

## personal care

Essential Aspects of Filling Stations for Cosmetic Products in the Retail Trade

Effect Pigments with Customized Performance

# sofw

# Journal

Home & Personal Care Ingredients & Formulations

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Sense or Nonsense?

## antiperspirants

Anti-Odor Properties of Sodium Bicarbonate

Microbiota-respectful Deodorant which Allows Axilla Perspiration

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## Beauty and the Mask – eyes only

How wearing a face mask affects the choice of the right skin care products

S. Hettwer, E. Besic Gyenge, S. Breitenbach, B. Suter, B. Obermayer

### Behavioural changes

Within a very short period of time, wearing a face mask has led women to focus more on the eye area when applying make-up. A survey by the French IFOP showed that 44% of women who regularly used decorative cosmetics no longer put make-up on their lips under the mask. The proportion of women who used make-up daily decreased by half. The trend is now strongly moving towards skin care and wellness at the expense of color cosmetics (Premium Beauty News, July 12, 2020). Surveys in France, Germany and U.K. confirm this. Of those over 55, 46% say they have more often taken up beauty and body care activities to promote their health. Of the 16-34 year olds, 45% say they do this to reduce stress and anxiety. Overall, 59% said that beauty and body care activities were used to have a good time (Mintel survey, 2020).

In uncertain times, people want to feel safe and secure. This leads to a strong demand for cosmetics that care for consumers and make them feel good. In other words, products with fragrances and active ingredients that help people to relax and cope better with stress. The personal care industry can respond with more positive and emotional marketing. However, the products must also be effective enough to generate long-term trust and interest, which is very important for emotional products.

### What happens above the mask?

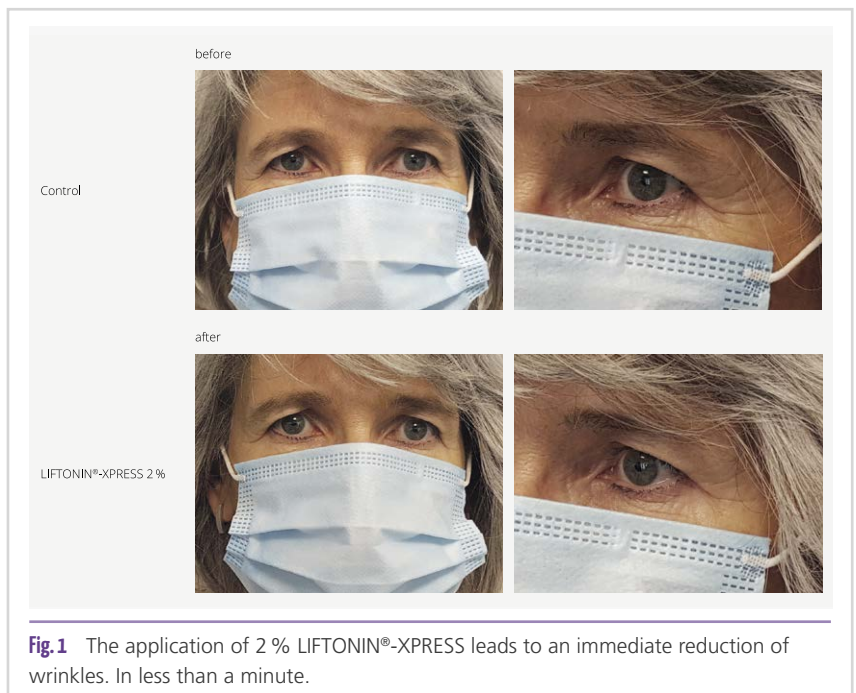
The mask covers a large part of the face. Therefore it is not always easy to correctly assess the emotions and state of mind of the person opposite. To emphasize the beauty of the face, a large part of the “surface” is also hidden. As the surveys show, it makes little sense to wear lipstick under the mask. It remains to accentuate the eye area and obviously, there are no limits in the color cosmetics field.

