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® 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.
## Certifications

<table>
<thead>
<tr>
<th>Grade</th>
<th>Ecocert / COSMOS</th>
<th>Natural Certified by NPA</th>
<th>RSPO</th>
<th>Halal</th>
<th>Kosher</th>
<th>Suitable for Vegetarians</th>
<th>Suitable for Vegans</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP70-C</td>
<td>![Certification Logo]</td>
<td>![NatCert Logo]</td>
<td>![RSPO Logo]</td>
<td>![Halal Logo]</td>
<td>![Kosher Logo]</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>SP50-C</td>
<td>![Certification Logo]</td>
<td>![NatCert Logo]</td>
<td>![RSPO Logo]</td>
<td>![Halal Logo]</td>
<td>![Kosher Logo]</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>SP30-C</td>
<td>![Certification Logo]</td>
<td>![NatCert Logo]</td>
<td>![RSPO Logo]</td>
<td>![Halal Logo]</td>
<td>![Kosher Logo]</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>SP01-C</td>
<td>![Certification Logo]</td>
<td>![NatCert Logo]</td>
<td>![RSPO Logo]</td>
<td>![Halal Logo]</td>
<td>![Kosher Logo]</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
### Product range, functionalities & application concepts

<table>
<thead>
<tr>
<th>Product range</th>
<th>PS750-C</th>
<th>L70-C</th>
<th>SP70-C</th>
<th>SP50-C</th>
<th>SP30-C</th>
<th>SP10-C</th>
<th>SP01-C</th>
<th>A10E-C</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCI-name</td>
<td>Sucrose Palmitate</td>
<td>Aqua (and) Sucrose Laurate (and) Alcohol</td>
<td>Sucrose Stearate</td>
<td>Sucrose Stearate</td>
<td>Sucrose Distearate</td>
<td>Sucrose Polystearate</td>
<td>Sucrose Polystearate</td>
<td>Sucrose Tetraestearate Triacetate</td>
</tr>
<tr>
<td>HLB value</td>
<td>16</td>
<td>15</td>
<td>15</td>
<td>11</td>
<td>6</td>
<td>2</td>
<td>&lt; 1</td>
<td>-</td>
</tr>
<tr>
<td>Physical form</td>
<td>powder</td>
<td>liquid (40% sol)</td>
<td>powder</td>
<td>powder</td>
<td>powder</td>
<td>powder</td>
<td>powder</td>
<td>powder</td>
</tr>
<tr>
<td>% mono ester</td>
<td>75</td>
<td>70</td>
<td>70</td>
<td>50</td>
<td>30</td>
<td>10</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Functionalities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emulsifier O/W</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Co-emulsifier W/O</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Co-surfactant / mild cleanser</td>
<td>○</td>
<td>●</td>
<td>○</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipidic phase modifier</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Selective antimicrobial activity</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

### Application concepts

<table>
<thead>
<tr>
<th>Application concepts</th>
<th>PS750-C</th>
<th>L70-C</th>
<th>SP70-C</th>
<th>SP50-C</th>
<th>SP30-C</th>
<th>SP10-C</th>
<th>SP01-C</th>
<th>A10E-C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main emulsifier</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Co-emulsifier O/W and W/O</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Cold emulsifier</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Gel-to-milk</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Spray/wipe &amp; serum emulsions</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Mild cleansing</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Anhydrous systems</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

● First choice ○ Good alternative
|   | Sucrose esters as main O/W emulsifier system | ME.010 Thai Wellness Body Butter  
ME.012 African Nourishing Lotion  
ME.013 Swiss Chocolate Body Mousse  
ME.014 Anime Grey Hair Styling Cream |
|---|---------------------------------------------|--------------------------------------------------------------------------------|
| 2 | Sucrose esters as co-emulsifier for O/W and W/O | CoE.008 Las Vegas Protection Cream  
CoE.009 Arctic Protection Cream |
| 3 | Sucrose esters as cold emulsifier for O/W | CE.003 Lagom Lotion Sweden |
| 4 | Sucrose esters for gel-to-milk (concentrated emulsion technology) | GE.008 Brazilian Conditioning Oil-Gel Treatment  
GE.010 Mediterranean Cream-To-Oil Massage  
GE.011 Hamam Argan Oil Gel  
GE.012 Egyptian Cleopatra Bath Milk |
| 5 | Sucrose esters for spray/wipe and serum concepts (concentrated emulsion technology) | SE.005 Relaxing Amsterdam Spray  
SE.006 Spanish Eyes Serum |
| 6 | Sucrose esters for mild cleansing | MC.006 Traveller Cleansing Powder  
MC.008 Siberian Cleansing Cream |
| 7 | Sucrose esters in anhydrous systems | AS.007 Korean Beauty Highlighter  
AS.008 All Purpose Travellers Balm  
AS.009 Lipstick Milano  
AS.010 Californian Gold Rush Eye Shadow  
AS.011 Mexican Avocado Hair Wax |
CH$_2$OOC (CH$_2$)$_{16}$CH$_3$

