



### Introduction to Sisterna® sucrose esters

Safety and mildness are key requirements in today's personal care industry and are increasingly driving formulators to focus their interest on natural and naturally derived raw materials. But just being mild and safe is not enough: today's raw materials should meet an outstanding technological performance as well.

In Sisterna® sucrose esters these requirements are combined. Being based on sucrose and vegetable fatty acids, Sisterna® sucrose esters are a unique range of high quality, non-ionic emulsifiers with exceptional performance and mildness.

Sisterna<sup>®</sup> sucrose esters can offer other unique benefits to personal care formulations, thus offering formulators many advantages in these times of environmental consciousness.

Sisterna distinguishes itself as a flexible partner that will help to find technical solutions in the development, improvement and process optimising of personal care products.

Further guide formulations are available on request.

#### **Business Partners**

Sisterna B.V. is responsible for the supply of Sisterna® sucrose esters in Europe and the Americas and has a network of exclusive distributors in its territory.

Visit our website www.sisterna.com to find out more about Sisterna® sucrose esters and to find the business partner responsible for your country.

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication. Nothing herein is to be construed as warranty expressed or implied. In all cases it is the responsibility of users to determine the applicability of such information or the suitability of any products for their own particular purpose.

# Certifications

| Grade    | Ecocert /<br>COSMOS | Natural<br>Certified<br>by NPA | RSPO    | Halal         | Kosher | Suitable<br>for Vege-<br>tarians | Suitable<br>for<br>Vegans |
|----------|---------------------|--------------------------------|---------|---------------|--------|----------------------------------|---------------------------|
| P\$750-C | COSMOS              |                                | MIXED   | ())la         |        | $\checkmark$                     | $\checkmark$              |
| L70-C    | COSMOS              |                                | CREDITS |               |        | $\checkmark$                     | $\checkmark$              |
| SP70-C   | COSMOS              |                                |         | Ula<br>Ala    |        | $\checkmark$                     | $\checkmark$              |
| SP50-C   | COSMOS              |                                |         | Da .          |        | $\checkmark$                     | $\checkmark$              |
| SP30-C   | COSMOS              |                                |         | ())La         |        | $\checkmark$                     | $\checkmark$              |
| SP10-C   | COSMOS              |                                |         | Ula<br>Marian |        | $\checkmark$                     | $\checkmark$              |
| SP01-C   | COSMOS              |                                |         | - COL         |        | $\checkmark$                     | $\checkmark$              |
| A10E-C   |                     |                                |         |               |        | $\checkmark$                     | $\checkmark$              |

## Product range, functionalities & application concepts

| Product range                       | P\$750-C             | L70-C  | SP70-C              | SP50-C              | SP30-C                | SP10-C                  | SP01-C                  | A10E-C                                 |
|-------------------------------------|----------------------|--|---------------------|---------------------|-----------------------|-------------------------|-------------------------|--|
| INCI-name                           | Sucrose<br>Palmitate | Aqua (and)<br>Sucrose<br>Laurate<br>(and)<br>Alcohol | Sucrose<br>Stearate | Sucrose<br>Stearate | Sucrose<br>Distearate | Sucrose<br>Polystearate | Sucrose<br>Polystearate | Sucrose<br>Tetrastearate<br>Triacetate |
| HLB value                           | 16                   | 15   | 15                  | 11                  | 6                     | 2                       | < 1                     | -                                      |
| Physical form                       | powder               | liquid<br>(40% sol)                                  | powder              | powder              | powder                | powder                  | powder                  | powder                                 |
| % mono ester                        | 75                   | 70   | 70                  | 50                  | 30                    | 10                      | 1                       | 0                                      |
| Functionalities                     | P\$750-C             | L70-C  | SP70-C              | SP50-C              | SP30-C                | SP10-C                  | SP01-C                  | A10E-C                                 |
| Emulsifier O/W                      | ٠                    | ٠  | •                   | ٠                   | •                     |                         |                         |  |
| Co-emulsifier W/O                   |                      |  |                     |                     |                       | ٠                       | •                       |  |
| Co-surfactant /<br>mild cleanser    | 0                    | ٠  | 0                   |                     |                       |                         |                         |  |
| Lipidic phase<br>modifier           |                      |  |                     |                     |                       |                         |                         | ٠                                      |
| Selective<br>antimicrobial activity |                      | •  | •                   |                     |                       |                         |                         |  |
| Application concepts                | P\$750-C             | L70-C  | SP70-C              | SP50-C              | SP30-C                | SP10-C                  | SP01-C                  | A10E-C                                 |
| Main emulsifier                     |                      |  | •                   | ٠                   | •                     |                         |                         |  |
| Co-emulsifier<br>O/W and W/O        | •                    |  | •                   |                     |                       | •                       | •                       |  |
| Cold emulsifier                     | •                    | •  | •                   |                     |                       |                         |                         |  |
| Gel-to-milk                         | •                    |  | •                   |                     |                       |                         |                         |  |
| Spray/wipe<br>& serum emulsions     | •                    | •  | •                   |                     |                       |                         |                         |  |
| Mild cleansing                      | 0                    | •  | 0                   |                     |                       |                         |                         |  |
| Anhydrous systems                   |                      |  |                     |                     |                       | •                       | •                       | •                                      |

• First choice O Good alternative

| 1 | Sucrose esters as main<br>O/W emulsifier system  | ME.010Thai Wellness Body ButterME.012African Nourishing LotionME.013Swiss Chocolate Body MousseME.014Anime Grey Hair Styling Cream   |  |
|---|--|--|--|
| 2 | Sucrose esters as co-<br>emulsifier for O/W and<br>W/O                                       | CoE.008 Las Vegas Protection Cream<br>CoE.009 Arctic Protection Cream  |  |
| 3 | Sucrose esters as cold emulsifier for O/W  | CE.003 Lagom Lotion Sweden   |  |
| 4 | Sucrose esters for gel-<br>to-milk (concentrated<br>emulsion technology)                     | GE.008Brazilian Conditioning Oil-Gel TreatmentGE.010Mediterranean Cream-To-Oil MassageGE.011Hamam Argan Oil GelGE.012Egyptian Cleopatra Bath Milk                              |  |
| 5 | Sucrose esters for<br>spray/wipe and serum<br>concepts (concentrated<br>emulsion technology) | SE.005 Relaxing Amsterdam Spray<br>SE.006 Spanish Eyes Serum   |  |
| 6 | Sucrose esters for mild cleansing  | MC.006 Traveller Cleansing Powder<br>MC.008 Siberian Cleansing Cream   |  |
| 7 | Sucrose esters in<br>anhydrous systems   | AS.007 Korean Beauty Highlighter<br>AS.008 All Purpose Travellers Balm<br>AS.009 Lipstick Milano<br>AS.010 Californian Gold Rush Eye Shadow<br>AS.011 Mexican Avocado Hair Wax |  |

### Sucrose esters as main O/W emulsifier system

# SISTERNA WORLD TOUR



### Sucrose esters as main O/W emulsifier system

Creating natural emulsions with a luxurious skin feel is a challenging task. This can be achieved with Sisterna® sucrose esters, which are excellent natural oil-in-water (O/W) emulsifiers. Furthermore Sisterna® sucrose esters provide an excellent touch and improve smoothness, emolliency and moisture level of the skin.

#### O/W emulsions

Sisterna® sucrose esters with a medium to high HLB value are recommended for the development of natural and mild O/W emulsions.

Advised products:

- Sisterna SP30-C/Sisterna SP70-C in a 2/2 ratio for creams
- Sisterna SP30-C/Sisterna SP70-C in a 3/1 ratio for lotions (LLC)
- Sisterna SP50-C

#### Aerated mousse technology

Sisterna's long experience of using sucrose esters in food mousses, where they give good aeration and firmness to the mousse, resulted in the development of a real cosmetic mousse with a light texture and excellent skin feel.

Advised products:

- Sisterna SP30-C/SP70-C in a 2/2 ratio
- Sisterna SP70-C ensures good aeration
- Sisterna SP30-C provides firmness and stability

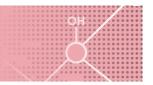
Benefits of Sisterna® sucrose esters in O/W emulsions and aerated mousses:

- Show very good emulsification properties with oils of different polarity, including vegetable and mineral oils, medium polarity and silicon oils
- Are suitable emulsifiers for the formation of traditional as well as lamellar liquid crystal type (LLC) emulsions
- Provide an excellent skin feel, largely independent of the oil phase
- Improve skin smoothness, emolliency and moisturisation
- Provide a cooling effect

### FORMULATION INFORMATION ME.010 Thai Wellness Body Butter

A rich body butter which contains more than 20% of butters and other solid ingredients. Sisterna SP30-C and Sisterna SP70-C will help to remove the greasiness of these butters and solids. This also increases the spreadability and gives a lighter skin feel.