The situation is different with rejuvenating cosmetics. Here too, the eye area offers great opportunities for application, because the wrinkles around the eyes make a big difference. And just as in the color cosmetics area, the immediate effect is desired. For this purpose, we offer LIFTONIN®-XPRESS, the “Instant Wrinkle Minimizer”. Whether on the train, while shopping or in a zoom meeting. With LIFTONIN®-XPRESS you can even out wrinkles around the eye area or on the forehead in seconds, for a fresh and young look above the mask (Fig. 1).

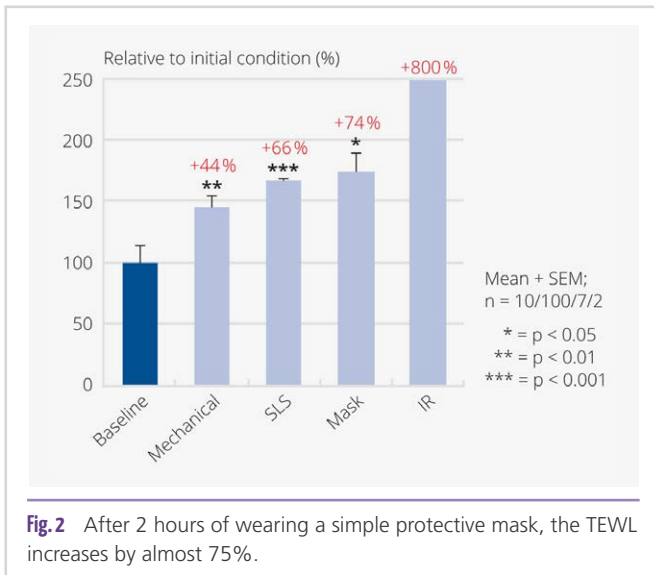
### What happens under the mask?

In many countries in Asia for a long time, an expression of mutual respect to protect their fellow human beings from infectious respiratory diseases, is wearing a face mask. This is a rather unusual sight in the rest of the world, up to now. However, the COVID-19 pandemic has also led to the wearing of masks there, which can cause cosmetic problems for the skin. We see three main causes that can affect the skin when wearing masks:

- Mechanical irritation of the skin
- Increase in humidity
- Increase of the air temperature



**Fig. 1** The application of 2 % LIFTONIN®-XPRESS leads to an immediate reduction of wrinkles. In less than a minute.



**Fig.2** After 2 hours of wearing a simple protective mask, the TEWL increases by almost 75%.

Mechanical irritation in the areas where the mask touches the face, such as the chin, cheeks and the bridge of the nose, can damage the skin barrier and cause an inflammatory reaction that leads to reddening of the skin. Skin irritation and discomfort can be the result. Permanent wearing of masks may intensify these skin reactions by mechanical activation of the TRPV1 receptor. It is therefore important to suppress corresponding inflammatory reactions from the beginning. Not least to avoid an acne outbreak (maskne).

But it is not only the mechanical irritation of the skin that causes problems. Internal studies show that the air conditions under the mask also lead to an undesired change of the skin barrier. The transepidermal water loss (TEWL) under the mask was on average almost 75 % higher than without wearing a mask (Fig.2). Indeed, *Van Rensburg et al.*, *Skin Res Technol.* 2019, describe that TEWL correlates positively with an increase of skin temperature. The TEWL is strongly influenced by the functioning skin barrier and any damage, be it chemical, mechanical or physical, directly expresses itself in an increased TEWL. The measurement of the TEWL is therefore the most important means to detect a damage of the skin barrier. In own studies it could be determined that the skin barrier is strongly disturbed by mechanical irritation (tape stripping), washing with SLS and massive IR irradiation (heat). Wearing a mask for only 2 hours already had a strong effect here. Increasing the temperature under a mask has the effect of a permanent irradiation with low doses of infrared light, which demonstrably disturbs the skin barrier. In addition, there is also mechanical irritation at the points where the mask lies on the face.

