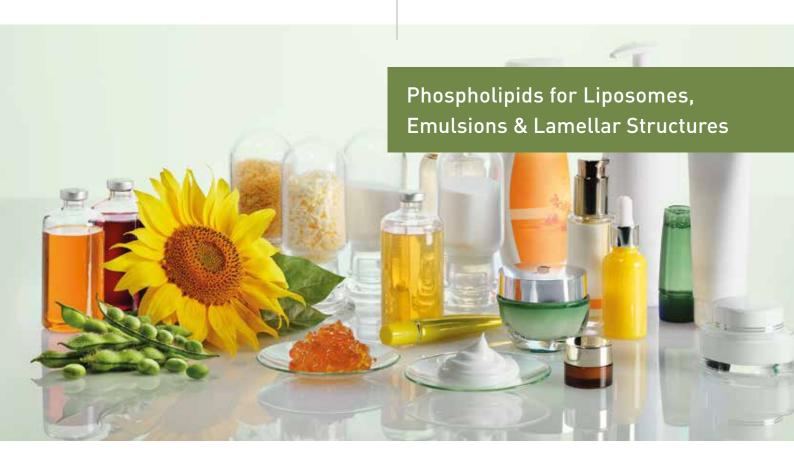


PRODUCT CATALOG





Facing page: More and more people understand the need for natural products made from renewable raw materials.



We offer a wide range of lecithins and phospholipids based on sunflower



Soybean (also non-GMO) is one of our most processed raw materials

About Lipoid Kosmetik

Lipoid Kosmetik is a leading manufacturer of natural ingredients for the cosmetic and personal care industry. High quality botanical actives and extracts (Lipoid Kosmetik AG, Switzerland) as well as high quality natural lecithins and phospholipids (Lipoid GmbH, Germany) are part of our sophisticated portfolio.

As a pioneer in both fields, Lipoid Kosmetik has gained an outstanding reputation in the global cosmetic industry over a period of 50 years. This long-standing expertise, in combination with the exceptional quality of our portfolio, enables our customers to develop innovative, functional, and natural cosmetic products meeting the highest standards.

Research & Development

At its two R&D facilities, one in Germany and the other in Switzerland, Lipoid Kosmetik develops innovative products and customized solutions in close cooperation with our customers.

Our quality management system meets the highest standards set by the regulatory authorities and the cosmetic industry. All manufacturing sites for our phospholipid portfolio are GMP and ISO 9001 certified.

Our Ludwigshafen facility has also passed inspection by the US FDA.

Regulatory

We assure the compliance of our products with national and international regulations and provide superior regulatory support to our customers.

Sustainability

Lipoid is committed to the principles of sustainability and environmental protection.

Because they are produced from renewable raw materials in processes characterized by minimal usage of auxiliary materials, our products display significantly enhanced sustainability. The by-products of the production processes are valuable raw materials in other markets and the auxiliary materials used are mostly recycled. Waste can therefore be entirely avoided or reduced to a minimum in most processes.

Phospholipids: The molecules with a hydrophilic head and a lipophilic tail are essential parts of our cell membranes and are the main functional components of our formulations Lamellar structure in SLM: Recovery and restauration of the skin barrier Emulsion oil droplet and Liposome: Encapsulation and penetration of cosmetic actives

Facing page: Schematic diagram of phospholipids, a lamellar structure, an emulsion droplet, and a liposome.



R & D at Ludwigshafen/Germany



Production facility at Ludwigshafen/ Germany

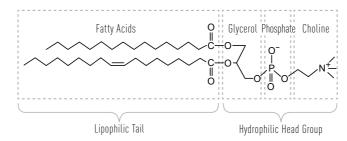


Fig. 1: Molecular structure of phosphatidylcholine, a typical phospholipid

Natural Phospholipids

Phospholipids in Cosmetics

Phospholipids are versatile raw materials that will add technical as well as physiological benefits to your formulations. Phospholipids can be used in a broad variety of product lines, such as leave-on, rinse-off, sun care, or color cosmetic products.

