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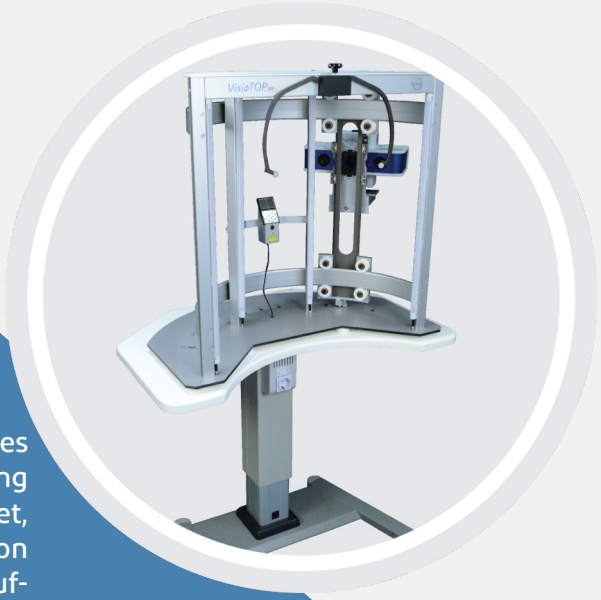
Application note

3D In Vivo measurement
for **Local testing**

Skin, Face & Body

3D measurement solutions from EOTECH provide in vivo 3D data which can be analyzed to calculate objective parameters to evaluate skin and morphology changes due to age, treatment or product application.

Skin microstructure changes, hydration, smoothness as well as foundation. Typical reference zones are forearm, cheek or legs.

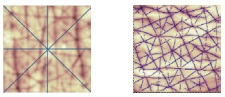
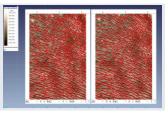
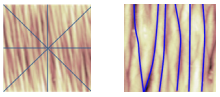


Fine lines & wrinkles are mostly anti-ageing effects on crow's feet, glabella, forehead, on eye bags, or for puffiness as volume reduction.

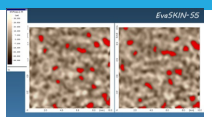
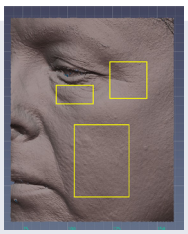
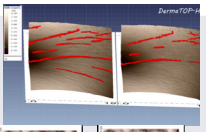
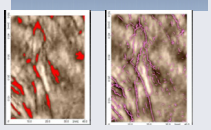
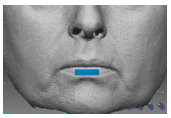
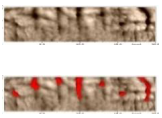
Fine lines can also be evaluated on cheek, peri-oral and lips as well as volume changes for sagging or oval effects.

Local testing focus these analysis on zones which are comonly used as references to illustrate product or treatment effects in cosmetics or dermatology. Different zones, different analysis are required to prove product or treatment efficacy or study skin changes over the age. 3D data can be directly measured locally with a high resolution field of view system (DermaTOP-HE-S60 or AEVA-HE-S110) or extracted from a larger high resolution FOV system (EvaSKIN-S5-125, EvaFACE-S5-300, DermaTOP-HE-S125 or AEVA-HE-160/250)

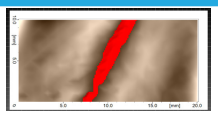
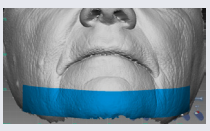
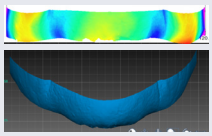
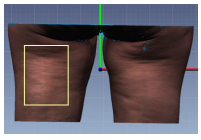
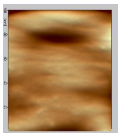
Skin Microstructure:

Effect	Calculated parameters	Illustration
Hydration	Star profile roughness, surface roughness, density of lines, anisotropy of lines	 
Smoothing	Star profile roughness, surface roughness, density of lines,	
Skin ageing	Surface roughness density of lines, anisotropy of lines	

Fine lines, wrinkles:

Effect	Calculated parameters	Illustration
Reducing large Pores	Surface roughness Object detection with number, area, length, volume and depth of each object and the sum or average of all object	 
Anti-ageing on crow's feet, eyebags, cheek, upper lips	Profile roughness (FOITS), surface roughness, object detection with number, area, length,volume and depth of each object and the sum or average of all detected objects, Density of lines & wrinkles	  
Lips lines smoothing	Profile roughness (FOITS), Object detection with number, area, length,volume and depth of each object and the sum ou average of all detected objects, Density of lines & wrinkles	 

Volume & folds

Effect	Calculated parameters	Illustration
Plumping on nasal, glabella or lips corner folds	Profile roughness, Fold line detection with area, length,volume and depth Comparison (surface deviation) and volume of the change	 
Firming, repulping on eye bags, cheek, lips, sag and oval	Profile roughness, Comparison (surface deviation before/ after or from an ideal shape) and volume of the deviation, section length and angles	 
Anti-Cellulite	Surface roughness, Comparison (surface deviation before/ after or from an ideal shape) and volume of the deviation, positive & negative volume, dimples detection	 

EOTECH SAS - www.eotech-sa.com
1, ZI du fond des prés, 91460 Marcoussis – France - Tel : + 33 (0)164 497 130, Fax : + 33 (0)164 493 229