



MY SKIN CARE

 Physioderm®

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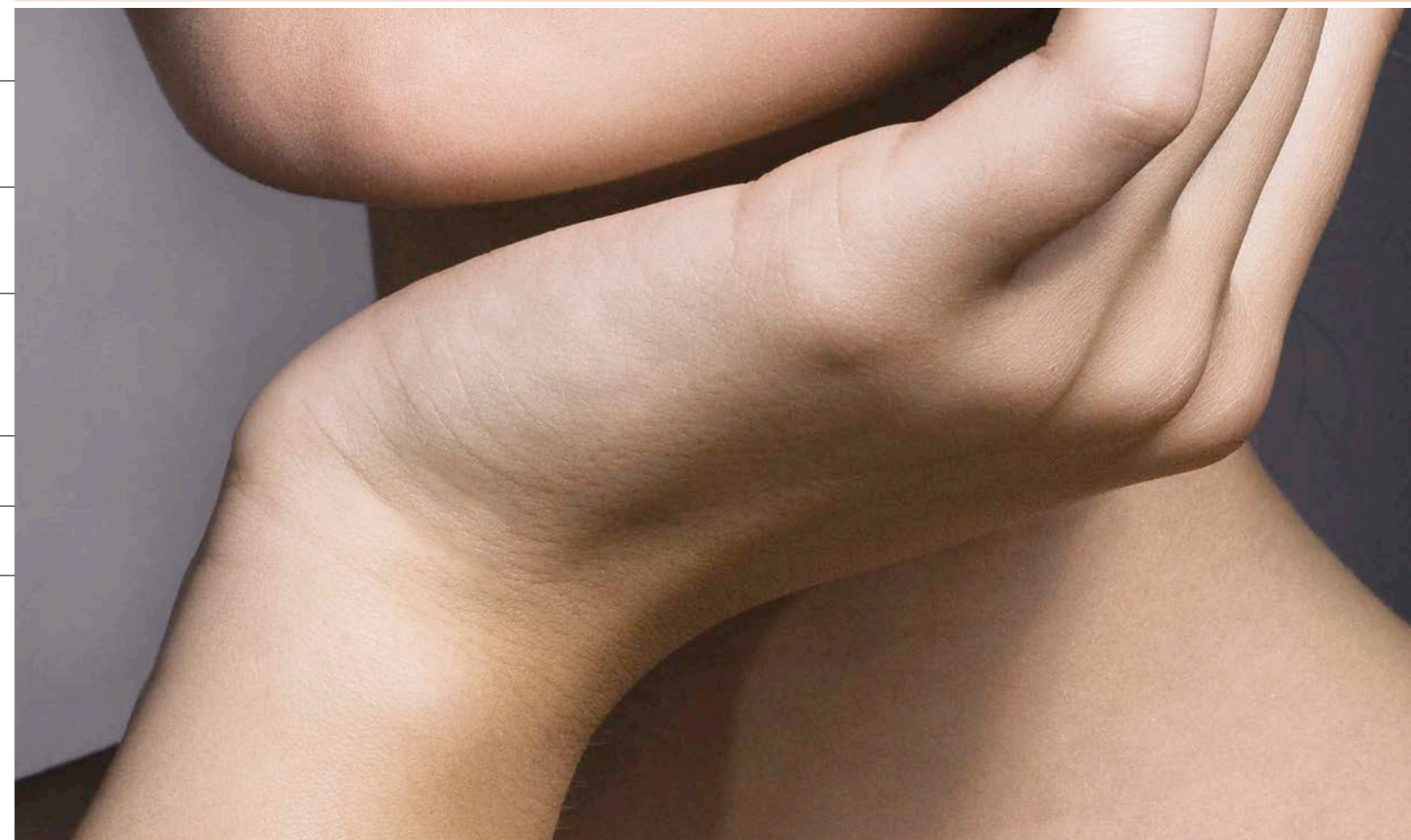
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## Physioderm® – My Skin Care.

Effective skin care at work is an essential precondition for a long and healthy professional life. With Physioderm®, you have a competent and committed partner who offers high-valued as well as precisely fitting solutions. As a leading supplier in the domain of occupational skin care, we develop integrated concepts which comprise all aspects of effective prevention: precautionary protection against harmful workplace substances, skin-friendly but thorough cleansing, effective disinfection as well as efficient skin care after work. Almost 100 years of experience and innovation ensure that you can always expect best quality from Physioderm®.

SKIN CARE IS OUR MISSION.












# SKIN CARE PROGRAMME

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## SKIN PROTECTION PRODUCTS

### Before and during work

#### Skin exposure




 Water-soluble substances	PROTEXSAN  , NUTRI SAFE	p. 6
 Wet areas and cold & frosty conditions	SANIWIP®	p. 6
 Glove wearers	PROGLOVE	p. 6
 Highly-adhesive dirt	SANSIBON®	p. 7
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## SKIN CARE PRODUCTS

### After work

#### Skin type








 Normal and slightly stressed skin	CURA SOFT, REVITALIZE GEL	p. 14
 Dry and strongly stressed skin	CUREA SOFT	p. 14
 Very dry and extremely stressed skin	PHYSIODERM® CREME, CARE PURE 	p. 14

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## SKIN CLEANSING PRODUCTS

### During and after work

#### Dirt level

 Light dirt	STEPHALEN® FRESH FOAM, ECOSAN, SANIKLIN SOFT	p. 10
 Light and medium dirt	STEPHALEN® OPTIFOAM, STEPHALEN® OPTIWASH  , STEPHALEN® VITAL	p. 10
 Medium dirt	ACTIVE PEARLS®, TOPSCRUB® SOFT	p. 12
 Heavy dirt	TOPSCRUB® NATURE, ACTIVE PEARLS® PLUS 	p. 13
 Special dirt	RAPITUFF® CONTRA COLOR®	p. 13

## DISINFECTANTS

### If required

#### Application area

Hand disinfection	MYXAL® SEPT GEL MYXAL® SEPT 70
Hand decontamination	MYXAL® HDS, MYXAL® HDS FOAM
Disinfection wipes	INCLUDAL® WIPES
Surface disinfection	INCLUDAL® ANTISEPT
Prevention of athlete's foot	MYXAL® FOOT SPRAY

 Individual prophylaxis for sensitive or extremely stressed skin. Further information on pages 22–27.

 Individual prophylaxis for sensitive or extremely stressed skin. Further information on pages 22–27.

# 1. SKIN PROTECTION

## WATER-SOLUBLE SUBSTANCES



### PROTEXSAN

Skin protection cream in case of skin exposure to aqueous and water-soluble substances, e.g. water-mixed oils and cooling lubricants, detergents and disinfectants, as well as protection against free radicals.

- contains luteolin, coenzyme Q10 and vitamin E as well as skin-related lipids
- absorbed quickly
- silicone-free
- perfume- and fragrance-free
- HACCP-compliant
- ECARF-certified

### NUTRI SAFE

Skin protection cream in case of skin exposure to water-soluble substances, especially in the food industry, e.g. aqueous food products, detergents and disinfectants.

- food safe
- absorbed quickly
- silicone-free
- perfume- and fragrance-free
- HACCP-compliant

## WET AREAS AND COLD & FROSTY CONDITIONS



### SANIWIP®

Skin protection cream for working in wet and moist conditions, e.g. when handling diluted surfactant solutions and diluted alkalis, as well as for working in cold and frosty conditions.

- water-resistant W/O emulsion
- greasy cream
- silicone-free
- perfume- and fragrance-free
- suitable for the food industry
- HACCP-compliant

**Skin protection products** are used before and during work. They are designed in order to prevent the skin from damage caused by potentially harmful substances. In order to provide optimum prevention, skin protection products should exactly match the substances the skin is exposed to during work.



Please have a look at the application video "Protection against Dirt": [https://www.youtube.com/watch?time\\_continue=2&v=ZyL11\\_zMYcU](https://www.youtube.com/watch?time_continue=2&v=ZyL11_zMYcU)

## HIGHLY-ADHESIVE DIRT



### SANSIBON®

Skin protection cream for handling highly-adhesive and water-insoluble substances, e.g. oil, graphite, varnish, adhesives and resins.

