Natural Ingredients in Personal Care

Anna Kethey
Marketing Manager – Skin Care, North America
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2 | Key Drivers

3 | Featured Ingredients

4 | Natural Formulations

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Natural Personal Care Market Overview
Europe, Asia Pacific and North America made up > 85% of Global Natural Personal Care product launches during 2010 - 2014

- Europe has the highest representation of launches, 43%, followed by APAC, North America, Latin America, and MEA.
- MEA had the highest growth in 2014 when compared to 2010, +40.5%.
- Brazil had a representation of 4.1% of total Latin American launches.

Top regions and countries launching natural skincare, soap & bath and hair products, based on number of products, **Global**, 2010 - 2014
Natural Personal Care market in North America shows strong historical and forecasted consumption volume growth

Historical & Forecasted natural ingredient consumption volume for North America

Category definition – Botanicals:
Natural ingredients which derive from plants. They are commonly found in a range of hair care and skin care products.

Today’s presentation will focus on North American market and consumer
Now let’s take a look at the key drivers in the natural personal care market
Key Drivers Influencing Growth of US Natural Personal Care Market

- Consumer Awareness
- Sensitive Skin
- Holistic Lifestyle
- Environmental Impact
Rising consumer interest and purchases are driving the growth in natural product launches and claims

60% of women worldwide expressed that natural claims highly influence their choice of beauty products¹

28% of adults reported purchasing more natural and organic products in 2013 compared to 2012²

4 out of 10 new product launches in the last 5 years featured natural claims³

Source: (1) Datamonitor (2) Natural and Organic Personal Care Consumer, US 2013 (3) Mintel Natural BPC Products -Skincare, Soap & Bath and Haircare February 2015
How Natural Personal Care Varies…Natural / Green / Sustainable

Essential elements:

- **Sustainability** (care and respect for the ecosystem and people)
- **Naturalness** (presence of natural ingredients)
- **Wholesomeness** (organic - use of renewable resources and the conservation of soil and water)
- **Environmentally-friendly**
- **Cruelty-free**
- **Safe** for use or consumption

*How these elements are incorporated in the development and marketing of natural products varies based on the criteria and definitions established by various organizations and CPG companies*

NPA standards offer acceptable guidelines when formulating for the US Natural Personal Care market
Here’s a quick overview on the NPA guidelines for natural products
Formulating to the NPA Standard

What is “Natural”:

- Ingredients that come or are made from a renewable resource found in nature (Flora, Fauna, Mineral), with absolutely no petroleum compounds.

All products that are labeled or branded “Natural” must:

- Be made with at least 95% natural ingredients – excluding water
- Contain only synthetic ingredients specifically allowed under this standard and environmentally-friendly products that are nurturing to us and as harmless as possible to the earth

A synthetic non-natural ingredient can be used:

- Only when there is not a readily available natural alternative ingredient
- Only when there are no suspected human health risks as indicated by peer-reviewed third-party scientific literature
BASF offers a comprehensive portfolio of natural ingredients

Our NPA certified products brochure features close to 100 products whereas, our newly launched NPA Effect pigment brochure highlights over 150 recently certified special effect pigments.
Let’s look at some of BASF’s Natural and NPA certified ingredients...
Plantapon® LGC Sorb NA

**INCI Name:** Sodium Lauryl Glucose Carboxylate (and) Lauryl Glucoside

**Description:** Anionic Surfactant

**Appearance:** Clear yellow liquid

**Use Level:**
- 15 – 45% as primary surfactant
- 3 – 15% as secondary surfactant

**Key Features/Benefits:**
- Offers both mild cleansing and rich, dense foam
- High HLB surfactant
- Efficient at low use levels
- Ideal as the primary surfactant for mild rinse-off applications
- Foam behavior is independent of pH
- Low pH stability – performs well in salicylic acid formulations
- EO/PO free
- Essential component of anionic SWOP formulations

Ecocert is a European certification body for natural & organic personal care.
Lamesoft® PO 65

**INCI Name:** Coco Glucoside (and) Glyceryl Oleate

**Description:** Lipid layer enhancer

**Appearance:** Slightly yellowish viscous composite

**Use Level:** 1 – 5 %

**Key Features/Benefits:**
- Lipid layer enhancer for surfactant based cleansers
- Softens and moisturizes skin and hair
- Can improve the mildness of a formulation
- Enhances viscosity in sulfate-free systems
- Can be used in clear, opacified and pearlized formulations
- Cold processable
- EO/PO free

