## What does it measure?

The Visiopor<sup>®</sup> PP34N camera uses a specific UVlight to visualize the fluorescing acne lesions of an area of 10 x 8 mm. The orange-red fluorescence indicates the presence of Propionibacterium acnes bacteria within clinically non-evident (follicular impactions and microcomedones) and clinically evident (comedones, papules and pustules) lesions.

Acne is a common disorder of the pilosebaceous follicles with the multifactorial pathogenesis. It typically begins in adolescence when androgen hormones stimulate the production of sebum and proliferation of follicular epidermis. The openings of hair follicles become clogged with oil secretion and corneocytes. In consequence initially invisible lesions (microcomedones) and then clinically evident comedones develop. Microcomedones and comedones are further colonized by P. acnes bacteria which promote inflamed acne lesions (papules and pustules) through the production of proinflammatory mediators, free fatty acids and porphyrins. The presence of porphyrins can be demonstrated by orange-red fluorescence in the follicle openings by examining the skin under appropriate UV-A light. The intensity of follicular fluorescence and the extent of facial involvement are proportional to the population density of P. acnes and porphyrin content at the skin surface.

Clinical improvement after therapy is accompanied by significant reduction of the porphyrin concentration and the number of P. acnes, respectively.

## **Advantages & Fields of Application**

There are numerous applications in dermatology and cosmetology especially in the field of acne.

- Detection of early invisible lesions and visualization of advanced small acne lesions.
- Efficacy testing of anti-bacterial products and drugs against P. acnes.
- Determination of the comedogenic and comedolytic activity of topically applied products.
- Non-invasive, easy to use and economic.
- Comfortable software for the evaluation of the number and size of the fluorescent spots.
- Possibility of distinguishing between the redorange spots (porphyrins) and the yellowgreenish spots (others).



## **Technical Data**

*Camera works with Windows Vista , 7 and 8.1; Interface/Power supply: USB; Dimensions: approx. 12 x 5.5 x 5.5 cm; Cable length 1.5 m; Illumination: 16 UVA- LEDs, 375...385 nm; Area of view: 10 x 8 mm; Resolution: 1280 x 1024; Camera button to freeze the image* 

Computer: Windows<sup>®</sup> Vista, 7, or 8, performance must meet system requirements, USB 2.0 Technical changes may be made without prior notice.

Courage+Khazaka electronic GmbH since 1986 Mathias-Brüggen-Str. 91 · 50829 Köln · GERMANY



phone +49 (0)221. 9 56 49 90 · fax +49 (0)221. 9 56 49 91 info@courage-khazaka.de · www.courage-khazaka.de