## ME.010 Thai Wellness Body Butter



| ID           | : Main Emulsifier / ME.010                        |
|--------------|---|
| pH-value     | : 5.3   |
| Viscosity    | : 83.000 mPa.s Brookfield DV2T, Spindle 93, 5 rpm |
| Product form | : O/W   |

|   | Ingredient  | INCI-name  | % w/w  | Supplier  |
|---|---|--|--|---|
| 1 | Deionised Water<br>Glycerin 99%<br>Keltrol CG-SFT<br>Amigel<br>Fruitliquid Pineapple PB                                 | Aqua<br>Glycerin<br>Xanthan Gum<br>Sclerotium Gum<br>Glycerin, Aqua, Ananas Sativus Fruit Extract  | 46.85<br>2.50<br>0.30<br>0.50<br>2.00        | several<br>several<br>CP Kelco<br>Alban Muller<br>Crodarom                |
| 2 | Sisterna SP70-C<br>Sisterna SP30-C<br>Jasmine Butter  | Sucrose Stearate<br>Sucrose Distearate<br>Prunus Amygdalus Dulcis (Sweet Almond)<br>Oil, Hydrogenated Vegetable Oil, Jasminum<br>Officinale Oil  | 2.00<br>2.00<br>9.00                         | Sisterna<br>Sisterna<br>EFP Biotek  |
|   | Lime Butter<br>Coconut Oil<br>Caprylic/Capric Triglyceride<br>Rice Serum<br>Cetearyl Alcohol<br>Tocomix L70-IP<br>VP 67 | Citrus Aurantifolia (Lime) Seed Oil,<br>Hydrogenated Vegetable Oil<br>Cocos Nucifera (Coconut) Oil<br>Caprylic/Capric Triglyceride<br>Oryza Sativa (Rice) Bran Oil, Phytosterols,<br>Olea Europaea (Olive) Oil Unsaponifiables,<br>Tocopherol<br>Cetearyl Alcohol<br>Tocopherol, Helianthus Annuus Seed Oil<br>Ricinus Communis (Castor) Seed Oil,<br>Hydrogenated Castor Oil, Copernicia<br>Cerifera (Carnauba) Wax | 9.00<br>6.00<br>7.50<br>3.00<br>0.05<br>2.00 | EFP Biote<br>several<br>EFP Biotek<br>several<br>Jan Dekker<br>EFP Biotek |
| 3 | Euxyl K 830<br>Malaysian Longan   | Phenoxyethanol, Ethylhexylglycerin,<br>Octenidine HCI<br>Parfum  | 1.00<br>0.30                                 | Schülke<br>Luzi   |
| 4 | Citric Acid (20% Aq. Sol.)  | Citric Acid, Aqua  | q.s.   | several   |

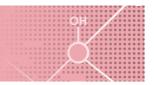
#### **Production method**

- 1. Add the Amigel and Keltrol CG-SFT to (1) while stirring. Hydrate for 10 minutes until fully incorporated.
- 2. Heat (1) and (2) to 70°C.
- 3. Add (2) to (1) while homogenising.
- 4. Cool down to 40°C while continuously stirring and add (3) to (1+2) while homogenising shortly.
- 5. Adjust pH with (4) if necessary.

Formulation developed by Matis Specialties (Belgium) - www.matisspecialties.be

### FORMULATION INFORMATION ME.012 African Nourishing Lotion

Combining Sisterna SP30-C and Sisterna SP70-C in a 3/1 ratio gives you the ability to create Lamellar Liquid Crystal (LLC) emulsions. The velvet skin feel created by using sucrose esters is enhanced by this LLC emulsions, also providing a higher stability and a controlled release of actives.



| ID           | : Main Emulsifier / ME.012                       |
|--------------|--|
| pH-value     | : 5.2  |
| Viscosity    | : 7.000 mPa.s Brookfield DV2T, Spindle 93, 5 rpm |
| Product form | : O/W  |

|   | Ingredient   | INCI-name   | % w/w  | Supplier   |
|---|--|---|--|--|
| 1 | Deionised Water<br>Glycerin 99%<br>Xilogel HS<br>Actigum VSX 20  | Aqua<br>Glycerin<br>Tamarindus Indica Seed Polysaccharide<br>Sclerotium Gum, Xanthan Gum  | 68.30<br>4.00<br>0.25<br>0.30                | several<br>several<br>Indena<br>Cargill  |
| 2 | Sisterna SP30-C<br>Sisterna SP70-C<br>Cetearyl Alcohol<br>Baobab Oil<br>Manketti Oil<br>Tocopherol oil CLR | Sucrose Distearate<br>Sucrose Stearate<br>Cetearyl Alcohol<br>Adansonia Digitata Seed Oil<br>Schinziophyton Rautanenii Kernel Oil<br>Glycine Soja (Soybean) Oil, Tocopherol | 3.00<br>1.00<br>2.00<br>9.00<br>9.00<br>1.25 | Sisterna<br>Sisterna<br>several<br>Sigma Oil Seeds<br>Zambezi<br>Organics<br>CLR |
| 3 | Euxyl K701<br>Rooibos Herbasol Extract<br>Arty Nomad   | Phenoxyethanol, Benzoic Acid,<br>Dehydroacetic Acid, Ethylhexylglycerin<br>Glycerin, Aqua, Aspalathus Linearis Extract<br>Parfum  | 1.10<br>0.50<br>0.30                         | Schülke<br>Lipoid Kosmetik<br>Luzi   |
| 4 | Citric Acid (20% Aq. Sol.)   | Citric Acid, Aqua   | q.s.   | several  |

#### **Production method**

- 1. Heat the deionised water of (1) to  $40^{\circ}$ C.
- 2. Premix Xilogel HS and Actigum VSX 20 into the glycerin and add to the water at 40°C. Stir for 15 minutes.
- 3. Heat (1) and (2) to 70°C.
- 4. Add (2) to (1) while homogenising.
- 5. Cool down to  $40^{\circ}$ C and add (3) to (1+2) while homogenising shortly.
- 6. Adjust pH if necessary.

### FORMULATION INFORMATION ME.013 Swiss Chocolate Body Mousse

Sisterna SP70-C ensures good aeration while Sisterna SP30-C provides firmness and stability. By dosing the correct heat, shock and long term stabilisers you can keep this product stable for three years. To manufacture this unique specialty product you need a continuous aeration equipment like a Mondomix.

# ME.013 Swiss Chocolate Body Mousse

| ID           | : Main Emulsifier / ME.013                                   |
|--------------|--|
| pH-value     | : 7.0  |
| Viscosity    | : 80.000 mPa.s Brookfield DV-I+, Helipath Spindle T-C, 5 rpm |
| Density      | : 0.6 g/ml   |
| Product form | : O/W  |

|   | Ingredient   | INCI-name  | % w/w                         | Supplier                                      |
|---|--|--|-------------------------------|---|
| 1 | Deionised Water<br>Glycerin 99%<br>Avicel PC611<br>Colorona Imperial Topaz | Aqua<br>Glycerin<br>Microcrystalline Cellulose, Cellulose Gum<br>Mica, Cl 77163,Cl 77491 Cl 77492,<br>Cl 77499 | 68.75<br>5.00<br>0.50<br>0.05 | several<br>several<br>FMC Biopolymer<br>Merck |
| 2 | Sisterna SP70-C  | Sucrose Stearate   | 2.00                          | Sisterna                                      |
|   | Sisterna SP30-C  | Sucrose Distearate   | 2.00                          | Sisterna                                      |
|   | Kelcogel CG-HA   | Gellan Gum   | 0.15                          | CP Kelco                                      |
|   | Methocel A4M   | Methyl Cellulose   | 0.10                          | Dow   |
|   | Keltrol CG-SFT   | Xanthan Gum  | 0.20                          | CP Kelco                                      |
| 3 | Lipex Cocoasoft  | Theobroma Cacao (Cocoa) Seed Butter  | 15.50                         | AAK   |
|   | Perilla Oil MM   | Perilla Ocymoides Seed Oil   | 4.00                          | MMP   |
|   | Cetearyl Alcohol   | Cetearyl Alcohol   | 0.50                          | several                                       |
| 4 | Euxyl PE9010   | Phenoxyethanol, Ethylhexylglycerin   | 1.00                          | Schülke                                       |
|   | Vitamin E Acetate  | Tocopheryl Acetate   | 0.10                          | several                                       |
|   | Swiss Choco Milk   | Parfum   | 0.15                          | Luzi  |

#### **Production method**

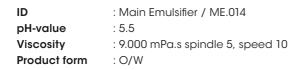
- 1. Disperse Avicel PC611 in water of (1) and shear with high shear mixer for 10 minutes. Then add other ingredients of (1).
- 2. Add (2) to (1) and heat to  $85^{\circ}$ C.
- 3. Heat (3) to 85°C.
- 4. Add (3) to (1+2) while homogenising with a high shear mixer for 3 minutes.
- 5. Cool down to  $20^{\circ}$ C while stirring slowly. Then add ingredients of (4).
- Whip emulsion with a Hobart (batch aeration equipment) until a density of 0.5 is reached. (approx. 1-3 minutes, depending on batch size) or use Mondomix (continuous aeration equipment).

