Antera 3D® CS

Best in Class Skin Analysis Device

Precise and validated by the scientific community.

- Small measurement error.
- Validated by Dermatologists and Aesthetic Doctors as a reliable instrument to study the efficacy of treatments.
- Validated by Cosmetic Scientists as a precise and robust instrument for efficacy tests.
- On par or outperforming higher class professional instruments and direct competitors.

Fast.

- Image acquisition time 0.1 second.
- In real life scenarios, 1-2 seconds.
- No post-processing time.
- All data available immediately.

Reliable Before & After comparison.

- One of the main strengths of the Antera 3D.
- It precisely evaluates each parameter and provides a reliable comparison . between images taken at different time-points.
- Antera 3D provides an objective and scientific support for clinical trials and internal studies.

Antera software.

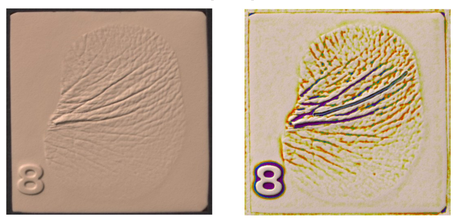
- Easy to use.
- Fast.
- Simple interface.
- Native Mac (no virtual machine).
- Native Windows.

Measurements' Repeatability

General information

- 30 images were acquired by the same observer using Antera camera (SN: 15399396).
- Images were acquired every two minutes.
- ROI- *Strip selection tool*. (Area 33.4 mm^2)
- Areas selected in different images by *Automatic matching tool*.

Artificial skin sample photo (No. 145-2, Plate 8)



Data summary

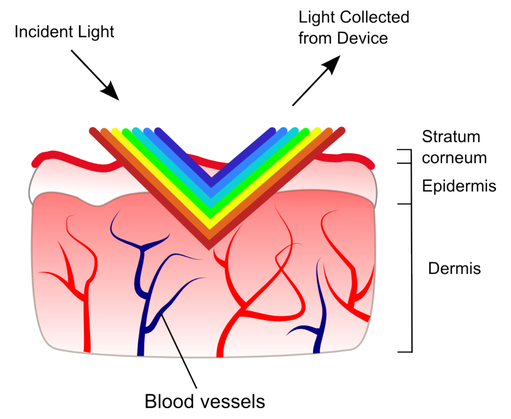
	Overall Size	Depth mm	Width mm	Max. Depth mm
Average Value	28.08	0.14	0.88	0.20
Standard Deviation	0.2025	0.0009	0.0126	0.0035
% Error	0.72%	0.66%	1.43%	1.77%

Data table

Strip selection: 2016-07-01 11:10:53	Wrinkles: Small (1 mm)			
Ref. Img.:1 2016-7-1	Overall size	Depth mm	Width mm	Max. depth mm
Image 2	28.053	0.138	0.892	0.204
Image 4	28.166	0.138	0.874	0.199
Image 6	28.015	0.138	0.883	0.200
Image 8	27.750	0.138	0.873	0.202
Image 10	28.030	0.139	0.876	0.202
Image 12	28.195	0.139	0.879	0.203
Image 14	28.417	0.139	0.902	0.198
Image 16	27.760	0.139	0.868	0.201
Image 18	28.629	0.142	0.892	0.205
Image 20	28.042	0.138	0.888	0.203
Image 22	28.236	0.139	0.903	0.205
Image 24	28.299	0.140	0.876	0.203
Image 26	27.993	0.139	0.868	0.203
Image 28	28.135	0.139	0.896	0.209
Image 30	28.130	0.139	0.880	0.199

Real 3D Images

The Antera 3D® is a camera for image acquisition and analysis of the skin. The Antera 3D® relies on multi-directional illumination and computer-aided reconstruction of the skin surface, illuminating the surface from different angles and using the differences between these images to reconstruct the surface in three dimensions. The skin topography and the chromophores' concentration are derived from the spatial and spectral analysis of the acquired image data, obtained by illuminating the skin with light emitting diodes (LEDs) of different wavelengths shining from different directions.



