

ISSUE MAY 2017

# COSMETOPOLITAN



**COS-INSIDE**

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RAHN

**LAB-NEWS**

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for your hair

**AROUND  
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of exploration in  
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FAQs - Frequently  
asked questions ...

**RAHN**

Your partner for excellence

# Dear Readers,



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Temperatures are rising, the sun makes our skin tingle: summer is just around the corner! We can look forward to some long, warm summer days.

At this time of year especially, we spend a lot of time outside in the fresh air. Sunlight heightens our thirst for activity and makes us feel good ... we shouldn't forget to protect our skin accordingly. Writer Mark Twain once said, "the finest clothing made is a person's own skin". Skin can only be beautiful – and stay that way – if it is cared for properly.

So what's missing? Not much at all really – often it's the little things which make life so wonderful: having enough time to enjoy the summer and the sun with the people we love.

Yours,

Sandra Gut  
from your RAHN team

# WHO IS NEW?

A very warm welcome to the new colleague joining our team:



**SANDRA BREITENBACH**

Function

Product Manager Cosmetic Actives

Joined

1 March 2017

We hope Sandra will settle in quickly and we look forward to developing a strong and productive working relationship.



# Hello there, we're new in town...

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## AJINOMOTO

**AMISAFE® LL-DS-22** (INCI: *Disodium Sebacoyl Bis-Lauramidolysine*) is a multifunctional, amino-acid-based gemini surfactant (= designation for surfactants whose molecules each contain two hydrophilic and two hydrophobic groups). The raw material itself, however, is not used as a surfactant, but provides multifunctional advantages. It is not a new material, but a number of new, exciting studies have been carried out. It has been proved, for example, that hair-drying time is reduced by 30%.

**Amihope OL** (INCI: *N-Capryloyl Lysine*) makes your formula easier to disperse, leaving a silky skin sensation. In contrast to Amihope LL, OL has an even lighter, more gentle texture and is invisible after application.

## LABORATOIRES EXPANSCIENCE

Three new products derived from Peruvian passion fruit have been launched. **Ormesia®**, **Virgin Maracuja Oil** and **Passioline®**. You'll find more detailed information on pages 9 and 14 to 17.

## RAHN COSMETIC ACTIVES

**DEFENSIL®-SOFT** (INCI: *Propanediol, Albatrellus Ovinus Extract, Citric Acid*) is obtained from the edible mushroom *Albatrellus ovinus* and blocks the pain receptor TRPV1 which is responsible for ultra-sensitive skin as well as heat-related skin ageing which is triggered, for example, by infrared rays. You'll find more information on page 8 of this issue.

## SYTHEON

**HydraSynol™ IDL** (INCI: *Isosorbide Disunflowerseedate*) for optimum moisturising of the epidermis and helps keeping the skin barrier intact. Furthermore, it protects the skin against oxidative stress and is ideally suited to anti-ageing applications.



Be inspired by our new textures and formulations ...

## PELLETECH

### Cooling Gel

	Ingredient	INCI Name	% [w/w]	Manufacturer
1	Water demin.	Aqua	88.76	several
2	Carpopol 980 NF	Carbomer	0.20	Lubrizol, B
3	Glycerine	Glycerin	3.00	several
	D-Panthenol	Panthenol	3.00	DSM, CH
	Protectol® PE 5	Phenoxyethanol	0.90	BASF, D
	Peppermint Oil	Mentha Piperita Oil	0.04	Essencia, CH
4	NaOH solution 10 %	Sodium Hydroxide, Aqua	0.60	several
5	Cosmospheres® WL1-M	Mannitol, Microcrystalline Cellulose, Menthol, Propylene Glycol	2.50	Spirig Pharma AG, CH
	Cosmospheres® GC3-S	Lactose, Microcrystalline Cellulose, Menthyl Lactate, CI 77289	1.00	Spirig Pharma AG, CH

