Natural Ingredients in Personal Care

150 years

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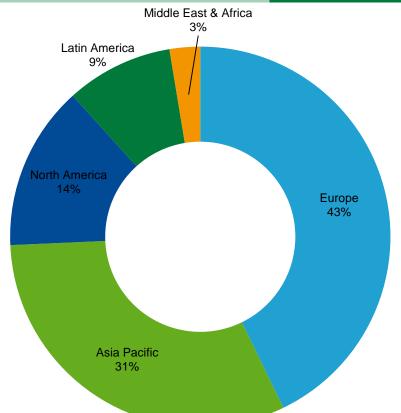


Natural Personal Care Market Overview

150 years

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.



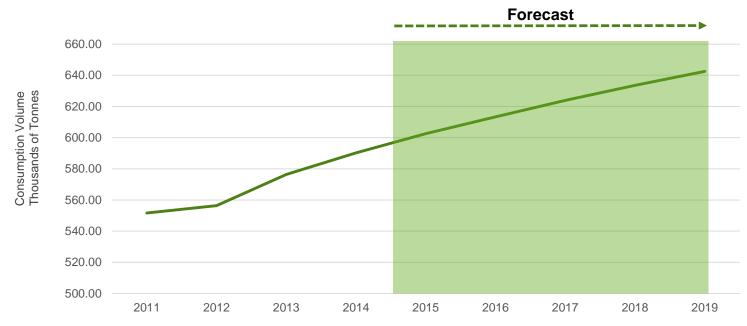
Top regions and countries launching natural skincare, soap & bath and hair products, based on number of products, **Global**, 2010 - 2014



150 years

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



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Source: Euromonitor

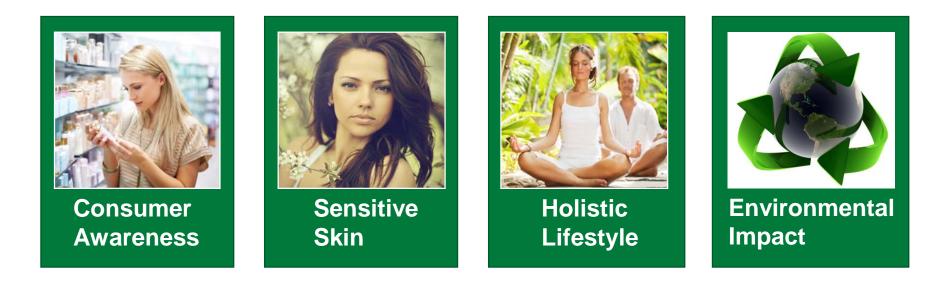
Now let's take a look at the key drivers in the natural personal care market

150 years



Key Drivers Influencing Growth of US Natural Personal Care Market

150 years





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



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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

Respect for the Environment

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

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Formulating to the NPA Standard

What is "Natural":

 Ingredients that come or are made from a renewable resource found in nature (Flora, Minerals etc), 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 that comply with the NPA standard

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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...

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Plantapon[®] LGC Sorb NA



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

Description: Anionic SurfactantAppearance:Clear yellow liquidUse Level:15 – 45% as primary surfactant3 – 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 enhancerAppearance:Slightly yellowish viscous compositeUse 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







Plantapon[®] TF



150 years



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

Description:Natural surfactant blendAppearance:Clear yellowish liquidUse 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







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

Cutina[®] HVG



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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 emulsifierAppearance:White to slightly yellowish granulesUse 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









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



Lipofructyl[™] MO LS 9305





INCI Name: Moringa Pterygosperma Seed Oil

Description: Natural, oil-soluble bio-active **Appearance:** Liquid **Use Level:** 1 – 5 %

Key Features/Benefits:

- Known for it's high fatty acid profile (97.5%)
- High oxidation stability
- High spreading value without tackiness
- Known to provide hydration and nutrition for both skin and hair







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









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Let's review some natural formulations that meet the NPA guidelines

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Tear-free* Pearlized Baby Wash

US-00846-027

Phase	Tradename	INCI	% by	Function	Fea
			weight		• P
А	Deionized Water	Water	74.30	Diluent	
	Natrasol Plus 330 CS	Cetyl Hydroxyethylcellulose	0.10	Thickener	- N
	Keltrol CG-SFT	Xanthan Gum	1.00	Thickener	
В.		Decyl Glucoside (and) Polyglyceryl-10		Mild	
		Caprylate/caprate (and) Coco		Surfactant	• E
	Plantapon® TF	Glucoside(and) Glyceryl Oleate	19.60	Blend	
	Myritol® 331	Cocoglycerides	1.50	Emollient	
	Sodium Benzoate	Sodium Benzoate	0.20	Preservativ e	
		Lauryl Glucoside (and) Stearyl			
	Euperlan® Green	Citrate	3.00	Pearlizer	
				рН	
C.	Citric Acid (100%)	Citric Acid	0.30	Adjustment	

* 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.

