

# Kindness Always Looks Good on You

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## Introduction

When was the last time you have been kind to the others and to yourself?

You may think that this is a “rhetorical question”, which can happen on a regular base in life to make people think about their actions. However, in this case, it is not. The question has been placed because there is a marketing study done by Mintel that has identified a new trend, called “circular kindness” which will shape people’s behaviors related to sustainable living [1]. This global survey showed that young adults aged 16-25 (Generation Z) are most concerned about their future with 75% saying that the future is frightening and that humanity is doomed. This generation is forging ahead speaking for the unheard by demonstrating that all people have an individual and collective responsibility towards themselves, others, and the planet.

Circular kindness goes in three directions, and it is summarized in **Figure 1**:

1. **Kindness to yourself**, where the need for physical and emotional support is addressed.
2. **Kindness to others**, where there is a fundamental aspect of supporting the local and wider community through the purchases and brand support.
3. **Kindness to the planet**, where personal behaviours help to minimise the impact on the planet, and thus indirectly support the community.

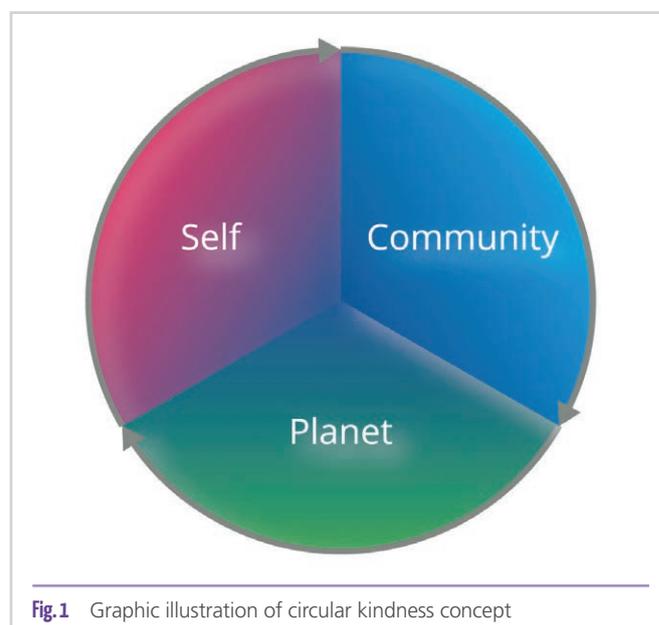
In the time of extreme climate change, pollution in the air, the landscape and the seas and the reduction of biodiversity, the cutting down of rainforests and the clinging to fossil fuels, it is not surprising that such a trend is evolving, especially involving the younger generations.

The beauty and personal care industry is not exempt from being influenced by this trend and therefore the need for products that care for the customer, society and the planet are already evident. This will impact all the different players in the industry from the raw material producer to the finish cosmetic manufacturer and from the packaging manufacturer up to the legislators.

Therefore, manufacturers have an opportunity to provide a new generation of convenient and affordable skin and hair products, which will draw deeply on new raw materials sourced both from nature and the laboratory, with a strong focus on upcycled vegetables and natural-identical lab grown ingredients.

They will be selected for their ability to improve skin and hair health, with an increased research into the link between microbioma and wellness, whilst building self-esteem and well-being. Sustainable principles will underpin all these developments, with ethically sourced, waste-minimising formulations paying a particular attention on water savings and rewarding of overseas communities and suppliers.

Such cosmetic raw materials are the RAHN-Cosmetic Actives, that are developed in a plant-based way and can be used in all cosmetic product areas. The advantage of plant-based cosmetic active ingredients is that they do not rely on fossil resources and are “natural-by-nature” and, when sustainably sourced, environmentally friendly. Enjoy the discovery of RAHN-Cosmetic Actives, be inspired and pass the sparkle of kindness, with its magic, for your new finished products.



**DEFENSIL®-PURE:****Discover the secret of postbiotic skin care.**

Anyone who has ever had dry skin knows that this is extremely unpleasant. Furthermore, unwanted microorganisms can proliferate to a greater extent and cause disbalanced microbiota on your skin, worsening the effects of dryness. DEFENSIL®-PURE is based on millet flour which is fermented using a proprietary sourdough microbiota which has been used in sourdough fermentation in a German bakery for decades. During the highly controlled fermentation process, the starch from the millet flour is transformed into valuable bacterial metabolites. We take advantage from the heterofermentative activity of the bacteria generating a plethora of organic acids, small chain fatty acids and other side products. These are especially useful for atopic skin conditions. It has been found that bakers who have frequent contact with sourdough have particularly good skin. As such, we tested the millet ferment as a RAHN-Cosmetic Active on atopic skin conditions.