## SISTERNA

### Natural Fluid Foundation

	Ingredient	INCI Name	% [w/w]	Manufacturer
1	Aqua Bio Aloe	Aloe Barbadensis Leaf Juice	47.70	several
	Natpure Cellgum Plus	Microcrystalline cellulose, Cellulose gum, Cellulose	0.50	Sensient
	Veegum Pure	Magnesium Aluminum Silicate	0.40	Vanderbilt
	Glycerin BIO	Glycerin	10.00	several
	Cosphaderm X 34	Xanthan Gum	0.10	Cosphatec GmbH
	Gum Arabic	Acacia Senegal Gum	0.20	several
	S-Face M-1001	Polyglyceryl-10 Myristate	3.00	Sakamoto
2	Hombitan AFDC	CI 77891	8.60	Huntsman
	Ferroxide 212P Red	CI 77491	0.30	Huntsman
	Ferroxide 510P Yellow	CI 77492	1.00	Huntsman
	Ferroxide 78P Black	CI 77499	0.10	Huntsman
3	S-Face S-1001 P	Polyglyceryl-10 Stearate	5.00	Sakamoto
	Isofol 20	Octyldodecanol	12.00	Sasol
	Plantasens Emulsifier HP30	Glyceryl Stearate, Cetearyl Alcohol, Sodium Stearoyl Lactylate	5.00	Clariant
	Sisterna SP30-C	Sucrose Distearate	1.50	Sisterna B.V.
	Sisterna SP70-C	Sucrose Stearate	0.50	Sisterna B.V.
	Sisterna SP50-C	Sucrose Stearate	1.00	Sisterna B.V.
	Jjoba Oil BIO	Simmondsia Chinensis Seed Oil	0.10	several
4	COVIOX T-90 EU C	Tocopherol	1.00	BASF
	Sensicare C3000	Dehydroacetic Acid, Benzy Alcohol	1.00	Chemipol
5	Profumo Doucer Miel Natflor RS38177	Parfum	1.00	several

Do you require further information / documentation? Ask your RAHN team.

# New Cosmetic Trend: “Black Cosmetics”

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## Cosmospheres® Activated Carbon Beads-S with 30% Carbon Black

- Activated carbon purifies the pores
- Cleans and matts oily, greasy skin and hair without irritating or dehydrating
- Whitens your teeth

### Rinse-off Products:

- Shower gel e.g. Carbon Power Shower Gel for men
- Cleansing gel, Cleansing mask, Shampoo
- Hair Care Products
- 3 in 1 Rinse-off products for face, body & hair

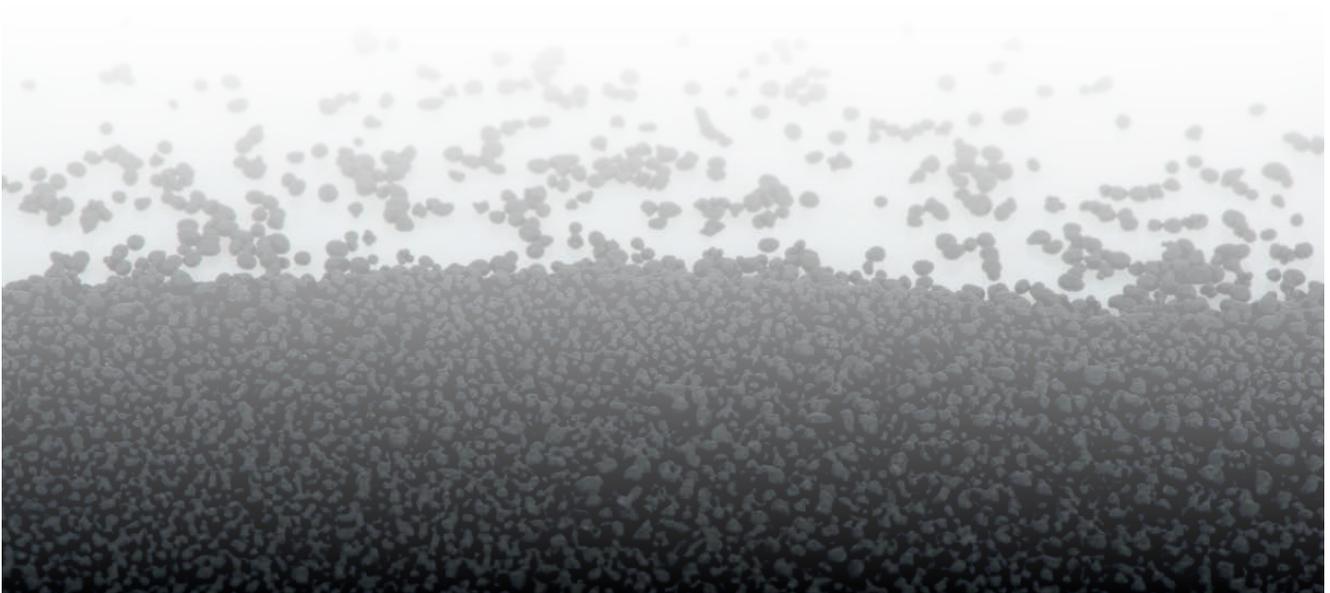
### Leave-on Products:

