

Courage + Khazaka electronic GmbH
Mathias-Brüggen-Str.91 • D-50829 Köln
Phone ++49 221 9564990 • Fax ++49 221 956499-1•
E-Mail info@courage-khazaka.de • Website: www.courage-khazaka.de

STUDIES LIST

Visiopor[®] PP 34

Gianetti, A.; **The european aesthetic guide**, Autumn 2008, S. 43-50

As in previous years, the congress will be accompanied by a highly impressive industrial exhibition featuring app. 300 companies and a large poster display. Global laser and light technology manufacturers, as well as companies from diagnostic, dermal filler, implant, pharmaceutical and neutraceutical industries will use this opportunity to display product innovations and introduce new clinical results.

Hristo Dobrev; **Use of Visiopor to Study Skin Fluorescence in Acne**; 6th Regional Conference of Dermatology and Venerology, 30.04.-02.05.2010, Hisarva, Bulgaria

Acne vulgaris – Definition: Acne vulgaris is a chronic inflammatory disease of the pilosebaceous units that affects 80% of people between the age of 11 and 30 years. Acne – Multifactorial pathogenesis: Retentional hyperkeratosis; Increased sebum production; Propionibacterium acnes; Inflammation Acne and skin microflora: Acne is not infectious. Cutaneous microflora is an element of acne pathogenesis which contributes to the inflammation. Cutaneous microflora is of secondary importance compared with: sebaceous gland activity; hyperproliferation of follicular keratinocytes (significant microbial involvement occurring only after sebum production has increased and comedone formation has become established)

E. Xhaufaire-Uhoda, G. Szepetiuk, A. Schreder, F. Henry, G. Piérard, **Tracabilité de la fluorescence folliculaire due à Propionibacterium acnes. Effet d'extinction par certains anti-acnéiques et des crèmes solaires**, Skin, Vol. 13 No 3, 2010

Diverses structures cutanées peuvent émettre une fluorescence en réponse à la stimulation lumineuse spécifique d'un fluorophore particulier. En particulier, la fluorescence de porphyrines peut être détectée sous différentes illuminations dans le spectre allant de la lumière bleue aux rayons ultraviolets dont la longueur d'onde est comprise entre 300 et 450nm. La source lumineuse d'excitation peut être la lumière de Wood, celle d'une lampe à arc, d'une lampe au krypton, d'une lampe à mercure avec un filtre adéquat, d'une source lumineuse bleue incohérente ou violette dont la longueur d'onde se situe au pic d'excitation de la fluorescence, ainsi que de lampes diodes particulières et de quelques autres systèmes encore. Sous ces stimulations, la fluorescence des porphyrines apparaît rougeâtre.

Hristo Dobrev; **Fluorescence diagnostic imaging in patients with acne**, 2010 John Wiley & Sons A/S, Photodermatology, Photoimmunology & Photomedicine

Acne is a chronic inflammatory disorder of the pilosebaceous follicles with a multifactorial etiology and pathogenesis. It typically begins in adolescence when androgen hormones stimulate the production of sebum and proliferation of follicular epidermis. In consequence, the openings of hair follicles become plugged with oil secretion and corneocytes. The follicular impactions develop into initially invisible lesions (microcomedones) and then into clinically evident comedones.

Gregory Szepetiuk, Gerald E. Piérard; Scrutinizing the antibacterial effect of acne treatments using the novel Visiopor PP34 camera; Household and Personal Care TODAY – n 3/2010

Acne is a common disorder in adolescents and young adults. It results from alterations taking place in pilosebaceous follicles. These structures are most abundant on the face, chest and upper back. Several sequential biological steps are involved in the initiation, maturation and regression of each acne lesion. At first, during the preadolescent age, hormonal changes progressively lead to increased circulating androgens, both in boys and girls. Androgen receptors are present in the sebaceous gland apparatus. Their stimulation leads to increasing the size of the sebaceous gland, the sebum flow (skin greasiness) and the size of opening of the excretion duct at the skin surface (skin pore, acroinfundibulum).

Grégory Szepetiuk, Sébastien Pierard, Claudine Piérard-Franchimont, Marie Caucanas, Pascale Quatresooz, Gérald E. Piérard; Recent trends in specular light reflectance beyond clinical fluorescence diagnosis; Eur J Dermatol 2011; pp. 157-161

Under specific light illumination, particularly ultraviolet (UV) and near-UV light stimulation, the skin produces both specular light reflectance and, possibly, specific fluorescent emission. These properties offer diagnostic clues and disclose some peculiar functions of the skin. A series of superficial infections (erythrasma, some tinea capitis types, tinea/pityriasis versicolor, dermatophytoses, etc.) and pilosebaceous follicles enriched in *Propionibacterium spp* show fluorescence. This latter characteristic is downgraded or lost while on some anti-acne treatments. A quenching effect of fluorescence is observed following the application of sunscreens.

C. Piérard-Franchimont; P. Quatresooz, G.E. Piérard, Specular light reflectance of flakes in seborrheic dermatitis of the scalp: a pilot study; Experimental dermatology 2011, pp. 1-4

Seborrheic dermatitis and dandruff are common scalp conditions. In this study, we set out to explore a new method for rating both the severity of the scalp condition and the efficacy of scalp-care compounds. Scalp flakiness was sampled for 40 volunteers using adhesive-coated clear discs, with image analysis used to quantify the specular light reflectance (SLR) of the flakes. Two ultraviolet (UV)-emitting charge-coupled device cameras (Visioscan VC98 and Visiopor PP34) were used. SLR clearly highlighted the flakiness with high contrast against a black background, and the recorded appearance could be conveniently submitted to the image-analysis system for quantification. In conclusion, SLR under UV illumination highlights scalp flakiness, allowing objective measurements.