These skin changes can therefore occur as a result of wearing a mask:

- Disruption of the skin barrier
- Skin redness
- Skin irritations and sensitive skin
- Acne outbreak

# LIFTONIN®-XPRESS

The Instant Wrinkle Minimiser



# DEFENSIL®-SOFT

Help your skin chill out



# SEBOCLEAR™-MP

Balanced Microbiota in Ageless Skin



# RAHN

SWISS EXPERTISE

Your partner for excellence

Since the trigger – wearing the mask – cannot be prevented, cosmetic solutions must be based on the expected disorders. This is where cosmetic active ingredients having the following effects can be of help:

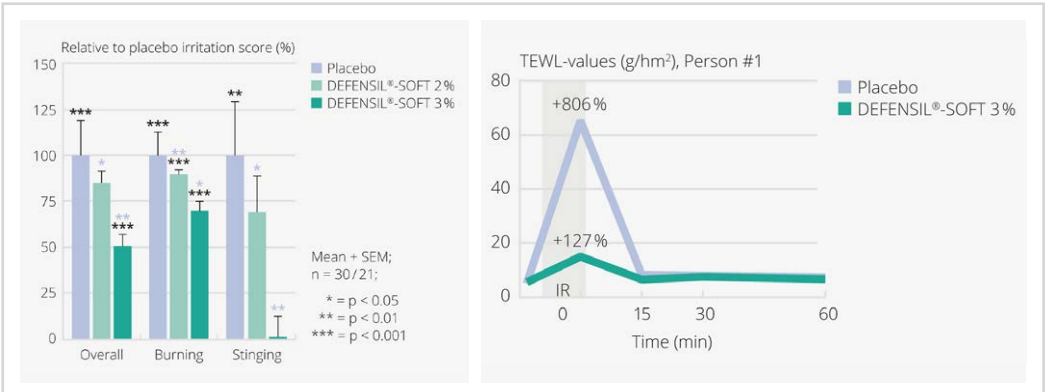
- Reduction of the transepidermal water loss to strengthen the skin barrier
- Reduction of the microcirculation to counteract reddening of the skin
- Blocking of the TRPV1 receptor to counteract inflammation and skin irritation
- Skin microflora and acne control

**RAHN offers various cosmetic actives as a solution**

DEFENSIL® protects against increasing transepidermal water loss due to skin irritation and thus strengthens the skin barrier. While cortisone and panthenol were unable to stop an increase in transepidermal water loss after irritation with SLS, the skin barrier remained virtually intact with 2% DEFENSIL® and was able to regenerate very quickly (Fig. 3).

Thanks to its anti-inflammatory properties, DEFENSIL® reduces the microcirculation triggered by an increase in temperature within minutes and can thus reduce skin redness (see DEFENSIL® documentation).

We pursue a different approach with DEFENSIL®-SOFT. It reduces heat-related transepidermal water loss and redness. DEFENSIL®-SOFT acts as a neuro-soother, which can bring the hypersensitivity of the skin due to the constant irritation by the mask back into the normal range. An increase in microcirculation is effectively reduced (see DEFENSIL®-SOFT documentation). A few minutes are sufficient to reduce sensations



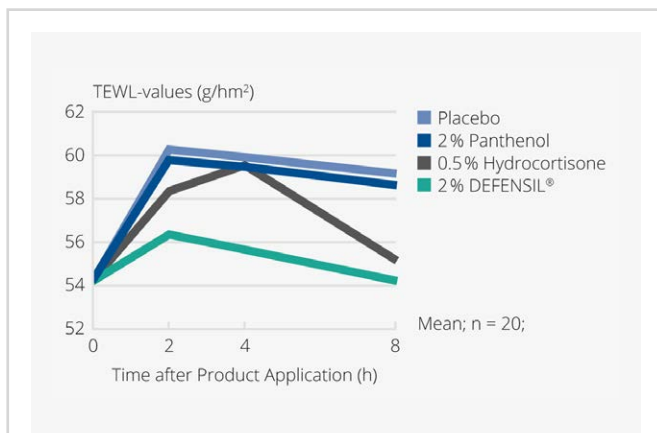
**Fig. 4** DEFENSIL®-SOFT can reduce skin irritation and discomfort within 3–5 minutes. It prevents heat-related transepidermal water loss, reduces microcirculation and skin redness.

(Fig. 4). With 2% you already get remarkable results, which are considerably intensified with 3%.

