



## Some of the Major USA Brands Using Our Product

- 94 Brands in the US
- 30+ Brands in Australia











**COOLA LLC** 







## ZinClearXP Non Nano Powder Designed to be Tinted

- In conjunction with Zinc Oxide:
  - Iron oxides enhance protection against skin damage new results demonstrate HEV blocking powder in specialty skin care products formulated with iron oxides (Carlsbad, CA. 2020) <u>ColoreScience</u>.
  - Iron oxides in novel skin care formulations attenuate blue light for enhanced protection against skin damage (Bernstein EF, et al. 2021)
     J Cosmet Dermatol.
  - ZiNClear XP is designed to provide exceptional UVB (SPF 280nm to 320nm) and UVA (Broad Spectrum 320nm to 400nm) protection while minimizing reflection in the visible spectra (400nm+) which causes the 'white cast' on the skin.
    - Adding iron oxides further diminish white cast on skin, especially important for darker skin tones, but welcomed by all.
  - Iron oxides provide protection against all visible light, including blue light.
  - Darker skin tones are more susceptible to immediate pigment darkening when exposed to visible light.
  - Lest you think this is a new notion, check out this reference to a 1991 paper from the JAMA dermatology; Efficiency of Opaque

Photoprotective Agents in the Visible Light Range (Kaye, ET, et al., 1991).











**API** 





# **UV Chemical Filters are Dangerous**

- <u>Suzuki et al. (2005)</u> reviewed thirty-five studies that have raised concerns about the **potential adverse health effects**caused by chemical UV filters. Also, a recently published study by <u>Ginzburg et al. (2021)</u> suggested: "that caution must be taken when formulating sunscreens containing both zinc oxide and small-molecule (petrochemical) UV-filters to avoid uncontaminated consequences during use." This was highlighted recently when Mineral Sunscreens by Banana Boat, Coppertone, and Neutrogena were recalled due to contamination.
- Infants, Babies and Pregnancy
  - The FDA's release published 24/08/2021 stated "infants are at greater risk than adults of sunscreen side effects." Zinc oxide is considered safe for infants by the FDA and is even present at up to 40% in nappy rash creams. Therefore, if there is a situation where sun protection such as protective clothing or shade is not available the safest option for babies is a Natural Zinc based 100% Organic Vegan Sunscreen. Amazon US search volume (Year on Year 2020/2021) has shown that 'organic baby sunscreen' now represents 25% of baby sunscreen searches versus 9% the previous year, indicating a large and growing market.
- FDA Position
  - The FDA sunscreen safety review, published 24/09/2021, has confirmed zinc oxide to be the only broad-spectrum UV Filter considered safe and effective, whilst the 12 UV Filters below have been identified as potentially toxic and/or carcinogenic:

Octinoxate	Oxybenzone	Avobenzone	Octisalate	Octocrylene	Homosalate
Ensulizole	Meradimate	Padimate O	Sulisobenzone	Dioxybenzone	Cinoxate

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## Zinc Oxide is Safe

### UVA/UVB/UVC & Blue Light Broad Spectrum

- "Of the available sunscreens only zinc oxide provides effective protection across the UV band range of 240 to 400 nm, covering UCV (240 to 280 nm), UVB (280 320nm), UVA 2 (320 to 340 nm), and UVA 1 (340 to 400 nm). 1"
  - "UV rays account for 95% of our sun exposure. They cause skin aging and contribute to skin cancer.2"
  - "The risk for skin cancer doubles in people who have had five or more sunburns."
  - "UVA rats penetrate deeply into the skin layers, damaging collagen and cells which leads to wrinkling, hyperpigmentation and loss of elasticity.2"
  - "UVB rays mostly affect the outer layers of the skin.<sup>2</sup>"

### Zinc Oxide Safety

- "Treatment with both types of uncoated ZnO nanoparticles mobilized pathways and responses centered on cellular stress, survival and apoptosis. 3"
- "A new study led by two Australian universities has found evidence that zinc oxide nanoparticles used in sunscreen does not cause cellular toxicity even after repeated applications.4"
- "The levels we found in blood were very small," says McCall, a research consultant on nano0safety at CSIRO. "After applications over five days, the levels of the tracer zinc in the blood were one thousandth of what is the naturally occurring total zinc levels in the blood. 5"