Legal Notice: Neither Sisterna nor its distributors represent or warrant patent freedom to operate. Whether specific uses of sucrose esters in specific formulations could result in an allegation of patent infringement is an issue that our customers should consider with their own legal counsel. Since sucrose esters have a wide variety of uses, this presentation should not be viewed as an inducement to infringe the intellectual property rights of any third party.

### FORMULATION INFORMATION ME.014 Anime Grey Hair Styling Cream

Sisterna® sucrose esters have a hair softening effect, they contribute to the spreadability of the cream and have good pigment dispersing properties. Furthermore they increase the mildness of a total formulation for a milder effect on the scalp.

# ME.014 Anime Grey Hair Styling Cream



|   | Ingredient   | INCI-name   | % w/w  | Supplier  |
|---|--|---|--|---|
| 1 | Deionised Water<br>Disodium EDTA<br>Glycerin 99%<br>Natrasol 250 HRR   | Aqua<br>Disodium EDTA<br>Glycerin<br>Hydroxyethylcellulose  | 59.90<br>0.10<br>3.00<br>0.40                        | several<br>several<br>several<br>Ashland  |
| 2 | Sisterna SP30-C<br>Sisterna SP30-C<br>BRB 1860<br>Carnauba Wax T1<br>Baobab Oil<br>KesterWax K-24<br>KesterWax K-72<br>Kesterwax K-60P<br>Neossance Hemisqualene | Sucrose Stearate<br>Sucrose Distearate<br>Dimethicone, Dimethiconol<br>Copernicia Cerifera (Carnauba) Wax<br>Adansonia Digitata Seed Oil<br>Lauryl Laurate<br>Behenyl Behenate<br>Behenyl Polydroxystearic Acid, Copernicia<br>Cerifera Cera<br>C13-15 Alkane | 4.00<br>2.00<br>3.00<br>2.00<br>2.00<br>3.00<br>8.00 | Sisterna<br>Sisterna<br>BRB<br>Koster Keunen<br>Sigma Oil Seeds<br>Koster Keunen<br>Koster Keunen<br>Koster Keunen<br>several |
| 3 | PVP K90 Solution 20%<br>PVP/VA W-635   | PVP<br>VP/VA Copolymer  | 4.00<br>4.00   | Ashland<br>Ashland  |
| 4 | Geopearl C Crystal Titanium  | Synthetic Fluorphlogopite, Titanium Dioxide,<br>Tin Oxide   | 0.70   | Geotech   |
|   | Liquid Germall Plus  | Propylene Glycol, Diazolidinyl Urea,<br>lodopropynyl Butylcarbamate   | 0.40   | Ashland   |
|   | Parfum   | Parfum  | 0.50   | several   |

#### **Production method**

- 1. Prepare (1) and heat to 70-75°C.
- 2. Prepare (2) and heat to 70-75°C
- 3. Add (2) to (1) while homogenising.
- 4. Prepare (3).
- 5. Cool down to  $40^\circ\text{C}$  and add (3)
- 6. Add (4) one by one to the production. Mix well after each addition.

Formulation developed by the Cosmetic Marketing Group - www.cosmeticmarketinggroup.com



Sucrose esters as co-emulsifier for O/W and W/O SISTERNA WORLD TOUR

### Sucrose esters as co-emulsifier for O/W and W/O

# SISTERNA WORLD TOUR

Creating natural emulsions with a luxurious skin feel is a challenging task. Sisterna® sucrose esters are excellent natural co-emulsifiers for both oil-in-water (O/W) and water-in-oil (W/O) skin care emulsions. Furthermore Sisterna® sucrose esters provide an excellent touch and improve smoothness, emolliency and moisture level of the skin.

#### O/W emulsions

Sisterna® sucrose esters with a high HLB value are recommended for the development of O/W emulsions.

Advised products:

• Sisterna SP70-C as co-emulsifier with a low HLB food emulsifier, such as glycerylstearate citrate or glyceryl monostearate

Benefits of Sisterna® sucrose esters in O/W emulsions:

- Show very good emulsification properties with oils of different polarity, including vegetable and mineral oils, medium polarity and silicon oils
- Are suitable emulsifiers for the formation of traditional as well as lamellar liquid crystal type emulsions
- Provide an excellent skin feel, largely independent of the oil phase
- Improve skin smoothness, emolliency and moisturisation
- Provide a cooling effect

#### W/O emulsions

Sisterna $^{\odot}$  sucrose esters with a low HLB value are recommended for the development of W/O emulsions.

Advised products:

• Sisterna SP01-C or Sisterna SP10-C as co-emulsifier

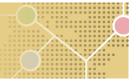
Benefits of Sisterna® sucrose esters in W/O emulsions:

- Improve the spreading and after skin feel properties of the emulsion
- Eliminate the oily/greasy sensation typical of W/O emulsions

### FORMULATION INFORMATION CoE.008 Las Vegas Protection Cream

Sisterna SP70-C can be used as a natural co-emulsifier for O/W emulsions. It improves the skin feel and increases the mildness of a formulation. Dosing Sisterna SP70-C only as a co-emulsifier is also a good way of using the benefits more economically for mass market products.

# CoE.008 Las Vegas Protection Cream



| ID           | : Co-emulsifier / CoE.008                                  |
|--------------|--|
| pH-value     | : 5.5  |
| Viscosity    | : 46.800 mPa.s Brookfield DV2T, Helipath Spindle 93, 5 rpm |
| Product form | : O/W  |

|   | Ingredient  | INCI-name   | % w/w  | Supplier   |  |  |
|---|---|---|--|--|--|--|
| 1 | Deionised Water<br>Dermosoft MCA Variante   | Aqua<br>Dipropylene Glycol, Caprylyl Glycol,<br>Glyceryl Caprylate  | 71.47<br>1.00  | several<br>Dr. Straetmans  |  |  |
| 2 | Disodium EDTA   | Disodium EDTA   | 0.10   | several  |  |  |
| 3 | Tego Carbomer 340 FD  | Carbomer  | 0.30   | Evonik   |  |  |
| 4 | CCT Oil<br>Eusolex HMS<br>Dermofeel BGC<br>Parsol 340<br>Amisoft HS-11P(F)<br>Sisterna SP70-C<br>Dermofeel GSC<br>Cetearyl Alcohol<br>Parsol 1789<br>Keltrol CG-SFT<br>Dermofeel Toco 70  | Caprylic/Capric Triglyceride<br>Homosalate<br>Butylene Glycol Dicaprylate/Dicaprate<br>Octocrylene<br>Sodium Stearoyl Glutamate<br>Sucrose Stearate<br>Glyceryl Stearate Citrate<br>Cetearyl Alcohol<br>Butyl Methoxydibenzoylmethane<br>Xanthan Gum<br>Tocopherol, Helianthus Annuus (Sunflower)<br>Seed Oil | 8.00<br>2.00<br>3.00<br>2.00<br>0.15<br>2.00<br>2.00<br>2.00<br>2.00<br>0.30<br>0.20 | several<br>Merck<br>Dr. Straetmans<br>DSM<br>Ajinomoto<br>Sisterna<br>Dr. Straetmans<br>several<br>DSM<br>CP Kelco<br>Dr. Straetmans |  |  |
| 5 | NaOH (29% sol.)   | Sodium Hydroxide, Water   | 0.28   | several  |  |  |
| 6 | RADICARE-GOLD   | Crambe Abyssinica Seed Oil, Beta-<br>Carotene, Xanthophylls, Tocopherol,<br>Helianthus Annuus Seed Oil, Rosmarinus<br>Officinalis (Rosemary) Leaf Extract   | 3.00   | Rahn   |  |  |
| 7 | Dreams Come True  | Parfum  | 0.20   | Luzi   |  |  |
|   | Production method    5. Mix the ingredients of (4) and heat to 70°C      1. Mix the ingredients of (1).    5. Mix the ingredients of (4) and heat to 70°C      2. Add (2) to (1).    while stirring.      3. Add (3) to the surface of (1+2). Wait until the    6. Add (4) to (1+2+3) and homogenise. |   |  |  |  |  |

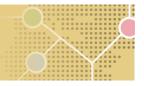
- Add (3) to the surface of (1+2). Wait until the powder is fully hydrated, mix thoroughly until completely dissolved.
- Cool down to 40°C while stirring gently.
  Add (5, 6, 7) separately.
- 4. Heat (1+2+3) to 70°C while stirring.
- 9. Cool down to room temperature while stirring.