- O/W Emulsion, Lotion, Serum, Gel, Mask for Oily Skin, After Shave Gel

## Why you should use Cosmospheres®

- Cosmospheres are unique beads
- Superb, esthetic visualization of your marketing claims
- Create emotions for customers
- Give your product a special touch

Apply the formulation, rub in and the active ingredient is released!



# 3. RAHN UK

## Formulation Technology Seminar

This year's seminar theme was "Protecting Skin".

Skin protection is an essential topic that is often understood simply as UV protection and/or antioxidant delivery. In fact, this topic needs a more holistic view – involving the formulation, understanding skin biology and creating an individual protection strategy.

It was our aim to present a market overview, stimulating with concept ideas and offering formulation know-how for ultimate skin protection.

A big "thank you" to all attendees and our suppliers Ajinomoto, AmSilk and RAHN-Cosmetic Actives. It was a great seminar!



# And the winner is ...

## ... DEFENSIL®-SOFT

We are very happy to announce that DEFENSIL®-SOFT received Gold in the category "Most Innovative Raw Material – Natural Products" of the BSB Innovation Prize for Cosmetics and Raw Materials 2017.

During In-Cosmetics 2017 in London, the BSB European Innovation Prizes were awarded for the 15<sup>th</sup> time by the independent German BSB – Beratungs- and Servicebuero Dr. Riedel. This innovation prize was brought to life with the aim to promote the global dissemination of up-to-date knowledge.

DEFENSIL®-SOFT is made from the edible mushroom *Albatrellus ovinus*, also known as Northern truffle. The active ingredient blocks the pain receptor TRPV1, a key mediator for very sensitive skin and for heat-induced skin ageing, e.g. due to IR-radiation. Within minutes DEFENSIL®-SOFT reduces discomfort such as stinging and burning, calms hypersensitive skin and protects skin barrier against IR stress.



Picture: Angelica Meiss, COSSMA



BSB  Innovation Prize  
NATURAL  
Products 2017  
1. Prize Category Most Innovative Natural product

## ... PASSIOLINE®

A successful In-Cosmetics 2017 for Laboratoires Expanscience. The new active ingredient PASSIOLINE® wins GOLD at the "Innovation Zone Best Ingredient Awards". This is presented each year during the In-Cosmetics event to acknowledge the development of a new, innovative active ingredient.

PASSIOLINE® is obtained by molecular distillation of Peruvian Virgin Maracuja Oil. The oil itself is produced by cold-pressing the washed and dried seeds of the passion fruit.

PASSIOLINE® soothes weakened and stressed skin, for example to treat shaving nicks or acne and chapped, irritated skin. PASSIOLINE® is also used in post-operative skin treatment or to relieve sunburn.



