

Personal Care  
functional ingredients

**AAK**

enhancing  
the power  
of nature

## 'The Art of Oils'

Some define art as the human capacity to create through imaginative or technical skill. At AAK Personal Care we use our technological know-how and skills to bring out the superb functionality of lipids found in renewable oils. We call it 'The Art of Oils'.

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# personal care

As a formulator or manufacturer, you know that cosmetic innovation is not only about identifying entirely new sources, ingredients or formulations. It is also about finding new ways to use, improve or replace parts of them, inspired by evolving demands from consumers, society and regulators. A task more easily accomplished when working with a knowledgeable partner.

### Specialists in lipids for more than a century

At AAK Personal Care we develop high-performance, active, functional and natural based lipids for use in skin care, hair care, colour cosmetics and other personal care products.

With more than 100 years of experience working with vegetable oils, AAK's expertise is unequalled. Our science-based product development, technical expertise and technological know-how are highly regarded and a guarantee for consistently high quality.

### When natural, functional, stable and sustainable matter

Today our specialised knowledge in lipid ingredients brings highly appreciated benefits to local, regional and global cosmetic brands. All our ingredients originate from renewable, natural sources and are carefully processed to achieve desired functionality and stability, while manufactured with low energy-processing methods to reduce their ecological footprint.

Formulators especially appreciate our ingredients for their track record concerning functionality, safety, stability and sustainability.

### Supporting your innovation

The development of unique ingredients is one way we help you to stay aligned with global trends. But we don't stop there.

To fully support your innovation process we provide ever-important technical support, claims substantiation, idea proposals and knowledge sharing. Together with our focus on functionality, this makes us ideally suited to help you create more specialised and sustainable cosmetics that consumers are looking for – your masterpieces in the making.

# New!

## Lipex SheaLiquid™ TR

from a traceable supply chain

## Lipex SheaLight™

Best Sustainable Ingredient 2014

NPA Industry Champion Award 2015

# bioactives

## naturally-derived bioactive lipids

When it comes to protecting skin against environmental stress and premature ageing, our naturally-derived bioactives have proven very powerful. Even in small doses, these ingredients have demonstrated large benefits through excellent anti-inflammatory and collagen protecting properties.

### Utilising the bioactivity of minor lipids

Our anti-ageing bioactives are scientifically developed to utilise the inherent bioactivity of the minor lipids found in sustainable sources of canola oil and shea butter. Using our soft processing and unique

AAK patented fractionation technology, we have been able to develop and manufacture exceptional bioactive ingredients.

Our bioactives feature high concentrations of anti-oxidative natural tocopherols (Vitamin E), anti-inflammatory phytosterols and their esters, as well as triterpene esters appreciated for their skin protecting and revitalising properties.

### Well-documented functionality and skin tolerance

Lipex bioactives are well-characterised lipophilic ingredients for safe use within personal care

applications. The lipophilic nature makes them readily bioavailable and highly functional, allowing low-use concentrations. Their good skin tolerance with documented non-irritancy and non-sensitising properties make them well suited for high-end facial skin care, sensitive skin and dermo-cosmetic applications. The high stability profile further allows for applications within caring colour cosmetics.

By including a natural based Lipex bioactive in your formulations, you can more easily meet the objective of well-protected and younger-looking skin.

## Bioactives

Products	INCI (EU)	Documented Functionality	Description/Applications	Use level
<b>Lipex SheaTris™</b>	<i>Butyrospermum Parkii Butter Extract</i>	Barrier strengthening (in vitro, ex vivo) Collagen protecting (in vitro, ex vivo) Anti-inflammatory (in vitro)	Shea butter triterpene ester concentrate. Long-term protection against environmental stress. Protection against premature ageing. Triterpene ester content 50–65%. Skin care and makeup.	0,3–0,5%
<b>Lipex Collect™</b>	<i>Phytosteryl Canola Glycerides</i>	Anti-inflammatory (in vitro)	Canola based phytosterol concentrate. Helps to supplement skin lipids. Protects against premature ageing. Phytosterol ester content 45%. Skin care and makeup.	0,5–2%



# emollients

Our decades of experience within lipid technology has enabled us to develop advanced, high-performance naturally-derived emollients with high stability and long shelf life. This lipid expertise is clearly evidenced through a long list of alternative butters, gels, oils and esters.