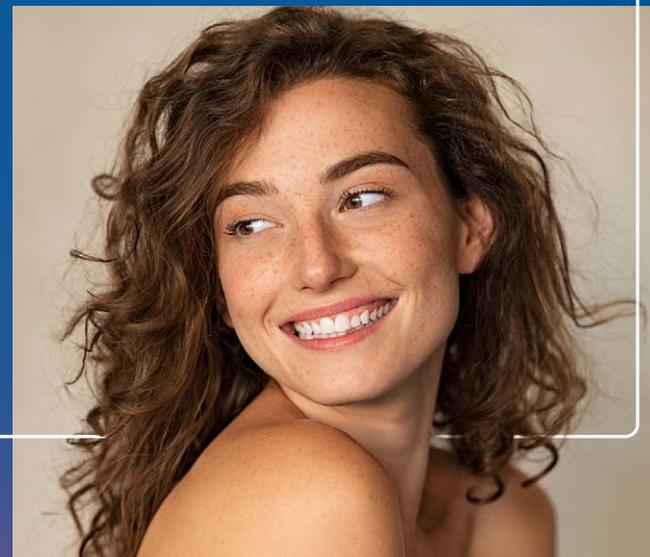
**Refinement of skin appearance on the face****Fig. 2** Improvements in facial skin

Application of 3% millet ferment increased skin hydration on atopic sites by 77% after 2 weeks and by 142% after 8 weeks. In turn, the TEWL decreased by 21 and 31%, respectively. The cumulative score of atopic condition decreased by 28% and 54%, respectively with visible results on specific atopic sites and the general appearance of the test subjects (**Figure 2**) [2].

The activity of the millet ferment can be attributed to a prebiotic effect, supporting *Staphylococcus epidermidis* and counteracting the deleterious effects of *Staphylococcus aureus* by reducing activity of the *S. aureus* toxin activated inflammasome. With its great efficacy in hydration and strengthening the skin barrier, it is also tried and tested on the non-atopic areas of the test panel. As such, it is suitable for all kinds of skin but especially suitable for sensitive skin. The active fits well into the concept of circular kindness as it is natural-

**RAHN  
COSMETIC  
ACTIVES**

DEFENSIL®-PURE

**Discover the  
secret of  
postbiotic  
skin care**

- ✓ Increases skin hydration by 142 %
- ✓ Strengthens the skin barrier by 79 %
- ✓ Improves the appearance of atopic skin
- ✓ Promotes a healthy skin microbiota
- ✓ Reduces inflammatory reactions



ly sourced and supports numerous of the UN sustainability goals. It is especially kind to people suffering from atopic dermatitis but can be used to clarify skin in every person.

### LIFTONIN®-XPERT ECO:

#### Discover the secret of smart collagen management.

Lack of collagen leads to sagging skin and development of wrinkles. The skin loses resilience and becomes dull. LIFTONIN®-XPERT ECO manages collagen production in a sustainable and a smart way, providing youthful skin and fresh appearance such as plump leaves of the *Bulbine frutescens*. This beauty of nature is cultivated on a farm in a rural region in South Africa. The carbon footprint is offset by supporting several of the UN sustainability goals. We take care for Access and Benefit Sharing of the South African legislation and by that, we support the local community. The farm provides them with work and an income and support local educational institutions. On top, we also support numerous of the UN sustainability goals in different projects. As such, this active ingredient is especially kind to the environment as well as for the local community.

The *Bulbine frutescens* plant sap (INCI: Water, Mannan) is especially suitable in making smart collagen management, i.e. providing the skin with that amount of collagen which is really needed. On top, it can encourage the preferred generation of collagen III over collagen I, as collagen III is more flexible and can better deal with gravitational forces leading to sagging skin. It is also called "baby-collagen", which we continuously lose while we age, in a larger extent as for collagen I, the "usual" collagen. *In-vitro* and *in-vivo* studies confirmed an increased collagen density after using this active ingredient.

*Bulbine frutescens* plant sap has a great lifting activity. It can decrease wrinkles and lines, and lift sagging skin in the neck area, supporting a V-shape look or decreasing the appearance of a double chin. After 3 months, the appearance of a test subject "rejuvenated" by 7.5 years, as judged by a panel of ordinary people (Figure 3) [3].

As the active ingredient is a collagen manager, it is especially suitable for care of stretch marks. It reduces length, width and depth of a stretch mark resulting in reduced volume by 53%.