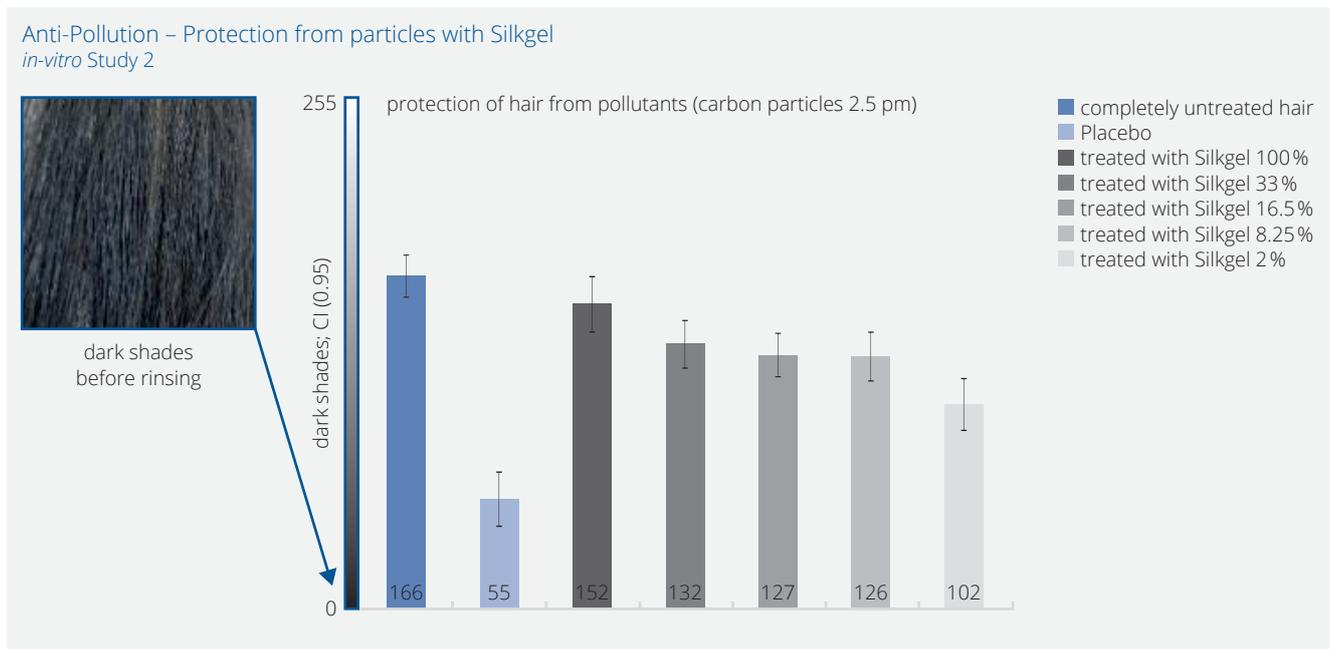
# Anti-pollution for your hair

In comparison with the skin, which has a number of different mechanisms to protect it against environmental influences, your hair is at the mercy of external stress factors.

At AMSilk, new studies with Silkgel have been performed relating to use on hair. The following images show the application of carbon particles and treatment with or without the use of Silkgel respectively.

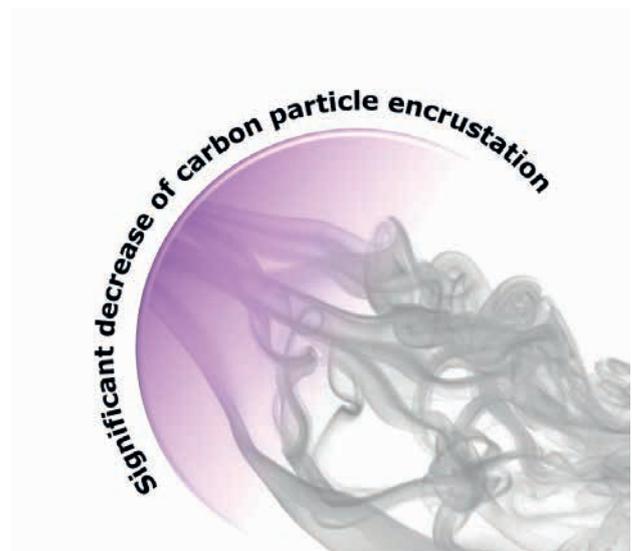
As shown in the following images, Silkgel prevents the adhesion of dirt particles and keeps the hair significantly cleaner.

A noticeable protective effect can be seen even with concentrations as low as 2%.



Silkgel offers a number of advantages:

- The breathable silky film provides effective protection and therefore works like a “STOP”-sign against pollution, harmful substances, microorganisms and irritants.
- Confirmed by numerous in-vivo and in-vitro studies.
- The silky film is long-lasting, not sticky, feels smooth to the touch and offers excellent skin compatibility.
- The physical barrier starts to work immediately after application and supports the process of skin regeneration.



“Stay protected” mit unserem LEAVE-IN SILK CONDITIONING SPRAY:

	Substance	INCI Name USA	% [w/w]	Manufacturer
1	Water demin.	Water	76.00	several
	AQUARICH®	Glycerin, Water, Avena Strigosa Seed Extract, Lecithin, Potassium Sorbate, Citric Acid	1.00	RAHN AG, CH
	Silkgel	sr-Spider Polypeptide-1, Water, 1,2-Hexanediol, Caprylyl Glycol	2.00	AMSilk GmbH, DE
	Carbopol Ultrez-10	Carbomer	0.15	Lubrizol, US
2	Ethanol 94% denat.	Alcohol denat., Water	20.00	several
3	L-Arginine solution 10%	Water, Arginine	0.85	Ajinomoto, JP

Ask your RAHN team for more information.

