

# Sun damage doesn't stop at sunset — so why should your skin care?

PEPHA<sup>®</sup>-AGE: A natural solution for around-the-clock enhanced care and rejuvenated looking skin







## The Effects of Sun Damage after Sunset

### Collagen Degradation

## MMPs & Skin

Even minimal UV exposure can lead to the increased skin production of matrix metalloproteinases (MMPs), which act as the major forces of collagen damage. Once increased, they can be active for 24 hours after UV exposure.

### Depressed Collagen Recovery

**2-3 days**

The amount of time it takes for your skin to produce collagen at the levels it did before UV exposure.

### Leading Cause of Skin Damage

**90%**

The amount of visible skin changes caused by sun light.

### Collagen Suppression

**70% less collagen**

After MMP exposure, fibroblasts (the cells that produce collagen and elastin) produced 70% less collagen.

### Blue Light from Sun

## Deepest impact

70% of Blue Light exposure comes from the sun, it penetrates skin further than UVA and UVB\*.

# Extend the care cycle for skin with **SOLAIRE TOTALE**



A 3-Step System to Reveal Your Most Radiant Skin, powered by **PEPHA®-AGE**, a natural solution for **around-the-clock** enhanced care and rejuvenated looking skin

## DSM's SOLAIRE TOTALE

### Step 1: Morning Glow Hydro-Boost Mist

Apply to freshly cleansed skin to seal in hydration and fortify skin with antioxidant protection against light and pollution damage.



## DSM's SOLAIRE TOTALE

### Step 2: Mineral Reveal Tinted Moisturizer SPF 50

Protect your skin with the ultimate layer of defense. This high-SPF sunscreen is enhanced with special "hidden" skin-toned pigments that are revealed as you apply.




## DSM's SOLAIRE TOTALE

### Step 3: Bright Night Rejuvenating Serum

Enhance the recovery of your good night's sleep. Natural actives enhance collagen production and cellular recovery from the effects of UV exposure.





Extend the  
care cycle with  
PEPHA®-AGE

Cellular  
Vitality

**200% increase**

PEPHA®-AGE is scientifically proven to significantly increase cellular vitality\* after UVA exposure by up to 200%

Enhances Skin Barrier  
Resilience against Sunlight

**>35% Less Damage**

PEPHA®-AGE is proven to significantly reduce the formation of sunburn cells on skin\*\* after UVB exposure. Sunburn cells are a sign of irreversible sun damage

Boosts Skin's "Youth" Collagen

**~30% increase**

Collagen III ("Youth Collagen") is one of the most depleted collagen forms with age. By age 30, the decline can be over 50%. PEPHA®-AGE is proven to help mature skin\*\* produce more of this vital collagen.

Blue Light Defense

**Visible Protection**

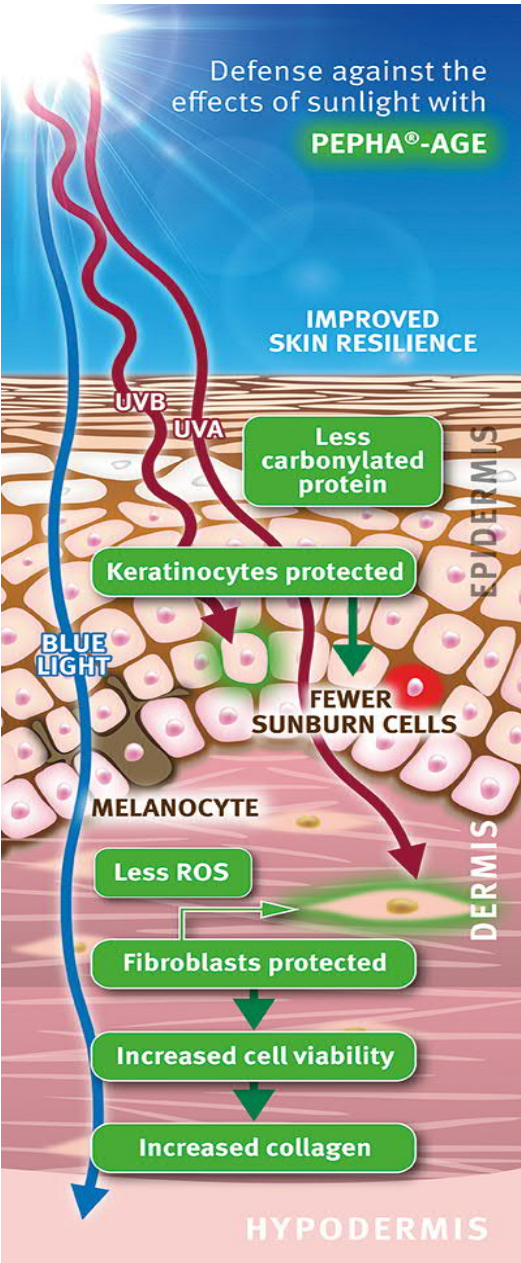
PEPHA®-AGE is proven to significantly reduce the immediate visible skin darkening and redness caused by blue light by up to 30%.