It reduces the individual clinical stretch mark score by 212% over the placebo formulation. *Bulbine frutescens* plant sap is an example of an active ingredient suitable for multi-purpose applications. It ranges from well-ageing of younger to anti-ageing / well-ageing of elder subjects. It can reduce stretch marks visibility in adolescent women as well as in pregnant women. Overall, it delivers reliable results whenever true beauty is needed.

### PROTEOLEA®:

#### Discover the secret of dandruff reduction.

Dandruff affects 50% of the worldwide adult population, independent on gender or ethnicity. The affected one often feel like outsiders. The social and psychological side-effects of dandruff are neither pleasant nor insignificant and can seriously knock one's self-confidence. Aetiology of dandruff identify three major causes with probable interdependency: *Malassezia* (yeast) colonization, sebaceous gland activity and host predisposition. Therefore, tackling dandruff development demands a holistic approach.

PROTEOLEA® has a fine-tuned blend of multifunctional olive leaf, jujube and fructan polysaccharide levan. The olive leaf extract standardized with oleuropein combines its powerful anti-itching, anti-inflammatory and skin protecting properties with the skin infection preventive and revitalizing properties of the jujube extract. Levan obtained from sugar cane gives the product its final soothing and moisture providing touch for an alleviation of scalp discomfort.

Two placebo-controlled studies were conducted on two different ethnical groups (European and Indian). After 28 days of treatment with PROTEOLEA® (rinse-off; 2% and 0.5%) for both treatment groups a significant dandruff reduction has been measured (54% and 11%). Additionally, the data



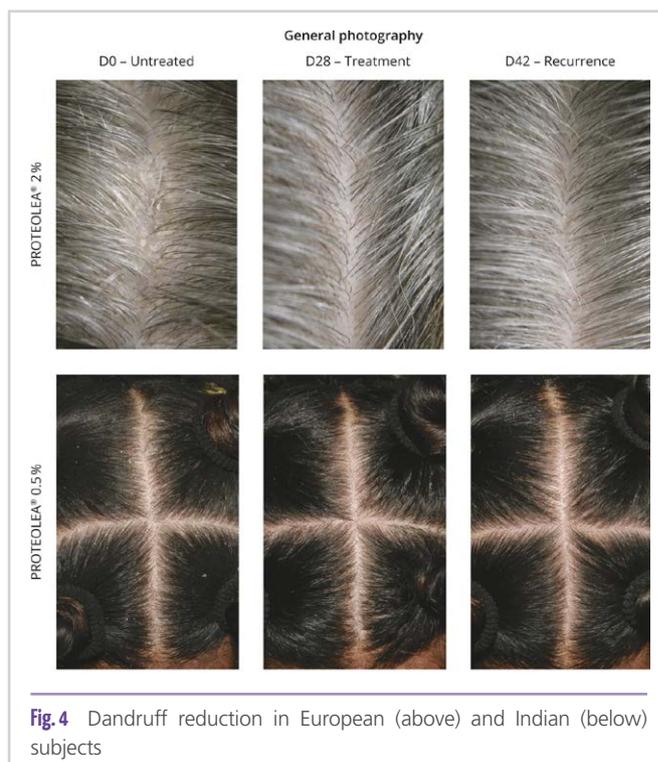
Fig. 3 LIFTONIN®-XPERT ECO visually reduces wrinkles

revealed that dandruff does not reappear after 2 weeks of treatment with neutral shampoo (Figure 4). Our additional experiments showed that we tackled two major causes of dandruff, namely sebum regulation and direct reduction of *Malassezia furfur* [4]. Therewith, PROTEOLEA® sustainably and naturally reduces dandruff giving the affected their self-confidence back.

**RADICARE®-ECO:**  
**discover the secret of urban stress prevention.**

According to the WHO, 91% of the world’s population lives in places where air pollution levels exceed the WHO guideline limits. Particulate matter causes more harm than once thought. Our integument (skin and hair) as a first line of defence experiences serious harm if exposed over the long term to the air pollutants and this is exacerbated drastically if there is simultaneous exposure to UV irradiation.

Oxidative stress is the root of many problems in our scalp and hair, hair follicles can be weakened, and scalp develops sensitivity, discomfort, dryness, or oiliness. Powerful antioxidants is defense mechanism of our body. A constant supply of antioxidants or even better a mixture of antioxidants is perfect way to combat oxidative stress. RADICARE®-ECO combines the three most powerful natural antioxidant ingredients; namely



**Fig. 4** Dandruff reduction in European (above) and Indian (below) subjects

barley grass (*Hordeum vulgare*), rosmarinic acid from *Melissa officinalis* and  $\alpha$ -glucosyl hesperidin from the pith of oranges. The application of 0.5% RADICARE®-ECO protected hair shafts against urban pollution-induced protein oxidative dam-