# Age Reverse Serum

## Instantly wipes out wrinkles

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### Key ingredients and benefits

2 % LIFTONIN®-XPRESS

INCI: *Hydroxypropyl Methylcellulose, Pullulan, Porphyridium Cruentum Extract*

- Quick wrinkle reduction
- Noticeable lifting effect

2 % LIFTONIN®

INCI: *Water, Glycerin, Panicum Miliaceum (Millet) Seed Extract, Citric Acid, Tannic Acid, Potassium Sorbate*

- Even, radiant skin
- Youthful, smooth complexion



**How to use:**

Apply twice daily on face or neck. Formulation can be used as a make up base.

**Watch the movie:****AGE REVERSE SERUM**

	Substance	INCI name USA	% [w/w]	Manufacturer
1	Water demin.	Water	85.70	several
	Verstatil PC	Phenoxyethanol, Caprylyl Glycol	1.10	Dr. Straetmans, DE
2	Optigel CL	Bentonite	5.00	BYK Chemie GmbH, DE
3	LIFTONIN®-XPRESS	Hydroxypropyl Methylcellulose, Pullulan, Porphyridium Cruentum Extract	2.00	RAHN AG, CH
4	Optigel WX	Bentonite, Xanthan Gum	1.00	BYK Chemie GmbH, DE
5	Citric Acid solution 10 %	Citric Acid, Water	3.00	several
6	LIFTONIN®	Water, Glycerin, Panicum Miliaceum (Millet) Seed Extract, Citric Acid, Tannic Acid, Potassium Sorbate	2.00	RAHN AG, CH
7	Eldew PS-203 R	Phytosteryl/Octyldodecyl Lauroyl Glutamate	0.20	Ajinomoto, JP

# On a journey of exploration in Peru

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Peru – a country full of contrasts. Characterised by the Andes, the infinite beauty of the Amazon basin and the mysterious, breathtaking Inca sites. Peru therefore offers an unimaginable wealth of natural and historical treasures – and a truly authentic picture of South America.

The Casma Valley is located close to Peru's capital, Lima. This is where the yellow passion fruit, known locally as the maracuja, is cultivated and harvested. The taste of passion fruit is a highly familiar one in the food industry, whether it be in yoghurts, smoothies or juices. Here, it is mostly the flesh of the fruit which is used, as it provides a high proportion of antioxidants. The characteristic seeds are generally considered a waste product.



For the first time, oil is being obtained from the passion-fruit seeds – *Virgin Maracuja Oil*. The oil is extracted by cold-pressing the washed and dried seeds of the passion fruit. The oil is very light, with a fruity scent and high proportion of the antioxidants *Tocotrienol* and *Tocopherol*. The linoleic oil contained in it helps to boost the skin's barrier function and protects it from external stress factors.



#### Profile:

Virgin Maracuja Oil	
Description	Low viscosity oil, yellow to orange-yellow in colour with a characteristic scent; can be slightly cloudy or contain residue
INCI	<i>Passiflora Edulis Seed Oil</i>
Preservatives	–
Origin	Plant-based
Solubility	Oil-soluble
Concentration used	1–100%
Certification	COSMOS
Advantages	<ul style="list-style-type: none"> <li>• It is absorbed quickly</li> <li>• It leaves the skin feeling soft and velvety</li> <li>• It is suitable as a discrete scent</li> </ul>
Use	<ul style="list-style-type: none"> <li>• Skin Care</li> <li>• Body Care (e.g. massage products)</li> <li>• Rinse-off products</li> </ul>





Another product which is now being obtained from the passion fruit is **ORMESIA®**.

This is a water-soluble extract which is rich in polyphenols and also obtained from the washed and dried seeds of the passion fruit. ORMESIA® is ideal for use on stressed skin. Blemished or irritated skin is just one result of this. That's why it's good to let your body regenerate regularly – by detoxing.

What must a care product be able to do in order to protect our skin from the increase in harmful environmental factors? Most people know that harmful substances outdoors can have a negative effect on skin health. Only a few, however, are aware that indoor pollution can equally lead to serious skin problems, such as dryness, premature ageing, rashes, eczema as well as acne.