- facilitates skin cleansing
- contains dirt-binding emulsifiers
- absorbed quickly
- silicone-free
- perfumed

## WATER-INSOLUBLE SUBSTANCES



### SANSIBAL®

Skin protection cream in case of skin exposure to water-insoluble substances, e.g. oil, grease or resins.

- water-soluble O/W emulsion
- absorbed quickly
- silicone-free
- perfumed
- skin-neutral pH value

## GLOVE WEARERS



### PROGLOVE

Skin protection gel against skin maceration in case of wearing occlusive protective clothing, e.g. gloves or rubber boots.

- with skin-strengthening hamamelis and moisturizing bisabolol
- contains alcohol
- free from greases
- silicone-free
- perfume- and fragrance-free
- HACCP-compliant



## VARYING WORKING MATERIALS



### DUALIN®

Skin protection cream with dualistic effect in case of skin exposure to not clearly defined or varying, water-soluble or water-insoluble substances.

- with waxes and special film-forming substances
- absorbed quickly
- silicone-free
- perfumed or perfume- and fragrance-free
- HACCP-compliant (perfume- and fragrance-free version)

## WORKING WITHOUT LEAVING GREASY FINGERPRINTS



### SINEPRINT®

Skin protection cream for working with sensitive surfaces where greasy fingerprints have to be avoided, as well as for working with mechanically irritating substances.

- O/W emulsion
- non-greasy
- silicone-free
- perfumed

Individual prophylaxis for sensitive or extremely stressed skin. Further information on pages 22–27.

# 1. SKIN PROTECTION

## UV RADIATION



### PHYSIO UV 30 SUN

Skin protection cream with high protection against UVA, UVB and UVC radiation.

- high protection with SPF 30
- UVA protection factor: 24 / highest category (5 "Stars") of the Boots rating system
- suitable for very sensitive skin (photodermatologically tested)
- very water-resistant
- modern system of photostable UV filters with silicone coating
- with vitamin E
- perfume- and fragrance-free



### PHYSIO UV 50 PLUS

Very water-resistant light and sun protection cream for outdoor work under extreme conditions (heat or wetness), for welding or for handling photosensitizers.

- very high protection with SPF 50+
- protection against UVC radiation
- very water-resistant
- for special requirements
- with vitamin E
- perfume- and fragrance-free
- optimized UV filters with silicone coating



### PHYSIO UV 50 SPRAY

Water-resistant, transparent sun spray with immediate protection against high natural UV radiation in case of outdoor work.

- high protection with SPF 50, UVA protection factor 26
- with vitamin E
- optimal handling, no rubbing necessary, also suitable for hairy sections of the skin
- bottle can be used upside down
- moisturizing
- perfume- and fragrance-free
- free from greases



### LIPSTICK FROST & SUN

Lip protection and care in case of coldness, wind and dry air as well as protection against natural UV radiation.

- with beeswax, vitamin E and shea butter
- with SPF 30
- protection against UVA and UVB radiation
- silicone-free

Many people are often exposed to sunlight and UV radiation - not only during their leisure time but also at work. In an occupational context, it is important to know that the requirements for skin protection products against natural UV radiation differ crucially from the requirements for preparations against artificial UVC radiation, e.g. in electric welding. Modern UV protection products often contain filters with silicone coating in order to prevent adhesion and skin whitening after being applied.



Please have a look at the application video "UV Protection at work": <https://www.youtube.com/watch?v=94MPUqrFgUM>



## 2. SKIN CLEANSING

### LIGHT DIRT



EU Ecolabel:  
DE / 030 / 079

#### STEPHALEN® FRESH FOAM

Mild and pleasantly perfumed skin-cleansing foam.

- blue foam concentrate
- very economical in contrast to washing lotions
- with moisturizing glycerin
- free from soaps and alkalis
- with skin-neutral pH value
- slightly perfumed



EU Ecolabel:  
DE / 030 / 046



www.blauer-engel.de/uz203

#### ECOSAN

Neutral cleansing syndet, also suitable for the food industry.

- transparent skin wash
- colorant-free
- soap- and alkali-free
- skin-neutral pH value
- perfume- and fragrance-free
- HACCP-compliant
- BLUE ANGEL environmental label and EU Ecolabel for 1000 ml Neptune bottles and 2000 ml collapsible bottles



#### SANIKLIN SOFT

Gentle skin cleansing syndet especially suitable for offices and administration.

- pearly-coloured cleanser with sugar-based surfactants
- soap-free
- with skin-neutral pH value
- perfumed

### LIGHT AND MEDIUM DIRT



#### STEPHALEN® OPTIFOAM

Fragrance-free cleansing foam for hair and body with OptiTens®.

- with the patent-pending surfactant combination OptiTens®
- contains rice protein
- perfume- and fragrance-free
- colorant-free
- soap- and alkali-free
- with skin-neutral pH value
- HACCP-compliant



Physioderm®  
sensitive

#### STEPHALEN® OPTIWASH

Fragrance-free cleansing gel for hair and body with OptiTens®.

- with the patent-pending surfactant combination OptiTens®
- contains rice protein
- perfume- and fragrance-free
- colorant-free
- soap- and alkali-free
- with skin-neutral pH value
- HACCP-compliant



#### STEPHALEN® VITAL

Gentle hair and skin cleansing gel for the removal of light and medium dirt.

- high-quality shower gel with sugar-based surfactants
- colorant-free
- soap- and alkali-free
- with skin-physiological pH value
- perfumed



**Skin cleansing products** have to ensure efficient cleansing without straining occupationally stressed skin additionally. Therefore, an unnecessarily strong skin cleanser should never be used. In terms of product selection, the kind of dirt has to be considered in order to ensure an optimum effect in combination with maximum protection.

## 2. SKIN CLEANSING

### MEDIUM DIRT



#### ACTIVE PEARLS®

Skin cleanser with dirt-binding wax pearls for the removal of medium dirt, e.g. oil, soot and metallic dust.

- with Active Soft Pearls® (ASP)
- particularly gentle to the skin, since free from abrasive scrubbing agents
- solvent-free
- skin-neutral pH value
- perfumed or perfume- and fragrance-free
- HACCP-compliant (perfume- and fragrance-free version)



#### TOPSCRUB® SOFT

Skin cleanser with natural scrubbing agents for the removal of medium dirt, e.g. oil, soot, graphite and metallic dust.

- strong cleansing power
- with natural scrubbing agents made of olive seed powder
- solvent-free
- perfume- and fragrance-free
- HACCP-compliant

**Skin cleansing products** containing abrasive ingredients might be irritating to the skin. However, the cleansing with innovative dirt-removing agents made of hydrogenated castor oil (wax) leads to a reduction of skin irritation and signs thereof.



Please have a look at the video "Applying Skin Cleansers": <https://www.youtube.com/watch?v=26t0umkdoFI>

### HEAVY DIRT



#### TOPSCRUB® NATURE

Skin cleanser with natural scrubbing agents for the removal of heavy dirt, e.g. oil, soot, graphite and metallic dust.

- strong cleansing power
- with natural scrubbing agents made of olive seed powder
- solvent-free
- perfumed
- EU Ecolabel for 2000 ml collapsible bottles



Physioderm sensitive



#### ACTIVE PEARLS® PLUS

High-performance skin cleanser with dirt-binding wax pearls for the removal of heavy dirt, e.g. oil, soot, metallic dust and graphite.

- with Active Soft Pearls® and a highly-efficient surfactant combination
- particularly gentle to the skin since free from abrasive scrubbing agents
- solvent-free
- skin-neutral pH value
- perfume- and fragrance-free
- HACCP-compliant
- ECARF-certified



### SPECIAL DIRT



#### RAPITUFF®

Intensive skin cleanser with ester oil for the removal of highly adhesive, stubborn dirt, e.g. varnish, resins, adhesives, paint and bitumen.

- with skin-compatible solvent
- with natural scrubbing agents made of olive seed powder
- perfumed



#### CONTRA COLOR®

Special hand cleansing paste for the removal of reducible dyestuffs.