## Zinc Anti-Bacterial & Wound Healing

- "Zinc has been used during the regime of Pharaohs, and historical records show that Zinc Oxide was used in many ointments for the treatment of injuries and oils even in 2000BC.<sup>6</sup>"
- "Of all natural and synthetic wound dressing materials, the chitosan hydrogel microporous bandages laced with zinc oxide nanoparticles developed by Kumar Etal are highly effective in treating burns, wounds and diabetic foot ulcers.<sup>6</sup>"

### Hypoallergenic

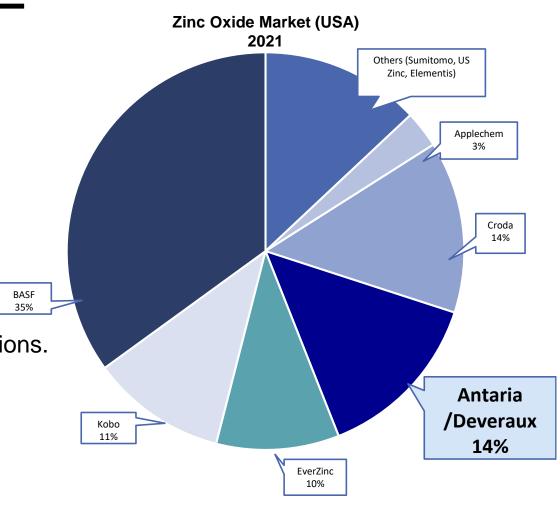
- "A study in Denmark, 56.7% of women (3,288,600 million) and 33.6% of men (1,948,800 million) in Denmark have experienced an adverse effect after using cosmetics at least once.<sup>∠</sup>"
- "In a study in which a 25% zinc oxide patch (2.9mg/cm²) was placed on human skin for 48 hours, there was no evidence of dermal irritation.<sup>8</sup>"
- "In another study comparing the dermal effect of different zinc compounds in mice, rabbits and guinea pigs, zinc chloride was clearly the strongest irritant, followed by zinc acetate, causing moderate and zinc sulfate, causing low irritations. Consistent with the study of Agren, zinc oxide did not show any irritant effect on skin.<sup>8</sup>"





## Why Uncoated ZinClearXP?

- Designed to be easily tinted.
- Safe
  - Our product is GRASE approved by FDA.
- Market share in the US as researched by our distributor Deveraux Specialties.
- COSMOS/ECO Approved for organic/vegan formulations.
- Non Nano.





## Our Regulatory Documentation

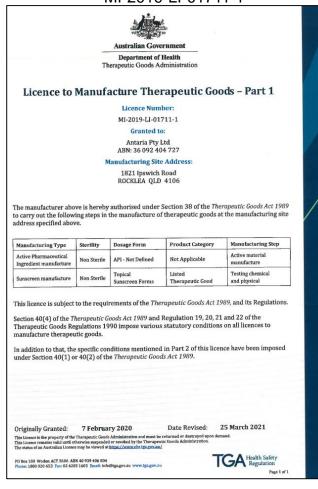
## **ECOCERT COSMOS Certified**



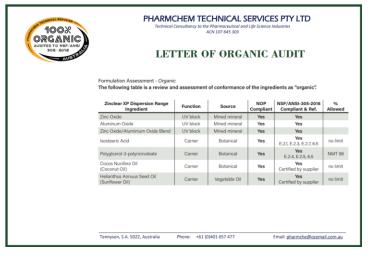
## 100% Certified Vegan



### TGA License MI-2019-LI-01711-1



## 100% Organic Audited



## **REACH Compliant**



Reseller Hub; all up to date documentation is on our website www.advancezinctek.com/



**Technical** Information

## FDA DMF Listing

3Q2021-EXCEL						
DMF#	STATUS	TYPE	SUBMIT DATE	HOLDER	SUBJECT	
23634	I	I	5/6/2010	ANTARIA LTD	ZINCLEAR-IM_50CCT	

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## **Non Nano Statements**

Our product has been tested by external university and proven to be Non Nano.

