



# MYRAMAZE®

An Oasis of Wellbeing for Desert-like Skin

In the desert-like environment of South Africa, there lives a resilient resurrection plant, *Myrothamnus flabellifolia*, which has a unique adaptation strategy: in spite of its extreme environment, it can survive long and hot periods of drought in a completely desiccated state and become green again within a few hours of the first drops of rain. The resurrection properties of *M. flabellifolia* are based on physical stabilisation (such as leaf morphology, cell-wall composition etc.) and metabolic adaptation. As an example, water loss increases the production of protective constituents such as galloylquinic acids.

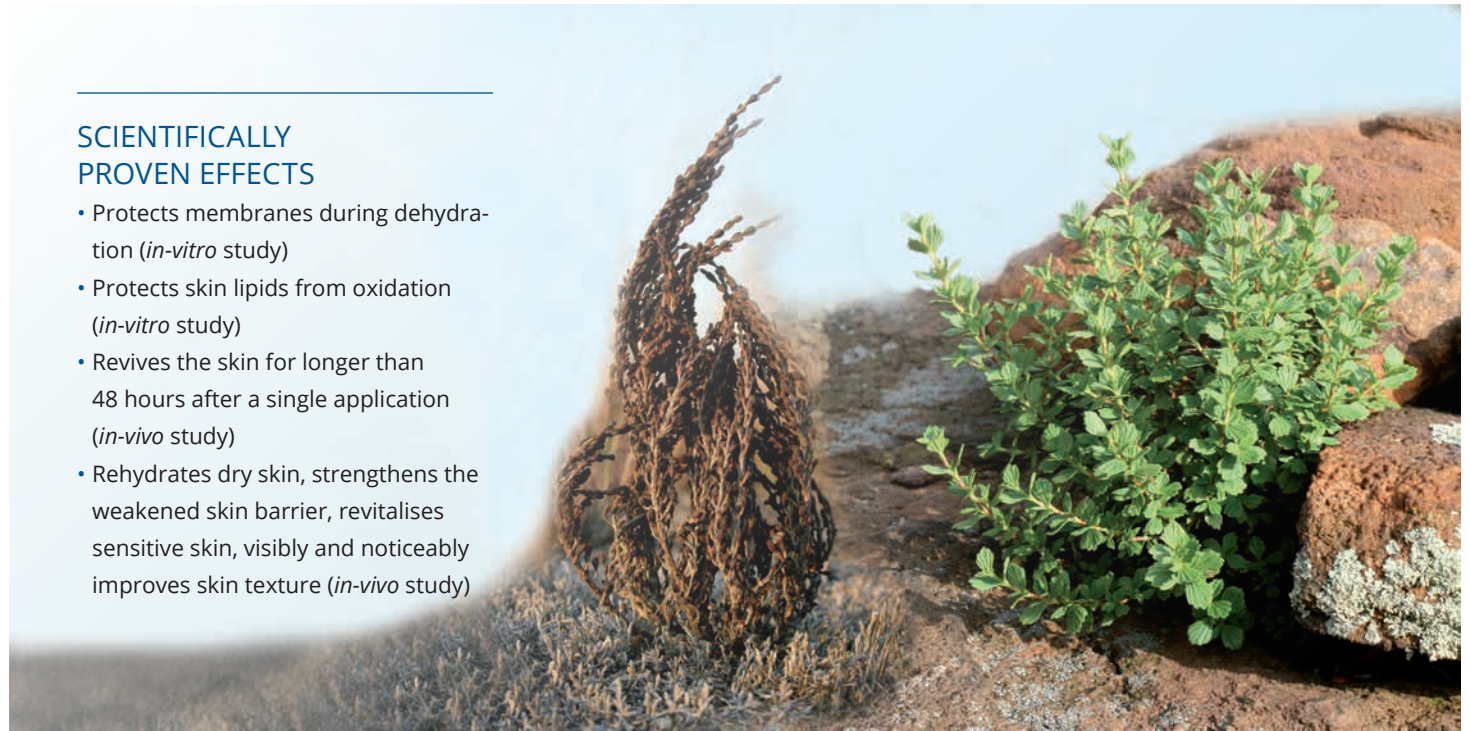
This resurrection effect can also be applied to the skin: MYRAMAZE®, an extract of *Myrothamnus flabellifolia*, is like an oasis for stressed, “desert-like” skin with a particularly high proportion of protective substances. It protects membrane structures from dehydration and preserves the most important skin lipid linoleic acid, against oxidation. A one-time application of MYRAMAZE® invigorates the skin for more than 48 hours. With regular use, MYRAMAZE® effectively revives, regenerates and strengthens skin that is stressed, attacked and depleted.