- light beige paste
- with reduction and dirt-carrier agent
- solvent-free

### 3. SKIN CARE

#### NORMAL AND SLIGHTLY STRESSED SKIN



#### CURA SOFT

Skin care cream for normal and slightly stressed skin.

- for hands and facial application
- moisturizing O/W emulsion
- with bisabolol and rice germ oil
- absorbed quickly
- slightly greasy
- silicone-free
- perfumed



#### REVITALIZE GEL

Vitalizing gel for rubbing on the skin

- cooling, relaxing and vitalizing
- with high-quality herb oils
- lipid-replenishing
- silicone-free

#### DRY AND STRONGLY STRESSED SKIN



#### CUREA SOFT

Moisturizing skin care cream for strongly stressed and dry skin.

- for hands and facial application
- O/W emulsion containing urea, rice germ oil and bisabolol
- absorbed quickly
- slightly greasy
- silicone-free
- perfumed or perfume- and fragrance-free
- HACCP-compliant (perfume- and fragrance-free version)

#### VERY DRY AND EXTREMELY STRESSED SKIN



#### PHYSIODERM® CREME

Highly-effective skin care cream for extremely stressed and very dry skin.

- for hands and facial application
- regenerative W/O emulsion
- with high lipid level, intensively lipid-replenishing
- also recommended as concomitant skin care for the therapy of irritated skin
- silicone-free
- perfumed

Physioderm  
sensitive



#### CARE PURE

Intensive skin care cream with natural oils and sallow-thorn essence for extremely stressed and dry skin.

- for hands and facial application
- O/W emulsion
- balances moisture and lipid loss
- silicone-free
- perfume- and fragrance-free
- ECARF-certified



**Skin care products** are applied to dry and clean skin after work. They support the skin's regeneration capability and renew its natural protective barrier.



Please have a look at the video "Applying Creams":  
<https://www.youtube.com/watch?v=TJ-ynm-EPlo>





## DISPENSING SYSTEMS

### VARIO SYSTEM



#### VARIOMAT M

Metal dispenser for 1000 ml and 2000 ml collapsible bottles.

- made of metal, casing coated in white
- very simple handling and filling
- optimal dosage
- lockable version available



#### VARIOMAT ECO

Plastic dispenser for 1000 ml and 2000 ml collapsible bottles.

- made of plastic, white/grey
- very simple handling and filling
- optimal dosage
- optionally lockable
- dispensing amount adjustable

Simple, economical and appropriate product application can only be achieved by **dispensing systems** that are perfectly adapted to the chosen skin care products. In this way, efficiency on the one hand, and highest acceptance among users on the other hand, can be ensured. VARIOMAT and NEPTUNE are completely hygienic dispensing systems as there is no direct contact between product and dispenser.



Please have a look at the application video "Mounting VARIOMAT ECO dispenser": <https://www.youtube.com/watch?v=LJgPSDm6kCY>



Please have a look at our separate brochure **DISPENSING SYSTEMS**.



### NEPTUNE SYSTEM



#### NEPTUNE STANDARD

Universal dispenser for Physioberm®'s 1000 ml Neptune bottles.

- simple, manual handling
- made of plastic
- available in black or white
- optionally lockable
- drip tray available on request



#### NEPTUNE TOUCHLESS

Touch-free, universal dispenser for Physioberm®'s 1000 ml Neptune bottles.

- automatic, touch-free handling
- made of plastic
- available in black or white
- optionally lockable
- drip tray available on request
- adjustable dispensing frequency (1 - 3 times)



#### NEPTUNE TOUCHLESS STAINLESS STEEL

Touch-free, universal dispenser for Physioberm®'s 1000 ml Neptune bottles.

- automatic, touch-free handling
- casing made of satin stainless steel with permanent anti-fingerprint coating
- lockable
- drip tray available on request
- adjustable dispensing frequency (1 - 3 times)
- also available as manually-operated version

## OCCUPATIONAL SKIN DISEASES

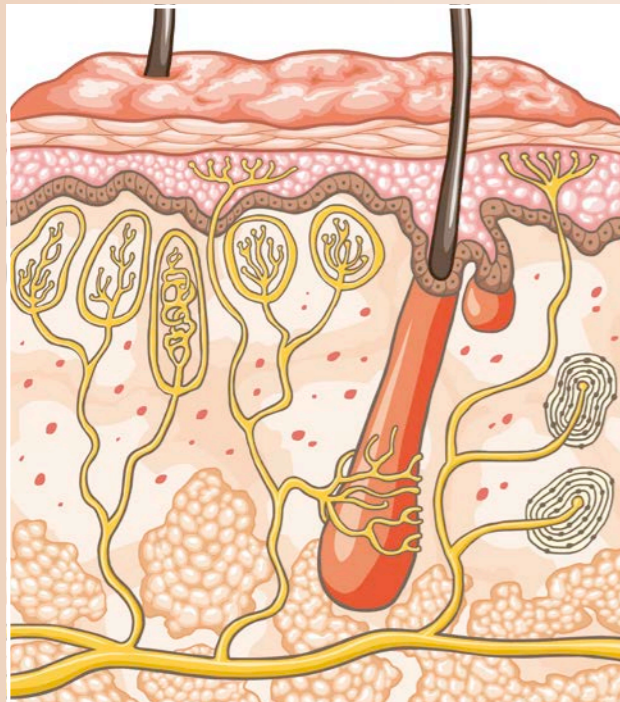
The skin forms the barrier between a human being and his or her environment. It protects the body from harmful effects, but is exposed to these influences at the same time.

Especially in occupational life, the skin has to resist high strains. If the skin is not sufficiently protected, skin diseases may occur.

A third of all confirmed occupational diseases in Germany affect the skin. In recent years, more than 25,000 new cases of dermatitis per year have been registered. Experts assume that the actual number might be 50 to 100 times higher.

### Functions Of The Skin

With a surface of about two square meters, the skin is the biggest human organ. It is not only the body's outer cover, but also carries out a multitude of important tasks. As a barrier, it protects the body from mechanical, chemical and thermal influences, softens the harmful effects of sunlight and wards off microorganisms. The skin regulates the body-heat balance and serves as storage of greases, carbohydrates, water and salts. Basic metabolic processes take place inside the skin. Most importantly, the skin forms the outer appearance of a human being and therefore, it is very important for social life and self-perception.



### The Pathogenesis Of Dermatitis At Workplace

90 percent of all occupational skin diseases are irritant and allergic eczema caused by the direct contact with hazardous substances. These substances are often only slightly skin irritating, but over time, the delayed effects from repetitive irritation may cumulatively damage the skin. The outer layer of the skin is the horny layer, which serves as a barrier against chemical and physical influences. Water and fat-dissolving materials like surfactants and organic solvents loosen the building blocks of the horny layer and undermine its barrier function. Due to these damages, the skin increasingly loses water, dries out and becomes rough and chapped. Moreover, hazardous substances and potential allergens can be absorbed more easily into the skin and may cause further damage. A healthy horny layer continuously regenerates; the dead epithelial cells of the horny layer are always replaced. However, repeated irritation also attacks and damages the skin's ability to heal itself. This may result in chronic skin disease.

### Dermatitis – The Most Frequent Occupational Disease

Occupational skin diseases are by far the most frequent health risk at work. More than 25 percent of all occupational diseases are skin related. Between the ages of 15 and 25, the percentages even rise as high as 90 percent. Many occupational dermatitis issues run a chronic course, especially if they are not recognized and treated in time.