Over the years AAK scientists have constantly refined and improved performance of our emollients to actively contribute to the efficacy, functionality and sensory aspects of your final formulations.

## Leading manufacturer of shea based emollients

With more than 60 years of presence in West Africa, we control and ensure the highest quality in all aspects of the shea butter supply chain: sourcing, processing and manufacturing. This is your guarantee for outstanding consistent quality and stability.

## Other natural sources

Illipe, mango, canola, cocoa, coconut and avocado are examples of other natural sources used in our emollient range. Each of these sources is carefully chosen, processed and in some cases mixed to obtain the exact chemical profile you need for developing the specific cosmetic formulation and consumer experience you envision.

## Lipex SheaClear™

100% clear liquid shea oil

- high unsaponifiable content
- softens and moisturises the skin
- improves shine and softness in hair



see table page 8

## Bioactive Emollients

Products (Origin)	INCI (EU)	Softening	Photo Protecting	Anti- inflammatory	Description/Applications	Use level
<b>Lipex PreAct™</b> (Canola)	Canola Oil	●	●	●	Canola oil with unique composition of natural tocopherols (vitamin E) and phytosterols. Documented protection of skin proteins and lipids against photo oxidation and free radicals. Skin care, hair care and makeup.	2–5%

## Performance Emollients

Products (Origin)	INCI (EU)	Softening	Moisturising	Sensory improver	Texture	Description/Applications	Use level
<b>Solids</b>							
<b>Lipex CocoaSoft™</b> (Cocoa)	Theobroma Cacao Seed Butter	●	●	●	●	Cocoa butter with optimised melting profile. Improved heat stability and crystallisation properties versus traditional cocoa butter. Skin care.	2–5%
<b>Lipex IllipeSoft™</b> (Illipe)	Shorea Stenoptera Seed Butter	●	●	●	●	Illipe butter with optimised melting profile. Improved heat stability and crystallisation properties versus traditional illipe butter. Skin care.	2–5%
<b>Lipex 102™</b> (Shea)	Butyrospermum Parkii Butter	●				Refined and deodorised shea butter. Low colour and odour. Skin care.	1–2%
<b>Lipex 106™</b> (Illipe)	Shorea Stenoptera Seed Butter	●				Refined and deodorised illipe butter of the Dayaks of Borneo. Low colour and odour. Skin care.	1–2%

## Semi-solids

<b>Lipex SheaSoft™</b> (Shea)	Butyrospermum Parkii Butter	●	●	●	●	Soft semi-solid shea butter. Documented moisturisation and skin barrier recovery. Improved heat stability and crystallisation properties versus traditional shea butters. Suitable for high concentrations and anhydrous formulations. Skin care, hair care and makeup.	2–15%
<b>Lipex Shea™</b> (Shea)	Butyrospermum Parkii Butter	●	●	●	●	Improved shea butter. Quick crystallisation for long-term texture stability. Skin care and hair care.	2–15%
<b>Lipex Genova™</b> (Palm)	Elaeis Guineensis Oil	●	●	●	●	Soft palm-based vegetable gel with unique melting profile. Skin care.	2–5%

Products <i>(Origin)</i>	INCI (EU)	Softening	Moisturising	Sensory improver	Texture	Description/Applications	Use level
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## Semi-solids

<b>Lipex L'sens™</b> <i>(Soybean/Shea)</i>	<i>Soybean Glycerides (and) Butyrospermum Parkii Butter Unsaponifiabiles</i>	●	●	●		Polar vegetable gel. Documented moisturisation. Skin care, hair care and makeup.	2–5%
<b>Akosoft 36™</b> <i>(Coco-glycerides)</i>	<i>Hydrogenated Coco-glycerides</i>	●	●	●		Stable semi-solid emollient based on coco-glycerides. Skin care, hair care and makeup.	2–5%