Ecocert is a European certification body for natural & organic personal care
Plantapon® TF

**INCI Name:** Decyl Glucoside (and) polyglyceryl-10 Caprylate/Caprate (and) Coco Glucoside (and) Glyceryl Oleate

**Description:** Natural surfactant blend

**Appearance:** Clear yellowish liquid

**Use Level:** ~ 20%

**Key Features/Benefits:**
- Extremely mild tear-free and sulfate-free surfactant blend based on APG technology
- Effective cleansing properties
- Excellent foaming and sensory properties
- Tear-free certification possible when diluted in final formulation
- Suitable for sulfate-free, EO-free, PEG-free, paraben-free applications
- Ideal for baby care products such as shampoo and bodywash
Euperlan® Green

INCI Name: Lauryl Glucoside (and) Stearyl Citrate

Description: Natural pearlizing wax
Appearance: Pearlescent liquid
Use Level: 2 – 6 %

Key Features/Benefits:
- Highly efficient consistency wax
- Positive impact on stability and viscosity of O/W emulsions
- Compatible with nonionic, cationic and anionic ingredients
- Contributes to improved skin feel in formulations
- Can reduce whitening effect in some formulations
- Suitable for a wide range of personal care formulations
INCI Name: Hydrogenated Vegetable Glycerides

Description: Natural consistency wax
Appearance: White to slightly yellowish granules
Use Level: 1 – 5 %

Key Features/Benefits:
- Highly efficient consistency wax
- Positive impact on stability and viscosity of O/W emulsions
- Compatible with nonionic, cationic and anionic ingredients
- Contributes to improved skin feel in formulations
- Can reduce whitening effect in some formulations
- Suitable for a wide range of personal care formulations
Emulgin® SG

INCI Name: Sodium Stearoyl Glutamate

Description: Anionic O/W emulsifier
Appearance: White to slightly yellowish granules
Use Level: 0.25 – 2.0 %

Key Features/Benefits:
• Strong O/W emulsifier, effective at low use levels
• High compatibility with electrolytes including water-soluble UV filters
• High flexibility in formulations
• Strong emulsifier for face, body and sun care applications
• EO-free
Emulgade® Sucro Plus

INCI Name: Sucrose Polystearate, Cetyl Palmitate

Description: Natural emulsifier blend
Appearance: White to slightly yellowish granules
Use Level: 1 – 5 %

Key Features/Benefits:
- Exhibits good consistency build-up in formulations
- Lamella structure provider
- Suitable for use in facial skin care including eye area, body care and sun care applications
- Provides sensory benefits in finished formulations – silky, dry skin after-feel
- Good electrolyte compatibility
Cetiol® SB 45

INCI Name: Butyrospermum Parkii (Shea) Butter

Description: Natural butter
Appearance: White to off-white semi solid wax
Melting Point: 42°C - 46°C

Key Features/Benefits:
• Excellent odor profile and color
• Skin soothing properties
• Soft and pleasant skin feel
• High content of triglycerides
Let’s review some natural formulations that meet the NPA guidelines
# Tear-free* Pearlized Baby Wash

**US-00846-027**

## Featured Ingredients:

- **Plantapon® TF:**
  - Natural surfactant blend
  - Achieve gentle cleansing formulations

- **Myritol® 331:**
  - Natural emollient
  - Skin conditioning benefits

- **Euperlan® Green:**
  - Natural pearlizer blend
  - Luxurious product aesthetics
  - Creamy foam

## Ingredients Details:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Tradename</th>
<th>INCI</th>
<th>% by weight</th>
<th>Function</th>
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<td>Natrasol Plus 330 CS</td>
<td>Cetyl Hydroxyethylcellulose</td>
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<td>Keltrol CG-SFT</td>
<td>Xanthan Gum</td>
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<td>Thickener</td>
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<td>B.</td>
<td>Plantapon® TF</td>
<td>Decyl Glucoside (and) Polyglyceryl-10 Caprylate/caprate (and) Coco Glucoside(and) Glyceryl Oleate</td>
<td>19.60</td>
<td>Mild Surfactant Blend</td>
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<td>Myritol® 331</td>
<td>Cocoglycerides</td>
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<td>Emollient</td>
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<td>Sodium Benzoate</td>
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<td>0.20</td>
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<td></td>
<td>Euperlan® Green</td>
<td>Lauryl Glucoside (and) Stearyl Citrate</td>
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<td>Pearlizer pH Adjustment</td>
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<td>C.</td>
<td>Citric Acid (100%)</td>
<td>Citric Acid</td>
<td>0.30</td>
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</tbody>
</table>