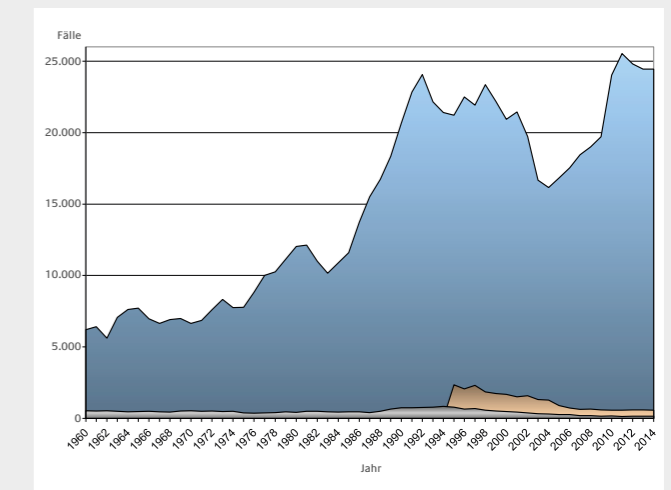
It is estimated that up to 5 billion euros are lost annually in European industries due to a loss of productivity caused by occupational skin diseases. Small and medium-sized companies, where industrial safety and occupational-medical care are not always available, are impacted the most.

### Consequences For Affected Persons And Society

Loss of manpower, retraining, disability and medical costs – occupational skin diseases result in higher costs for the economy and the health-care system. But above all, they are a high personal stress factor for the affected persons, who often are no longer able to pursue their profession. Quite often, loss of social status is the result.

In addition to the occupational difficulties, affected persons suffer from considerable restrictions in their everyday life. Serious skin diseases reduce quality of life as severely as the consequences of a cardiac infarction or an apoplectic stroke. Furthermore, the disfiguring effect of many dermatitis cases may have a negative psychological impact resulting in withdrawal from society and depression.

### Development Of Selected Occupational Diseases “5101 Skin Diseases”

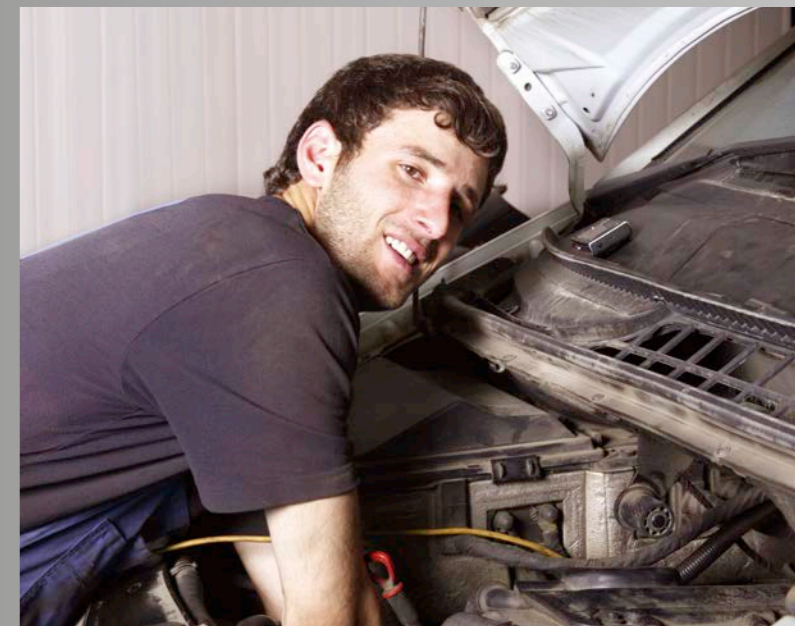


■ indicated suspected cases  
■ accepted occupational diseases  
■ new retirements

source: European Agency for Safety and Health at Work (EU-OSHA)

### Skin Protection And Prevention: A Legal Obligation For Every Employer

The German Occupational Safety and Health Act obliges employers to take appropriate measures against work-related health risks. According to the European PPE User Directive, occupational skin protection products are regarded as a part of the personal protective equipment (PPE). In case of an imminent occupational disease, the costs for skin protection products can be borne by accident insurance if requested by a physician. The relevant directive “TRGS 401 – Risks resulting from skin contact” defines occupational skin protection agents as products that are used within the scope of an integrated concept in order to prevent occupational skin diseases and that have been proven and confirmed in terms of efficacy and skin-compatibility. In addition to skin protection products, skin cleansing and skin care products are also part of an integrated concept.



## EFFECTIVE PREVENTION DUE TO SKIN CARE

Prevention is the best medicine – a principle that also holds true for occupational skin diseases. Applying skin care products consequently is the best solution to maintain the health of strongly stressed skin. In order to be effective, the protective measures have to be taken right from the beginning of the occupational skin exposure. If skin diseases already occurred, it may already be too late to avert a case of dermatitis.

An efficient occupational skin care concept includes preliminary measures applied before work as well as the most gentle cleansing possible and an effective care after performing the stressing activities. In this regard, all measures have to be adapted to each other as well as to the health hazards of the respective work performed.

### The Three Pillars Of An Integrated Skin Care Concept

- Skin protection (preventive measure)
- Skin cleansing
- Skin care (regenerative measure)

### Skin Protection

Most of the strains the skin is exposed to during work result from direct contact with potentially hazardous substances. Skin protection products prevent these specific substances from entering the skin. The protective lotions, creams and gels are applied before work and operate together with the natural horny layer of the epidermis in order to establish an effective barrier against hazardous substances. Essential for an efficient protection is the exact knowledge of the substances the skin is exposed to during work. Usually, there is no universally applicable and effective skin protection product. Therefore, the applied products have to be chosen in exact accordance with the hazardous substances constituting a skin exposure at the respective workplace.

### Skin Cleansing

The choice of the right skin cleansing product is of great importance. Skin, which is already occupationally stressed, must not be strained by the cleansing agent additionally. However, at the same time, dirt – and hence, hazardous substances – have to be completely removed. As a rule of thumb: the higher the cleansing effect of a product, the higher the possible skin strain. For this reason, an unnecessarily strong skin cleanser should never be used. In terms of product selection, the kind of dirt has to be considered in order to ensure an optimum effect in combination with maximum skin protection. In some companies, it might be reasonable to provide several skin cleansing products which are graded according to efficiency and which can be applied as required. Thus, an unnecessarily strong product will not be used.



### Skin Care

As the third pillar of an integrated skin care concept, skin care products ensure, with their regenerative features, that the barrier function of the stressed epidermis is sustained in the long term. Skin care creams are applied to the previously cleaned skin after work; they bind water within the skin and contain fat and oil, which smooth the horny layer. As a result, skin care products compensate for the loss of moisture from stress, water, detergents or fat-dissolving substances.

### 5 Steps To Your Individual Skin Care Concept

You do not have a plan (yet)? No problem! We support you in developing and implementing a tailor-made solution that effectively protects employees from occupational skin diseases. In five steps, we will work with you to develop your individual skin care concept.

1. Identify and assess local hazards
2. Create a model for reasonable implementation of the skin care concept
3. Develop the skin care concept and examine it in free product tests
4. Use hand care plan and instruct employees
5. Continuously optimize and update the concept



### Skin Cleansing Agents At A Glance

Product	Skin Stress	Application Area
Liquid skin cleansers (soaps and syndets)	low	light dirt
Skin cleansers with smooth and soft dirt-removing agents	low	heavy dirt (e.g. greases, oils, lubricants, soot)
Skin cleansers with sharp-edged, abrasive scrubbing agents	high	heavy and extreme dirt (e.g. greases, oils, lubricants, soot)
Skin cleansers containing solvents	extremely high	highly-adhesive dirt (e.g. colorants, varnishes, paints and adhesives)

**Hand Care Plan** Physioderm®

for water-insoluble substances, e.g. oil, grease and graphite

Plan de protection cutanée pour les salissures insolubles à l'eau, p.ex. l'huile, la graisse et le graphite  
Huid protectie plan voor niet-water oplosbare stoffen, bv: Vetten, olie en grafiet  
Hautschutzplan für wasserunlösliche Stoffe, z.B. Fett, Öl und Graphit