## Liquids

<b>Lipex SheaClear™</b> <i>(Shea)</i>	<i>Butyrospermum Parkii Oil</i>	●	●	●		Liquid shea oil for clear formulations and cold processing. Suitable for all types of moisturising and softening body oils, face oils and hair oils. A mild ingredient for baby oils and lotions.	2–80%
<b>Lipex 205™</b> <i>(Shea)</i>	<i>Butyrospermum Parkii Butter (or) Butyrospermum Parkii Oil</i>	●	●	●		Liquid shea butter with enriched content of triterpene esters and vitamin F. Contributes to good skin health. Skin care, hair care and makeup.	2–5%
<b>Lipex SheaLiquid™ TR</b> <i>(Shea)</i>	<i>Butyrospermum Parkii Butter (or) Butyrospermum Parkii Oil</i>	●	●	●		Liquid shea butter from a traceable supply chain with enriched content of triterpene esters and vitamin F. Contributes to good skin health. Skin care, hair care and makeup.	2–5%
<b>Lipex Omega 3/6™</b> <i>(Gold of Pleasure)</i>	<i>Olus Oil (and) Camelina Sativa Seed Oil</i>	●	●			Stable delivery system with optimised balance of omega-6 and omega-3 fatty acids (3:1) from Gold of Pleasure oil. Essential omega fatty acids for restoring skin health. Suitable for cold processing. Skin care, hair care and makeup.	2–5%
<b>Lipex Omega EPO™</b> <i>(Evening Primrose)</i>	<i>Olus Oil (and) Oenothera Biennis Oil</i>	●	●			Stable delivery system with evening primrose oil (gamma linolenic acid). Essential omega fatty acids for restoring skin health. Suitable for cold processing. Skin care, hair care and makeup.	2–5%
<b>Lipex Omega Passiflora™</b> <i>(Passionflower)</i>	<i>Olus Oil (and) Passiflora Incarnata Seed Oil</i>	●	●			Stable delivery system with passionflower seed oil (omega-6 fatty acids). Essential omega fatty acids for restoring skin health. Suitable for cold processing. Skin care, hair care and makeup.	2–3%
<b>Lipex 109 S™</b> <i>(Cottonseed)</i>	<i>Gossypium Herbaceum Seed Oil</i>	●	●			Cottonseed oil stabilised with an optimised natural antioxidant system. Rich in omega-6 fatty acids. Skin care and hair care.	2–3%
<b>Lipex 120™</b> <i>(Canola)</i>	<i>Canola Oil</i>	●	●			Canola oil stabilised with an optimised natural antioxidant system. Rich in omega-3, omega-6 and omega-9 fatty acids. Skin care.	2–3%
<b>Lipex 203™</b> <i>(Mango)</i>	<i>Mangifera Indica Seed Oil</i>	●				A golden oil from the seeds of the mango fruit. Skin care, hair care and makeup.	2–3%
<b>Akogreen O™</b> <i>(Organic Olive)</i>	<i>Olea Europaea Fruit Oil</i>	●				Refined and deodorised certified organic olive oil. Rich in omega-9 fatty acids. Skin care.	2–3%

Products	INCI (EU)	Softening	Moisturising	Sensory improver	Texture	Description/Applications	Use level
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## Esters

<b>Lipex Shea W™</b>	<i>Shea Butter Cetyl Esters</i>	●	●	●	●	Solid shea butter wax ester. Dry and velvety skin feel. Optimised for makeup and anhydrous formulations. Skin care, hair care and makeup.	2–5%
<b>Lipex Shea WM™</b>	<i>Shea Butter Oleyl Esters</i>	●		●		Liquid shea butter ester. Low viscosity and low spreadability. Quick absorption and velvety skin feel. Skin care, hair care and makeup.	2–5%
<b>Lipex SheaLight™</b>	<i>Shea Butter Ethyl Esters</i>	●		●		Eco-designed liquid shea butter ester. Low viscosity. Light and silky soft skin feel. Suitable for cold processing. Skin care, hair care, sun care and makeup.	5–15%

## High Stability Base Emollients

Products	INCI (EU)	Softening	Moisturising	Sensory improver	Texture	Description/Applications	Use level
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## Semi-solids