Tolerability

Phospholipids number among the body's own building blocks and are an essential part of our cell membranes. Therefore, they are highly biocompatible, completely biodegradable, and irrittion-free, making them extremely suitable for sophisticated, high-end skin care products. Many of our phospholipids are based on non-GMO soy or sunflower, making them suitable for COSMOS- and NATRUE-approved formulations. In general, because of their naturalness and excellent tolerability, phospholipids are widely used in products for sensitive or damaged skin, baby-care, and dermto-cosmetics.

Applications

Based on their amphiphilic character and their ability to interact with human skin, phospholipids can serve as actives for skin protection and skin rejuvenation, delivery systems for cosmetic active ingredients, and as emulsifiers with perfect skin feel. They can form colloidal systems like liposomes or micelles, or even form lamellar structures mimicking the skin's natural lipid layer.

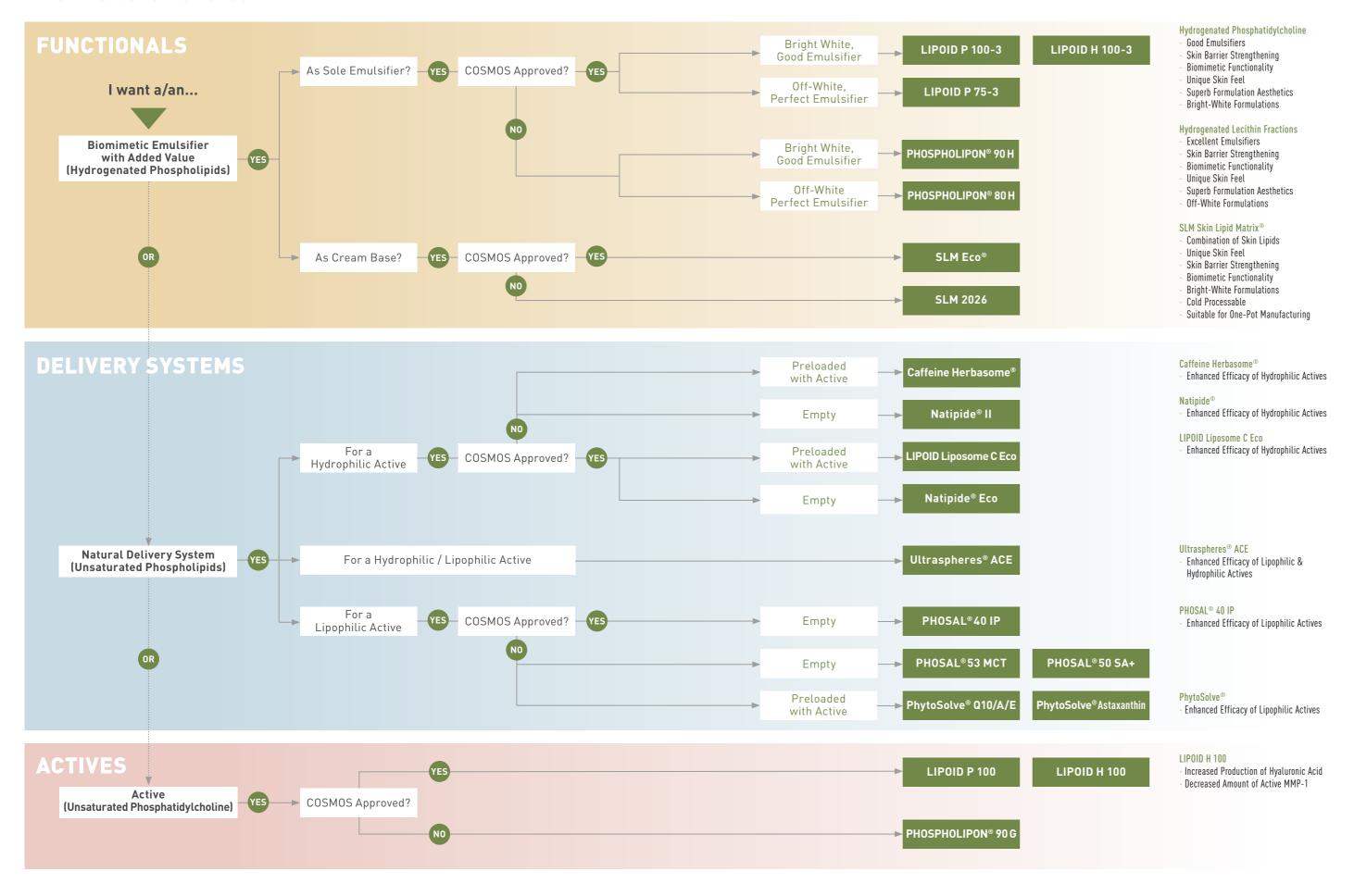
Our experienced application engineers are continuously investigating the usability of our phospholipids in various cosmetic applications. We are regularly developing new frame formulations and innovative concepts, in order to offer the best technical support to our customers and partners.