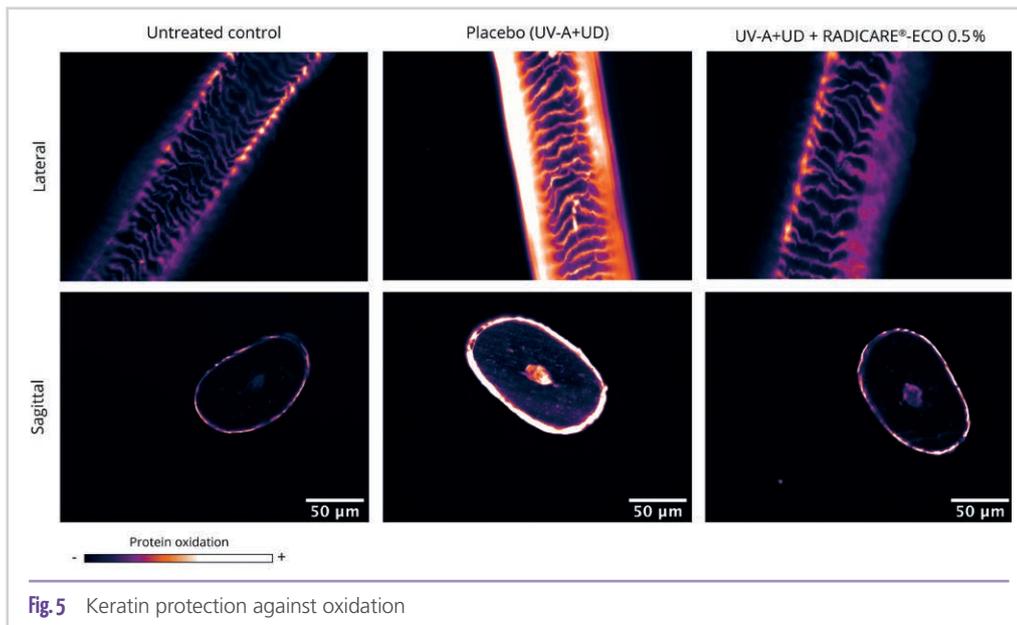
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**Fig. 5** Keratin protection against oxidation

age. Oxidative damage was reduced by 52% in the cuticle and by 88% in the cortex compartment (Figure 5). Further studies revealed improvement of hair integrity, significant shine preservation in chlorinated water and colour boosting and protecting efficacy. Additionally, cells in 3D scalp model were successfully protected against deleterious effects of particulate matter and UV irradiation [5].

The powerful RADICARE®-ECO protection trio nips the problem in the bud and unveils perfect urban pollution shield for scalp and hair.

## Conclusions

RAHN-Cosmetic Actives are the perfect choice when it comes to future-oriented active ingredients in the cosmetics industry. They are developed according to the concept of “circular kindness”, which incorporates sustainability in relation to the planet, the community, and the self.

**Sustainability for the planet:** RAHN-Cosmetic Actives are plant-based. Not only the plant-based active ingredients, but also the respective solvents for the extraction are derived from plants. We are a member of the RSPO and thus pay attention in the choice of sustainable palm oil-based solvents.

Especially with new developments, we make sure that the distances from the field to the warehouse are as short as possible. This is achieved, for most of our actives, by cultivation and production in Central Europe. Our active ingredients are fully biodegradable and do not pose any risk to the environment after use in finished cosmetic products.

**Sustainability for the community:** the RAHN-Cosmetic Actives development model is based on the promotion of Small-Medium enterprises (SME) in terms of cultivation and

extraction of plant material. A particular attention is paid to the applicable environmental standards and to an active involvement in access and benefit sharing in the respective countries – with certification. The UN sustainability goals are supported through carbon footprint reduction projects, thereby promoting educational standards and sustainable thinking in developing countries. In RAHN-Cosmetic Actives, there is the goal to be one step ahead in complying with global cosmetic regu-

lations. For example, the supply chain is already fully traceable for almost all products. Many of RAHN-Cosmetic Actives are already vegan, kosher and halal.

## Sustainability for finish cosmetic products manufacturers and consumers:

RAHN-Cosmetic Actives are easy to formulate, tested for long-term stability and claim substantiated with scientific *in-vivo* and *in-vitro* studies. Their documentation is unprecedentedly complete and the support legendary. They are also in harmony with nature and science for the end consumer. The products are safety tested, non-irritating and non-sensitising, fragrance allergens are well below the declaration limit in the final product. Numerous “free-from...” claims can be served as well. And, finally, the customer can also rely on tested efficacy.

*RAHN-Cosmetic Actives: Unveiling the secrets of beauty.*

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