FATTY ACID
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

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

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.
# ME.012
## African Nourishing Lotion

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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>INCI-name</th>
<th>% w/w</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Deionised Water Glycerin 99% Xilogel HS Actigum VSX 20</td>
<td>68.30 4.00 0.25 0.30</td>
<td>several several Indena Cargill</td>
</tr>
<tr>
<td></td>
<td>Succrose Distearate Succrose Stearate Cetearyl Alcohol Adansonia Digitata Seed Oil Schinziophyton Rautanenii Kernel Oil Tocopherol oil CLR</td>
<td>3.00 1.00 2.00 9.00 9.00 1.25</td>
<td>Sisterna several Sigma Oil Seeds Zambezi Organics CLR</td>
</tr>
<tr>
<td>2</td>
<td>Glycine Soja (Soybean) Oil, Tocopherol</td>
<td>1.10</td>
<td>Schülke</td>
</tr>
<tr>
<td>3</td>
<td>Euxyl K701 Rooibos Herbasol Extract Arty Nomad</td>
<td>1.10 0.50 0.30</td>
<td>Lipoid Kosmetik Luzi</td>
</tr>
<tr>
<td>4</td>
<td>Citric Acid (20% Aq. Sol.) Citric Acid, Aqua</td>
<td>q.s.</td>
<td>several</td>
</tr>
</tbody>
</table>

**Production method**
1. Heat the deionised water of (1) to 40°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°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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>INCI-name</th>
<th>% w/w</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Deionised Water, Glycerin 99%, Avicel PC611, Colorona Imperial Topaz</td>
<td>Deionised Water, Glycerin, Microcrystalline Cellulose, Cellulose Gum, Mica, CI 77163, CI 77491, CI 77492, CI 77499</td>
<td>68.75, 5.00, 0.50, 0.05</td>
</tr>
<tr>
<td>2</td>
<td>Sisterna SP70-C, Sisterna SP30-C, Kelcogel CG-HA, Methocel A4M, Keltrol CG-SFT</td>
<td>Sucrose Stearate, Sucrose Distearate, Gelman Gum, Methyl Cellulose, Xanthan Gum</td>
<td>2.00, 2.00, 0.15, 0.10, 0.20</td>
</tr>
<tr>
<td>3</td>
<td>Lipex Cocoasoft, Perilla Oil MM, Cetearyl Alcohol</td>
<td>Theobroma Cacao (Cocoa) Seed Butter, Perilla Ocymoides Seed Oil, Cetearyl Alcohol</td>
<td>15.50, 4.00, 0.50</td>
</tr>
<tr>
<td>4</td>
<td>Euxyl PE9010, Vitamin E Acetate, Swiss Choco Milk</td>
<td>Phenoxyethanol, Ethylhexylglycerin, Tocopherol Acetate, Parfum</td>
<td>1.00, 0.10, 0.15</td>
</tr>
</tbody>
</table>

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°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°C while stirring slowly. Then add ingredients of (4).
6. 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**

**ID**: Main Emulsifier / ME.014  
**pH-value**: 5.5  
**Viscosity**: 9,000 mPa.s spindle 5, speed 10  
**Product form**: O/W