Our products are easy to handle and to formulate with standard laboratory or production equipment, they are freely combinable with other cosmetic raw materials such as oils, thickeners, emollients, preservatives, actives, etc.

Scientific Standards: State-of-the-Art Studies

To investigate the capabilities of our products, we collaborate with leading institutes to generate in vitro as well as in vivo data.

Which Product is the Perfect Fit?



Cosmetic Application of Phospholipids

Phospholipids as Functionals

Emulsifiers

Hydrogenated phospholipids are excellent emulsifiers, especially for o/w emulsions.

Skin Texture Modifiers

Hydrogenated phospholipids leave the skin with an extremely pleasant and smooth feeling.

Phospholipids as Delivery Systems

Loaded Carriers for Cosmetic Actives

Encapsulation of cosmetic ingredients with phospholipids (liposomal or as nanoemulsion) allows to achieve a more efficient and controlled transport of cosmetic active substances into the skin.

For hydrophilic actives, we recommend our liposome range; for lipophilic actives, use our PhytoSolve® technology.

Empty Carriers for Cosmetic Actives

Phospholipids interact with the surface of the stratum corneum and thus can support the penetration of active ingredients into the skin. For hydrophilic actives, we recommend our Natipide® products; for lipophilic actives, use our PHOSAL® range.

Phospholipids as Actives

Skin Repair & Protection

Hydrogenated phospholipids help to repair and restore our skin's natural protective barrier. They mimic the lamellar structure of the extracellular matrix and form a protective layer, preventing water loss from the skin.

Skin Rejuvenation

Unsaturated phospholipids are key molecules involved in the process of skin formation and skin renewal. As cosmetic active ingredients, they can significantly counteract the visible signs of skin aging on a cellular level.



Multifunctionality is the Key

Based on their amphiphilic character and their ability to interact with human skin, phospholipids can serve as actives for skin protection and skin rejuvenation, delivery systems for cosmetic active ingredients, and as emulsifier systems with perfect skin feel. They can form colloidal systems like liposomes or micelles, or even form lamellar structures mimicking the skin's natural lipid layer.

Unsaturated phospholipids:

- Are excellent penetration enhancers
- Function as actives for skin rejuvenation

Hydrogenated phospholipids:

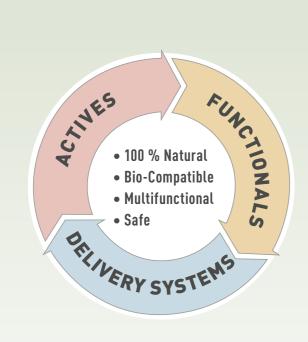
- Are powerful emulsifiers with superior skin feel
- Will restore the skin lipid barrier and protect the skin from water loss on the one hand, and environmental stress on the other hand

INCI Nomenclature

Our products are produced from the natural, plant-based raw material lecithin, which is still reflected in the INCI nomenclature (see below).

We fractionate the lecithin and purify the phospholipids contained therein. The phospholipids are obtained in fractions of ascending phosphatidylcholine content. Therefore, we prefer using the term "phospholipids" or, for the highest purity, "phosphatidylcholine", for our products.

