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Application note

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

Face

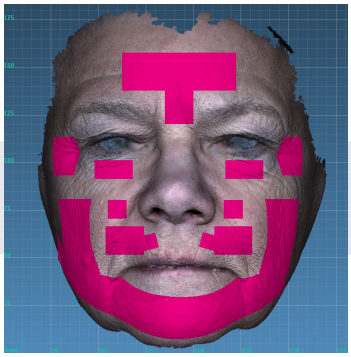
3D measurement solutions from EOTECH provide in vivo 3D data which can be analyzed to calculate objective parameters to evaluate skin and morphology changes due to age, treatment or product application.

Ageing effects on the face over time reveel different type of changes, fine lines & wrinkles appears, skin tone becomes more shiny, fold gets deeper and sagging change the oval.

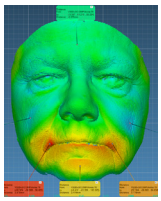
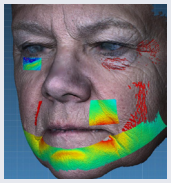
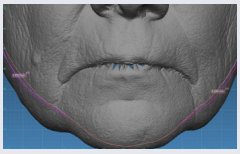
Evaluation of product effect on global face requires high resolution data on a large field of view to cover part or the full face at once.

Global face testing can extract local zones which are comonly used as references to illustrate product or treatment effects in cosmetics or dermatology, but also opens shape and volume changes analysis as well as a global detection of features like fine lines, wrinkles & folds. Local zones are extracted from a larger high resolution FOV system (EvaFACE-S5-300, or AEVA-HE-160/250). Local zone analysis are decribed on the Local application note.

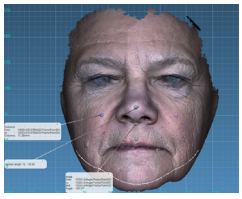
Zone extraction:

Effect	Zones	Illustration
Anti ageing	Crow's feet Eye bags Cheek & Upper cheek Upper lips & lips	
Folds reduction	Glabella Nasal Lips corner	
Firming, repulping	Eye bags Cheek Sagging and oval	

Shape & volume:

Effect	Calculated parameters		Illustration
Firming and repulping	Comparison on the global face or on a selection (surface deviation before/after) and volume of the deviation (positive volume = augmentation, negative volume = diminution)	Positive = Yellow-red Negative = blue-violet	
Reshaping	Comparison on the global face or on a selection (surface deviation before/after) and volume of the deviation Comparison with an ideal shape (selection) Dimensional		
Anti ageing	Feature density in global or by curvature classes		

Dimensional:

Effect	Calculated parameters	Illustration
Reshaping, repulping	Distance Section length and angles	

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