Formulation developed by RAHN AG (Switzerland) - www.rahn-group.com

### FORMULATION INFORMATION CoE.009 Arctic Protection Cream

Dosing Sisterna SP01-C in this heavy duty W/O cream, improves the spreading properties, eliminates the oily or greasy sensation and enhances the after skin feel. It makes the total cream feel like a rich O/W emulsion. The addition of Sisterna A10E-C increases viscosity and improves the sensorial aspect of the final formulation.

# CoE.009 Arctic Protection Cream



| ID           | : Co-emulsifier / CoE.009                                     |
|--------------|---|
| pH-value     | : Not applicable  |
| Viscosity    | : 371.200 mPa.s Brookfield DV2T, Helipath Spindle RV07, 5 rpm |
| Product form | : W/O   |

|   | Ingredient   | INCI-name  | % w/w  | Supplier  |
|---|--|--|--|---|
| 1 | Deionised Water<br>Magnesium Sulfate 7H2O<br>Glycerin 99%<br>Snow Algae Powder<br>Aqua GG  | Aqua<br>Magnesium Sulfate Heptahydrate<br>Glycerin<br>Coenochloris Signiensis Extract,<br>Maltodextrin, Lecithin, Aqua<br>Glyceryl Glucoside   | 60.40<br>0.70<br>3.00<br>2.00<br>3.00                                | several<br>several<br>several<br>Mibelle<br>Gene-Chem   |
| 2 | Sisterna SP01-C<br>Sisterna A10E-C<br>Arlacel 1690<br>Olive Squalane<br>Arnica Oil CLR<br>Probarrier CLR<br>Olive Squalene Wax<br>Dermofeel Toco 70 non GMO<br>Vegetable Alternative to<br>Lanolin | Sucrose Polystearate<br>Sucrose Tetrastearate Triacetate<br>Sorbitan Isostearate, Polyglyceryl-3<br>Polyricinoleate<br>Squalane<br>Glycine Soja (Soybean) Oil, Arnica Montana<br>Flower Extract, Tocopherol<br>Aqua, Caprylic/Capric Triglyceride,<br>Copernicia Cerifera (Carnauba) Wax, Decyl<br>Glucoside, Pentylene Glycol<br>Olea Europaea (Olive) Oil unsaponifiables<br>Tocopherol, Helianthus Annuus (Sunflower)<br>Seed Oil<br>Butyrospermum Parkii (shea butter),<br>Glyceryl Rosinate, Olea Europaea (Olive) Oil<br>unsaponifiables | 1.50<br>3.00<br>3.00<br>7.00<br>5.00<br>3.00<br>3.00<br>0.50<br>3.50 | Sisterna<br>Sisterna<br>Croda<br>EFP Biotek<br>CLR<br>CLR<br>EFP Biotek<br>Dr. Straetmans<br>EFP Biotek |
| 3 | Fragile Green<br>Borealine Protect<br>Euxyl K830   | Parfum<br>Glycerin, Picea Mariana Bark Extract<br>Phenoxyethanol, Ethylhexylglycerin,<br>Octenidine HCl  | 0.30<br>0.10<br>1.00   | Luzi<br>Lucas Meyer<br>Schulke  |

#### **Production method**

- 1. Heat (1) until 75°C.
- 2. Heat (2) until 75°C.
- 3. Add (1) to (2) while homogenising.
- 4. Cool down while stirring to  $35^{\circ}C-40^{\circ}C$  and add (3).
- 5. Homogenise shortly.
- 6. Cool down to room temperature while stirring.

### Sucrose esters as cold emulsifier for O/W

# SISTERNA WORLD TOUR



### Sucrose esters as cold emulsifier for O/W

# SISTERNA WORLD TOUR

Cold process emulsifiers are becoming increasingly popular as a way of reducing costs and obtaining a greener production method. Sisterna® sucrose esters are excellent emulsifiers for cold process oil-in-water (O/W) emulsions. Furthermore Sisterna® sucrose esters provide an excellent touch and improve smoothness, emolliency and moisture level of the skin.

#### O/W emulsions

Sisterna® sucrose esters with a high HLB value are recommended for the development of cold process O/W emulsions.

Advised products:

- Sisterna SP70-C
- Sisterna PS750-C

Benefits of Sisterna® sucrose esters in O/W emulsions:

- Show very good emulsification properties with oils of different polarity, including vegetable and mineral oils, medium polarity and silicon oils
- Easy to use
- Safe and mild
- Provide an excellent skin feel, largely independent of the oil phase
- Improve skin smoothness, emolliency and moisturisation
- Provide a cooling effect

#### FORMULATION INFORMATION CE.003 Lagom Lotion Sweden

Creating simple but effective formulations with a short INCI list is possible with Sisterna SP70-C. It is mild on the skin, increases moisturisation and has a great skin feel. You can also produce in an environmental friendly way as it is cold processable, while also being readily biodegradable. Perfect for making a no-nonsense cosmetic product.

## CE.003 Lagom Lotion Sweden



| ID           | : Cold emulsification / CE.003                            |
|--------------|---|
| pH-value     | : 4.60  |
| Viscosity    | : 5.700 mPa.s Brookfield DV2T, Helipath Spindle 92, 5 rpm |
| Product form | : O/W – Cold production                                   |

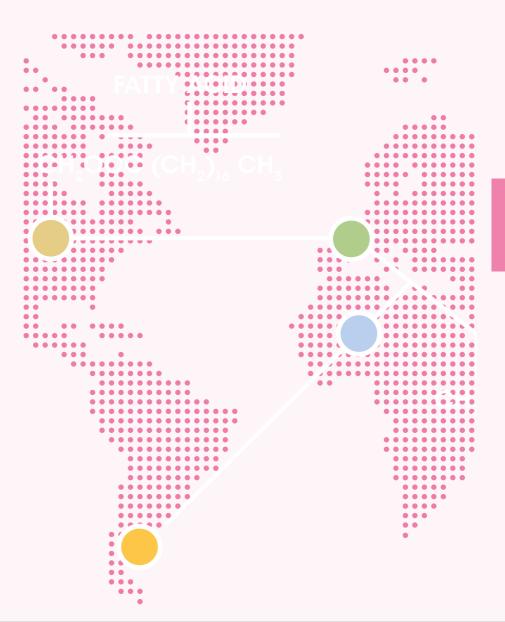
|   | Ingredient                       | INCI-name  | % w/w         | Supplier            |
|---|----------------------------------|--|---------------|---------------------|
| 1 | Glycerin 99%                     | Glycerin   | 5.00          | several             |
|   | Genuvisco CG131                  | Carrageenan  | 0.30          | CP Kelco            |
|   | Keltrol CG-SFT                   | Xanthan Gum  | 0.30          | CP Kelco            |
| 2 | Deionised Water<br>Nipaguard SCE | Aqua<br>Sorbitan Caprylate, Propanediol, Benzoic<br>Acid | 48.80<br>1.30 | several<br>Clariant |
| 3 | Lipex PreAct                     | Canola Oil   | 40.00         | AAK                 |
|   | AvenaPlex                        | Avena Sativa (Oat) Kernel Extract                        | 1.00          | Oat Cosmetics       |
|   | Sisterna SP70-C                  | Sucrose Stearate   | 3.00          | Sisterna            |
|   | Pura                             | Parfum   | 0.30          | Luzi                |

#### Production method

- 1 Disperse the carrageenan and xanthan gum into the glycerin while stirring.
- 2. Add (1) into (2) while stirring.
- 3. Mix Sisterna SP70-C well into the other ingredients of (3).
- 4. Add phase (3) into phase (1+2) and homogenise for a few minutes.

Sucrose esters for gel-to-milk (concentrated emulsion technology)

# SISTERNA WORLD TOUR



### Sucrose esters for gel-to-milk (concentrated emulsion technology)

Concentrated emulsion technology for gel-to-milk concepts Sisterna® sucrose esters with a high HLB value are recommended for the development of oil-in-glycerin (O/G) concentrated emulsions, with the aspect of an oil gel turning into milk when diluted with water upon use.

