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IMPATIC ESSENCE

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COMPOSITION CHARACTERISTICS

— **INCI**
Impatiens Glandulifera
Extract, Pandanus Amaryllifolius
Leaf Extract

— **RECOMMENDED DOSING**
0,1%-1%

— **SOLUBILITY AT 20°C**
Water – soluble
Alcohol – soluble

— **OPTIMAL PH**
5-8

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IT CAN BE USED IN THE FOLLOWING PRODUCTS:

SKIN CARE

Products:

— Soothing
— Anti-wrinkle
— Moisturizing
— Brightening

HAIR CARE

— Shampoos
— Rinse-off conditioners
— Conditioners

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EFFICIENCY TESTS

ANTI-AGING PROPERTIES

In aging skin, for the loss of collagen fibers and elastin correspond to increased expression of matrix metalloproteinases (MMPs), mainly collagenaseand elastinases. They cause remodeling of the extracellular matrix. Collagenase breaks down collagen fibers and elastinase breaks down elastic fibers. With age, the level of collagenase increases, which causes more and more damage to the collagen fibers. In addition, they become folded, and individual strands are separated by connective tissue elements. Also, the fibers are deprived of contact with the fibroblasts that produce them. With age, the amount of soluble glycosaminoglycan and soluble collagen decreases.

[Pawlaczyk M., Lelonkiewicz M., Witkowska A. Dermatoporosis as the disease induced by ageing process. Geriatria 5, 303-308, 2011].

IMPATIC ESSENCE EXTRACT HAS BEEN PRESENTED TO BE VERY EFFECTIVE IN INHIBITING COLLAGENASE AND ELASTASE ACTIVITY IN IN VITRO TESTS.

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INHIBITION OF COLLAGENASE ACTIVITY

0.01% extract inhibited activity of collagenase isolated from Clostridium heamolyticum at the level of 81.73%.

INHIBITION OF ELASTASE ACTIVITY

0.01% extract inhibited activity of porcine pancreatic elastase at 83.19%

ANTIOXIDANT PROPERTIES

An assessment of the antioxidant properties was conducted by determining the ability of the lyophilised extract to neutralise the violet radical 2,2-diphenyl-1-picrylhydrazyl (DPPH·). 0,01% extract showed antioxidant activity at the level of 177.07 µg Trolox/mL (equivalent to highly active antioxidant Trolox).

SKIN SMOOTHING ACTION

The level of skin smoothness was assessed using a special measuring device Visioscan® VC 20 plus, Courage & Khazaka Company. 11 volunteers took part in the instrumental study. Based on the conducted application tests, after 28 days of regular application, it was found that the extract smoothes the skin (on average by 9%).

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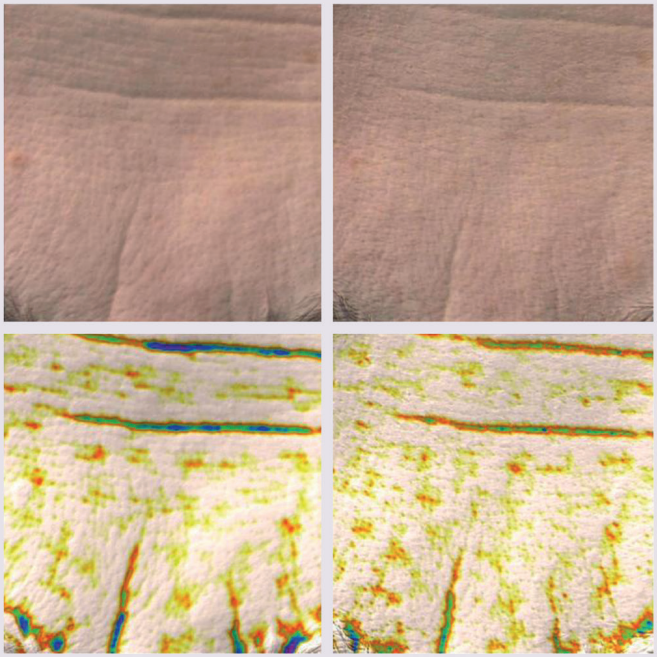

BEFORE STARTING TO USE (D0)

AFTER 28 DAYS OF REGULAR PRODUCT APPLICATION (D28)

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SKIN ELASTICITY AND FIRMNESS

The study of the effect on improving the biomechanical parameters of the skin was carried out using a specialized measuring device Cutometer® MPA 580 by Courage & Khazaka Company. Eleven participants took part in the efficacy study. Based on the application tests, after 28 days of regular application, it was found that the extract improves the skin elasticity (on average by 6%) and skin firmness (on average by 10%).