Harmful substances in the air rob the skin cells of oxygen which makes it appear dull and sagging. The older we get, the less able the body is to combat free radicals (which are responsible for cell ageing in the body). The number of these free radicals is increased by the harmful substances in the air. UV radiation should also be taken into account with regard to the resulting effects on the skin.

The fight against pollution – the challenge of our time!

ORMESIA® could be your ally in the daily fight against the harmful effects of INdoor and OUTdoor pollution.

Profile:

Ormesia	
Description	Brown to dark brown liquid with an unmistakable smell; can be slightly cloudy or contain residue
INCI	<i>Propanediol, Water, Passiflora Edulis Fruit Extract</i>
Preservatives	–
Origin	Plant-based
Solubility	Water-soluble
Concentration used	1–3%
Certification	–
Advantages	<ul style="list-style-type: none"> <li>• Activates the skin's protective shield</li> <li>• Protects the skin from aggressive influences</li> <li>• Improves the function of the skin barrier</li> <li>• Increases resistance to oxidative stress</li> </ul>
Use	<ul style="list-style-type: none"> <li>• Protective skin care</li> <li>• Anti-pollution skin care</li> <li>• Detoxifying, radiance revealing skin care</li> </ul>

Interested? Ask your RAHN team for detailed documentation or efficacy studies.

# FAQs –

## Frequently asked questions ...

We offer application support for your development projects, providing comprehensive advice on formulas as well as proposing

solutions to diverse questions arising from every aspect of your work. In the following article you'll find a selection of questions we are frequently confronted with ...



### I Cosmospheres®

#### What must I consider when incorporating Cosmospheres?

Cosmospheres are not water-soluble and generally not very hygroscopic. As soon as they are added to formulas with a water content of at least 30% (for example emulsions, cleansing products or water-based gels) water penetrates the pellets and they become soft. This process takes between 6 and 24 hours. It is therefore recommended that Cosmospheres be added during the final production step. The risk of damaging the beads increases, the softer they become. To avoid damaging the beads, shear stress should be kept low when stirring and filling.

#### How stable are Cosmospheres at low pH?

In general, a low pH value does not pose a problem. Mannitol, lactose and microcrystalline cellulose as well as most colourants are stable at low pH. The pigment ultramarine blue (INCI: *CI 77007*), on the other hand, is not acid-resistant, leading to a smell of sulphur. This applies to the following types: BN10-S; BT3-S; PBN-S; PIT-S; BC2-S; BN-S; BSL3-M; BTA-S; LBC-S; PN1-S.

## II Zinc PCA

### What must be taken into account when processing zinc PCA?

Zinc PCA is sensitive to alkaline components. As soon as an alkaline component, such as NaOH, is added to a zinc PCA

solution, visible flocculation occurs. You should therefore check whether the pH value is below 7, before adding the zinc PCA to the product in purely powder form or as a watery solution.

## III Amilite

### What is the precise difference between Amilite GCS-11 and GCS-12K, where both have the same INCI? When do I use which raw material?

The difference between the two amino-acid surfactants is illustrated by the table below:

	GCS-11	GCS-12K
Appearance	White powder	Transparent liquid
INCI	<i>Sodium Cocoyl Glycinate</i>	<i>Water, Sodium Cocoyl Glycinate</i>
Active content	100%	30%
Use	< pH 7.0: cleansing pastes; powder applications > pH 7.0: transparent rinse-off products with excellent foaming properties (face care, aerosol use, pump-foamer)	< pH 7.0: cleansing pastes; creamy body wash > pH 7.0: transparent rinse-off products with excellent foaming properties (face care, aerosol use, pump-foamer)

## IV Amisoft HS-11P(F)

### How do I process Amisoft HS-11P(F)?

This emulsifier can be incorporated in the cold or hot oil phase. It is possible that the raw material does not dissolve completely in the oil phase, although it is still active. If this is disruptive to

the manufacturing process, Amisoft HS-11P(F) can be incorporated directly in the water phase without any difficulty. In the event of stability problems, Amisoft can also be added subsequently to an emulsion (o/w).

