

Actify

The indigenous acne solution



BLYDE
BOTANICALS



Actify for naturally clearer skin

It's no secret how commonplace acne is. It affects roughly 85% of the global population, and manifests as painful papules, nodules, blackheads, whiteheads and cysts. It leaves our skin irritated, sensitive, and red - just shouting for help!

The World Health Organisation recognises acne as a severe, disfiguring disease and major social handicap.

Actify has a range of scientific mechanisms which contribute to the eradication of acne, unsightly pigmentation and scarring - the natural way. By uniquely targeting the communication network of these bacteria, Actify prevents antibiotic resistance and persistence of acne infections.

A potent cocktail of phytochemicals acts together to reduce pain and inflammation of acne lesions, as well as reduce unsightly pigmentation and scarring.



Antibacterial

Antioxidant



Anti-inflammatory

Scarring



Sebum production

Safe





Actify is the natural solution for healthy, blemish-free skin

Proven antibacterial activity against the acne-causing bacteria *Cutibacterium acnes* (ATCC 6919). Proven to prevent *C. acnes* (ATCC 6919) biofilm formation that contributes to antibiotic resistance.

AIM

To determine the antimicrobial activity and biofilm formation prevention potential of Actify against *C. acnes* strain 6919 compared to an industry standard.

RESULTS

Actify inhibits *C. acnes* growth at a minimum inhibitory concentration (MIC) of 7.8 $\mu\text{g/mL}$ compared to an industry standard control of 0.78 $\mu\text{g/mL}$. Actify prevents biofilm formation at a 50% inhibitory concentration (IC_{50}) of $5.7 \pm 5.0 \mu\text{g/mL}$ and the industry standard at $4.7 \pm 11.7 \mu\text{g/mL}$. [Figure 1](#)

Targets inflammation associated with acne to reduce painful lesions and sebum production by inhibiting the action of cyclooxygenase-2 (Cox-2) and lipase.

AIM

Determine the Cox-2 and lipase inhibitory potential of Actify compared to industry standards.

RESULTS

Actify inhibits Cox-2 at an IC_{50} of $28.6 \pm 4.8 \mu\text{g/mL}$ and lipase at $13.25 \pm 15.3 \mu\text{g/mL}$ compared to the industry standards with IC_{50} values of $0.09 \pm 0.04 \mu\text{g/mL}$ and $52.62 \pm 9.3 \mu\text{g/mL}$ respectively.

Actify antibacterial and biofilm formation inhibition activity

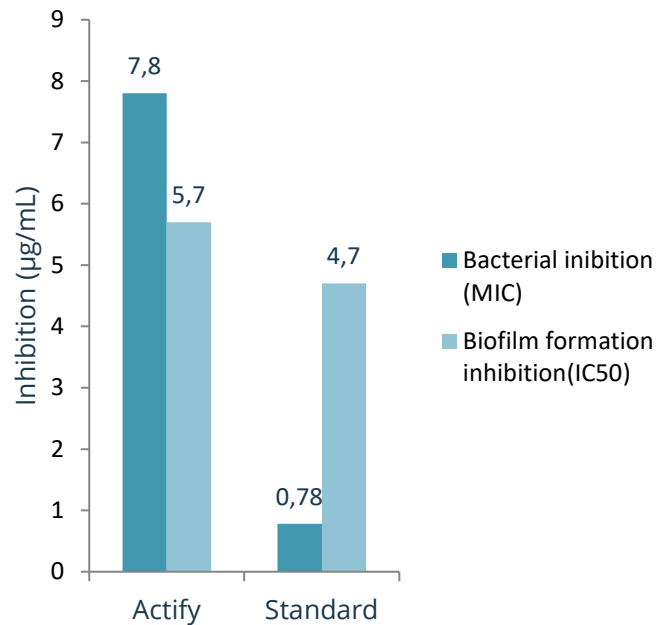


Figure 1: Bacterial and biofilm formation inhibition of *Cutibacterium acnes* (ATCC 6919)

Actify Cox-2 and lipase inhibitory activity

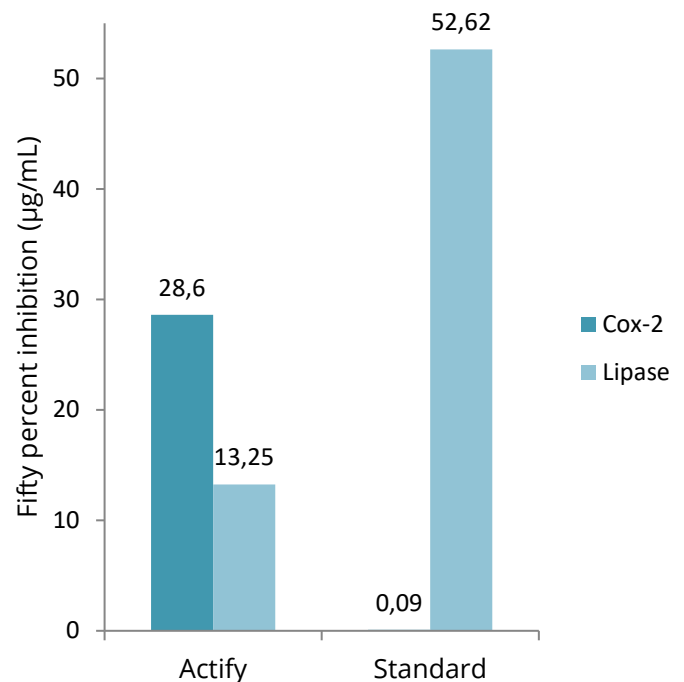


Figure 2: Cox-2 and lipase inhibitory activity of Actify against industry standards



Actify targets matrix metalloproteinase-(MMP-9) associated with acne scarring.