Advised products:

- Sisterna SP70-C or Sisterna PS750-C alone
- To decrease the viscosity the oil phase can be reduced to 30% as a maximum or Sisterna SP70-C or PS750-C can be combined with Sisterna L70-C

Additional concept information:

- The optimum ratio of oil/glycerin is between 30/70 and 70/30
- Standard homogenisation equipment is used
- Transparent emulsions can be obtained by matching refractive indices of oil and glycerin phase
- Best emulsion stability is obtained with vegetable oils, caprylic/capric triglyceride
- The addition of approx. 5% of water helps reducing viscosity
- Cold production is possible in the case of the combination with Sisterna L70-C

#### FORMULATION INFORMATION GE.008 Brazilian Conditioning Oil-Gel Treatment

Massaging oils into the hair to nourish it is a typical Brazilian use. Afterwards these oils are removed with a shampoo. This oil-gel treatment contains 40% of oils for the nourishing effect and it will turn into a milk when in contact with water, making it an easily rinseable 2-in-1 product. It leaves your hair silky smooth due to the softening and conditioning boosting effect of sucrose esters.

### GE.008 Brazilian Conditioning Oil-Gel Treatment

| ID           | : Gel-to-milk / GE.008                              |
|--------------|---|
| pH-value     | : N/A   |
| Viscosity    | : 4.650 mPa.s Brookfield DV2T, Spindle RV03, 10 rpm |
| Product form | : Gel-to-milk                                       |

|   | Ingredient      | INCI-name                              | % w/w | Supplier     |
|---|-----------------|--|-------|--------------|
| 1 | Glycerin 99%    | Glycerin                               | 54.80 | several      |
|   | Sisterna SP70-C | Sucrose Stearate                       | 1.00  | Sisterna     |
|   | Sisterna L70-C  | Aqua, Sucrose Laurate, Alcohol         | 2.50  | Sisterna     |
| 2 | Andiroba Oil    | Carapa Guaianensis Seed Oil            | 20.00 | Expanscience |
|   | Maracuja Oil    | Passiflora Edulis Seed Oil             | 20.00 | Expanscience |
|   | Tocomix L70-IP  | Tocopherol, Helianthus Annuus Seed Oil | 0.10  | Jan Dekker   |
| 3 | Amazzonia       | Parfum                                 | 0.80  | Luzi         |
|   | Quatin 350 UP   | Hydroxypropyltrimonium Inulin          | 0.80  | Cosun        |

#### Production method

- 1. Mix (1) and heat to 70°C.
- 2. Mix (2) and heat to 70°C.
- 3. Add (2) to (1) very slowly while homogenising.
- 4. Cool down to 40°C and add (3). Cool down to room temperature while stirring.

Formulation prepared via concentrated emulsification procedure.

Formulation developed by Galena (Brazil) - www.galena.com.br

### FORMULATION INFORMATION GE.010 Mediterranean Cream-To-Oil Massage

This formulation does not have the gel-to-milk effect, but it is manufactured with the same technique. The natural silicon replacer gives it a creamy look and when applying it, the cream turns into an easy spreadable oil which has a better skin absorption than standard massage oils. Also a good starting formulation for making any kind of skin treatments.

### GE.010 Mediterranean Cream-To-Oil Massage

| ID           | : Gel-to-milk / GE.010                              |
|--------------|---|
| pH-value     | : N/A   |
| Viscosity    | : 4.800 mPa.s Brookfield DV2T, Spindle RV03, 10 rpm |
| Product form | : Gel-to-milk                                       |

|   | Ingredient   | INCI-name   | % w/w                          | Supplier                                       |
|---|--|---|--------------------------------|--|
| 1 | Glycerin 99%<br><mark>Sisterna SP70-C</mark><br>Cosme-Phytami Porphyra TH<br>Deionised Water | Glycerin<br><mark>Sucrose Stearate</mark><br>Glycerin, Porphyra Umbilicalis Extract<br>Aqua                                     | 30.20<br>2.50<br>1.00<br>10.00 | several<br>Sisterna<br>Alban Muller<br>several |
| 2 | Gilsolide HV<br>Olive Squalene<br>Tocomix L70-IP   | Hydrogenated Rapeseed Alcohol,<br>Polyglyceryl-4 Oleate, Glyceryl Olivate<br>Squalene<br>Tocopherol, Helianthus Annuus Seed Oil | 53.30<br>2.60<br>0.10          | Gilas<br>EFP Biotek<br>Jan Dekker              |
| 3 | Olivera  | Parfum  | 0.30                           | Luzi   |

#### **Production method**

- 1. Mix (1) and heat to 75°C.
- 2. Mix (2) and heat to 70°C.
- 3. Add (2) to (1) very slowly while homogenising.
- 4. Cool down to 40°C and add (3). Cool down to room temperature while stirring.
- 5. Viscosity will increase over time (48h).

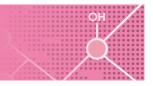
Formulation prepared via concentrated emulsification procedure.

Formulation developed by DKSH Marketing Services Spain - www.dksh.com

# FORMULATION INFORMATION GE.011 Hamam Argan Oil Gel

A low viscous and thus pumpable shower product which turns into a milk on the skin when in contact with water. Playing with the internal phase enables you to make less viscous products. Also, matching the refractive indices of the oil and glycerin phase makes this product transparent.

### GE.011 Hamam Argan Oil Gel



| ID           | : Gel-to-milk / GE.011                              |
|--------------|---|
| pH-value     | : N/A   |
| Viscosity    | : 3.170 mPa.s Brookfield DV2T, Spindle RV03, 10 rpm |
| Product form | : Gel-to-milk                                       |

|   | Ingredient  | INCI-name  | % w/w                  | Supplier                  |
|---|---|--|------------------------|---------------------------|
| 1 | Glycerin 99%<br>Sisterna SP70-C                             | Glycerin<br>Sucrose Stearate   | 53.42<br>2.00          | several<br>Sisterna       |
| 2 | Argan Oil<br>Caprylic/Capric Triglyceride<br>Tocopherol Oil | Argania Spinosa Kernel Oil<br>Caprylic/Capric Triglyceride<br>Glycine Soja (Soybean) Oil, Tocopherol | 19.00<br>19.00<br>1.00 | several<br>several<br>CLR |
| 3 | Imperial Oud  | Parfum   | 0.30                   | Luzi                      |
| 4 | Deionised Water   | Aqua   | 5.28                   | several                   |

#### **Production method**

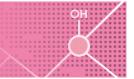
- 1. Mix (1) and heat to  $70^{\circ}$ C.
- 2. Mix (2) and heat to 75°C.
- 3. Add (2) to (1) very slowly while homogenising.
- 4. Cool down to  $40^\circ\text{C}$  and add (3). Homogenise shortly.
- 5. Add (4) while homogenising to obtain transparency.

Formulation prepared via concentrated emulsification procedure.

### FORMULATION INFORMATION GE.012 Egyptian Cleopatra Bath Milk

This formulation turns into a milk when in contact with water, transforming a water bath into a milk bath. It is very mild for the skin and makes it silky smooth.

### GE.012 Egyptian Cleopatra Bath Milk



| ID           | : Gel-to-milk / GE.012                              |
|--------------|---|
| pH-value     | : N/A   |
| Viscosity    | : 3.200 mPa.s Brookfield DV2T, Spindle RV03, 10 rpm |
| Product form | : Gel-to-milk                                       |

|   | Ingredient  | INCI-name   | % w/w   | Supplier  |
|---|---|---|---|---|
| 1 | Glycerin 99%<br>Sisterna L70-C<br>Sisterna SP70-C   | Glycerin<br>Aqua, Sucrose Laurate, Alcohol<br>Sucrose Stearate  | 30.00<br>4.00<br>1.50                                 | several<br>Sisterna<br>Sisterna                                   |
| 2 | Olive Oil<br>Caprylic/Capric Triglyceride<br>Vitamine F Forte<br>RCS Rice Bran Serum<br>Euxyl PE9010<br>Tocopherol Oil CLR<br>Olive Dream | Olea Europaea (Olive) Fruit Oil<br>Caprylic/Capric Triglyceride<br>Linoleic Acid, Linolenic Acid<br>Oryza Sativa (Rice) Bran Oil, Phytosterols,<br>Olea Europaea (Olive) Oil Unsaponiables,<br>Tocopherol<br>Phenoxyethanol, Ethylhexylglycerin<br>Glycine Soja (Soybean) Oil, Tocopherol<br>Parfum | 5.00<br>47.10<br>3.00<br>3.50<br>1.00<br>2.00<br>0.90 | several<br>several<br>CLR<br>EFP Biotek<br>Schulke<br>CLR<br>Luzi |
| 3 | Syricalm CLR<br>Crodarom Papyrus extract  | Aqua, Phragmites Karka Extract, Poria<br>Cocos Extract<br>Aqua, Glycerin, Cyperus Papyrus Stem<br>Extract   | 1.00<br>1.00  | CLR<br>Croda  |

#### **Production method**

- 1. Mix ingredients of (1).
- 2. Mix ingredients of (2).
- 3. Add (2) to (1) very slowly while homogenising.
- 5. Add (3) while homogenising.