Sources: DSM PEPHA®-AGE Presentation, \*Cellular vitality of fibroblasts was assessed by MTT assay, a known test for determining cellular mitochondria activity, \*\*ex vivo, skin explants, 43 year old donors

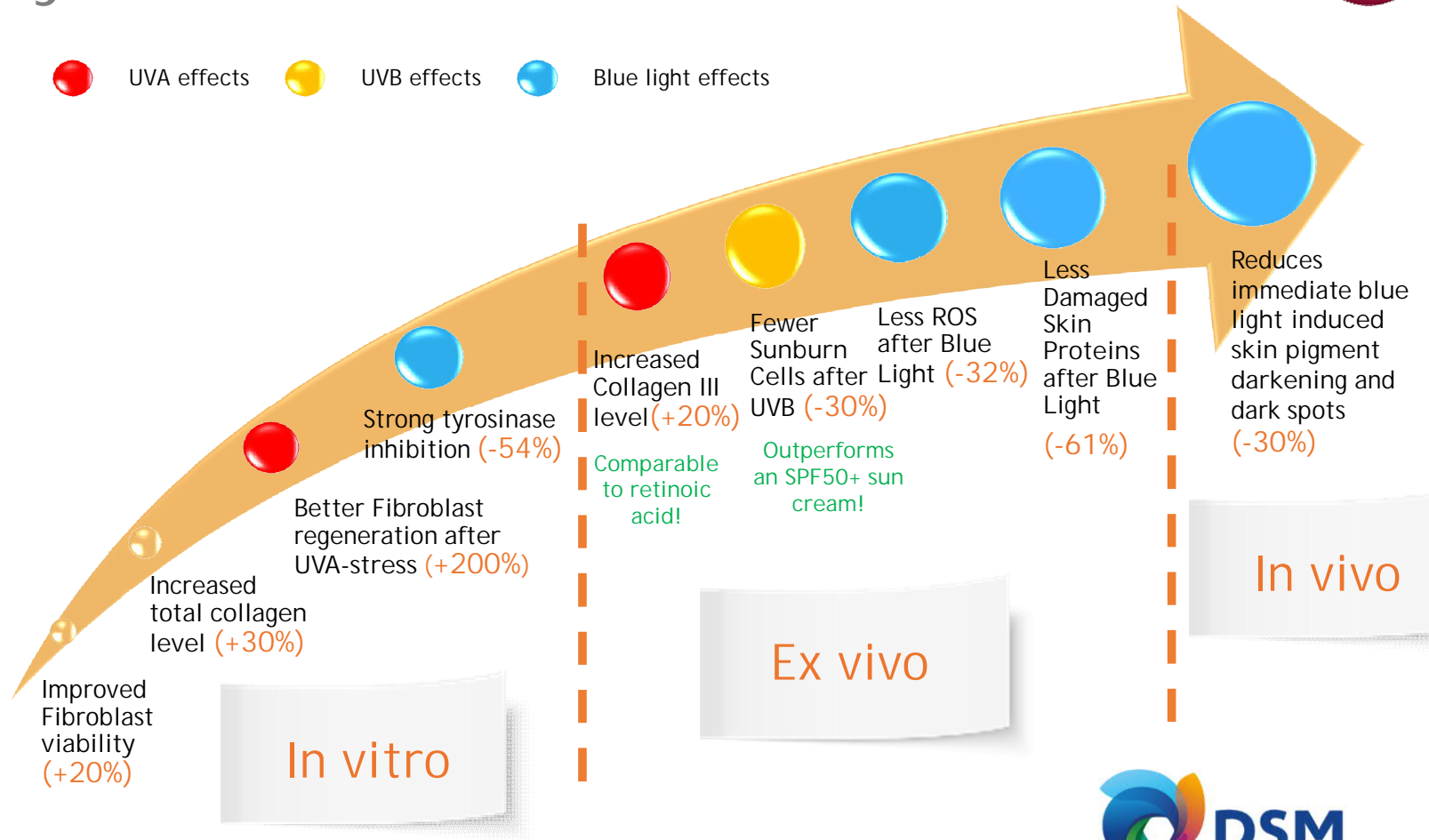




# How PEPHA®-AGE extends the care cycle for skin



● UVA effects ● UVB effects ● Blue light effects





# SOLAIRE TOTALE Formulations

Ingredient Details and Formulating Instructions





# SOLAIRE TOTALE - Ingredients

## Step 1: Morning Glow Hydro-Boost Mist



Phase	Ingredients	INCI Name	% w / w	Supplier	Ingredient Benefits
A	WATER DEM.	AQUA	87.55		
	Glycerine CremerGLYC 86.5%	GLYCERIN, AQUA	1.00	101003	Humectant
	PEPHA®-AGE	SCENEDESMUS RUBESCENS EXTRACT, AQUA, PHENOXYETHANOL	3.00	100288	Protects and regenerates skin from oxidative damage caused by UV and Blue light
	PENTAVITIN®	SACCHARIDE ISOMERATE, AQUA, CITRIC ACID, SODIUM CITRATE	0.50	100288	100% natural moisture magnet with immediate and long-lasting skin hydration effect, up to 72 hours
	Dermosoft 700 B	LEVULINIC ACID, SODIUM LEVULINATE, GLYCERIN, AQUA	1.00	100491	Plant derived bactericidal activity