## V Sisterna SP70-C

### How do I process Sisterna SP70-C?

The sugar emulsifier is usually added in the oil phase. Care should be taken that it is thoroughly coated with the oil, by stirring gently when cold otherwise agglutination may occur during the warming process and small brown lumps form which

rarely dissolve. Sisterna SP70-C can also be dissolved in the water phase. Where concentrations used are > 1 %, a slight gelling, and therefore thickening, can occur in the water phase. In addition, foam can form relatively easily in the water phase. Sisterna SP70-C can be processed either hot or cold.

## VI Silkgel and Silkbeads

**Silkgel / Silkbeads do not dissolve in my water phase.**

**What am I doing wrong?**

Probably nothing at all. During incorporation, it should be remembered that both AMSilk products are not soluble but merely dispersible in water.

In the case of Silkgel, we recommend incorporation in the water phase. A pH value under 5 as well as a high electrolyte content should be avoided where possible, since this can lead to clouding.

Silkbeads can be incorporated either in the water phase or the oil phase. Here, too, the product is not dissolved, but merely dispersed.

## VII L-Arginine

**How do I use L-Arginine as a neutralising agent for Carbomers as a substitute for sodium hydroxide?**

We recommend consulting the following table:

Carbopol Ultrez 20		L-Arginine	=	pH value
0.30%	+	0.20%	=	5.0
0.30%	+	0.25%	=	5.3
<b>0.30%</b>	<b>+</b>	<b>0.30%</b>	<b>=</b>	<b>5.7</b>
0.30%	+	0.35%	=	6.0
0.30%	+	0.40%	=	6.3
0.30%	+	0.45%	=	6.6
0.30%	+	0.50%	=	6.9

A 10% L-Arginine solution with water, for example, can considerably simplify usage. Alongside its neutralising properties, L-Arginine also provides pleasant side-effects, such as the proven moistening of the skin or a deep-repair effect for the hair.



## VIII Darkening of emulsions

### **My emulsion darkens during storage tests.**

#### **What can I do about this?**

There are a number of substances which are oxidised slightly by oxygen in the air. This results in changes in colour (darkening) or oxidation products and by-products which have a highly unpleasant smell (rancidity). Hydrophilic and lipophilic raw material categories, such as active ingredients, plant extracts, perfumes

and botanical oils, are particularly affected by this oxidation process. In this case, 0.1–0.2% sodium sulphite can prove helpful. Sodium sulphite oxidises with the oxygen present in the water to make sodium sulphate. That means that free (reactive) oxygen in the water has been bound and is no longer available for oxidative reactions. In this way, darkening of the emulsion can effectively be prevented.