<b>Akogel™</b>	<i>Hydrogenated Vegetable Oil</i>	●	●	●		Semi-solid vegetable gel with paste-like consistency. Long shelf life (OSI >100h, 110°C). Skin care and makeup.	5–15%
<b>Akogel Plus™</b>	<i>Hydrogenated Vegetable Oil</i>	●	●	●	●	Semi-solid vegetable gel with paste-like consistency Long shelf life (OSI >100h, 110°C). Skin care and makeup.	5–15%

## Liquids

<b>Lipex Bassol C™</b>	<i>Olus Oil (or) Canola Oil</i>	●				Renewable clear high stability oil (OSI 40h, 110°C). Alternative to mineral/synthetic emollients and vegetable oils with short shelf life. Suitable for cold processing. Skin care and hair care.	5–15%
<b>High Oleic Brassica Oil™</b>	<i>Brassica Campestris Seed Oil</i>	●				Canola oil with prolonged shelf life (OSI 16hours, 110°C). Rich in omega-9 and omega-6 fatty acids. Skin care.	5–15%
<b>Akosun™</b>	<i>Helianthus Annuus Hybrid Oil</i>	●				Cold clear high oleic (omega-9) sunflower seed oil. Prolonged shelf life (OSI 20h, 110°C) compared to traditional sunflower seed oil. Skin care.	5–15%
<b>Akomed R™</b>	<i>Caprylic/Capric Triglyceride</i>	●				Caprylic/capric triglyceride oil with long shelf life (OSI>100h, 110°C). Skin care and makeup.	5–15%

# surfactants



When creating shampoos, conditioners, shower gels, liquid soaps and face cleansing products, our mild amphoteric and non-ionic surfactants help you to reduce eye and skin irritation potential compared to other surfactants.

Based on shea butter and mango oil, these gentle but effective surfactants are appropriate even for baby care products.

Our Lipex Shea Betaine has been shown to offer an improvement of hair volume, softness and combing properties in both wet and dry hair compared to betaines from coconut. And our ethoxylated Lipex surfactants made with water-soluble shea or mango can also act as solubilisers of essential oils and perfumes.

## Surfactants

Products	INCI (EU)	Cleansing	Conditioning	Viscosity enhancer	Solubiliser	Description/Applications	Use level
<b>Lipex Shea Betaine™</b>	<i>Shea Butteramidopropyl Betaine</i>	●	●			Shea butter based amphoteric surfactant for mild rinse-off hair and body care formulations. Suitable for clear, translucent and opaque formulations.	2–5%
<b>Lipex 102 E75™</b>	<i>PEG-75 Shea Butter Glycerides</i>		●	●	●	Water-soluble shea butter. Mild non-ionic surfactant. Improves viscosity and decreases irritancy in rinse-off hair and body care formulations.	1–3%
<b>Lipex 203 E70™</b>	<i>PEG-70 Mango Glycerides</i>		●	●	●	Water-soluble mango oil. Mild non-ionic surfactant. Improves viscosity and decreases irritancy in rinse-off hair and body care formulations.	1–3%

# structuring agents



Our structuring agents offer good crystallisation behaviour and choice of melting profiles to help you achieve precisely the texture and consistency that consumers want from skin care and makeup products.

Based on vegetable fats, these triglyceride ingredients are designed to show good compatibility with other cosmetic ingredients when structuring all types of emulsions and anhydrous formulations, particularly decorative cosmetics such as lipsticks and pencils.

## Structuring Agents

Products	INCI (EU)	Texture	Description/Applications	Use level
<b>Akofine R™</b>	<i>Hydrogenated Vegetable Oil</i>	●	Structuring vegetable triglyceride. High melting point (mp 58-60°C) and good thermal stability. Stabilises oil based dispersions and increases texture in anhydrous and emulsion formulations. Skin care and makeup.	1–5%
<b>Akofine P™</b>	<i>Hydrogenated Vegetable Oil</i>	●	Structuring vegetable triglyceride. High melting point (mp 59-61°C). Stabilises structure and increases temperature resistance in anhydrous formulations. Skin care and makeup.	1–5%
<b>Lipex BC™</b>	<i>Hydrogenated Vegetable Oil</i>	●	Structuring triglyceride base for pencils and stick formulations. Sharp melting point at body temperature (mp 34-36°C). Skin care and makeup.	5–15%

# emulsifiers



The composition of the emollient and emulsifier you choose will always influence the viscosity and stability of your cosmetic formulation. But it can also influence the activity and sensory aspects of the formulation.