	EUXYL K 712	AQUA, SODIUM BENZOATE, POTASSIUM SORBATE	1.00	100444	Preservative
	Niacinamide PC	NIACINAMIDE	1.00	100288	Vitamin B3 for even skin tone, blue light protection and defense against airborne and waterborne pollutants
	Dow Corning 2501 Cosmetic Wax	BIS-PEG-18 METHYL ETHER DIMETHYL SILANE	0.40	100099	Emulsifier
B	Solubilisant LRI	PPG-26-BUTETH-26, PEG-40 HYDROGENATED CASTOR OIL, AQUA	0.20	100659	Solubilizer
	Frag 49424902 CHLOE	PARFUM	0.10	101007	Fragrance
C	1,3-Propanediol	PROPANEDIOL	4.00	101157	Humectant, preservative-boosting
D	COSNACOLOR FD&C BLUE NO.1 0.1% solution	CI 42090, AQUA	0.25	100427	Pigment
E	Sodium Hydroxide 10% Solution	SODIUM HYDROXIDE, AQUA	0.00		pH adjuster
SK-E-101273-35					

# SOLAIRE TOTALE – Formulating Instructions

## Step 1: Morning Glow Hydro-Boost Mist



### Procedure

1. Mix A at room temperature under stirring
2. Mix B at room temperature under stirring. Add B to A under stirring.
3. Add C & D at room temperature to AB under stirring
4. Adjust with E to pH about 5.5

