

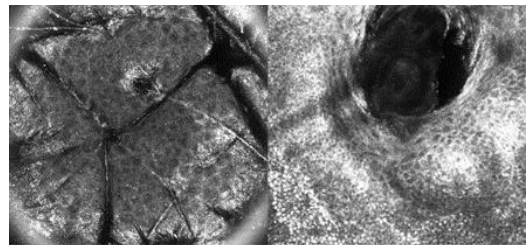
Confocal Microscopy: Cosmetic Efficacy Studies through three-dimensional images analysis.

Allergisa, a company of Investiga Group, uses the reflectance confocal microscopy (MCR) in cosmetic efficacy studies. This technique is noteworthy as a technology able to reveal the skin cell architecture and morphology dynamically and "in real time". In addition, its contrast is comparable to the conventional histology.

The reflectance confocal microscopy (MCR) allows the skin analysis *in vivo*, in a completely non-invasive manner, with no need of biopsy or the conventional tissue histological processing, eliminating the physical trauma or the scar formation as consequence of the biopsy procedure, as well as artifacts and sample destruction, which might occur in the histological procedure.

Among the applications to the cosmetic products efficacy evaluation through the morphology and skin structure, it is possible to highlight: anti-aging action, pores reduction, deep moisturizing, skin topography analysis, collagen synthesis in the papillary dermis, improvement of the dermo-epidermal junction, morphological and structural analysis of different types of blemishes.

This microscope uses a laser beam of 35mW with the wavelength similar to the infrared (830 nm) and objective lens of 30x, reaching the depth of 200-300 mm with lateral resolution of 0.5-1 mm and axial resolution of 2-5 mm. This thickness is closely related to the axial thickness of the histological sections excised. Each image presents a view field of 500x500 μm .



The images formation is based on the light emission that brightens a small spot inside the tissue, so the light is reflected and passes through a small opening; then, the image is formed in the detector. This opening does not allow the light reflected that comes from another point of the tissue to reach the detector. Therefore, only the reflected light in the area focused is detected. Thus, in order to create the image of the entire interest area, each point is recorded.

The image contrast is created by the different levels of refraction of the the skin components. In the human skin, the melanin is the endogenous source of greater contrast, followed by keratin, the mitochondria and the cytoplasmic organelles, of the chromatin in the nucleus and the dermal collagen.

Allergisa - a company of Group Investiga - is a reference in the assessment of safety, efficacy, photoprotection, quality of prototypes, sensory analysis, consumers studies, physical-chemical analyses, microbiology, in the different phases of a product development, supporting the marketing and products registration areas with technical dossier.

Contact:

Erandi Lara Salvador Junior - Global Sales Director
Mobile: +55+ 19-99822-9102
E-mail: erandi.salvador@grupoinvestiga.com.br