Akoline – our line of vegetable derived emulsifiers – are high quality

products renowned for their mildness and moisturising capacity. Formulating with these natural based emulsifiers is therefore relevant not only for natural skin care products, but also for developing skin care formulations that provide a pleasant, soft and elegant skin feel.

## Emulsifiers

Products	INCI (EU)	o/w emulsion	w/o emulsion	Skin conditioner	Solubiliser	Description/Applications	Use level
<b>Akoline MCM™</b>	<i>Caprylic/Capric Glycerides</i>	●			●	Medium chain mono-/diglyceride with high solubilisation capacity. Co-emulsifier for o/w emulsions. Suitable for microemulsion formulations. (HLB 8–9). Skin care, hair care and makeup.	1–3%
<b>Akoline GC™</b>	<i>Hydrogenated Vegetable Glycerides Citrate</i>	●		●		Polar anionic/non-ionic o/w emulsifier. (HLB 11). Releases citric acid giving improved skin firmness and smoothness. Skin care, hair care and makeup.	1–4%
<b>Akoline SL™</b>	<i>Sodium Stearoyl Lactylate</i>	●		●		Highly polar anionic o/w emulsifier. (HLB 17). Stabilises liquid crystals. Releases lactic acid giving improved skin firmness and smoothness. Skin care, hair care and makeup.	0,2–1%
<b>Akoline LC™</b>	<i>Glyceryl Stearate Citrate</i>	●		●		Anionic emulsifier for o/w creams and lotions. (HLB 12). Can be used in cold processing. Skin care, hair care and makeup.	1–3%
<b>Akoline PG7™</b>	<i>Polyglyceryl-3 Stearate</i>	●				Non-ionic o/w emulsifier giving shiny emulsions. Stabilises liquid crystals. (HLB 7). Skin care, hair care and makeup.	2–5%
<b>Akoline PGPR™</b>	<i>Polyglyceryl-3 Polyricinoleate</i>		●			An efficient non-ionic w/o emulsifier and dispersion stabiliser. (HLB 3–4). Skin care, hair care and makeup.	2–5%
<b>Akoline MD50™</b>	<i>Glyceryl Stearate</i>	●	●			Basic w/o emulsifier and stabiliser for creams and lotions. (HLB 3). Skin care, hair care and makeup.	1–5%

# AAK ACADEMY™

the knowledge centre for applied lipid technology



At AAK, 'The Art of Oils' is all about using our technological know-how and skills to bring out the superb functionality of renewable, vegetable derived lipids. The AAK Academy is all about sharing lipid insights and know-how, to make you a master in technical application, because the more you know about lipid technology, the easier it is to find the best solution for your formulation.

As a customer of AAK Personal Care you have unique access to AAK's team of lipid experts through the AAK Academy. Attending our

courses is a great way for product developers and formulators to learn more about the technology. It also paves the way for open and constructive dialogue that can continue to pay benefits in your future work with cosmetic formulations.

We offer open and closed courses ranging from basic lipid know-how focused on lipid chemistry, sustainable processing and functionality in different applications, to more advanced courses in lipid crystallisation and rheology.

## Topics

- Skin health
- Lipids – essential skin nutrients
- Vegetable derived, renewable sources
- Sustainable processing
- Shelf life optimisation
- Optimal emollient blend for skin care
- Creating texture by combining waxes and emollients
- Consistency and skin feel
- Crystallisation and rheology
- Lipid based emulsifiers

For more information about the AAK Academy program kindly visit [www.aakpersonalcare.com](http://www.aakpersonalcare.com)

For more information about closed, customer specific seminars, please call +46 454 820 00 or mail [lipid@aak.com](mailto:lipid@aak.com)