<div style="background-color: #0056b3; color: white; padding: 5px; font-weight: bold;">Pre-Work Cream</div> <div style="background-color: white; color: #0056b3; padding: 5px; font-weight: bold;">SANSIBON®</div> <p style="font-size: 8px;"><small>against highly adhesive dirt contre les salissures très adhérentes tegen sterk hechtende vervuilingen stark haftende Verschmutzungen</small></p>	<div style="background-color: #008000; color: white; padding: 5px; font-weight: bold;">Cleansing</div> <div style="background-color: white; color: #008000; padding: 5px; font-weight: bold;">ACTIVE PEARLS®</div> <p style="font-size: 8px;"><small>fragrance-free for medium dirt pour les salissures moyennes voor matige vervuilingen für mittelstarke Verschmutzungen</small></p>	<div style="background-color: #c00000; color: white; padding: 5px; font-weight: bold;">After-Work Cream</div> <div style="background-color: white; color: #c00000; padding: 5px; font-weight: bold;">CUREA SOFT</div> <p style="font-size: 8px;"><small>for strongly stressed &amp; dry skin pour la peau sollicitée et sèche voor de sterk geïrriteerde en droge huid für stark belastete &amp; trockene Haut</small></p>
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## INNOVATION OPTITENS®: SKIN-FRIENDLY AND EFFICIENT

Almost 100 years of competence and experience stand behind the Physiaderm® programme for occupational skin care. It is our ultimate ambition to avoid occupational dermatitis. For this reason, we pursue an integrated approach to emphasize not only the dermatological effectiveness, but also the practical usability. We constantly work on new, more efficient and user-friendly solutions. As a result, we are proud to offer innovative concepts and high quality products.

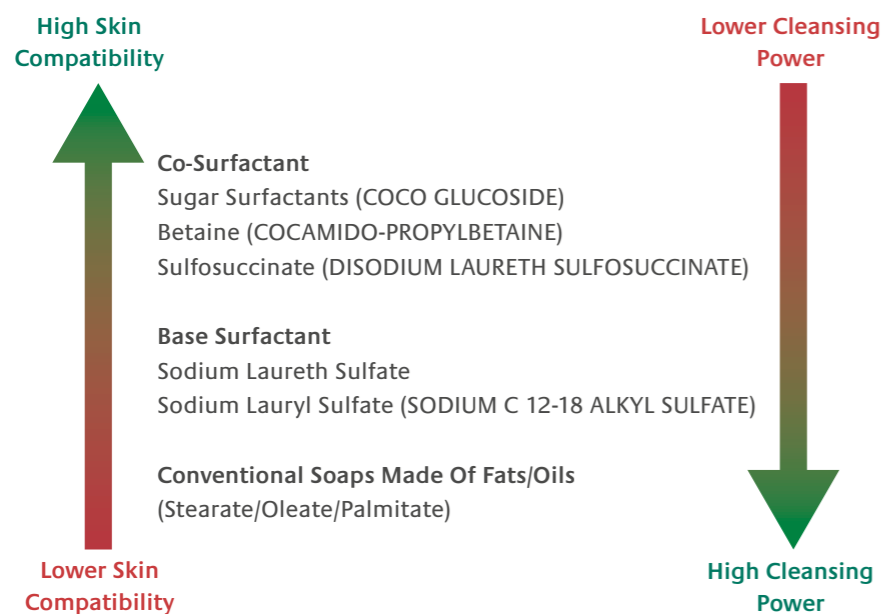
### Surfactants: Washing-Active Grease Removers

Occupational skin cleansers use surfactants to remove dirt from the skin. The cleansing effect of these washing-active substances is based on their interaction with water. Due to their particular molecular structure, surfactants reduce the surface tension of water, allowing it to spread better on the skin. At the same time, they increase the solubility of greases and oils in water and support the loosening of dirt particles.

### Compromise Between Performance And Protection

Like scrubbing agents and solvents, surfactants may harm the skin as well. Up to now, the general rule has been: the stronger the cleansing effect, the heavier the skin exposure. Since, until now, no surfactant could combine strong performance with high skin compatibility, occupational skin cleansers usually combine several surfactants; a strong base surfactant provides the cleansing power while a milder co-surfactant ensures better skin compatibility. However, this compromise is not a solution to the problem that workers often have to use cleansers multiple times a day to remove dirt.

### Previous Vision Of Surfactants



### Natural Lipids Of The Skin Suffer From Frequent Contact With Surfactants

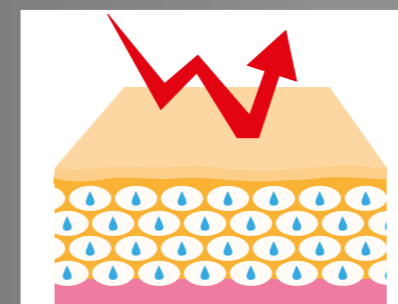
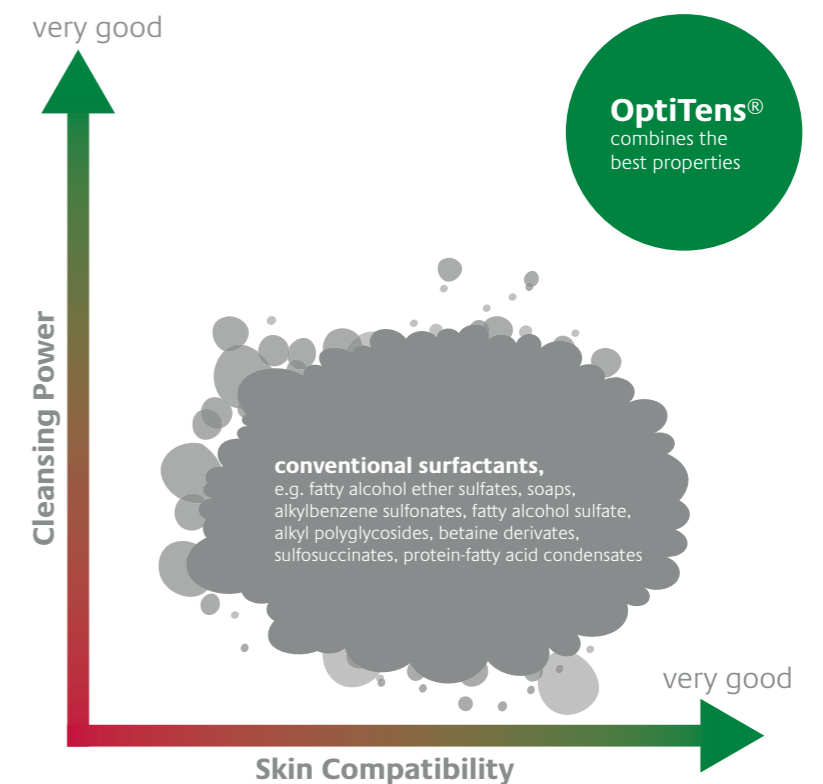
Lipids play a crucial role in the health of the skin. The cells of the stratum corneum – the outer horny layer of the skin – are connected by natural fats that prevent the skin from losing moisture and are vitally important for maintaining its barrier function. Moreover, healthy skin is also protected by a hydrolipid film, the so-called acid mantle. This layer built up of water and fats that are produced by the skin's sebaceous glands protects the epidermis from drying out and acts as an additional barrier against harmful substances, bacteria and fungi. Dissolving fats is one of the main tasks of surfactants. However, they do not distinguish between contaminating fats and the skin's important natural lipids, which protect and soften the skin. Thus, the frequent use of surfactants for skin cleansing may damage the acid mantle, dehydrate the stratum corneum and lead to rough and cracked skin. Due to the impairment of its barrier function, the skin becomes susceptible to harmful substances that cause further damage. As a result, dermatitis may occur in the long term.

Up to now, it was believed that surfactants could provide either excellent cleansing power or outstanding skin compatibility, but not both. However, PGP was not satisfied with this assumption, and achieved a major breakthrough in the field of skin cleansing. In the course of a three-year project in cooperation with scientists of the University of Osnabrück, the PGP skin care experts developed a true novelty: a surfactant combination that is as effective as it is skin-friendly.