### Technical Data

pH: 5.55

### Supplier

100288	DSM NUTRITIONAL PRODUCTS LTD	101003	CREMER OLEO GMBH & CO. KG
100444	SCHÜLKE & MAYR GMBH	100491	DR. STRAETMANS
100659	SENSIENT	100099	DOW CORNING EUROPE
101157	CONNECT CHEMICALS	101007	DROM FRAGRANCES GMBH & KO. KG
100427	LCW		

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# SOLAIRE TOTALE - Ingredients

## Step 2: Mineral Reveal Tinted Moisturizer SPF 50



Phase	Ingredients	INCI Name	% w / w	Supplier	Ingredient Benefits
A	Water Dem.	Aqua	31.00		
	Palmera G995V	Glycerin	2.00	101047	Humectant
	Zemea Propanediol	Propanediol	2.00	101015	Humectant, preservative-boosting
	Sodium Chloride Emprove Exp	Sodium Chloride	0.50	100230	Stabilizer
	RonaCare® Zinc Sulfate	Zinc Sulfate	1.00	100230	Stabilizer
	D-panthenol	Panthenol	0.50	100288	Vitamin B5
B	Dowsil ES-5300 Formulation Aid	Lauryl Peg-10 Tris(trimethylsiloxy)silylethyl Dimethicone	6.00	100099	Emulsifier
	Miglyol-gel 840 B	Propylene Glycol Dicaprylate/Dicaprate, Stearalkonium Hectorite, Propylene Carbonate	5.00	101043	Stabilizer
	Palmester 1547	Ethylhexyl Cocoate	4.25	101047	Emollient
	Dermosoft® GMC	Glyceryl Caprate	0.50	100491	Antimicrobial activity
	Emogreen L19	C15-19 Alkane	8.00	100313	Biodegradable, bio-sourced emollient
	Dispersun DSP-OL300	Polyhydroxystearic Acid	2.50	100627	Natural dispersant agent
	DL-alpha-tocopheryl Acetate	Tocopheryl Acetate	0.20	100288	Love your skin and the earth with eco-friendly QUALI®-E, vitamin E with the lowest carbon footprint on the market
	Aerosil 200	Silica	0.25	101005	Rheology modifier and stabilizer
	DOWSIL(TM) 2502 Cosmetic Fluid	Cetyl Dimethicone	5.00	100404	SPF enhancing and whiteness reducing properties
	PARSOL® TX	Titanium Dioxide, Silica, Dimethicone	7.00	100288	Inorganic UV filter providing broad-spectrum protection and blue light performance with extraordinary skin feel
	PARSOL® ZX	Zinc Oxide, Triethoxycaprylylsilane	18.00	100288	Inorganic UV filter providing broadening spectrum and blue light performance
	VALVANCE® Look 100	Silica, Titanium Dioxide	0.50	100288	Visual modifier. Blur effect
D	PEPHA®-AGE	Scenedesmus Rubescens Extract, Aqua, Henoxyethanol	1.00	100288	Protects and regenerates skin from oxidative damage caused by UV and Blue light
	Perfume Lotus Blanc RS67561	Parfum	0.60	100668	Fragrance
E	Cameleon Yellow	Cellulose Acetate, Titanium Dioxide, Ci 77492, Propylene Glycol Stearate, Acrylates/Ammonium Methacrylate Copolymer, Magnesium Stearate	3.40	100032	Pigment
	Cameleon Black	Cellulose Acetate, Titanium Dioxide, Ci 77499, Propylene Glycol Stearate, Acrylates/Ammonium Methacrylate Copolymer, Magnesium Stearate	0.06	100032	Pigment
	Cameleon Red	Cellulose Acetate, Titanium Dioxide, Ci 77491, Propylene Glycol Stearate, Acrylates/Ammonium Methacrylate Copolymer, Magnesium Stearate	0.54	100032	Pigment
	Cloisne Sparkle Bronze 250J	Mica, Iron Oxides *expected SPF	0.20	100032	Pigment

SU U 101426 01



# SOLAIRE TOTALE – Formulating Instructions

## Step 2: Mineral Reveal Tinted Moisturizer SPF 50



### Procedure

1. Heat phase A up to 50-60°C under stirring.
2. Heat phase B up to 50-60°C with high shear stirring.
3. When phase B is homogenous, add one by one all the ingredients of phase C to phase B and mix it until homogenous.
4. Slowly add phase A to phase B+C while increasing the shear speed.
5. Cool down to room temperature under gentle stirring.
6. Below 40°C, add one by one ingredients of phases D and E under gentle stirring.