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







D-BASE

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Nourishing Baby Lotion

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

Phase	Tradename	INCI	% by Weight
А	Monomuls 90 - L 12	Glyceryl Laurate	2.90
	Soybean Oil	Glycine Soja (Soybean) Oil	2.90
	Myritol 331	Cocoglucosides	2.50
	Lameform TGI	Cetyl Alcohol	0.10
	Lanette 16	Cetyl Alcohol	0.95
	Cutina GMS V	Glyceryl Stearate	0.55
	Lanette O	Cetearyl Alcohol	0.55
	Cutina HVG	Hydrogenated Vegetable Glycerides	0.95
	Emulgin SG	Sodium Stearoyl Glutamate	0.50
В	Vanzan NF	Xanthan Gum	0.40
	Natrosol Plus 330 CS	Hydroxyethylcellulose	0.40
С	Water, demin	Water	84.0
	Glycerin	Glycerin	3.00
D	Benzoic Acid	Benzoic Acid	0.30

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





Procedure

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Daily Cleansing Shampoo

HB-US-15-31198-52

Phase	Tradename	INCI	% by weight
А.	DI Water	Water	q.s.
	Glycerin	Glycerin	4.00
-	Keltrol CG-SFT	Xanthan Gum	2.00
В.	DI Water	Water	58.40
	Plantapon® LGC Sorb	Sodium Lauryl Glucose Carboxylate (and) Lauryl Glucoside	20.00
	Plantapon® ACG HC	Disodium Cocoyl Glutamate	12.00
	Lamesoft® PO 65	Coco-Glucoside (and) Glyceryl Oleate	3.00
	Sodium Benzoate	Sodium Benzoate	0.60
С	Citric Acid (50%)	Citric Acid	q.s.

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





Procedure

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Naturally Moisturizing Body Butter

SC-US-15-32916-52-1

Phase	Tradename	INCI	% by weight
А	Water, demin	Water	62.5
	Vanatural Bentonite Clay	Bentonite	2.00
	Vanzan NF	Xanthan Gum	0.50
	Emulgin [®] SG	Sodium Stearoyl Glutamate	0.90
	Plantacare® 818 UP	Coco-Glucoside	0.30
	Tinocare [®] GL	Sclerotium Gum	3.00
	Potassium Sorbate	Potassium Sorbate	0.30
В	Cutina [®] GMS	Glyceryl Stearate	6.40
	Lanette [®] O	Cetearyl Alcohol	2.40
	Cetiol [®] CC	Dicaprylyl Carbonate	3.00
	Lanette [®] 22	Behenyl Alcohol	1.00
	Cetiol [®] OE	Dicaprylyl Ether	5.00
	Cetiol [®] SB 45	Buterospermum Parkii (Shea) Butter	10.00
	Lipofructyl™ MO LS 9305	Moringa Pterygosperma Seed Oil, Moringa Oleifera Seed Oil	2.00
С	Benzyl Alcohol	Benzyl Alcohol	1.00
D	Citric Acid	Citric Acid	0.05

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





Thank you!!

Q & A

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Additional information and questions

Feel free to contact us at:

E-mail: personalcare-na@basf.com

<u>Ulprospector.com</u> for additional ingredient and formulation information





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Naturally Moisturizing Body Butter

SC-US-15-32916-52-1

С

Benzyl Alcohol

Phase	Tradename	INCI	% by weight	Function
А	Water, demin	Water	62.5	
	Vanatural Bentonite Clay	Bentonite	2.00	Thickener, Stabilizer
	Vanzan NF	Xanthan Gum	0.50	Stabilizer
	Emulgin [®] SG	Sodium Stearoyl Glutamate	0.90	Emulsifier (O/W)
	Plantacare [®] 818 UP	Coco-Glucoside	0.30	Emulsifier (O/W)
	Tinocare [®] GL	Sclerotium Gum	3.00	Humectant
	Potassium Sorbate	Potassium Sorbate	0.30	Preserrvative
В	Cutina [®] GMS	Glyceryl Stearate	6.40	Consistency agent
	Lanette [®] O	Cetearyl Alcohol	2.40	Consistency agent
	Cetiol [®] CC	Dicaprylyl Carbonate	3.00	Emollient
	Lanette [®] 22	Behenyl Alcohol	1.00	Consistency agent
	Cetiol [®] OE	Dicaprylyl Ether	5.00	Emollient
	Cetiol [®] SB 45	Buterospermum Parkii (Shea) Butter	10.00	Emollient
	LipofructyI™ MO LS 9305	Moringa Pterygosperma Seed Oil, Moringa Oleifera Seed Oil	2.00	Active ingredient
•		-		_

Benzyl Alcohol

1.00

Preservative



- 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

Phase	Tradename	INCI	% by Weight	Function
А	Monomuls 90 - L 12	Glyceryl Laurate	2.90	Lipid layer enhancer
	Soybean Oil	Glycine Soja (Soybean) Oil	2.90	Emollient
	Myritol 331	Cocoglycerides	2.50	Emollient
	Lameform TGI	Cetyl Alcohol	0.10	Emulsifier (W/O)
	Lanette 16	Cetyl Alcohol	0.95	Consistency agent
	Cutina GMS V	Glyceryl Stearate	0.55	Consistency agent
	Lanette O	Cetearyl Alcohol	0.55	Consistency agent
	Cutina HVG	Hydrogenated Vegetable Glycerides	0.95	Consistency agent
	Emulgin SG	Sodium Stearoyl Glutamate	0.50	Emulsifier (O/W)
В	Vanzan NF	Xanthan Gum	0.40	Rheology modifier
	Natrosol Plus 330 CS	Hydroxyethylcellulose	0.40	Rheology modifier
С	Water, demin	Water	84.0	
	Glycerin	Glycerin	3.00	Humectant
D	Benzoic Acid	Benzoic Acid	0.30	Preservative

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Procedure:

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







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Daily Cleansing Shampoo

HB-US-15-31198-52

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

Procedure

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