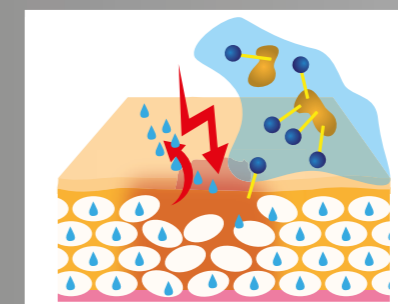
### Occupational Skin Cleansing Without Compromise

OptiTens® is powerful against dirt and offers best cleaning properties, but is very gentle to the skin. The innovative surfactant combination protects the skin's natural lipids. As a result, the epidermis does not dry out and maintains its natural barrier function – even in case of frequent washing.

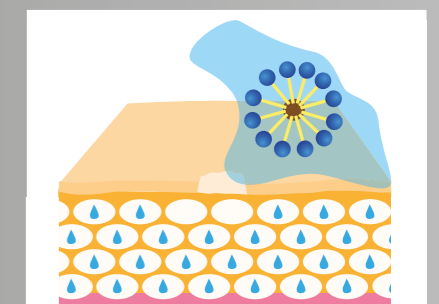
### Surfactants And Their Properties



Due to its natural barrier function, healthy skin is protected against harmful substances, such as working materials and detergents.



Classic surfactants degrease the skin and, thus, weaken the skin barrier. As its natural protective function is weakened, the skin loses moisture. External influences can penetrate the skin more easily and may cause lasting damages.



OptiTens® has been proven to reduce the skin's water loss after washing. With comparable cleansing effect, the skin compatibility with OptiTens® is much higher and vice versa.

## INNOVATION PROTEXSAN: INDIVIDUAL PROPHYLAXIS FOR SENSITIVE OR EXTREMELY STRESSED SKIN

The product line Physioderm® sensitive, which includes PROTEXSAN – the innovative protection cream with luteolin – has especially been developed for persons with extremely stressed, atopic and already irritated skin. If the sensitive products are consequently applied, they will even be able to prevent the irritation of sensitive or extremely stressed skin. The product line is characterized by the fact that all formulations are based on ingredients that are especially gentle to the skin.

### Physioderm® sensitive at a glance

- Suitable for primary prevention in case of sensitive skin
- Therapy-concomitant concept for skin protection, skin cleansing and skin care
- Especially skin-compatible
- Perfume- and fragrance-free
- Colorant-free
- Free from silicones
- Without preservatives as per annex of the EU Cosmetics Directive, whenever possible



### Prevention Is The Best Medicine

Adequate skin care prevents people with occupationally extremely stressed hands from developing eczema. Due to appropriate protection, already irritated skin is saved from further damages and is supported in its regeneration process. Skin protection is a preventative measure and not a therapy in case of an existing disease. However, in the course of therapy, especially while being reintegrated at the workplace, skin care products can be applied additionally.

90 percent of all cases of dermatitis are irritant and allergic eczema which are caused by the skin's direct contact with harmful substances.



### A Main Reason For Skin Cell Damages: Free Radicals

Free radicals rank among the most important reasons for skin damages on a cellular level. According to the latest scientific findings<sup>1</sup>, free radicals contribute to the pathogenesis of irritant and allergic contact dermatitis as well.

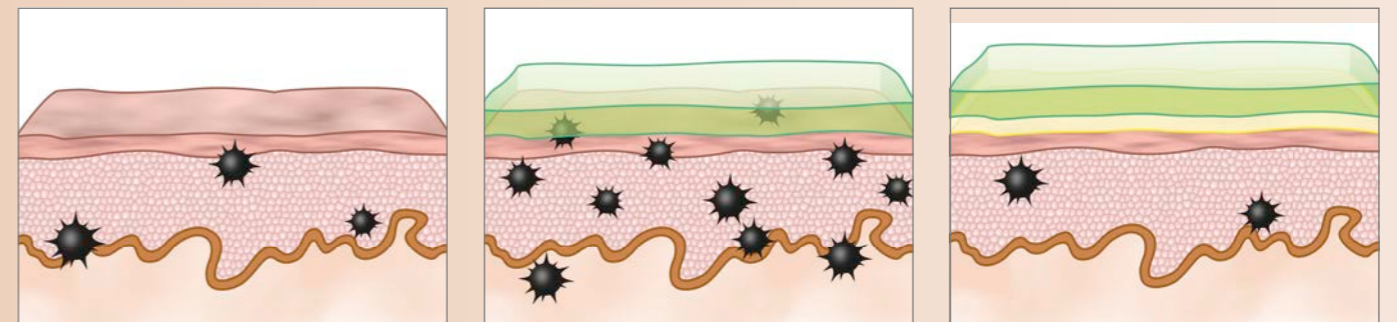
### The Formation Of Free Radicals Inside Of The Skin

Free radicals are atoms or molecules which have at least one unpaired electron. Due to ordinary metabolic processes, they arise from molecular oxygen inside of the body. Different factors contribute to their occurrence inside of the skin – next to UV radiation, especially the impact of detergents, allergens and other skin-irritating substances is an important aspect.

Due to their high reactivity, free radicals damage proteins, lipids and important molecules such as RNA and DNA. Healthy cells are able to render dangerous particles harmless. However, a concentration of free radicals, which is too large, overexerts the repair and detoxication capacities of the cells and results in oxidative stress: an injury of cellular and extracellular macromolecules.

### Effective Protection Against Working Materials And Free Radicals

Occupationally extremely stressed hands are in need of comprehensive protection – this will be even more necessary if the skin is already stressed and irritated. The innovative skin protection cream PROTEXSAN protects sensitive or extremely stressed hands in an especially efficient way. The cream regenerates the skin's barrier because of skin-related ceramides and a new lamellar structure which is similar to the structure of the epidermis. Moreover, the cream uses the antioxidant properties of the natural substance luteolin in order to counteract aggressive oxygen radicals effectively. Additionally, PROTEXSAN does not only protect hands from the working materials they are in contact with in professional everyday life. The luteolin contained also reduces the inflammation risk which is caused by the formation of free radicals.



In unstressed skin, free radicals form to an extent which can be reduced by the body's own antioxidants.

The extended formation of free radicals in occupationally extremely stressed skin overexerts the skin's repair mechanisms. The cell damages resulting from this overexertion are co-responsible for the development of eczema.

A skin protection cream containing luteolin prevents the excessive formation of free radicals in occupationally extremely stressed skin.

<sup>1</sup> cf. Senaldi G. et al. (1994), J Invest Dermatol 102: 934-937 and Willis CM. et al. (1998), Eur J Dermatol 8: 8-12.



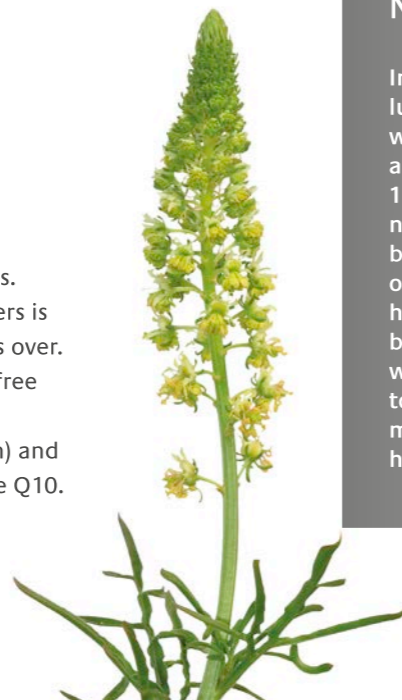
## HIGHLY EFFECTIVE NATURAL ANTIOXIDANT

The natural substance luteolin is extracted from the medicinal plant *Reseda luteola* and it is one of the most effective antioxidants in the plant kingdom. Luteolin does not only protect sensitive or extremely stressed skin from free radicals, it also protects the skin from the irritation caused by irritant and potentially allergenic substances. Furthermore, luteolin operates in an anti-inflammatory way, it absorbs UV radiation and it stimulates the formation of collagen.

A skin protection cream containing luteolin is ideally suitable for people whose hands are repeatedly exposed to water and water-soluble working materials in the course of their professional activities.

### Strong Combination: Luteolin, Q10 and Vitamin E

Various antioxidants protect each other and create a network inside of the skin which absorbs free radicals. A combination of luteolin and other radical scavengers is able to potentiate the ingredient's effect many times over. Thus, PROTEXSAN maximizes the protection against free radicals because of the combination of the patented flavonoid extract taken from *Reseda luteola* (Luteolin) and the body's own antioxidants vitamin E and coenzyme Q10.