## Approvals and Certifications



Organic

Products	ECOCERT RAW MATERIAL COSMETICS	ECOCERT RAW MATERIAL COSMETICS	RSPO CERTIFIED SUSTAINABLE PALM OIL	GreenPalm SUSTAINABILITY	NATURAL PRODUCTS ASSOCIATION OF INDIA CERTIFIED	Organic
<b>Emollients</b>						
Akogel™	●	●		●		
Akogel Plus™	●	●		●		
Akogreen O™						●*
Akomed R™	●					
Akosoft 36™	●					
Lipex Bassol C™	●	●				
Lipex CocoaSoft™	●	●		●		
Lipex Genova™	●			●	●	
Lipex IllipeSoft™	●	●				
Lipex L'sens™	●					
Lipex Omega 3/6™	●	●				
Lipex Omega Passiflora™	●	●				
Lipex PreAct™	●	●				
Lipex Shea™	●	●				
Lipex Shea W™	●					
Lipex Shea WM™	●					
Lipex SheaLight™	●	●			●	
Lipex SheaSoft™	●	●				
<b>Structuring Agents</b>						
Akofine P™	●			●		
Lipex BC™	●			●		
<b>Emulsifiers</b>						
Akoline GC™	●					
Akoline LC™	●					
Akoline MCM™	●					
Akoline MD50™	●			●		
Akoline PG7™	●			●		
Akoline PGPR™	●	●				
Akoline SL™	●			●		

\*Certified by the Soil Association, UK

Different types of official and private standards are important tools when developing formulations to meet market demands. AAK Personal Care strives to provide ingredients that not only fulfil demands for

functionality, but also provide compliance for approval by various certifying bodies. Use the table above as guidance for selecting ingredients approved and/or certified according to specific

standards. For the latest status updates, official certificates and letters of approval, please contact AAK Personal Care.

## Application Advice

Products	INCI (EU)	Skin care – Face and Body	Rinse-off/Wash – Face and Body	Sun care – SPF and After Sun	Baby care – oils, lotions and creams	Dermo-cosmetics	Makeup – foundations and facial makeup	Makeup – sticks, pencils and powders	Hair care – rinse-off shampoos and conditioners	Styling and leave-in conditioners
<b>Bioactives</b>										
Lipex SheaTris™	Butyrospermum Parkii Butter Extract	●		●		●	●	●		
Lipex Collect™	Phytosteryl Canola Glycerides	●		●		●	●	●		
<b>Bioactive Emollients</b>										
Lipex PreAct™	Canola Oil	●	●	●	●	●	●	●	●	●
<b>Performance Emollients Solids</b>										
Lipex CocoaSoft™	Theobroma Cacao Seed Butter	●		●	●		●			●
Lipex IllipeSoft™	Shorea Stenoptera Seed Butter	●		●	●		●			●
Lipex 102™	Butyrospermum Parkii Butter	●								
Lipex 106™	Shorea Stenoptera Seed Butter	●								
<b>Semi-solids</b>										
Lipex SheaSoft™	Butyrospermum Parkii Butter	●		●	●	●	●			●
Lipex Shea™	Butyrospermum Parkii Butter	●		●	●				●	●
Lipex L'sens™	Soybean Glycerides (and) Butyrospermum Parkii Butter Unsaponifiables	●		●	●	●	●	●	●	●
Lipex Genova™	Elaeis Guineensis Oil	●		●	●		●			
Akosoft 36™	Hydrogenated Coco-glycerides	●		●	●	●				●
<b>Liquids</b>										
Lipex SheaClear™	Butyrospermum Parkii Oil	●	●		●	●	●	●	●	●
Lipex 205™	Butyrospermum Parkii Butter (or) Butyrospermum Parkii Oil	●	●		●	●	●	●	●	●
Lipex SheaLiquid™ TR	Butyrospermum Parkii Butter (or) Butyrospermum Parkii Oil	●	●		●	●	●	●	●	●
Lipex Omega 3/6™	Olus Oil (and) Camelina Sativa Seed Oil	●	●		●	●			●	●
Lipex Omega EPO™	Olus Oil (and) Oenothera Biennis Oil	●	●		●	●			●	●
Lipex Omega Passiflora™	Olus Oil (and) Passiflora Incarnata Seed Oil	●	●		●	●			●	●
Lipex 109 S™	Gossypium Herbaceum Seed Oil	●								
Lipex 120™	Canola Oil	●								
Lipex 203™	Mangifera Indica Seed Oil	●	●				●		●	●
Akogreen O™	Olea Europaea Fruit Oil	●								

