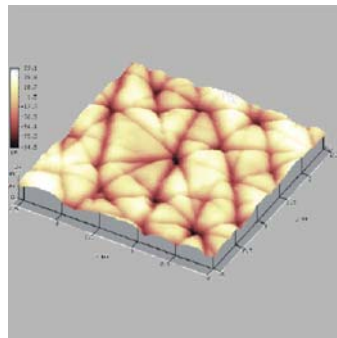
The use of a blue LED as light source allows the representation of the skin structure with optimal contrast. This guarantees a still more reliable analysis of the skin roughness and other characteristic parameters of the skin.

Here are the key features of the **derma TOP-blue** system in brief:

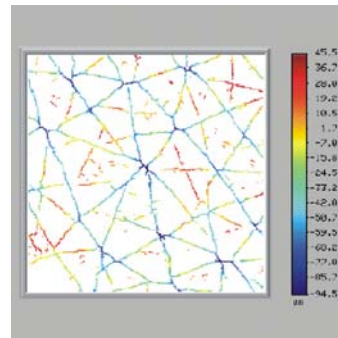
- ❑ The very rapid measurement of the skin, between 300 - 400 Milliseconds per image, enables direct in-vivo-analysis
- ❑ Scanning of the skin is performed non contacting and without any effect upon the patient
- ❑ A digital camera with 1280 x 1024 pixel and digital zoom guarantees the highest resolution
- ❑ The user can select between three measurement fields, which are optimized for the varying tasks to be performed
- ❑ The sensor of the **derma TOP-blue** system is very light, with it's weight of only 1.5 kg
- ❑ The entire system can be controlled by a laptop computer and is thus easily and quickly transportable



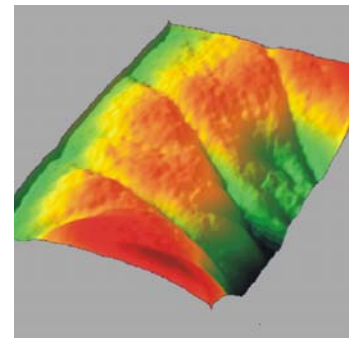
derma TOP-blue



Skin lines -3D-view



Skin line distribution



Wrinkles

The visualisation and analysis of the measured data can be performed, depending on the application, according to various available criteria :

- ❑ As standard, roughness parameters R_a and R_z are available
- ❑ In addition to these, other characteristics concerning skin roughness (waviness, profile) can be quantitatively measured
- ❑ Correlated images, e.g. before and after treatment, can be compared to each other, e.g. for cosmetic application
- ❑ Further applications are, for example, the measurements of wounds and scars

In studies, a good correlation with measurements made by laser profilometers was demonstrated.

derma *TOP*-blue RELIABLE ANALYSIS OF HUMAN SKIN

Technical Data

Image processing

Host computer	Intel Pentium IV, ≥ 2 GHz, ≥ 512 MHz RAM, ≥ 40 GB
Image data interface.....	IEEE 1394-Interface (FireWire®)
Operating system.....	Windows 2000, XP
Measurement Software	OPTOCAT for Windows
Data interface.....	SDF, ASCII, STL, BRE

Sensors

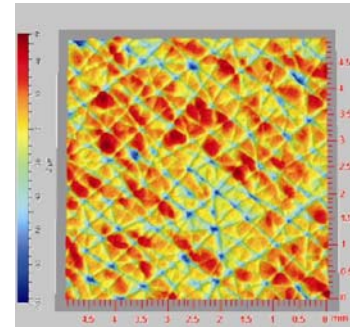
Projection unit.....	Miniaturized projection technique
Light Source.....	blue high-performance LED
Sensor weight	1.5 kg
Imaging.....	high resolution digital camera
Digitization	1280 x 1024 Pixel
Depth resolution.....	approx. 2 μ m
Acquisition time	approx. 300 - 400 msec

Options

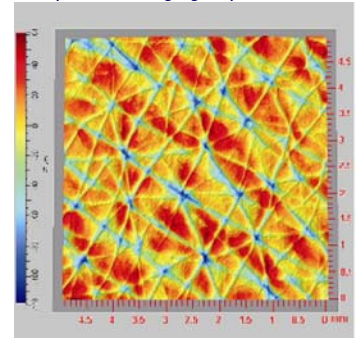
Host computer	Notebook or Laptop
Software Options.....	TOPOSURF
Positioning equipment.....	Tripod, Swivel arm, Height adjustable table tripod

The specifications of the derma *TOP*-blue system:

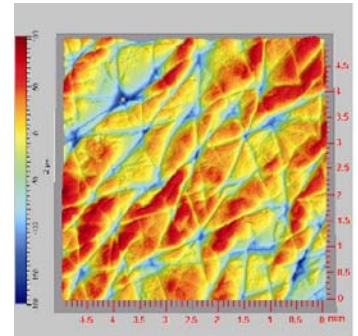
Measurement field [mm]	20 x 15	40 x 30	80 x 60
Depth of measuring volume [mm]	6	20	40
Operating distance [mm]		210	
Digitization [pixel]		1280 x 1024	
Meas. points distance [μ m]	15	30	60
Lateral resolution [μ m]	8	15	30
Depth resolution [μ m]	2	4	8
Repeatability [μ m]	1	2	4



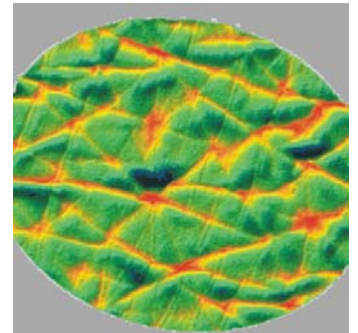
Analysis of skin aging,40 years



Human Skin,50 years



Human Skin, 70 years



Replica

Breuckmann GmbH
Industrial 3D Image Processing
and Automation
Torenstr.14, D-88709 Meersburg
phone: +49 (0) 75 32 – 43 46 0
fax: +49 (0) 75 32 – 43 46 50
info@breuckmann.com
www.breuckmann.com

Accurex Measurement, Inc.
200 Grove Road, West Deptford, NJ 08066

phone: 856-251-3111
www.accurexmeasure.com