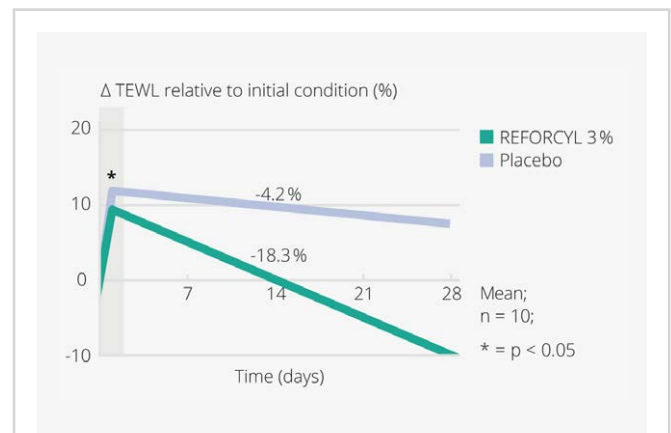
We recommend REFORCYL® for more mature skin or in cases of mechanical damage to the skin barrier due to chafing of the mask on the skin. At an application level of 3% it strengthens the skin barrier after mechanical stress as impressively determined in a tape stripping assay. The moderate mechanical removal of corneocytes already showed a 10% increase of the transepidermal water loss, which could be completely compensated after 14 days. After 28 days, it was even 10% lower than baseline level. Placebo, however, did not lead to any improvement (Fig. 5). The reason for the fast regeneration is the increased lipid synthesis and refilling of fatty acids which are important for the skin barrier. REFORCYL® is therefore very well suited for mature, dry skin whereas young skin needs different care, as oily skin tends to acne.

**SEBOCLEAR™-MP takes care of the causes of maskne**

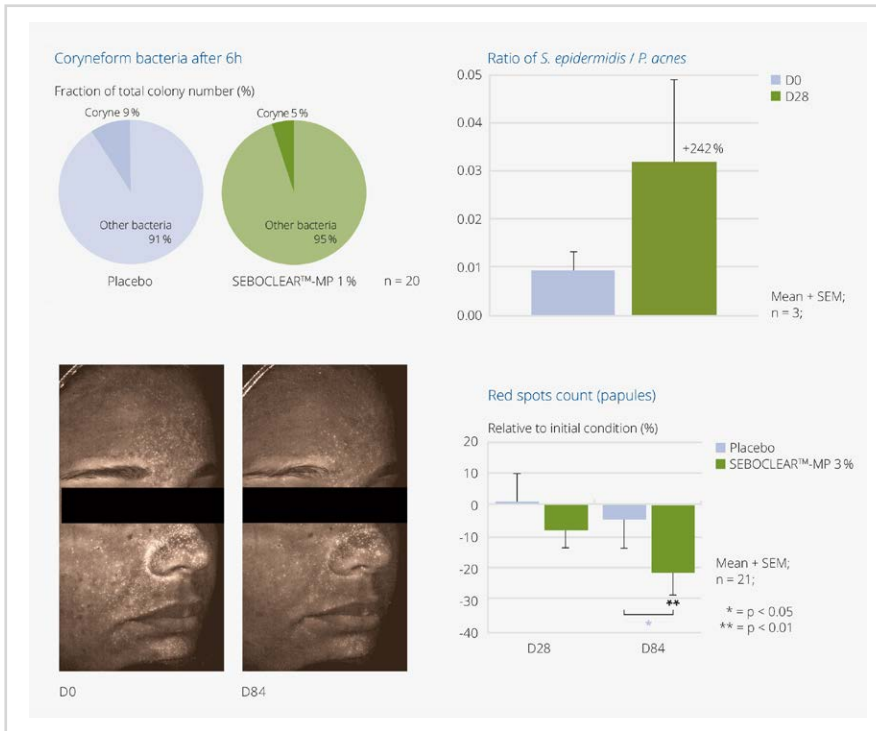
Maskne (acne caused by wearing a mask) has been a rapidly developing skin impurity since the COVID-19 pandemic. In addition to adequate cleansing and moderate exfoliation, sebum



**Fig. 3** DEFENSIL® maintains control of the skin barrier after irritation with SLS.



**Fig. 5** Single tape stripping simulates a damage of the skin barrier, as one can imagine a mechanical abrasion of corneocytes under a mask.