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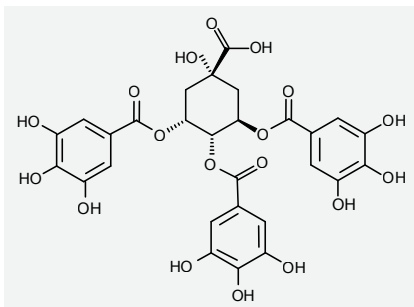
## SCIENTIFICALLY PROVEN EFFECTS

- Protects membranes during dehydration (*in-vitro* study)
- Protects skin lipids from oxidation (*in-vitro* study)
- Revives the skin for longer than 48 hours after a single application (*in-vivo* study)
- Rehydrates dry skin, strengthens the weakened skin barrier, revitalises sensitive skin, visibly and noticeably improves skin texture (*in-vivo* study)



## ACTIVE INGREDIENTS

### Quinic acid derivatives (3,4,5-tri-O-galloylquinic acid)



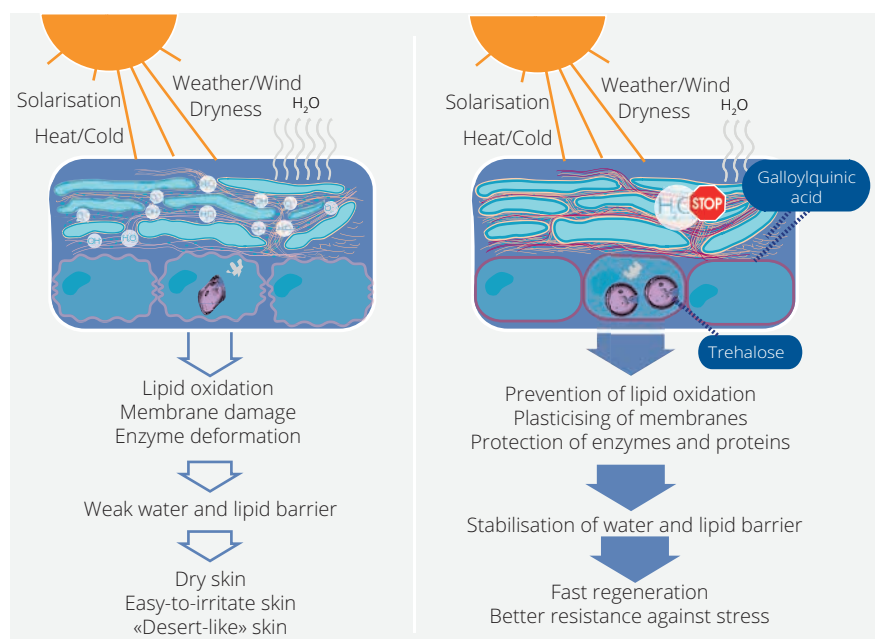
- Protect skin lipids (cell membrane and extracellular lipid matrix) from oxidation
- Protect cell membrane from damage caused by desiccation
- Traditional use: activity against asthma and allergic reactions, burn- and wound-healing

### Further active ingredients

- Polyphenols
- Trehalose
- Arbutin

## MODE OF ACTION

MYRAMAZE® stabilises membranes and protects membrane lipids from oxidative damage. This leads to a more rapid regeneration and invigoration of stressed skin.

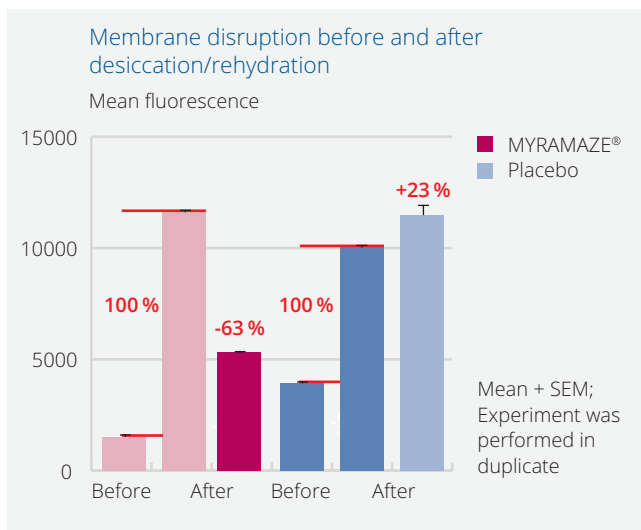


## MYRAMAZE® PROTECTS MEMBRANES DURING DEHYDRATION (*in-vitro* study)

**Method:** Simulation of a stress situation (desiccation/rehydration) for calcein (fluorescence dye) encapsulated liposomes; Membrane stability was measured by monitoring fluorescence intensity.

