Skin benefits

- Synergistic complex of manuka, black pepper and magnolia
- Acts on the core problems of skin dysbiosis
- Reduces growth and biofilm formation of most virulent phylotypes of *Cutibacterium acnes* (*C. acnes)*
- Inhibits the expression of 5α-reductase and shows potent anti-inflammatory effects
- Noticeably reduces sebum, papules, pustules and comedones
- Potently acts against dandruff and scalp sensitivity
- Cosmos approved

Applications

- Anti-acne
- Soothing, calming, anti-stress

Marketing opportunities *

- Restores balance to oily and troubled skin
- Fights the appearance of spots, shine and blocked pores
- Effectively targets breakouts of pimples for a healthy, balanced complexion
- Gently balances your skin’s and scalp’s microbiome
- Regulates sebum to effectively reduce dandruff and scalp oiliness
- Soothes scalp and reliefs itch caused by dandruff

* This list is for illustrative purposes only. Make sure to comply with relevant legislation.
CutiBiome CLR™ – Selected efficacy studies – *in vivo*

**ACNE**

The activity of CutiBiome CLR™ (3%) on acne was assessed in an 8-week application study.

The study was performed as follows
- Application twice daily on face
- Before study: one-week washout phase
  (no use of cosmetics and oral anti-acne products)
- 20 volunteers, 17–42 yrs old, female (16) and male (4),
  mild to moderate acne
- Determination of sebum: Sebumeter® SM 815 (Courage + Khazaka electronic GmbH), 3 measurements at distinct time points per volunteer. Results were averaged.
- Expert grading by a trained assessor of the number of papules, comedones and pimples on one side of the face
- Questionnaire

Over the period of 8 weeks, sebum production was reduced by almost 41% (Fig. 1). Thirteen out of 20 volunteers already showed reduction of sebum after 1 week into the study. An interesting correlation could be found between the measured reduction of sebum and the perceived reduction of sebum. Sixty-five percent of the volunteers reported that they felt their skin was less oily after 1 week of use of the formulation with CutiBiome CLR™. After 8 weeks, this number had increased to 80% (Fig. 2).

**DANDRUFF**

The activity of CutiBiome CLR™ (1.5%) on dandruff was assessed in a 4-week-application study. In this study a comparison was made with a benchmark active ingredient for dandruff, Piroctone Olamine (0.1%).

The study was performed as follows
- Application on scalp 3 times per week after washing hair with neutral shampoo
- Total of 39 volunteers with clinical score of dandruff ≥2 and <5
  - 19 volunteers: Piroctone Olamine (0.1%), 21–63 yrs old,
    female (11) and male (8)
  - 20 volunteers: CutiBiome CLR™ (1.5%), 20–68 yrs old,
    female (13) and male (7)
- Expert grading:
  - scalp oiliness
  - photography, Canon Ixus 30 (Canon Inc., Japan):
    general assessment of dandruff
  - micro-photography, I-scope (Moritex Corporation, Japan):
    assessment of dandruff
- Questionnaire

An assessment using micro-photography, however, showed that CutiBiome CLR™ was more effective than Piroctone Olamine (Fig. 3 and Fig. 4).

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**Fig. 1:** Effect on sebum production as determined with Sebumeter

**Fig. 2:** Effect on skin oiliness in the perception of the volunteers

**Fig. 3:** Assessment of reduction of dandruff on 3 volunteers with micro-camera (CutiBiome CLR™, 1.5%)

**Fig. 4:** Results obtained with assessment of reduction of dandruff with micro-camera