DEPTH- AND WIDTH-REDUCING OF WRINKLES

The study confirming the wrinkle reducing activity on the depth and width of wrinkles in the measurement zone using Antera 3D® (Miravex Limited). Eleven participants took part in the instrumental study. On the basis of application tests, after 28 days of regular application, it was found that the extract improves the skin elasticity (on average by 6%) and skin firmness (on average by 10%).

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ANTI-INFLAMMATORY PROPERTIES

The study of anti-inflammatory activity of the extract was assessed on the basis of lipoxygenase (LOX) inhibition using a spectrophotometric method. 0.01% extract inhibited LOX activity at the level of 73.38%.

SKIN-WHITENING PROPERTIES

Tyrosinase is the rate-limiting enzyme for melanin production. The anti-tyrosinase effect was determined by calculating the oxidation of L-DOPA to dopaquinone in an in vitro fungal tyrosinase assay. 0.01% extract inhibited tyrosinase activity at the level of 53.95%.

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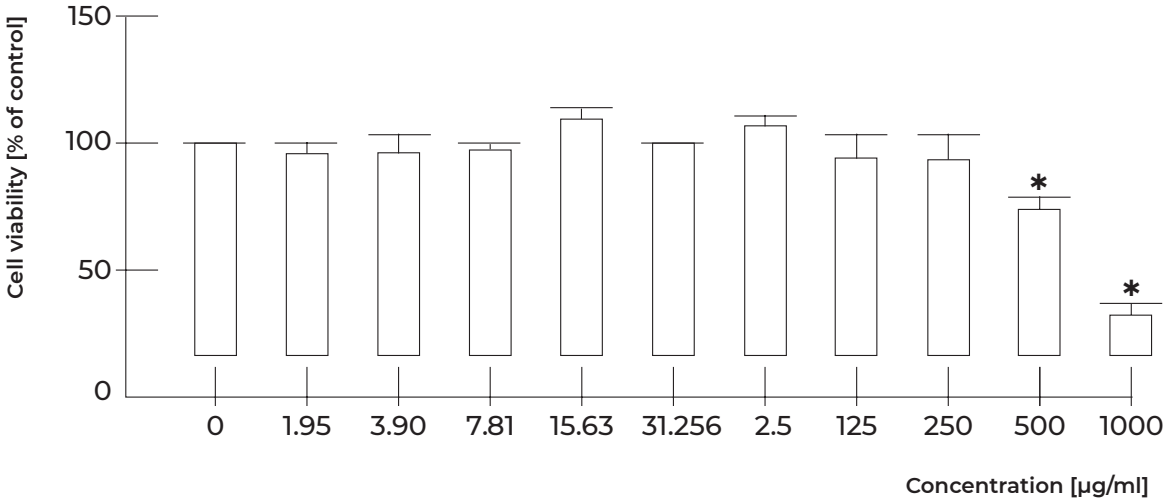
*Drawi. Viability of human skin fibroblasts after 24-hour incubation with the extract. The MTT test was performed to assess viability. *Significantly statistically different compared to control cells - incubated without test compound (0 µg/ml); $p < 0.05$, t-test.

NO CYTOTOXICITY

The cytotoxicity assessment of the extract was performed using a human normal skin fibroblast (BJ) cell line. The conducted experiment showed that the extract showed no cytotoxic effect against human skin fibroblasts.



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NO IRRITANT PROPERTIES

The aim of the study was to evaluate the irritant properties (dermal tolerance) of the extract on healthy skin of adult, using a patch test. After conducting a patch test under dermatological control on a group of 25 volunteers, it was found that the extract used by people with no documented allergy to any of the ingredients is well tolerated by the skin. No irritation or allergic reactions occurred in the tested group of volunteers. The extract therefore meets the requirements of the Skin Compatibility Test and can be classified as non-irritating.

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MOISTURIZING PROPERTIES

Instrumental tests of the level of skin hydration using Corneometer® CM 825. The aim of the study was to determine the effect of the extract on the level of skin hydration. The study was conducted with the use of a specialized measurement device by the Courage & Khazaka Company - Corneometer® CM 825. Eleven volunteers took part in the instrumental study. On the basis of application tests, after 28 days of regular application, it was found that the extract according to the invention at a concentration of 100 mg/l moisturizes the skin (on average by 3%).

ACTIVE COMPOUNDS

The extract contains large amounts of azelaic acid, p-hydroxybenzoic acid, as well as quercetin and kaempferol derivatives, ferulic acid, chlorogenic acid, vanillic acid, salicylic acid and others, confirmed by LC-MS analysis.

THANK YOU FOR GETTING TO KNOW OUR OFFER!

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