# The Cosmetic

## Encyclopaedia

# G for ...

... **G**amma-linolenic acid

... **G**LP

... **G**lutamic acid

... **G**lycerine

... **G**lyceryl stearate

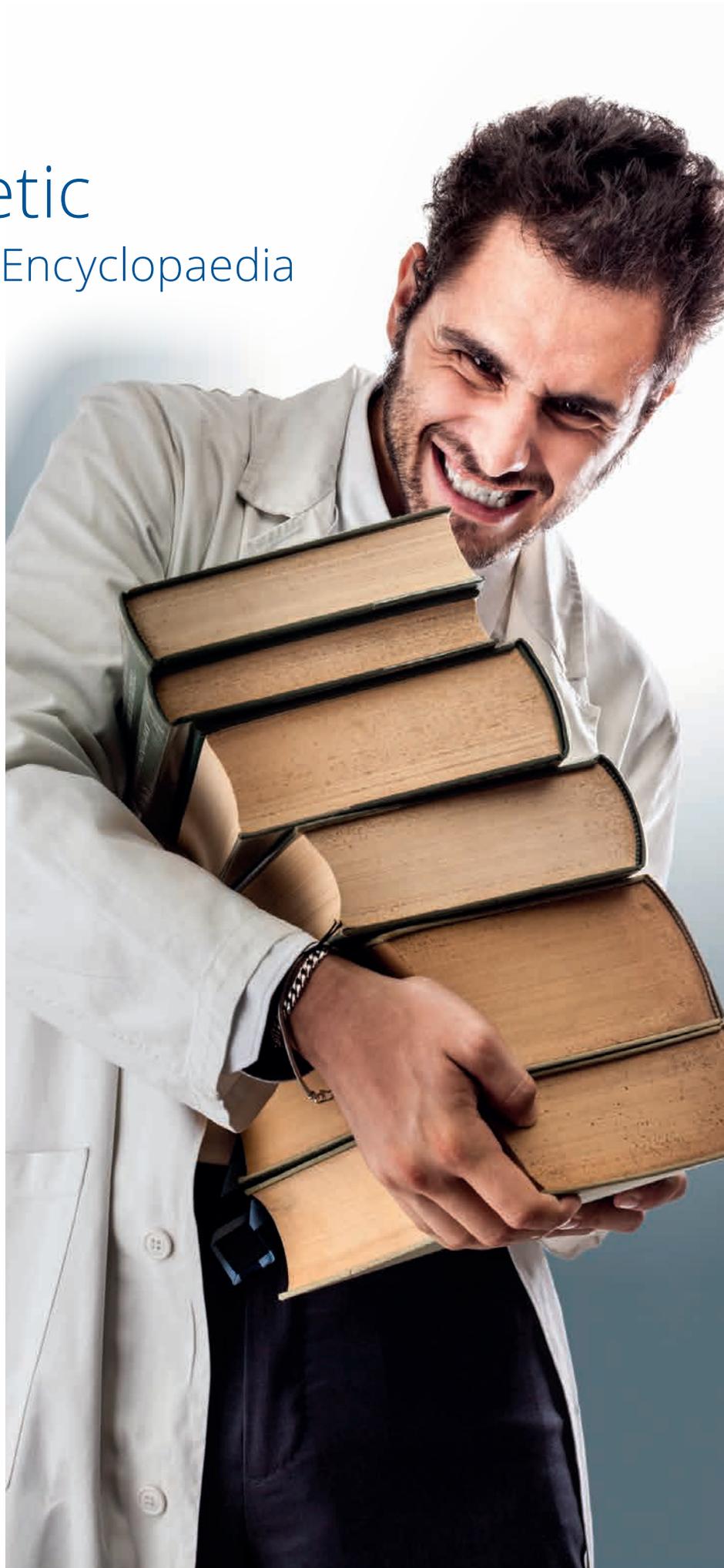
... **G**lycinates

... **G**lycolic acid

... **G**MO

... **G**MP

... **G**ram staining



## Gamma-linolenic acid

Linoleic acid is found above all in human skin, particularly in the epidermis. It is a polyunsaturated fatty acid which is used especially with dry skin. It targets the occurrence of inflammation in the skin. Gamma-linolenic acid is contained in large quantities in evening primrose oil and borage oil.

## GLP

GLP stands for "Good Laboratory Practice". As with GMP, these guidelines are relevant for cosmetics manufacturers. They relate to testing equipment in laboratories, safeguarding of raw material quality and traceability of individual testing steps.

## Glutamic acid

Also known as L-Glutamic acid. This is a non-essential amino acid. It is part of the chemical structure of hair keratin.

## Glycerine

Glycerine is a trivalent sugar alcohol. Glycerine is a clear, highly viscous, odourless, sweet-tasting, hygroscopic liquid. Glycerine is used as a moisturiser in cosmetic products or also as antifreeze.

## Glyceryl stearate

A tried-and-tested, versatile, non-ionic o/w emulsifier based on botanical raw materials.

## Glycinates

These are amino-acid-based mild surfactants. Glycinates have excellent foaming properties. They leave the skin feeling soft and pleasant to touch and improve its suppleness. When used on hair, they make it easier to comb.

## Glycolic acid

Glycolic acid is probably the best known natural fruit acid – also familiar as alpha-hydroxy acid (AHA). It occurs in unripe grapes, in sugar cane juice, in sugar beet, in Virginia creeper leaves and in rosemary. In cosmetics, glycolic acid is used in fruit-acid peelings. Dead skin cells are removed and the formation of new cells is stimulated.

## GMO

GMO stands for "Genetically Modified Organism" – here, hereditary factors in organisms are specifically manipulated by genetic engineering.

## GMP

"Good Manufacturing Practice" indicates a set of behavioural guidelines and regulations which are to be observed/complied with during the manufacture of cosmetics. The objective is to manufacture products of reproducible and uniform quality. The relevant specifications are to be found in the DIN EN ISO 22716 standard.

## Gram staining

This is method for differentiation by colour to enable visualisation of bacteria in light microscopy. Bacteria are classified as gram positive or gram negative, depending on their staining behaviour.

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