**Fig. 6** SEBOCLEAR™-MP reduces corynebacteria and propionibacteria and promotes healthy skin microflora, recognizable by the reduction of porphyrin-positive pores. It reduces the number of inflamed papules, which can develop into acne pimples when irritated.

control and inhibition of acne-causing bacteria is essential. In the humid climate under the mask, the growth conditions of corynebacteria and propionibacteria are optimized. It is therefore important to keep them in check and reduce inflammatory skin reactions. This is where SEBOCLEAR™-MP can help, as it quickly reduces the number of coryneform bacteria and balances the ratio of the good skin microbiota (*S. epidermidis*) to the acne germ *Propionibacterium acnes*. SEBOCLEAR™-MP markedly reduces the number of pores populated with *P. acnes* and suppresses acne formation, especially in the chin/nasolabial folds/bridge of the nose (Fig. 6).

The important thing with this face care is to take intensive care of the skin barrier. For this purpose, we have developed the "Skin Balancing SOS-Treatment" with 2% SEBOCLEAR™-MP and 3% DEFENSIL®-PLUS. DEFENSIL®-PLUS, as an intensified version of DEFENSIL®, is RAHN's flagship product for the protection and repair of the skin barrier. In addition to supporting the skin's own barrier active ingredients, it has a strong anti-inflammatory effect, which, in synergy with SEBOCLEAR™-MP, ensures optimum protection when wearing a mask. With the selected RAHN-Cosmetic Actives you can get the most important skin irritations under control when wearing a mask.

## Skin Balancing SOS Treatment

(700.482.0001)

St	Substance	INCI name USA	% [w/w]	Manufacturer	
1	Water demin.	Water	60.50	several	
2	TEGO Feel C 10	Cellulose	1.00	Evonik, DE	
	Keltrol CG-SFT	Xanthan Gum	0.50	CP Kelco, US	
3	Tego Alkanol 1618	Cetearyl Alcohol	3.50	Evonik, DE	
	Dermofeel GSC	Glyceryl Stearate Citrate	3.00	Evonik, DE	
	Amisoft HS-11P(F)	Sodium Stearoyl Glutamate	0.20	Ajinomoto, JP	
	Tegosoft CI	Cetearyl Isononanoate	7.00	Evonik, DE	
	Verstatil PC	Phenoxyethanol, Caprylyl Glycol	1.00	Evonik, DE	
	Myritol 318 MB	Caprylic / Capric Triglyceride	18.00	BASF, DE	
4	DEFENSIL®-PLUS	Dermofeel Toco 70 non-GMO	Tocopherol, Helianthus Annuus (Sunflower) Seed Oil	0.10	Evonik, DE
			Octyldodecanol, Ribes Nigrum (Black Currant) Seed Oil, Helianthus Annuus (Sunflower) Seed Oil Unsaponifiables, Cardiospermum Halicacabum Flower/Leaf/Vine Extract, Tocopherol, Helianthus Annuus (Sunflower) Seed Oil, Rosmarinus Officinalis (Rosemary) Leaf Extract	3.00	RAHN AG, CH
5	SEBOCLEAR™-MP	Propanediol, Maclura Cochinchinensis Leaf Prenylflavonoids	2.00	RAHN AG, CH	
6	Perfume NihilO001	Perfume	0.20	Huber the Nose, CH	

Production: Mix 2 and add to 1 while stirring, the phase must be homogenous, heat to 75°C while stirring / Mix 3 and heat to 75°C while stirring / Add 1&2 to 3 while stirring strongly, homogenise and cool to 40°C while stirring / Add the remaining ingredients separately, homogenise strongly, cool to 25°C while stirring.

**Formulation** Example of a formulation perfectly designed to strengthen the skin barrier and prevent maskne when wearing face masks.



contact

Stefan Hettwer | stefan.hettwer@rahn-group.com

Emina Besic Gyenge  
 Sandra Breitenbach  
 Brigit Suter  
 Barbara Obermayer

RAHN AG  
 Dörflistrasse 120  
 8050 Zürich | Switzerland