* This formula is to be classified as harmless in regards to the possibility of eye irritation in a direct eye contact situation. The claim "no tears" and "no burning in the eyes" were confirmed.
# Nourishing Baby Lotion

**SC-US-15-452-656-186-8**

<table>
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<td>Soybean Oil</td>
<td>Glycine Soja (Soybean) Oil</td>
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<td><strong>Myritol 331</strong></td>
<td>Polyglyceryl-3 Diisostearate</td>
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<td>Lameform TGI</td>
<td>Cetyl Alcohol</td>
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<td>Lanette 16</td>
<td>Cetyl Alcohol</td>
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<tr>
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<td>Cutina GMS V</td>
<td>Glyceryl Stearate</td>
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<td>Lanette O</td>
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<td>Vanzan NF</td>
<td>Xanthan Gum</td>
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<td>Natrosol Plus 330 CS</td>
<td>Hydroxyethylcellulose</td>
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<tr>
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<tr>
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<td>Glycerin</td>
<td>Glycerin</td>
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<tr>
<td>D</td>
<td>Benzoic Acid</td>
<td>Benzoic Acid</td>
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</table>

## Featured Ingredients:

- **Myritol® 331**
  - Naturally derived, medium spreading emollient
  - Effective moisturization

- **Cutina® HVG**:
  - Provides a silky feel and texture
  - Helps reduce whitening effect of products during application
Daily Cleansing Shampoo
HB-US-15-31198-52

Featured Ingredients:

- **Plantapon® LGC Sorb:**
  - Anionic surfactant
  - Suitable for mild cleansing
  - Excellent foaming properties
  - Suitable for sulfate-free applications

- **Plantapon® ACG HC**
  - Excellent co-surfactant in mild cleansing applications
  - Excellent foaming and skin sensory benefits
  - Suitable for Sulfate-free applications

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<table>
<thead>
<tr>
<th>Phase</th>
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<th>INCI</th>
<th>% by weight</th>
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<td>Water</td>
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<td>Water</td>
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<tr>
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<td>Plantapon® LGC Sorb</td>
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<td>Plantapon® ACG HC</td>
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<td>Lamesoft® PO 65</td>
<td>Coco-Glucoside (and) Glyceryl Oleate</td>
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<td>Sodium Benzoate</td>
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<tr>
<td>C</td>
<td>Citric Acid (50%)</td>
<td>Citric Acid</td>
<td>q.s.</td>
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Procedure
# Naturally Moisturizing Body Butter


<table>
<thead>
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<th>Phase</th>
<th>Tradename</th>
<th>INCI</th>
<th>% by weight</th>
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<tbody>
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<td>Water, demin</td>
<td>Water</td>
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<tr>
<td></td>
<td>Vanatural Bentonite Clay</td>
<td>Bentonite</td>
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<tr>
<td></td>
<td>Vanzan NF</td>
<td>Xanthan Gum</td>
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</tr>
<tr>
<td></td>
<td>Emulgin® SG</td>
<td>Sodium Stearoyl Glutamate</td>
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<tr>
<td></td>
<td>Plantacare® 818 UP</td>
<td>Coco-Glucoside</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td>Tinocare® GL</td>
<td>Sclerotium Gum</td>
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<tr>
<td></td>
<td>Potassium Sorbate</td>
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</tr>
<tr>
<td>B</td>
<td>Cutina® GMS</td>
<td>Glyceryl Stearate</td>
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</tr>
<tr>
<td></td>
<td>Lanette® O</td>
<td>Cetearyl Alcohol</td>
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<tr>
<td></td>
<td>Cetiol® CC</td>
<td>Dicaprylyl Carbonate</td>
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<td></td>
<td>Lanette® 22</td>
<td>Behenyl Alcohol</td>
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<tr>
<td></td>
<td>Cetiol® OE</td>
<td>Dicaprylyl Ether</td>
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<td>Cetiol® SB 45</td>
<td>Buterospermum Parkii (Shea) Butter</td>
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<tr>
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<td>Lipofructyl™ MO LS 9305</td>
<td>Moringa Pterygosperma Seed Oil, Moringa Oleifera Seed Oil</td>
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<tr>
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<td>Benzyl Alcohol</td>
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<tr>
<td>D</td>
<td>Citric Acid</td>
<td>Citric Acid</td>
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</table>

### Featured Ingredients:

- **Cetiol® CC, Cetiol® OE:**
  - Natural emollient with high spreadability
  - Light skin after feel
  - Mitigate greasiness in formulations

- **Cetiol® SB 45:**
  - Natural Shea Butter
  - Promote skin barrier function repair

- **Lipofructyl™ MO:**
  - Long lasting moisturization
  - Replenish natural skin lipids

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**Procedure**
Thank you!!