### Reseda luteola: Healing Power from Nature

In Central Europe, the plant *Reseda luteola*, which is also known as weld or wild mignonette, is used as a medicinal plant since the 18th century. Even the plant's name is based on its effectiveness, because „reseda“ is the imperative of the Latin verb „resedare“, „to heal“. Possibly, the name traces back to a spell which was spoken while applying the plant in order to strengthen its effect: „reseda morbos, reseda!“ (‘‘Heal the disease, heal!’’)

## Dermatologically-Proved Protective Effect of Luteolin

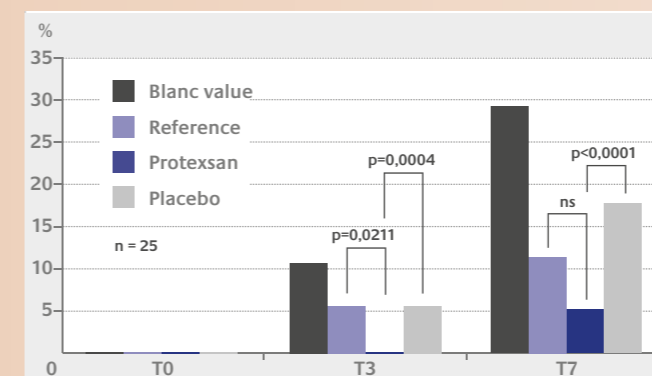
In the course of a project which has been granted by the German Federal Ministry of Economics and Technology, the Department of Dermatology at the University of Freiburg developed an innovative skin protection cream containing luteolin. As a result of this project, Prof. Dr. C. Schempp and Prof. Dr. W. Gehring observed that luteolin is able to protect human skin effectively. The dermatologists ascribe the natural substance's outstanding protective effect to properties which are UV-absorbing, DNA-protecting, antioxidant, anti-inflammatory and protecting the skin's extracellular matrix<sup>2</sup>.

In the repetitive washing test, the skin protection cream PROTEXSAN with luteolin showed a superior protective effect – also in comparison to other preparations. During the test period, PROTEXSAN was the only product which even improved the hydration of the skin's horny layer.<sup>3</sup>



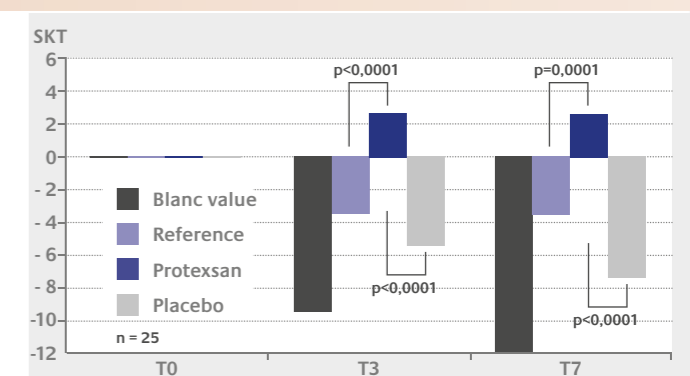
### Anti-Inflammatory Effect

The repetitive washing test on untreated skin led to an increasing inflammatory reaction which was documented as an increase of the cutaneous blood flow. PROTEXSAN prevented the increase of cutaneous blood flow completely on day three and reduced it in the clearest way on day seven.<sup>4</sup>



### Protection Against Transepidermal Water Loss

The repetitive washing test on untreated skin led to a statistically significant loss of stratum corneum moisture. Despite the repetitive washing, PROTEXSAN was the only formulation which improved stratum corneum moisture at both observation points.<sup>5</sup>



<sup>2</sup> cf. Zentrales Innovationsprogramm Mittelstand (ZIM), AiF grant no. KF2556501SK0, „Entwicklung einer Hautschutzserie mit patentiertem Flavonoid-Extrakt aus *Reseda luteola* für den gewerblichen Hautschutz im industriellen Umfeld“, Final Report of the Department of Dermatology, University Medical Centre Freiburg, Prof. Dr. C. Schempp and Prof. Dr. L. Bruckner-Tuderman. 2012.

<sup>3</sup> cf. Schempp, C. M., Meinke, M., Lademann, J., Ferrari, Y., Brecht, T., Gehring, W.: „Topical antioxidants protect the skin from chemical-induced irritation in the repetitive washing test: a placebo-controlled, double-blind study.“, Contact Dermatitis 67: 234-237. 2012.

<sup>4</sup> cf. *ibid.*  
<sup>5</sup> cf. *ibid.*

## OCCUPATIONAL SKIN CARE TODAY

The general requirements for occupational skin care have fundamentally changed in the last decades. On the one hand, the industrial restructuring led to a reduction of the average dirt level. On the other hand, highly qualified workers encounter new working materials, which might stress the skin. Furthermore, the population's increasing skin sensitivity from environmental influences (atopy) can be noticed.

### Realistic Effectiveness Tests

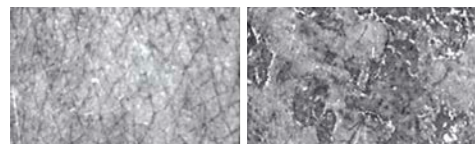
Occupational skin care is on the move. Contrary to previous assumptions, skin protection products do not merely have a physical effect by laying a protective film on the skin. Rather, their ingredients interact with the horny layer of the epidermis – a complex interaction and a circumstance that makes it even more important to test skin protection products

Physioderm® verifies the efficacy of skin protection products with the help of the **Repetitive Irritation Test (RIT)**, which is defined as the gold standard.

with the most practical relevance. This is the only way to prove their effectiveness reliably. The best methods are in vivo-studies like the Repetitive Irritation Test (RIT). The RIT simulates the situation at workplaces with test persons who repetitively apply skin protection agents and skin-irritating working materials over a longer period of time.

### Focus On Skin Cleansing

Although preventive skin protection agents have been the focus of research for a long time, currently, more emphasis is placed on the development of optimised skin cleansing products as well. For many years, most of the attention has been paid to the elimination of solvents. Therefore, the further development of scrubbing agents stagnated. This was a mistake since abrasive skin cleansing products



Left: healthy skin; Right: damaged skin

In contrast to walnut shell powder, wax pearls remove dirt without affecting or damaging the skin.

for heavy dirt often contain hard, sharp-edged scrubbing agents which have the potential to cause dermatitis.

A study by the dermatological clinic of the University of Erlangen recently proved the damaging effect of hard scrubbing agents made of walnut shell powder, as well as the considerably better skin compatibility of an innovative alternative: soft pearls made of hydrogenated castor oil which remove dirt without damaging the skin.

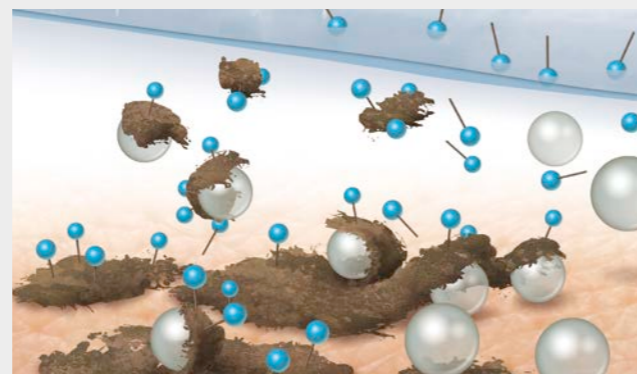
### Active Soft Pearls®

Active Soft Pearls® (ASP) are wax pearls made of hydrogenated castor oil, which are characterised by a soft and smooth surface. ASP do not support the cleansing process merely by mechanical rubbing like abrasives, but primarily by their lipophilic surface structure which is able to bind oily dirt particles. The skin cleansing products ACTIVE PEARLS® and ACTIVE PEARLS® PLUS contain ASP.