AIM

Determine the MMP-9 inhibitory potential of Actify against an industry standard

RESULTS

Actify inhibits the MMP-9 enzyme at an IC_{50} of $277.1 \pm 4.7 \mu\text{g/mL}$ against an industry standard with an IC_{96} of $0.411 \mu\text{g/mL}$.

Actify nourishes and boosts skin vitality by replenishing antioxidant activity

AIM

Determine the free radical scavenging potential of Actify

RESULTS

Scavenges 50% of DPPH free radicals at a concentration of $4.8 \mu\text{g/mL}$ and 50% of nitric oxide radicals at $177.9 \mu\text{g/mL}$. *Figure 3*

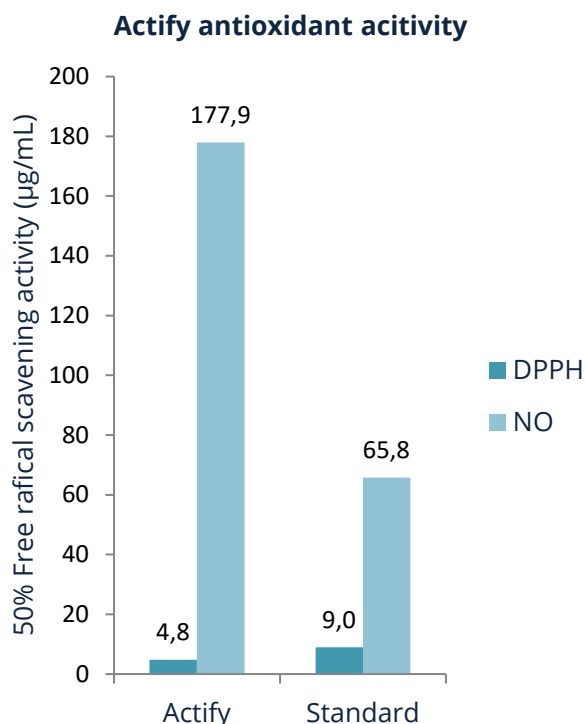


Figure 3: Free radical scavenging activity of Actify

Confirmed non-cytotoxic activity

AIM

Determine the cytotoxicity of Actify against human keratinocytes (HaCat) and mouse melanocytes (B16-F10)

RESULTS

Actify is non-toxic towards both cell lines at concentrations above $100 \mu\text{g/mL}$

Actify brightens acne-prone skin for an even complexion

AIM

Inhibit of tyrosinase, an enzyme overproduced during acne inflammation-causing loss of even skin complexion.

RESULTS

Actify inhibited tyrosinase at an IC_{50} of $26.3 \pm 4.9 \mu\text{g/mL}$ compared to an industry standard with an IC_{50} of $3.3 \pm 0.5 \mu\text{g/mL}$





Actify confirmed to be non-irritating when tested in human validation studies

AIM

To determine the primary skin irritancy potential of Actify when applied directly to the skin's surface.

RESULTS

A mean visual score of 0.47 was obtained during human irritancy studies compared to a known skin irritant with a mean visual score of 2.01. Actify is confirmed to be a non-irritant.

Actify, the power to visibly reduce 4 hallmarks of acne in 14-28 days

AIM

To demonstrate the acne reduction efficacy of Actify at 10% to eradicate acne lesions on the human face.

RESULTS

Pustules: Actify effective in reducing the number of pustules; after twenty-eight (28) days of consecutive use twice a day

Whiteheads: Actify effective in reducing the number of whiteheads; after fourteen (14) to twenty-eight (28) days of consecutive use twice a day.

Blackheads: Actify effective in reducing the number of blackheads; after fourteen (14) to twenty-eight (28) days of consecutive use twice a day.

Comedones: Actify effective in reducing the number of comedones; after fourteen (14) days of consecutive use twice a day.

Cysts: Actify effective in reducing the number of microcysts; after fourteen (14) to twenty-eight (28) days of consecutive use twice a day.

SUMMARY FILE

INCI

To be finalised

Appearance

Dark green extract, with a characteristic ethanolic, plant like smell

Preservative

None

Mutagenicity

Non-mutagen

Heavy-metal detection

None detected

Bacterial TMA (Total Microbial Activity)

None detected

Yeast and mould

None detected

Recommended concentration of use

10% in a gel formulation

Solubility

N/A

Optimal pH

5.5

Storage

In its original packaging and protected from moisture, at room temperature

Recommended shelf Life

12-18 months



BLYDE BOTANICS

www.blydebotanics.com

info@blydebotanics.com

bianca@blydebotanics.com

isa@blydebotanics.com

+27 81 254 3469

+27 72 503 5819

Floor 14, Humanities Building

TuksNovation

University of Pretoria

Hatfield, Pretoria, 0002

Gauteng, South Africa