Formulation prepared via concentrated emulsification procedure.

### Sucrose esters for spray/wipe and serum concepts (concentrated emulsion technology)

# SISTERNA WORLD TOUR



### Sucrose esters for spray/wipe and serum concepts (concentrated emulsion technology)

# SISTERNA WORLD TOUR

#### Concentrated emulsion technology for spray and wipe concepts

Thin liquid oil-in-water emulsions with very small droplet sizes of 0.3 µm can be obtained when producing via a simple intermediate concentrated oil-in-glycerin (O/G) emulsification step. The O/G emulsion is then diluted with water to a final spray or wipe formulation.

Advised products:

- Sisterna PS750-C (cold production, hot production for sprays)
- Sisterna SP70-C (hot production, slightly higher viscosity)

Additional concept information:

- The optimum ratio of oil/glycerin is 50/50
- · Standard homogenisation equipment is used
- After emulsification the emulsion is diluted with water containing a stabiliser

#### Serum formulations

Due to the very small droplet sizes of  $0.3 \mu m$ , this is also an excellent production method for making serums with a high skin penetration. The serums can require a higher viscosity than the spray and wipe concepts.

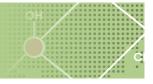
Advised products:

- Sisterna SP70-C (hot production, slightly higher viscosity)
- By selecting the right hydrocolloids, viscosity can be increased further

# FORMULATION INFORMATION SE.005 Relaxing Amsterdam Spray

A production technique to make a sprayable formulation without using ethoxylated emulsifiers. With the oil in glycerine intermediate production phase you create stable emulsions with oil droplets of 0.3 micrometer.

### SE.005 Relaxing Amsterdam Spray



| ID           | : Spray & Wipe / SE.005                                   |
|--------------|---|
| pH-value     | : 5.5   |
| Viscosity    | : 4.000 mPa.s Brookfield DV2T, Helipath Spindle 93, 5 rpm |
| Product form | : O/W   |

|   | Ingredient                                   | INCI-name   | % w/w        | Supplier             |
|---|--|---|--------------|----------------------|
| 1 | Glycerin 99%                                 | Glycerin  | 5.00         | several              |
|   | Sisterna PS750-C                             | Sucrose Palmitate   | 1.00         | Sisterna             |
| 2 | Hempseed Oil MM<br>Dermofeel Toco 70 non-GMO | Cannabis Sativa Seed Oil<br>Tocopherol, Helianthus Annuus (Sunflower)<br>Seed Oil | 4.90<br>0.10 | MMP<br>Dr Straetmans |
| 3 | Euxyl PE9010                                 | Phenoxyethanol, Ethylhexylglycerin  | 1.00         | Schülke              |
|   | Matcha & Goji                                | Parfum  | 0.10         | Luzi                 |
| 4 | Deionised Water                              | Aqua  | 85.95        | several              |
|   | Keltrol CG-SFT                               | Xanthan Gum   | 0.45         | CP Kelco             |
|   | Avicell PC 611                               | Microcrystalline Cellulose, Cellulose Gum   | 1.50         | FMC                  |
| 5 | Citric Acid (10% sol.)                       | Citric Acid, Aqua   | q.s.         | several              |

#### **Production method**

Heating is optional, product can also be made without heating.

- 1 Disperse Sisterna PS750-C into the glycerin (1) and heat to 70°C.
- 2. Heat (2) separately to 70°C.
- 3. Add (2) to (1) while homogenising with a high shear mixer.
- 4. Add (3) without heating to (1+2) at 70°C and homogenise with a high shear mixer for 1 minute.
- Add Avicel PC611 to the cold water of (4) and shear for 10 minutes with a high shear mixer until fully incorporated.
- 7. Add oil in glycerin emulsion (1+2+3) to (4) while mixing.
- 8. Adjust pH with citric acid (5) if necessary.

Formulation prepared via concentrated emulsification procedure.

# FORMULATION INFORMATION SE.006 Spanish Eyes Serum

Making an emulsion with an oil in glycerine intermediate phase enables an oil droplet size of 0.3 micrometer. This is very suitable for dosing (oil) actives for a better skin penetration. Effective serums can be made with this technique.

### SE.006 Spanish Eyes Serum



| ID           | : Spray & Wipe / SE.006                          |
|--------------|--|
| pH-value     | : 5.3  |
| Viscosity    | : 2.000 mPa.s Brookfield DV2T, Spindle 93, 5 rpm |
| Product form | : O/W  |

|   | Ingredient   | INCI-name   | % w/w                         | Supplier                              |
|---|--|---|-------------------------------|---------------------------------------|
| 1 | Glycerin 99%<br>Sisterna SP70-C                              | Glycerin<br>Sucrose Stearate  | 5.00<br>1.00                  | several<br>Sisterna                   |
| 2 | MOT - Maxi Olive 3T-Action<br>Oleosoft-4OC<br>Tocomix L70-IP | Olea Europaea (Olive) Oil Unsaponifiables,<br>Tocopherol<br>Olea Europaea (Olive) Fruit Oil, Prunus<br>Amygdalus Dulcis (Sweet Almond) Oil,<br>Linum Usitatissimum (Linseed) Seed Oil,<br>Borago Officinalis Seed Oil, Tocopherol<br>Tocopherol, Helianthus Annuus Seed Oil | 2.00<br>3.00<br>0.10          | EFP Biotek<br>Phenbiox<br>Jan Dekker  |
| 3 | Deionised Water<br>Granulated Amigel                         | Aqua<br>Sclerotium Gum  | 66.50<br>0.75                 | several<br>Alban Muller               |
| 4 | Deionised Water<br>JuvenEye<br>W TR-Active<br>Euxyl PE9010   | Aqua<br>Bellis Perennis (Daisy) Flower Extract,<br>Hieracum Pilosella (Hawkweed) Extract<br>Glycerin, Tuber Magnatum Extract, Sodium<br>Benzoate, Potassium Sorbate<br>Phenoxyethanol, Ethylhexylglycerine  | 14.65<br>5.00<br>1.00<br>1.00 | several<br>CLR<br>Phenbiox<br>Schülke |
| 5 | NaOH (50% solution)  | Sodium Hydroxide  | q.s.                          | several                               |

#### **Production method**

- 1. Disperse Sisterna SP70-C into the glycerin (1).
- 2. Add (2) to (1) and homogenise with a high shear mixer for 1 minute.
- 3. Add Amigel to the cold water of (3) and shear for 10 minutes with a high shear mixer until fully incorporated.
- 4. Add oil in glycerin emulsion (1+2) to (3) while mixing.
- 5. Add (4) and adjust pH if necessary with (5).

Formulation prepared via concentrated emulsification procedure.



### Sucrose esters for mild cleansing

### Sucrose esters for mild cleansing

# SISTERNA WORLD TOUR

#### Water based systems

In the development of body and hair cleansing formulations non-ionic surfactants are added to blends of traditional foaming anionic and amphoteric surfactants to improve mildness. Sisterna® sucrose esters are non-ionic and EO-free surfactants and their interesting and innovative properties make them excellent candidates for this type of products. Especially Sisterna L70-C is recommended for its good foaming properties and suitable for use in transparent formulations.

Advised products:

- Sisterna L70-C
- Alternatively Sisterna PS750-C or Sisterna SP70-C for non-transparent systems

Benefits of Sisterna® sucrose esters in mild cleansing:

- Reduce the irritating properties of anionic surfactants
- Considerably improve the sensorial properties of the formulations, in terms of skin feel and skin mildness
- Emulsify lipids into the cleansing formulation
- · Contribute to the conditioning effect in shampoo and conditioners
- · Increase viscosity at lower electrolyte concentrations

### FORMULATION INFORMATION MC.006Traveller Cleansing Powder

A waterless formulation which is suitable for the frequent traveller. Wet your hands and add a little bit of powder for a good cleansing sensation. Sisterna SP70-C increases the mildness, improves the skin feel and gives a creamy effect in this formulation.