**Implementation:** Addition of MYRAMAZE® or placebo (propanediol) to liposomes; desiccation (15 h); rehydration (phosphate buffer resp. test substances); the higher the fluorescence values, the higher the membrane damage.

**Result:** MYRAMAZE® protects liposomal membranes against desiccation/rehydration and maintains membrane integrity.



### Application and Processing Information

Anti-Ageing products, products to regenerate stressed skin. Suitable for gels and emulsions (O/W and W/O). MYRAMAZE® is water soluble and should be processed at temperatures < 50° C.

**Recommended Use Level:** 1 – 5%

**INCI:** **EU:** Propanediol, Aqua, *Myrothamnus flabellifolia* Extract, Ascorbic Acid, Citric Acid; **USA:** Propanediol, Water, *Myrothamnus flabellifolia* Extract, Ascorbic Acid, Citric Acid; **Japan:** Propanediol, Onsen-Sui, *Myrothamnus flabellifolia* Extract, Ascorbic Acid, Citric Acid

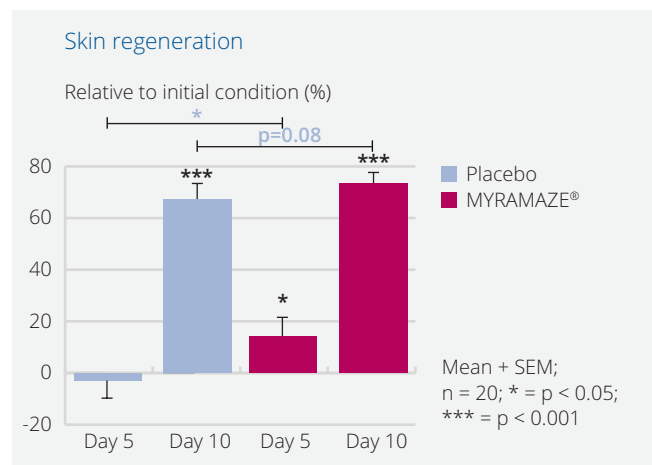
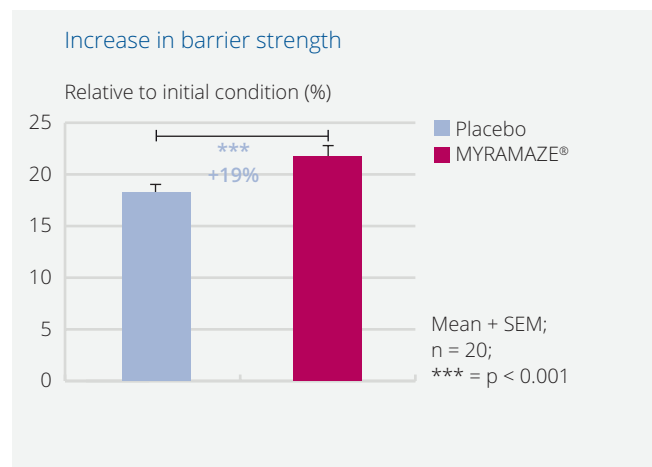


## MYRAMAZE® MEASURABLY AND VISIBLY REVITALISES ATTACKED SKIN (*in-vivo* study)

**Method:** Tewameter/assessment by dermatologists/macro photographs;

**Implementation:** 20 test persons with attacked, chronically dry skin; 19–74 years; twice daily application of a gel with 2% MYRAMAZE® or placebo (0% MYRAMAZE®) for a period of 10 days; skin measurements and photographs taken at the beginning and at the end of the study; dermatological assessment done at the beginning, in the middle and at the end of the study.

**Result:** MYRAMAZE® significantly improves the condition of attacked and stressed skin: it strengthens the skin barrier, regenerates the skin after only five days, reduces redness and improves skin texture.



▲ Day 0



▲ Day 10

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Version: 04/2014