Depending on the content of phosphatidylcholine, LIPOID and PHOSPHOLIPON® products comply with the following INCI names:



INCI NAME	TYPE OF PHOSPHOLIPID
LECITHIN	Lecithin Fractions with < 80 % Phosphatidylcholine
HYDROGENATED LECITHIN	Hydrogenated Lecithin Fractions with < 80 % Phosphatidylcholine
PHOSPHATIDYLCHOLINE	Lecithin Fractions with ≥ 80 % Phosphatidylcholine
HYDROGENATED PHOSPHATIDYLCHOLINE	Hydrogenated Lecithin Fractions with ≥ 80 % Phosphatidylcholine

ORIGIN	PRODUCT, PROPERTY & APPEARANCE	INCI	DESCRIPTION	DETAILS	CONFORMITY
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Lecithin Fracti	ons and Phospholipids				
SOYBEAN	LIPOID S 45	Lecithin, Tocopherol	Soybean lecithin fraction with 45 % phosphatidylcholine	China INCI compliant	
	FUNCTIONAL DELIVERY				
	LIPOID S 75	Lecithin, Tocopherol	Soybean lecithin fraction with 70 % phosphatidylcholine	China INCI compliant	
	FUNCTIONAL DELIVERY				
	PHOSPHOLIPON® 90 G	Phosphatidylcholine, Ascorbyl Palmitate, Tocopherol	Soybean phosphatidylcholine (≥ 94 %)	China INCI compliant	
NON-GMO SOYBEAN	LIPOID P 45 FUNCTIONAL DELIVERY	Lecithin, Tocopherol	Soybean lecithin fraction with 45 % phosphatidylcholine from non-genetically modified plants	COSMOS-approved raw material China INCI compliant	ECOCERT WO WITHIN TO THE PROPERTY OF THE PROP
	LIPOID P 75 FUNCTIONAL DELIVERY	Lecithin, Tocopherol	Soybean lecithin fraction with 70 % phosphatidylcholine from non-genetically modified plants	COSMOS-approved raw material China INCI compliant	EDOCERT THE WITTERLE COSMOS APPROVED
	LIPOID P 100	Phosphatidylcholine, Tocopherol	Soybean phosphatidylcholine from non-genetically modified plants	COSMOS-approved raw material China INCI compliant	ECCERT ECCERT No METERIAL COSMOS APPROVED
SUNFLOWER (NON-GMO)	LIPOID H 100	Phosphatidylcholine, Tocopherol	Sunflower phosphatidylcholine from non-genetically modified plants	COSMOS-approved raw material China INCI compliant	ECOCERT EN MUTHIL COSMOS APPROVED

We make beauty natural. | 11

ORIGIN	PRODUCT, PROPERTY & APPEARANCE	INCI	DESCRIPTION	DETAILS	CONFORMITY

Hydrogenate	d Lecithin Fractions					
SOYBEAN	PHOSPHOLIPON® 80 H		Hydrogenated Lecithin	Biomimetic emulsifier, hydrogenated soybean lecithin fraction with 70 % phosphatidylcholine	China INCI compliant	
	PHOSPHOLIPON® 90 H		Hydrogenated Phosphatidylcholine	Biomimetic emulsifier, hydrogenated soybean phosphatidylcholine (≥ 90 %)	China INCI compliant	
	FUNCTIONAL				1	
NON-GMO SOYBEAN	LIPOID P 75-3 FUNCTIONAL	Control of the last	Hydrogenated Lecithin	Biomimetic emulsifier, hydrogenated soybean lecithin fraction with 70 % phosphatidylcholine	 COSMOS-approved raw material NATRUE-approved raw material China INCI compliant 	COSMOS NATRUE Approvec APPROVED
	LIPOID P 100-3	(GP)	Hydrogenated Phosphatidylcholine	Biomimetic emulsifier, hydrogenated soybean phosphatidylcholine (≥ 90 %)	 COSMOS-approved raw material China INCI compliant 	COSMOS APPROVED
SUNFLOWER (NON-GMO)	LIPOID H 100-3		Hydrogenated Phosphatidylcholine	Biomimetic emulsifier, hydrogenated sunflower phosphatidylcholine (≥ 90 %)	 COSMOS-approved raw material China INCI compliant 	ESCOVED TO SECRET THE PROPERTY OF THE PROPERTY