“Castor wax beads constitute a novel non-irritating alternative for abrasive cleaning of recalcitrant oily skin contamination appropriate for individuals with an atopic skin diathesis [...]”

Research by Prof. Dr. med. V. Mahler, dermatological clinic of the University of Erlangen

The English version of the research has been published in the British Journal of Dermatology (BJD), Volume 162, Number 4, April 2010.



### Perfume- And Fragrance-Free Products As A Special Solution

More and more people are allergic to perfume and fragrances but the inherent smell of perfume- and fragrance-free products often appears to be unpleasant. Therefore, many users do not accept perfume- and fragrance-free agents in practice. The result: either they use the skin protection products insufficiently or they switch to products of their choosing. However, the best skin care concept is useless, if it is not applied consistently. For this reason, perfume- and fragrance-free products primarily serve as an alternative for employees with known perfume or fragrance allergies. They are useful as a single solution, if a high perfume exposure already exists or an odor transfer needs to be excluded.

#### Perfume- and fragrance-free Physioderm® products available:

SANIWIP®, PROTEXSAN, NUTRI SAFE, PROGLOVE, DUALIN® (perfume- and fragrance-free), PHYSIO UV 30 SUN, PHYSIO UV 50 PLUS, PHYSIO UV 50 SPRAY, STEPHALEN® OPTIFOAM, STEPHALEN® OPTIWASH, ECOSAN, ACTIVE PEARLS® (perfume- and fragrance-free), TOPSCRUB® SOFT, ACTIVE PEARLS® PLUS, CUREA SOFT (perfume- and fragrance-free) and CARE PURE

### Environmental Protection And Sustainability

Environmental awareness plays an increasing role in occupational skin care. The growing demand for ecologically responsible products leads to an increasing range of products that save the skin and the environment as well. Instead of mineral oil, manufacturers increasingly often choose oils, fats and waxes based on natural and renewable raw materials, e.g. olive oil, rice germ oil or beeswax.

### Use Of Sustainable Palm Oil Certified By The RSPO

An important natural raw material often used for the production of skin cleansing products is palm oil and its derivatives. In this regard, PGP focuses on an increased use of certified palm oil which is proven to derive from sustainable sources. In this context, PGP cooperates with the “Roundtable on Sustainable Palm Oil” (RSPO), whose principal objective is, “to promote the growth and use of sustainable palm oil through cooperation within the supply chain and open dialogue between its stakeholders“, according to their own statutes. For this reason, PGP has received the RSPO Supply Chain Certification.



### The Myth of “free from preservatives”

Most of the industrially produced skin care products have to be preserved with the help of preservative agents. In order to create an impression of special skin compatibility, substances, which do not have to be declared as preservatives, are occasionally used. However, these substances, e.g. essential oils, are anything but generally more compatible than ingredients under the duty of declaration; many of them even have a higher allergenic potential.

## OCCUPATIONAL SKIN CARE WITH PHYSIODERM®

The prevention of occupational skin diseases is a complex mission, which requires far more than merely compatible products. Skin care only works as a comprehensive and integrated concept. It demands various measures which have to be determined, coordinated and implemented in a consistent as well as in an organized way. Consideration must always be given to the specific requirements of every single workplace and employee.

In order to support companies in effective skin care, Physioder® offers a comprehensive range of products and services – while additionally providing almost 100 years of experience in the domain of occupational skin care.

### Uncompromising Quality From A To Z

Excellent compatibility and highest efficacy – these are the two basic principles behind every Physioder® product. These are simple principles with far-reaching consequences, especially in terms of ingredient selection, product development, product manufacturing as well as extensive product testing.

The raw materials of Physioder® products are carefully chosen. As a matter of course, all raw materials correspond to the requirements of the Cosmetics Regulation and in parts also to the stricter requirements of the Pharmacopoeia. Rigorous quality controls and microbiological tests along the entire production process ensure that the end product always satisfies the highest requirements.

To be sure, the Physioder® products are not only tested according to the most modern procedures in the in-house laboratory, but also by neutral external institutes. Physioder® uses a strict quality management and certification system for its production: DIN EN ISO 9001. In addition, Physioder® established an environmental management system which is certified according to the international norm DIN EN ISO 14001 and which ensures the highest possible sustainability.

### Contact

The Physioder® customer service team is gladly available for all inquiries and information concerning occupational skin care. Your direct contact persons can be found on [www.physioderm.com/en/contact](http://www.physioderm.com/en/contact)

Phone: +49 (0) 2251 77617-30 (during office hours)  
e-Mail: [info@physioderm.de](mailto:info@physioderm.de)

### Focus On Cost Effectiveness

By preventing occupational dermatitis, modern skin care concepts reduce loss of manpower and sales. Good skin care costs money. These costs have to have a perceived value for the benefits received. Physioder® helps companies do a profitability calculation in addition to creating a skin care concept exactly meeting all workplace requirements. Furthermore, Physioder® continuously looks for ways to save its customers money. Innovative concepts and formulations as well as efficient corporate structures allow for economical prices for high quality products.

### Competent Assistance In Risk Assessment

The first step on the way to an effective skin care concept is a risk assessment, which includes all potential strains and risks the employee's skin might be exposed to. Only on the basis of this risk assessment, it is possible to determine appropriate protection measures. In order to support companies in conducting a risk assessment, Physioder® will send an experienced local representative to the company. In cooperation with the persons in charge, our experts analyse the risks of each workplace and prepare skin care concepts, which consider the specific requirements of the respective company.



### Concepts In Practice

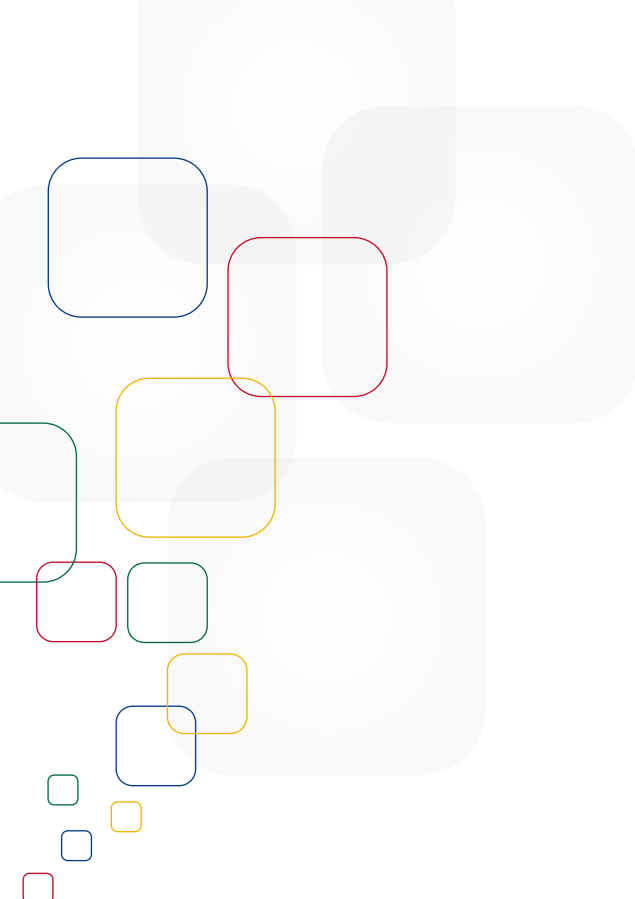
No product can protect the skin, if it is not applied. In order to facilitate the step from theory into the practice of everyday working life, Physioder® offers services and supportive devices that increase the acceptance and thus, the effectiveness of skin care products significantly – e.g. practice-related dispensers simplifying the application of skin care products. In order to prevent confusion, all Physioder® products bear a symbol indicating their application area. Dispensers can also be labelled individually. In addition, Physioder® provides product samples on request in order to give companies the possibility to test the product acceptance and effectiveness without running a financial risk.

### Crucial Point: The Employee

Well-informed and motivated employees are an essential factor for the success of skin care concepts. With the help of advisory services and on-site trainings, Physioder® systematically communicates the application and the effect of occupational skin care products. Regular local activities and informative events create an awareness for employees about occupational skin care.







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