### MC.006 Traveller Cleansing Powder



| ID           | : Mild cleansing / MC.006 |
|--------------|---------------------------|
| pH-value     | : N/A                     |
| Viscosity    | : N/A                     |
| Product form | : Powder                  |

|   | Ingredient      | INCI-name                      | % w/w | Supplier  |
|---|-----------------|--------------------------------|-------|-----------|
| 1 | FARMAL CS 3757  | Zea Mays (Corn) Starch         | 23.50 | Ingredion |
|   | Tea White       | Parfum                         | 1.00  | Luzi      |
| 2 | Talc            | Talc                           | 25.00 | Kobo      |
|   | Amisoft LS-11   | Sodium Lauroyl Glutamate       | 15.00 | Ajinomoto |
|   | Amisoft MS-11   | Sodium Myristoyl Glutamate     | 15.00 | Ajinomoto |
|   | Mannitol        | Mannitol                       | 12.00 | several   |
|   | Sisterna SP70-C | Sucrose Stearate               | 4.00  | Sisterna  |
|   | Zymo Clear MD   | Maltodextrin, Protease, Lipase | 3.00  | I.R.A.    |
|   | Amihope LL      | Lauroyl Lysine                 | 1.00  | Ajinomoto |
|   | Ketrol CG-SFT   | Xanthan Gum                    | 0.50  | CP Kelco  |

- 1. Mix (1) by adding the perfume slowly to the Zea Mays Starch while mixing until homogeneous.
- 2. Add ingredients of phase (2) in given order until homogeneous.
- 3. Sieve the powder.

### FORMULATION INFORMATION MC.008 Siberian Cleansing Cream

A waterless cream with a cleansing effect, in case you do not want to wash yourself with water. Just add the cream to the place that you want to wash, rub it in and wipe it off with a tissue. Sisterna SP70-C leaves the skin soft and increases the mildness of the formulation.

### MC.008 Siberian Cleansing Cream



| ID           | : Mild cleansing / MC.008                                  |
|--------------|--|
| pH-value     | : 6.7  |
| Viscosity    | : 41.000 mPa.s Brookfield DV2T, Helipath Spindle 93, 5 rpm |
| Product form | : O/W Cream  |

|   | Ingredient   | INCI-name   | % w/w  | Supplier  |
|---|--|---|--|---|
| 1 | Glycerin 99%<br>Keltrol CG SFT   | Glycerin<br>Xanthan Gum   | 19.00<br>0.30  | several<br>CP Kelco   |
| 2 | Amilite GCS-12K  | Sodium Cocoyl Glycinate, Aqua   | 43.70  | Ajinomoto   |
| 3 | Sisterna SP70-C<br>Stearic Acid<br>Lanette O<br>VAL Vegetable alternative to<br>Lanolin<br>Lipex SheaLight<br>Arnica Oil<br>Tocomix L70-IP | Sucrose Stearate<br>Stearic Acid<br>Cetearyl Alcohol<br>Butyrospermum Parkii (Shea Butter),<br>Glyceryl Rosinate, Olea Europaea (Olive) Oil<br>Unsaponifiables<br>Shea Butter Ethyl Esters<br>Glycine Soja (Soybean) Oil, Arnica Montana<br>Flower Extract, Tocopherol<br>Tocopherol, Helianthus Annuus (Sunflower)<br>Seed Oil | 3.50<br>3.00<br>6.00<br>8.00<br>7.00<br>8.00<br>0.05 | Sisterna<br>several<br>BASF<br>EFP Biotek<br>AAK<br>CLR<br>Jan Dekker |
| 4 | Euxyl PE9010<br>Signature Swan   | Phenoxyethanol, Ethylhexylglycerin<br>Parfum  | 1.00<br>0.45   | Schülke<br>Luzi   |
| 5 | NaOH (50% solution)  | Sodium Hydroxide  | qs   | several   |

- 1. Add Xanthan Gum into the glycerin and mix until fully incorporated.
- 2. Add (2) to (1) and heat to  $70^{\circ}$ C.
- 3. Mix the ingredients of (3) and heat to 70°C.
- 4. Add phase C to (1+2) while stirring at low speed.
- 4. Cool down to 40°C while stirring.
- 5. Add (4) to (1+2+3) while stirring.
- 6. Adjust the pH with NaOH if necessary.

# Sucrose esters in anhydrous systems

# SISTERNA WORLD TOUR



# Sucrose esters in anhydrous systems

# SISTERNA WORLD TOUR

Sisterna A10E-C is a special sucrose ester grade, obtained by the esterification of sucrose with stearic, palmitic fatty acids and acetic acid. Due to its high degree of esterification, Sisterna A10E-C no longer has surface active properties, resulting in a completely different behaviour compared to all other Sisterna grades. Sisterna A10E-C can be considered as a so called 'sugar wax', which can be used as lipidic phase modifier to influence the rheological and sensorial properties of oils and natural butters.

Advised products:

• Sisterna A10E-C as lipidic phase modifier

Benefits of Sisterna A10E-C in anhydrous systems:

- Thickens or gels many oils as well as silicon oils
- Helps reducing blooming and sweating of sticks
- Improves the sensorial properties
- Improves cohesion of sticks
- Reduces brittleness of sticks
- Excellent binding properties in compact powders

### FORMULATION INFORMATION AS.007 Korean Beauty Highlighter

Sisterna A10E-C makes the stick stronger but also more bendable, making it less easy to break. The amount of waxes with a high melting point can be reduced and sensorial properties are improved. It also improves the spreadability, because A10E-C enables the formula to melt near skin temperature. Furthermore it helps reducing blooming and sweating of sticks.

### AS.007 Korean Beauty Highlighter



| ID           | : Anhydrous / AS.007 |
|--------------|----------------------|
| pH-value     | : Not applicable     |
| Viscosity    | : Wax                |
| Product form | : Solid stick        |

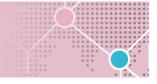
|   | Ingredient  | INCI-name  | % w/w                                 | Supplier                              |
|---|---|--|---------------------------------------|---------------------------------------|
| 1 | Lipex SheaLight<br>Lipex SMP<br>Lipex SheaLiquid TR<br>PM Wax 82<br>Sisterna A10E-C | Shea Butter Ethyl Esters<br>Hydrogenated Vegetable oil<br>Butyrospermum Parkii (Shea) Butter<br>Polyethylene, Microcrystalline Wax<br>Sucrose Tetrastearate Triacetate | 40.84<br>7.00<br>3.00<br>5.00<br>6.00 | AAK<br>AAK<br>AAK<br>Kobo<br>Sisterna |
| 2 | Zeodent 167   | Silica   | 1.00                                  | several                               |
| 3 | ASO-I2<br>Amihope LL  | Aluminium Starch Octenylsuccinate,<br>Isopropyl Titanium Triisostearate<br>Lauroyl Lysine  | 33.00<br>3.00                         | Kobo<br>Ajinomoto                     |
| 4 | Parfum  | Parfum   | 0.16                                  | several                               |
| 5 | Kobopearl Perpetual Sheen<br>Red Gold<br>KTZ Rose                                   | Synthetic Fluorphlogopite, Silica, Titanium<br>Dioxide<br>Mica, Titanium Dioxide, Carmine  | 4.00<br>1.80                          | Kobo<br>Kobo                          |

- 1. Heat (1) to 85°C.
- 2. When liquid and transparent add (2) in (1) under stirring until a complete dispersion is obtained.
- 3. Add (3) one by one and homogenise after each adding.
- 4. Cool down until  $65^{\circ}$ C and add (4) and (5).
- 5. Fill in in mold when product is still around 65°C.

### FORMULATION INFORMATION AS.008 All Purpose Travellers Balm

A nourishing anhydrous balm that you can use for about everything and which you can easily take on a plane. Moisturising balm, lipbalm, sore spots, dry hands, you name it. Multifunctional and waterless products are becoming more popular among people who have an environmental mindset. Sisterna A10E-C improves the spreadability, because it lets the formula melt near skin temperature. It also improves the absorption of oils and gives a silky after skin feel.