Capabilities

Topography Measurement

Wrinkles
Wrinkles' overall size average depth (mm), average width (mm), Indentation index, maximum depth (mm)

Pores
Pores' total volume (mm), index, Pores' count, density (/cm^2), Mean pore volume (mm^3), Mean pore area (mm^2), Pores' area (mm^2), Pores' maximum depth (mm)

Texture
Arithmetical mean roughness R_a , Squared mean roughness R_q , Elevation span R_t (mm)

Volumes
Volume of depressions & elevations (mm^3), Maximum valley depth and peak height, R_v (mm) Affected area (mm^2)

Chromophores' Measurement

Pigmentation
Average concentration, uniformity, hyper-concentration, hypo-concentration, affected area (mm^2)

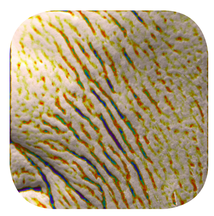
Redness
Average concentration, Redness uniformity, hyper-concentration, hypo-concentration, affected area (mm^2)

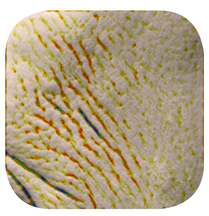
Colour Measurement
Overall colour variation, L*a*b* values, L*a*b* variation, High variation area (mm^2) , Relative high variation area in percentages

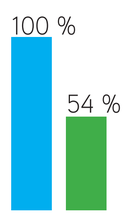
Other Features
Before & After Comparison.
Spot-On (automatic ROI matching).
Data Export & raw data (z-elevation, L*a*b* values, pigmentation, redness).
Remote image acquisition (option to attach camera to a tripod).

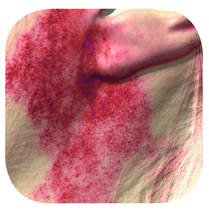
Before & After

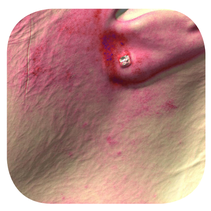
Antera 3D® allows you to compare Before & After images in a quick, accurate and easy way. The matching of areas of Before & After images is done by a proprietary algorithm that automatically registers two or more images to one another. When you acquire successive images of your patient, you don't need to worry about their exact position, as *Spot-on* will automatically compensate for the relative shifts and rotations of the images, which translates to quick image acquisition.

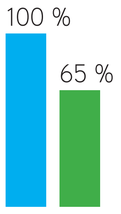

Wrinkles Before

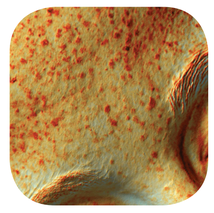

Wrinkles After

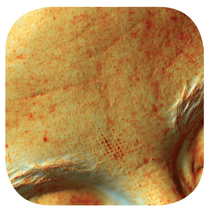


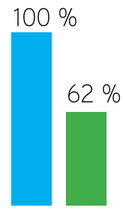

Redness Before


Redness After




Pigmentation Before


Pigmentation After



Comparison Publications

C. Messaraa, A. Metois, M. Walsh et al., "Wrinkle and roughness measurement by the Antera 3D and its application for evaluation of cosmetic products.", Skin Res Technol. 2018 Jan 24, PMID: 29368349, DOI:10.1111/srt.12436

F. Linming et al., "Comparison of two skin imaging analysis instruments: The VISIA from Canfield vs the ANTERA 3D from Miravex", Skin Res. Technol. 2017; 1–6. DOI: 10.1111/srt.12381

R. Matias, M. Ferreira, P. Costa, "Skin colour, skin redness and melanin biometric measurements: comparison study between Antera® 3D, Mexameter® and Colorimeter®", accepted for publication in Skin Research and Technology, Manuscript ID SRT-0098-14.

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