SLM SKIN	I LIPID M∧TRIX>°					
SOYBEAN	SLM 2026 FUNCTIONAL ACTI	VE.	Aqua (Water), Caprylic/Capric Triglyceride, Hydrogenated Phosphatidylcholine, Penty- lene Glycol, Glycerin, Butyrospermum Parkii (Shea) Butter, Squalane, Ceramide NP	Cream matrix with hydrogenated soybean phosphatidylcholine and skin-identical lipids of the stratum corneum	 China INCI compliant (Ceramide NP = Ceramide 3) Dosage: 10 – 30 % 	
SUNFLOWER (NON-GMO)	SLM Eco® FUNCTIONAL ACTI	VE.	Aqua (Water), Caprylic/Capric Triglyceride, Hydrogenated Phosphatidylcholine, Penty- lene Glycol, Glycerin, Butyrospermum Parkii (Shea) Butter, Squalane, Ceramide NP	Cream matrix with hydrogenated sunflower phosphatidylcholine from non-genetically modified plants and skin-identical lipids of the stratum corneum	 COSMOS-approved raw material (Ceramide NP = Ceramide 3) China INCI compliant Dosage: 10 – 30 % 	ECOCERT TWM AGTESU. COSMOS APPROVED

ORIGIN	PRODUCT, PROPERTY	& APPEARANCE	INCI	DESCRIPTION	DETAILS	CONFORMITY
Empty Lipos	somal Carriers for Hydrop	ohilic Substances	l			
SOYBEAN	Natipide® II DELIVERY		Aqua (Water), Lecithin, Alcohol, Tocopherol, Sodium Hydroxide	Empty pre-liposomes of soybean phospholipids for encapsulation of hydrophilic actives	 China INCI compliant Dosage: 1 – 5 % 	
NON-GMO SOYBEAN	Natipide® Eco		Aqua (Water), Lecithin, Glycerin, Pentylene Glycol, Tocopherol, Sodium Hydroxide	Empty pre-liposomes of soybean phospholipids from non-genetically modified plants for encapsulation of hydrophilic actives	 COSMOS-approved raw material China INCI compliant Dosage: 1 – 5 % 	ECOCERT COSMOS APPROVED

Liposomal Del	ivery Systems with Hydr	ophilic Actives				
NON-GMO SOYBEAN	LIPOID Liposome C Eco with Vitamin C DELIVERY ACTIVE		Glycerin, Aqua (Water), Ascorbyl Glucoside, Lecithin, Sodium Hydroxide, Tocopherol	Liposome dispersion of soybean phospholipids with ascorbyl-2-glucoside (vitamin C)	 COSMOS-approved raw material China INCI compliant Dosage: 1 – 5 % in vivo data 	COSMOS APPROVED
	Caffeine Herbasome® with Caffeine DELIVERY ACTIVE		Aqua (Water), Niacinamide, Propanediol, Caffeine, Lecithin, Tocopherol	Liposome dispersion of soybean phospholipids with caffeine	 China INCI compliant Dosage: 1 – 5 % in vitro data 	

Delivery System with Hydrophilic and Lipophilic Actives						
NON-GMO SOYBEAN	Ultraspheres® ACE with Vitamin A, C, and E DELIVERY ACTIVE		Glycerin, Aqua (Water), Phosphatidyl- choline, Tocopheryl Acetate, Sodium Ascorbyl Phosphate, Retinyl Palmitate, Citric Acid, Tocopherol	Finely dispersed emulsion with vitamin A, C, and E and soybean phosphatidylcholine as single emulsifier	 China INCI compliant Dosage: 1 – 5 % 	