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>INCI-name</th>
<th>% w/w</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Deionised Water</td>
<td>Aqua</td>
<td>59.90</td>
<td>several</td>
</tr>
<tr>
<td>Disodium EDTA</td>
<td>Disodium EDTA</td>
<td>0.10</td>
<td>several</td>
</tr>
<tr>
<td>Glycerin 99%</td>
<td>Glycerin</td>
<td>3.00</td>
<td>several</td>
</tr>
<tr>
<td>Natrasol 250 HRR</td>
<td>Hydroxyethylcellulose</td>
<td>0.40</td>
<td>Ashland</td>
</tr>
<tr>
<td>2 Sisterna SP70-C</td>
<td>Sucrose Stearate</td>
<td>4.00</td>
<td>Sisterna</td>
</tr>
<tr>
<td>Sisterna SP30-C</td>
<td>Sucrose Distearate</td>
<td>2.00</td>
<td>Sisterna</td>
</tr>
<tr>
<td>BRB 1860</td>
<td>Dimethicone, Dimethiconol</td>
<td>2.00</td>
<td>BRB</td>
</tr>
<tr>
<td>Carnauba Wax T1</td>
<td>Copernicia Cerifera (Carnauba) Wax</td>
<td>3.00</td>
<td>Koster Keunen</td>
</tr>
<tr>
<td>Baobab Oil</td>
<td>Adansonia Digitata Seed Oil</td>
<td>2.00</td>
<td>Sigma Oil Seeds</td>
</tr>
<tr>
<td>KesterWax K-24</td>
<td>Lauryl Laurate</td>
<td>2.00</td>
<td>Koster Keunen</td>
</tr>
<tr>
<td>KesterWax K-72</td>
<td>Behenyl Behenate</td>
<td>3.00</td>
<td>Koster Keunen</td>
</tr>
<tr>
<td>Kesterwax K-60P</td>
<td>Behenyl Polyoxyystearic Acid, Copernicia Cerifera Cera</td>
<td>8.00</td>
<td>Koster Keunen</td>
</tr>
<tr>
<td>Neossance Hemisqualene</td>
<td>C13-15 Alkane</td>
<td>1.00</td>
<td>several</td>
</tr>
<tr>
<td>3 PVP K90 Solution 20%</td>
<td>PVP</td>
<td>4.00</td>
<td>Ashland</td>
</tr>
<tr>
<td>PVP/VA W-635</td>
<td>VP/VA Copolymer</td>
<td>4.00</td>
<td>Ashland</td>
</tr>
<tr>
<td>4 Geoparl C Crystal Titanium</td>
<td>Synthetic Fluorphlogopite, Titanium Dioxide, Tin Oxide</td>
<td>0.70</td>
<td>Geotech</td>
</tr>
<tr>
<td>Liquid Germall Plus</td>
<td>Propylene Glycol, Diazolidinyl Urea, Iodopropynyl Butylcarbamate</td>
<td>0.40</td>
<td>Ashland</td>
</tr>
<tr>
<td>Parfum</td>
<td>Parfum</td>
<td>0.50</td>
<td>several</td>
</tr>
</tbody>
</table>

**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°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
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® 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

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

**Production method**
1. Mix the ingredients of (1).  
2. Add (2) to (1).  
3. Add (3) to the surface of (1+2). Wait until the powder is fully hydrated, mix thoroughly until completely dissolved.  
4. Heat (1+2+3) to 70°C while stirring.  
5. Mix the ingredients of (4) and heat to 70°C while stirring.  
6. Add (4) to (1+2+3) and homogenise.  
7. Cool down to 40°C while stirring gently.  
8. Add (5, 6, 7) separately.  
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

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

**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°C-40°C and add (3).  
5. Homogenise shortly.  
6. Cool down to room temperature while stirring.
Sucrose esters as cold emulsifier for O/W
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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>INCI-name</th>
<th>% w/w</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Glycerin 99%</td>
<td>5.00</td>
<td>several</td>
</tr>
<tr>
<td></td>
<td>Genuvisco CG131</td>
<td>0.30</td>
<td>CP Kelco</td>
</tr>
<tr>
<td></td>
<td>Keltrol CG-SFT</td>
<td>0.30</td>
<td>CP Kelco</td>
</tr>
<tr>
<td>2</td>
<td>Deionised Water</td>
<td>48.80</td>
<td>several</td>
</tr>
<tr>
<td></td>
<td>Nipaguard SCE</td>
<td>1.30</td>
<td>Clariant</td>
</tr>
<tr>
<td>3</td>
<td>Lipex PreAct</td>
<td>40.00</td>
<td>AAK</td>
</tr>
<tr>
<td></td>
<td>AvenaPlex</td>
<td>1.00</td>
<td>Oat Cosmetics</td>
</tr>
<tr>
<td></td>
<td>Sisterna SP70-C</td>
<td>3.00</td>
<td>Sisterna</td>
</tr>
<tr>
<td></td>
<td>Pura</td>
<td>0.30</td>
<td>Luzi</td>
</tr>
</tbody>
</table>

**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)
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
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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>INCI-name</th>
<th>% w/w</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>Glycerin 99%</td>
<td>54.80</td>
<td>several</td>
</tr>
<tr>
<td>Sisterna SP70-C</td>
<td></td>
<td>1.00</td>
<td>Sisterna</td>
</tr>
<tr>
<td>Sisterna L70-C</td>
<td></td>
<td>2.50</td>
<td>Sisterna</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Andiroba Oil</td>
<td>20.00</td>
<td>Expanscience</td>
</tr>
<tr>
<td>Maracuja Oil</td>
<td></td>
<td>20.00</td>
<td>Expanscience</td>
</tr>
<tr>
<td>Tocomin L70-IP</td>
<td></td>
<td>0.10</td>
<td>Jan Dekker</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Amazzonia Parfum</td>
<td>0.80</td>
<td>Luzi</td>
</tr>
<tr>
<td>Quatin 350 UP</td>
<td></td>
<td>0.80</td>
<td>Cosun</td>
</tr>
</tbody>
</table>