### Technical Data

pH: NA

\*Expected SPF: 50

FDA Complaint

Viscosity (Brookfield RV6/10rpm): 38800 cps

In vitro UVAPF (Colipa 2011): >10

UVAPF/SPF (30 labeled);  $\geq 0.33$ ;  $>0.33$

Critical Wavelength: Min 370 nm

(Measurement done with Labsphere equipment)

### Supplier

101015 DUPONT TATE & LYLE BIOPRODUCTS

100288 DSM NUTRITIONAL PRODUCTS LTD

101043 IOI OLEO

100313 SEPPIC

101005 EVONIK INDUSTRIES AG

100668 TECHNICOFLOR

100037 BASF

101047 KLK OLEO

100230 MERCK KGAA

100099 DOW CORNING EUROPE

100491 DR. STRAETMANS

100627 INNOSPEC LIMITED

100404 DOW CORNING CORP

100032 TAGRA

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# SOLAIRE TOTALE - Ingredients

## Step 3: Bright Night Rejuvenating Serum



Phase	Ingredients	INCI Name	% w / w	Supplier	Ingredient Benefits
A	WATER DEM.	AQUA	82.05		
	Glycerin 99.5%	GLYCERIN	2.00	100654	Humectant
	SIMULGEL EG	SODIUM ACRYLATE/SODIUM ACRYLOYLDIMETHYL TAURATE COPOLYMER, ISOHEXADECANE, POLYSORBATE 80	3.00	100313	Texturizing polymer
	PEPHA®-AGE	SCENEDESMUS RUBESCENS EXTRACT, AQUA, PHENOXYETHANOL	1.00	100288	Protects and regenerates skin from oxidative damage caused by UV and Blue light
	Niacinamide PC	NIACINAMIDE	3.00	100288	Vitamin B3 for hydration, even skin tone and blue light protection
B	AuraSphere A	ISODODECANE, ADIPIC ACID/NEOPENTYL GLYCOL CROSSPOLYMER, LAURYL DIMETHICONE, HYDROGENATED POLYISOBUTENE	2.50	999999	Sensory enhancer
	Neossance Hemisqualane	C13-15 ALKANE	3.00	999999	Biodegradable, bio-sourced emollient
	VALVANCE Touch 210	SILICA	0.20	100288	Sensory modifier with unique moisture and oil absorption properties
	dl-alpha-Tocopherol	TOCOPHEROL	0.50	100288	Antioxidant
	Diocide	CAPRYLYL GLYCOL, PHENOXYETHANOL, HEXYLENE GLYCOL	1.00	999999	Preservative
C	HYASOL-PF	AQUA, PHENOXYETHANOL, SODIUM HYALURONATE	1.50	100288	Moisturizing and smoothness agent
	Citrus TEA E Parfum	PARFUM	0.25	101184	Fragrance
					SU-E-500007-4

# SOLAIRE TOTALE – Formulating Instructions

## Step 3: Bright Night Rejuvenating Serum



### Procedure

1. Mix phase A ingredients until homogeneous.
2. Mix phase B ingredients until homogeneous.
3. Add phase B to phase A mixing until homogeneous.
4. Add phase C one by one to phase AB mixing until homogenous.

### Technical Data

pH: 5.5 -6.5 Viscosity (Brookfield RV5/10rpm):

### Supplier

999999  
100313 SEPPIC  
101184 MANE

100654 EMERY OLEOCHEMICALS GMBH  
100288 DSM NUTRITIONAL PRODUCTS LTD  
999999 CENTERCHEM

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Let SOLAIRE TOTALE and  
PEPHA®-AGE take total  
care of your skin.