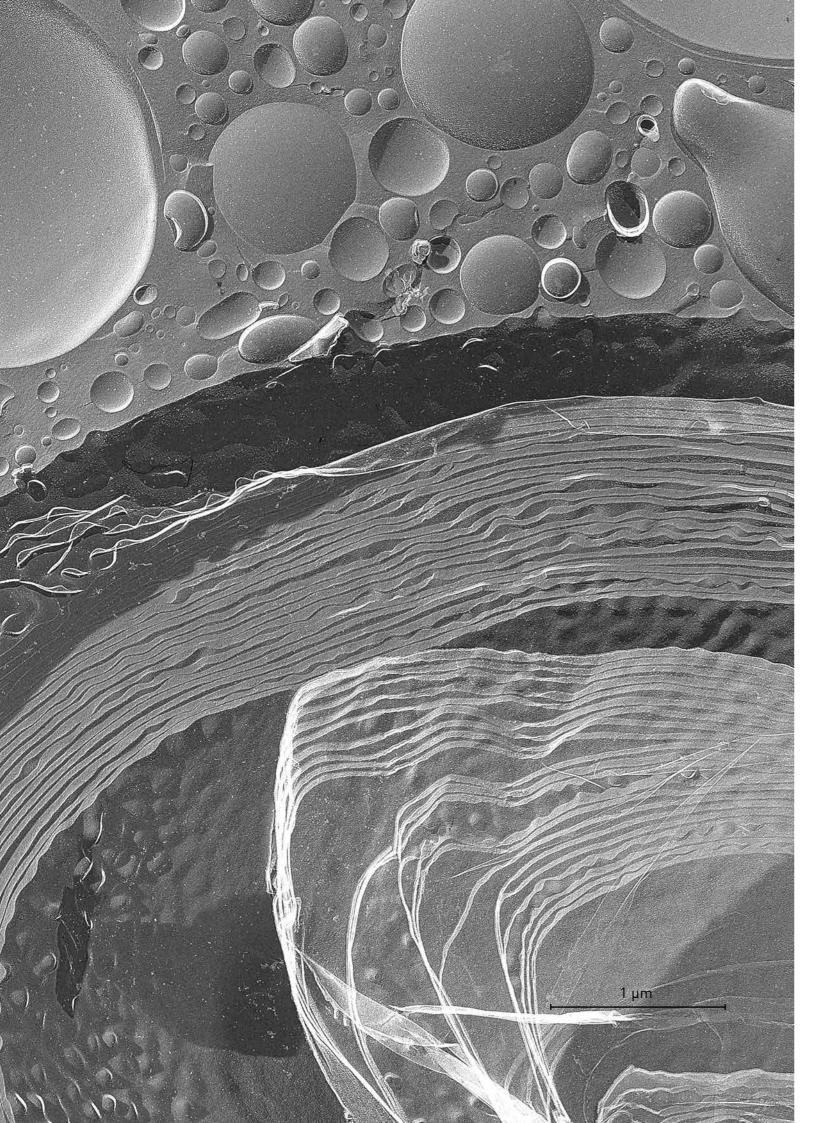
DELIVERY

• in vivo data

ORIGIN	PRODUCT, PROPERTY & APPEARANCE	INCI	DESCRIPTION	DETAILS	CONFORMITY

Empty Carrier	s for Lipophilic Substar	ıces				
SOYBEAN	PHOSAL® 50 SA+		Phosphatidylcholine, Carthamus Tinctorius (Safflower) Seed Oil, Glycerin, Caprylic Capric Triglyceride, Alcohol, Sunflower Seed Oil Glyceride, Soy Acid, Ascorbyl Palmitate, Tocopherol	Soybean phosphatidylcholine (≥ 50 %) in safflower seed oil	• Dosage: 1 – 5 %	
	PHOSAL® 53 MCT DELIVERY		Phosphatidylcholine, Caprylic/Capric Triglyceride, Alcohol, Sunflower Seed Oil Glyceride, Oleic Acid, Ascorbyl Palmitate, Tocopherol	Soybean phosphatidylcholine (≥ 50 %) in medium-chain triglycerides (MCT)	• Dosage: 1 – 5 %	
NON-GMO SOYBEAN	PHOSAL® 40 IP		Lecithin, Helianthus Annuus (Sunflower) Seed Oil, Alcohol, Tocopherol	Fluid mixture of soybean phospholipids from non-genetically modified plants enriched in phosphatidylcholine (≥ 37 %) in organic sunflower oil	 COSMOS-approved raw material China INCI compliant Dosage: 1 – 5 % in vivo data 	ECOCERT RAPMOEBAT COSMOS APPROVED