Gérald E. Piérard, Sophie Seité, André Rougier, Pascale Quatresooz; Analytic assessment under ultraviolet light of actinic lentigines under bleaching treatment

Actinic (solar) lentigines are melanitic tumors frequently developed during photoaging on the dorsum of the hands. Bleaching (whitening) agents are commonly offered to fade their darker aspect. In general, regular colorimetric methods show poor sensitivity to disclose any bleaching effect. The present randomized controlled study on 24 women was designed to objectively assess the clinical efficacy of a combination of bleaching agents on actinic lentigines. In the endeavour of improving sensitivity. The ultraviolet light-enhanced visualization (ULEV) method was used to derive analytical measurements of lentigo areas and darkness

Gérald E. Piérard, Claudine Piérard-Franchimont, Philippe Humbert; Bioimpact of EGFR antagonists on the pilosebaceous follicles; Eur J Dermatol 2011, pp. 1-4

Cancer patients under targeted chemotherapy to the epidermal growth factor receptor (EGFR) frequently suffer from unusual skin adverse events. In the past, these changes were globally qualified as a rash. Our aim was to assess objectively by non invasive bioinstrumentation some early structural and functional skin changes associated with EGFR inhibitor treatment. A series of 27 cancer patients aged 58-66 years were assessed using two ultraviolet light emitting CCD cameras, Visioscan and Visiopor. Assessments were performed on the foreheads at inclusion and therefore at weekly intervals for 2 months at most. No topical treatment was applied during the assessment period.

Grégory Szepetiuk, Sébastien Pierard, Claudine, Marie Caucanas, Recent trends in specular light reflectance beyond clinical fluorescence diagnosis, Eur J Dermatol 2011; 21(2):157-61

For centuries the human eye was the only imaging device. Since the introduction of microscopy, technical advances have been progressively brought through instruments. In fact, a considerable research effort has been launched and rapidly improved new imaging technologies over the past two decades. They have been successfully applied to skin observation, each of them affording new insight into and specific information on cutaneous morphology and physiology. In this field, we are looking at what the eye has never seen before.

T. Hermanns-Lê, K. Al Rustom, C. Piérard-Franchimont, G.E. Piérard, S. Piérard, Le “cheetah-look” Le phenotype guépard, face cache de la pigmentation mélanique innée du visage; DERM ACTU n° 131 mai-juin 2012

Au niveau du visage, trois types principaux de pigmentation physiologique peuvent être distingués. On identifie d'une part des mélanoses zonales ethniques comme la pigmentation orbitaire. D'autre part, le territoire facial peut comporter des zones mélaniques discrètes limitées par des lignes de démarcation coédifiées qui donnent un effet de “tigre-look” sous éclairage en lumière ultraviolette. Enfin, des mouche-tures relativement régulières, peuvent parsemer le visage, contribuant à un “cheetah-look” très particulier sous lumière ultraviolette.

La lampe de Wood est un outil ancestral permettant des observations dans un spectre relativement étroit de lumière ultraviolette. Cet équipement centenaire a fait l'objet de transformations techniques nombreuses pour aboutir à des cameras de type Visioscan et Visiopor (C+K electronic, Cologne).

Christiane Uhl, Diana Khazaka, C+K electronic GmbH; Techniques for globally approved skin testing; Personal Care April 2013

In efficacy testing and claim support for cosmetic products, objective measurement systems became indispensable long ago, especially since subjective clinical assessments are often prone to bias and inter-observer variation. Without suitable instrumentation it is close to impossible to determine what a product is really doing for the skin. Those objective measurement methods and subjective evaluations are mutually dependent. No measurement can be performed without the subjective evaluation of the results by the user of such instrumentation. However, a pure subjective evaluation of the skin without appropriate measurement techniques is not able to achieve accurate results either. This relationship becomes clearer when looking for example at skin colour measurements. Subjectively, the human brain cannot process slight changes in colour, especially when the colours are not viewed side by side, but at different points in time. Instrumental measurement however will clearly detect such slight changes. The achieved result must then be interpreted in context with the expected outcome or the hypothesis. For this, you will always need a knowledgeable and experienced person because ‘a fool with a tool is still a fool’, as the late Albert Kligman used to say. This relationship between objective measurement and subjective evaluation is not only true for the determination of differences in skin colour, but also for all other skin measurement parameters important for the cosmetic industry.

Teixeira, Raquel S., Araújo, Lidiane A., Mercúrio, Daiane G., Application of biophysical techniques to evaluate the efficacy of a gel with zinc pca; University of Sao Paulo, 2013

Introduction

The biophysical and skin imaging techniques are effective tools to help characterize the skin type and to evaluate the clinical efficacy of products cosmetics because they are non-invasive methods and enable to evaluate the products directly in human skin.



The oily skin properties are related to more oiliness, brightness, roughness, and disrupted skin barrier function. Acne is a common disorder of the pilosebaceous follicles with the multifactorial pathogenesis.



Microcomedones and comedones are further colonized by *P. acnes* bacteria which cause acne inflammatory lesions (pustules) and the production of proinflammatory mediators and porphyrins.



Zinc L-pyrrolidone carboxylate (Zinc PCA) has long been used as a cosmetic ingredient because of its astringent and antimicrobial properties.