Q & A
Additional information and questions

Feel free to contact us at:

E-mail: personalcare-na@basf.com

Ulprospector.com for additional ingredient and formulation information
Tear-free* Pearlized Baby Wash
US-00846-027

Procedure:
I. Mix the Xanthan Gum and Natrasol Plus 330 CS with the water while stirring.
II. Add ingredients of Phase B and blend until uniform.
III. Adjust pH to 4.8 with Citric Acid.

* This formula is to be classified as harmless in regards to the possibility of eye irritation in a direct eye contact situation. The claim "no tears" and "no burning in the eyes" were confirmed.
## Naturally Moisturizing Body Butter

### SC-US-15-32916-52-1

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<td>Emollient</td>
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<td>Benzyl Alcohol</td>
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### Procedure:

I. Combine phase A and begin heating to 75-80°C
II. Combine phase B and heat to 75-80°C with mixing.
III. Add phase B to phase A while homogenizing
IV. Switch to lightenin' mixing and begin cooling to RT
V. Add phase C at 40°C
VI. Adjust pH to between 6.0 - 7.0 if necessary
# Nourishing Baby Lotion

**SC-US-15-452-656-186-8**

<table>
<thead>
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<th>Phase</th>
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<td>Lipid layer enhancer</td>
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<td>Soybean Oil</td>
<td>Glycine Soja (Soybean) Oil</td>
<td>2.90</td>
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<td>Myritol 331</td>
<td>Polyglyceryl-3 Diisostearate</td>
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<td>Lameform TGI</td>
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<td>Emulsifier (W/O)</td>
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<td>Consistency agent</td>
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<td>Benzoic Acid</td>
<td>Benzoic Acid</td>
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</table>

**Procedure:**

I. Heat phase A with slow mixing to 80°C until it melts.
II. Add phase B to phase A with moderate mixing and make sure all gums are hydrated.
III. Add phase A/B to pre-heated water phase C (80°C), mix well and start cooling.
IV. Homogenize when temperature is ~65°C.
V. Continue mixing with moderate speed while cooling.
VI. Add phase D with moderate mixing when temperature drops below 40°C.
# Daily Cleansing Shampoo

**HB-US-15-31198-52**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Tradename</th>
<th>INCI</th>
<th>% by weight</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>DI Water</td>
<td>Water</td>
<td>q.s.</td>
<td>Diluent</td>
</tr>
<tr>
<td></td>
<td>Glycerin</td>
<td>Glycerin</td>
<td>4.00</td>
<td>Moisturizer</td>
</tr>
<tr>
<td></td>
<td>Keltrol CG-SFT</td>
<td>Xanthan Gum</td>
<td>2.00</td>
<td>Thickener</td>
</tr>
<tr>
<td>B.</td>
<td>DI Water</td>
<td>Water</td>
<td>58.40</td>
<td>Diluent</td>
</tr>
<tr>
<td></td>
<td><strong>Plantapon® LGC Sorb</strong></td>
<td>Sodium Lauryl Glucose Carboxylate (and) Lauryl Glucoside</td>
<td>20.00</td>
<td>Primary Surfactant</td>
</tr>
<tr>
<td></td>
<td><strong>Plantapon® ACG HC</strong></td>
<td>Disodium Cocoyl Glutamate</td>
<td>12.00</td>
<td>Secondary Surfactant</td>
</tr>
<tr>
<td></td>
<td>Lamesoft® PO 65</td>
<td>Coco-Glucoside (and) Glyceryl Oleate</td>
<td>3.00</td>
<td>Lipid Layer Enhancer</td>
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<tr>
<td></td>
<td>Sodium Benzoate</td>
<td>Sodium Benzoate</td>
<td>0.60</td>
<td>Preservative</td>
</tr>
<tr>
<td></td>
<td>Citric Acid (50%)</td>
<td>Citric Acid</td>
<td>q.s.</td>
<td>pH Adjuster</td>
</tr>
</tbody>
</table>

**Procedure**

1. Add Phase A and mix well.
2. Add Phase B to separate vessel and mix well. Adjust pH to 5.0-5.5 with citric acid and add to Phase A.
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