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NON-GMO SOYBEAN	PhytoSolve® Q10 with Coenzyme Q10	Glycerin, Aqua (Water), Ubiquinon, Caprylic/Capric Triglyceride, Lecithin, Tocopherol, Sodium Hydroxide	Finely dispersed emulsion with coenzyme Q10 and soybean phospholipids from non-genetically modified plants as single	 China INCI compliant Dosage: 1 – 5 % in vitro data 	
	DELIVERY ACTIVE		emulsifier		
	PhytoSolve® A with Vitamin A	Glycerin, Aqua (Water), Retinyl Palmitate, Caprylic/Capric Triglyceride, Lecithin, Tocopherol	Finely dispersed emulsion with vitamin A and soybean phospholipids from non-genetically modified plants as single emulsifier	 China INCI compliant Dosage: 1 – 5 % in vitro data 	
	DELIVERY ACTIVE				
	PhytoSolve® E with Vitamin E	Glycerin, Tocopheryl Acetate, Caprylic/ Capric Triglyceride, Aqua (Water), Lecithin, Tocopherol	Finely dispersed emulsion with vitamin E and soybean phospholipids from non-genetically modified plants as single emulsifier	China INCI compliantDosage: 1 – 5 %	
	DELIVERY ACTIVE				
	PhytoSolve® Astaxanthin with Astaxanthin	Glycerin, Aqua (Water), Caprylic/Capric Triglyceride, Lecithin, Haematococcus Pluvialis Extract, Tocopherol, Sodium Chloride, Sodium Hydroxide,	Finely dispersed emulsion with astaxanthin and soybean phospholipids from non-genetically modified plants as single emulsifier	 China INCI compliant Dosage: 0.1 – 2 % in vitro data 	ETOCERT COSMOS
	DELIVERY ACTIVE	Helianthus Annuus (Sunflower) Seed Oil	, ,	• in vivo data	APPROVEI



Facing page: Electron micrograph of lamellar structures/liposomes in a phospholipid formulation

Our Natural Phospholipid Brands

BRAND NAME	SOURCE
PHOSPHOLIPON®	Phospholipids based on GMO Soybean
LIPOID S Range	Phospholipids based on GMO Soybean
LIPOID P Range	Phospholipids based on non-GMO Soybean
LIPOID H Range	Phospholipids based on non-GMO Sunflower
Natipide [®]	Empty Carrier for Hydrophilic Actives
PHOSAL®	Empty Carrier for Lipophilic Actives
PhytoSolve®	Loaded Carrier for Lipophilic Actives
ULTRASPHERES®	Loaded Carrier f. Hydrophilic/Lipophilic Actives
SLM Skin Lipid Matrix®	Cream Matrix, Skin Repair & Protection

Discover our Actives & Botanicals

This catalog covers the phospholipid products produced by Lipoid GmbH in Germany. If you are interested in our second product line, please request our Actives and Botanicals Catalog issued by Lipoid Kosmetik AG in Switzerland.





Facing page: Lipoid GmbH Headquarters and production plant 2 at Ludwigshafen/Rhine, Germany



Production plant 1 Lipoid GmbH at Ludwigshafen/Rhine, Germany



Manufacturing site PHOSPHOLIPID GmbH at Cologne, Germany



Manufacturing site R&R Extrakte GmbH at Cologne, Germany

All data and recommendations made herein are based on our present state of knowledge. We disclaim any liability for risks or formulate that may result from the use of our products, including improper and illicit use. Product properties identified and highlighted by specific tests or studies are to be interpreted in the context of the test/study conditions only. Please be aware that the use of any claim on cosmetic products is the sole responsibility of the customer and is regulated by your local Regulatory Body.



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