### AS.008 All Purpose Travellers Balm



| ID           | : Anhydrous / AS.008 |
|--------------|----------------------|
| pH-value     | : N/A                |
| Viscosity    | : N/A                |
| Product form | : Anhydrous balm     |

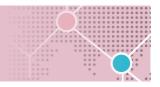
|   | Ingredient  | INCI-name  | % w/w  | Supplier   |
|---|---|--|--|--|
| 1 | Lipex bassol C<br>Caprylic/Capric Triglyceride<br>Sisterna A10E-C<br>APB Apricot Butter<br>VS Olive Squalane<br>OWB Squalene-Based Olive<br>Waxy Butter<br>VPT185 Vegetable Petrolatum<br>Transparent 185<br>Tocomix L70-IP | Canola Oil<br>Caprylic/Capric Triglyceride<br>Sucrose Tetrastearate Triacetate<br>Prunus Armeniaca (Apricot) Kernel Oil,<br>Hydrogenated Vegetable Oil<br>Squalane<br>Olea Europaea (Olive) Fruit Oil, Olea<br>Europaea (Olive) Oil Unsaponifiables<br>Ricinus Communis (Castor) Seed Oil,<br>Hydrogenated Castor Oil, Copernicia<br>Cerifera (Carnauba) Wax, Beeswax<br>Tocopherol, Helianthus Annuus (Sunflower)<br>Seed Oil | 18.00<br>18.00<br>15.00<br>5.00<br>15.00<br>10.00<br>17.00<br>0.10 | AAK<br>several<br>Sisterna<br>EFP Biotek<br>EFP Biotek<br>EFP Biotek<br>EFP Biotek |
| 2 | Orange Mega   | Aroma  | 1.90   | Luzi   |

- 1. Heat phase (1) to  $80^{\circ}$ C and stir ingredients until homogenous.
- 2. Cool phase (1) down to  $50^{\circ}$ C.
- 3. Add (2) to (1) and stir until homogenous.
- 4. Fill the product in a suitable packaging at 40-45°C.

### FORMULATION INFORMATION AS.009 Lipstick Milano

Sisterna A10E-C makes the lipstick stronger but also more bendable, making it less easy to break. The amount of waxes with a high melting point can be reduced and sensorial properties are improved. It also improves the spreadability, because Sisterna A10E-C enables the formula to melt near skin temperature. Furthermore it helps reducing blooming and sweating of sticks. Sisterna SP10-C provides more gloss and creaminess.

### AS.009 Lipstick Milano



| ID           | : Anhydrous / AS.009 |
|--------------|----------------------|
| pH-value     | :-                   |
| Viscosity    | :-                   |
| Product form | : Solid stick        |

|   | Ingredient   | INCI-name  | % w/w   | Supplier   |
|---|--|--|---|--|
| 1 | Sisterna A10E-C<br>Sisterna SP10-C<br>Candelilla Wax<br>Carnauba Wax T1<br>Permulgin 3230<br>Kesterwax K82 P<br>Sunflower Wax<br>CCT Oil<br>Isostearyl Isostearate<br>TeCero-Wachs®30332cs | Sucrose Tetrastearate Triacetate<br>Sucrose Polystearate<br>Euphorbia Cerifera (Candelilla) Wax<br>Copernicia Cerifera (Carnauba) Wax<br>Ozokerite<br>Synthetic Beeswax<br>Helianthus Annuus (Sunflower) Seed Wax<br>Caprylic/Capric Triglyceride<br>Isostearyl Isostearate<br>Hydrogenated Microcrystalline Wax,<br>Synthetic Wax | 10.00<br>1.00<br>4.50<br>2.00<br>4.50<br>3.00<br>4.20<br>24,41<br>25.00<br>6.29 | Sisterna<br>Sisterna<br>Koster Keunen<br>Koster Keunen<br>Koster Keunen<br>Koster Keunen<br>several<br>several<br>TH.C.TROMM |
| 2 | Dermofeel Toco 70<br>COD 8001<br>COD 8003<br>COD 8009<br>COD 8008  | Tocopherol<br>Castor (Ricinus Communis) Oil, Cl 15850<br>Castor (Ricinus Communis) Oil, Cl 15850<br>Castor (Ricinus Communis) Oil, Cl 19140<br>Castor (Ricinus Communis) Oil, Cl 77891   | 0.10<br>2.45<br>0.55<br>3.40<br>7.60  | Dr. Straetmans<br>Sun Chemical<br>Sun Chemical<br>Sun Chemical<br>Sun Chemical   |
| 3 | Bungo  | Parfum   | 1.00  | Luzi   |

- 1. Before starting: spray silicone release spray in mould and put in oven at  $45^{\circ}$ C.
- 2. Weigh (1) in beaker and put in water bath to melt to 85°C.
- 3. Add (2) into (1) and homogenise.
- 4. Then add (3) and stir for 1 minute.
- 5. Take mould out of the oven and pour the mixture into the mould.
- 6. Allow to cool down for 20 minutes at room temperature.
- 7. Take the top part of the mixture out of the mould with the scraping spatula.
- 8. Put the mould in the freezer for 20 minutes.
- 9. Put the lipsticks in the cases.

### FORMULATION INFORMATION AS.010 Californian Gold Rush Eye Shadow

This golden eye shadow contains Sisterna A10E-C as a binder, but also as a skin softening and spreadability improving ingredient. It results in a soft sensation when applying and gives a nice after feel.

### AS.010 Californian Gold Rush Eye Shadow

| ID           | : Anhydrous / AS.010 |
|--------------|----------------------|
| pH-value     | : N/A                |
| Viscosity    | : N/A                |
| Product form | : Pressed Powder     |

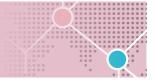
|   | Ingredient   | INCI-name  | % w/w                                  | Supplier   |
|---|--|--|--|--|
| 1 | Sunrise SVA<br>Sunrise 970<br>Magnesium Stearate<br>Talc<br>Sisterna A10E-C  | Mica, Lauroyl Lysine<br>Mica<br>Magnesium Stearate<br>Talc<br>Sucrose Tetrastearate Triacetate                       | 10.00<br>7.00<br>7.00<br>21.00<br>5.00 | Geotech<br>Geotech<br>several<br>several<br>Sisterna |
| 2 | Geopearl C Crystal<br>Bright Sun Gold<br>Geopearl C Crystal<br>Silk Sun Gold | Synthetic Fluorphlogopite, Titanium Dioxide,<br>Cl 77491<br>Synthetic Fluorphlogopite, Titanium Dioxide,<br>Cl 77491 | 30.00<br>10.00                         | Geotech<br>Geotech                                   |
| 3 | BRB DM5<br>BRB SG 212  | Dimethicone<br>Cyclopentasiloxane, Dimethicone<br>Crosspolymer   | 5.00<br>5.00                           | BRB<br>BRB   |

- 1. Thoroughly blend (1) in a blender.
- 2. Add (2) and mix till uniform.
- 3. Make a premix of (3), add to production and mix till uniform.
- 4. Press the powder with 150 bar for 30 seconds.

### FORMULATION INFORMATION AS.011 Mexican Avocado Hair Wax

A good spreadable wax because of the addition of Sisterna A10E-C which lets the formula melt near skin temperature. It also softens the hair while styling it and it is very mild for the scalp.

### AS.011 Mexican Avocado Hair Wax



| ID           | : Anhydrous / AS.011 |  |
|--------------|----------------------|--|
| pH-value     | : N/A                |  |
| Viscosity    | : N/A                |  |
| Product form | : Anhydrous balm     |  |

|   | Ingredient   | INCI-name   | % w/w   | Supplier   |
|---|--|---|---|--|
| 1 | VAW Vegetable Alternative to<br>Lanolin Wax<br>Sisterna A10E-C<br>Hempseed Oil MM<br>VS Olive Squalane<br>HSBO Vegetable Alternative to<br>Beeswax #1<br>AVS Avocado Serum | Glyceryl Rosinate, Ricinus Communis Seed<br>Oil, Hydrogenated Vegetable Oil<br>Sucrose Tetrastearate Triacetate<br>Cannabis Sativa Seed Oil<br>Squalane<br>Hydrogenated Soybean Oil<br>Persea Gratissima (Avocado) Oil, | 40.00<br>15.00<br>5.00<br>23.00<br>7.50<br>7.50 | EFP Biotek<br>Sisterna<br>MMP Inc.<br>EFP Biotek<br>EFP Biotek<br>EFP Biotek |
|   | Tocomix L70-IP   | Phytosterols, Olea Europaea (Olive) Oil<br>Unsaponifiables, Tocopherol<br>Tocopherol, Helianthus Annuus Seed Oil  | 0.10  | Jan Dekker   |
| 2 | Style Me   | Parfum  | 1.90  | Luzi   |

- 1. Heat (1) to 80°C and stir ingredients until homogenous.
- 2. Cool (1) down to 50°C.
- 3. Add (2) to (1) and stir until homogenous.
- 4. Fill the product in a suitable packaging at 40-45°C.

# SISTERNA WORLD TOUR



info@sisterna.com - www.sisterna.com