Products	INCI (EU)	Skin care – Face and Body	Rinse-off/Wash – Face and Body	Sun care – SPF and After Sun	Baby care – oils, lotions and creams	Dermo-cosmetics	Makeup – foundations and facial makeup	Makeup – sticks, pencils and powders	Hair care – rinse-off shampoos and conditioners	Styling and leave-in conditioners
<b>Esters</b>										
Lipex Shea W™	Shea Butter Cetyl Esters	●							●	●
Lipex Shea WM™	Shea Butter Oleyl Esters	●		●			●	●	●	●
Lipex SheaLight™	Shea Butter Ethyl Esters	●	●	●		●	●		●	●
<b>High Stability Base Emollients Semi-solids</b>										
Akogel™	Hydrogenated Vegetable Oil	●	●	●	●	●	●	●		
Akogel Plus™	Hydrogenated Vegetable Oil	●	●	●	●	●	●	●		
<b>Liquids</b>										
Lipex Bassol C™	Olus Oil (or) Canola Oil	●	●	●	●				●	●
High Oleic Brassica Oil™	Brassica Campestris Seed Oil	●	●		●					
Akosun™	Helianthus Annuus Hybrid Oil	●	●		●					
Akomed R™	Caprylic/Capric Triglyceride	●		●	●			●		
<b>Surfactants</b>										
Lipex Shea Betaine™	Shea Butteramidopropyl Betaine		●						●	
Lipex 102 E75™	PEG-75 Shea Butter Glycerides	●	●						●	●
Lipex 203 E70™	PEG-70 Mango Glycerides	●	●						●	●
<b>Structuring Agents</b>										
Akofine R™	Hydrogenated Vegetable Oil	●							●	
Akofine P™	Hydrogenated Vegetable Oil	●							●	
Lipex BC™	Hydrogenated Vegetable Oil	●							●	
<b>Emulsifiers</b>										
Akoline MCM™	Caprylic/Capric Glycerides	●	●	●		●	●		●	
Akoline GC™	Hydrogenated Vegetable Glycerides Citrate	●		●	●	●	●			●
Akoline SL™	Sodium Stearoyl Lactylate	●	●	●	●	●	●		●	
Akoline LC™	Glyceryl Stearate Citrate	●		●	●	●	●		●	●
Akoline PG7™	Polyglyceryl-3 Stearate	●		●	●		●		●	●
Akoline PGPR™	Polyglyceryl-3 Polyricinoleate	●		●	●				●	●
Akoline MD50™	Glyceryl Stearate	●	●	●	●		●	●		●

# eco-design

In the cosmetics and personal care industry, emollients typically make up the largest part of most formulations, particularly within skin care. This makes them the best place to start when looking to improve the sustainability profile of your formulations.

By considering eco-designed alternatives early on during the design phase, you can create formulations that will advance your efforts farther and faster. Our innovative ester, Lipex SheaLight, is one such alternative, and an example of how we apply these same eco-design principles.

## Sensible alternatives

Our objective with Lipex SheaLight was to create a sustainable ester that could deliver light skin feel

and good stability. We chose shea as the base material because of its favourable fatty acid composition and significance for conservation and development in West Africa.

Esters, however, require an alcohol. And because synthetic alcohols traditionally used for esters are non-renewable, we chose to look for an alternative made from agricultural sources. Ethanol was the best choice due to its easy availability and low environmental impact.

## Sustainable processing

With the question of raw materials addressed, we turned our focus to another crucial dimension of eco-design – processing conditions. Conventional processes for making esters require high amounts

of energy as well as catalysts that are less advantageous from an environmental perspective. In contrast, Lipex SheaLight is made using lower temperatures, shorter processing times and biodegradable catalysts – all helping to reduce energy consumption and the greenhouse gas footprint.

## Award-winning achievement

Our efforts have truly paid off. At the 2014 Sustainable Cosmetics Summit in Paris, Lipex SheaLight was named Best Sustainable Ingredient! And in 2015 it was recognized by the National Products Association as a leading example of advancing technology to make natural products that are also sustainable.



Lipex SheaLight™  
Best Sustainable Ingredient 2014



AAK Personal Care  
Industry Champion Award 2015



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