**Formulation prepared via concentrated emulsification procedure.**

**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 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

<table>
<thead>
<tr>
<th>ID</th>
<th>Gel-to-milk / GE.010</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH-value</td>
<td>N/A</td>
</tr>
<tr>
<td>Viscosity</td>
<td>4.800 mPa.s Brookfield DV2T, Spindle RV03, 10 rpm</td>
</tr>
<tr>
<td>Product form</td>
<td>Gel-to-milk</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>INCI-name</th>
<th>% w/w</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Glycerin 99%</td>
<td>30.20</td>
<td>several</td>
</tr>
<tr>
<td></td>
<td>Sisterna SP70-C</td>
<td>2.50</td>
<td>Sisterna</td>
</tr>
<tr>
<td></td>
<td>Cosme-Phytami Porphyra TH Deionised Water</td>
<td>1.00</td>
<td>Alban Muller</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10.00</td>
<td>several</td>
</tr>
<tr>
<td>2</td>
<td>Gilsolide HV</td>
<td>53.30</td>
<td>Gilas</td>
</tr>
<tr>
<td></td>
<td>Olive Squalene Tocomic L70-IP</td>
<td>2.60</td>
<td>EFP Biotek</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.10</td>
<td>Jan Dekker</td>
</tr>
<tr>
<td>3</td>
<td>Olivera</td>
<td>0.30</td>
<td>Luzi</td>
</tr>
</tbody>
</table>

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 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

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

Production method
1. Mix (1) and heat to 70°C.
2. Mix (2) and heat to 75°C.
3. Add (2) to (1) very slowly while homogenising.
4. Cool down to 40°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

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

### Production method
1. Mix ingredients of (1).
2. Mix ingredients of (2).
3. Add (2) to (1) very slowly while homogenising.
4. Add (3) while homogenising.

Formulation prepared via concentrated emulsification procedure.
Sucrose esters for spray/wipe and serum concepts (concentrated emulsion technology)
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 μm, 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

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

**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.
5. Add Avicel PC611 to the cold water of (4) and shear for 10 minutes with a high shear mixer until fully incorporated.
6. Add oil in glycerin emulsion (1+2+3) to (4) while mixing.
7. 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

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

**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

\[ \text{CH}_2\text{OH} \quad \text{CH}_2\text{OOC} \quad \text{(CH}_2\text{)}_{16} \quad \text{CH}_3 \]
Sucrose esters for mild cleansing

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.006 Traveller 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

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

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

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

**Production method**

1. Add Xanthan Gum into the glycerin and mix until fully incorporated.  
2. Add (2) to (1) and heat to 70°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.
CH$_2$OOC (CH$_2$)$_{16}$CH$_3$

FATTY ACID
Sucrose esters in anhydrous systems
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

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

Production method
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°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

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

**Production method**
1. Heat phase (1) to 80°C and stir ingredients until homogenous.
2. Cool phase (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.
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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>INCI-name</th>
<th>% w/w</th>
<th>Supplier</th>
</tr>
</thead>
</table>
| 1 Sisterna A10E-C  
Sisterna SP10-C  
Candelilla Wax  
Carnauba Wax T1  
Permuglin 3230  
Kesterwax K82 P  
Sunflower Wax  
CCT Oil  
Isostearyl Isostearate  
TeCero-Wachs®30332cs | Sucrose Tetrastearate Triacetate  
Sucrose Polystearate  
Euphorbia Cerifera (Candelilla) Wax  
Copernicia Cerifera (Carnauba) Wax  
Ozokerite  
Synthetic Beeswax  
Helianthus Annuus (Sunflower) Seed Wax  
Caprylic/Capric Triglyceride  
Isostearyl Isostearate  
Hydrogenated Microcrystalline Wax, Synthetic Wax | 10.00  
1.00  
4.50  
2.00  
4.50  
3.00  
4.20  
24.41  
25.00  
6.29 | Sisterna  
Sisterna  
Koster Keunen  
Koster Keunen  
Koster Keunen  
Koster Keunen  
several  
several  
TH.C.TROMM |
| 2 Dermofeel Toco 70  
COD 8001  
COD 8003  
COD 8009  
COD 8008 | Tocopherol  
Castor (Ricinus Communis) Oil, CI 15850  
Castor (Ricinus Communis) Oil, CI 15850  
Castor (Ricinus Communis) Oil, CI 19140  
Castor (Ricinus Communis) Oil, CI 77891 | 0.10  
2.45  
0.55  
3.40  
7.60 | Dr. Straetmans  
Sun Chemical  
Sun Chemical  
Sun Chemical  
Sun Chemical |
| 3 Bungo | Parfum | 1.00 | Luzi |

**Production method**

1. Before starting: spray silicone release spray in mould and put in oven at 45°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

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

**Production method**
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 developed in cooperation with GEOTECH - www.geotech.nl
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.
**Mexican Avocado Hair Wax**

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

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

**Production method**

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.