STA901.74\_R1

#### ZinClear US Non-Nano Statement

In the US there is no current legal definition of what constitutes a nanoparticle as stated by the FDA. In June 2014, FDA issued a guidance for industry titled "Considering Whether an FDA-Regulated Product Involves the Application of Nanotechnology". As described in that guidance, when considering whether an FDA-regulated product involves the application of nanotechnology, the FDA will ask: (1) whether a material or end product is engineered to have at least one external dimension, or an internal or surface structure, in the nanoscale (approximately 1 mm to 100 nm); and (2) whether a material or end product is engineered to exhibit properties or phenomena, including physical or chemical properties or biological effects, that are attributable to its dimension(s), even if the dimensions fall outside of the nanoscale range, up to (1,000 nm).

There are however, other government bodies outside of the US that make such statements.

The French decree n°2010-232 issued on 17.02.2012 defined a nanomaterial in article 3 of Regulation (EC) n°1907/2006 (REACH) as "a substance intentionally manufactured at nanoscale, containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the size range of 1 ma and 100 cm."

The Cosmetic Product Group Standard 2017 — HSR002552 of New Zealand Government Environmental Protection Authority defines nanomaterial as "an insoluble or biospersistent and intentionally manufactured material with one or more external dimensions, or an internal structure, on the scale from 1 to 100 mm"

In a literature review on the safety of titanium dioxide and zinc oxide nanoparticles in sunscreens published by the Therapeutic Goods Administration of Australia in August 2016, nanoparticles are defined as "materials within the nanosize range of 1 to 100 mm".

According to these definitions, our range of ZinClear Products are considered to be non-nano.

Additionally, no raw materials created by nanotechnology are used in the manufacturing process of our ZinClear range of products.

Geoff Acton, B. Com. CA Managing Director

Effective from 03 November 2020

Latest revision supersedes previous document revisions

ANTARIA an advanced materials world Antaria Pty Ltd ABN 54 079 845 855 1821 Ipswich Road, Rocklea, Queensland 4106 tel +61 7 3726 2030 STA901.94 R3 ZinClear European Non-Nano Statement French decree n°2010-232 issued on 17.02.2012 In regard to the French nanomaterial decree n°2012-232, a nanomaterial is defined in article 3 of Regulation (EC) n°1907/2006 (REACH) as a substance intentionally manufactured at nanoscale, containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm and 100 nm. Our ZinClear product range is non-nano according to the above definition. Cosmetic regulation EC 1223/2009 In regard to the Cosmetic Regulation EC 1223/2009, a nanomaterial is defined as an insoluble or biopersistant and intentionally manufactured material with one or more external dimensions, or an internal structure, on the scale from 1 to 100 nm. Our ZinClear product range is non-nano according to the above definitions. Additionally, no raw materials created by nanotechnology are used in the manufacturing process of our ZinClear range of products.

Managing Director

Effective from 03 November 2020

Latest revision supersedes previous document revisions

STA901.105 R1

#### ZinClear Australian & New Zealand Non-Nano Statement

#### Auctealia

The Australian Government Department of Health and Ageing — NICNAS 2010, defines a nanomaterial as: "Industrial materials intentionally produced, manufactured or engineered to have unique properties or specific composition at the nanoscale, that is a size range typically between 1 nm to 100 nm, and is either a nano-object (i.e. that is confined in one, two, or three dimensions at the nanoscale) or is nanostructured (i.e. having an internal or surface structure at the nanoscale). Aggregates and agglomerates are included and apply to materials where 10% or more of the particles by number count meet the above definition."

In a Literature Review on the safety of titanium dioxide and zinc oxide nanoparticles in sunscreens published by the Therapeutic Goods Administration of Australia in August 2016, nanoparticles are defined as "materials within the nanosize range of 1 to 100 mm."

#### New Zealand

As stated in the Cosmetic Products Group Standard 2017 – HSR002552, the New Zealand Government of Environmental Protection Authority define a nanomaterial as: "an insoluble or biopersistent and intentionally manufactured material with one or more external dimensions, or an internal structure, on the scale from 1 to 100 nm."

Our ZinClear product range is non-nano, according to the above definitions.

Additionally, no raw materials created by nanotechnology are used in the manufacturing process of our ZinClear range of products.

Geoff Acton, B. Com. CA Managing Director

Effective from 03 November 2020

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## **About Us**



### ANO Timeline (ASX announcements) Company Performance

#### 1987

MCP technology starts at University of Western Australian using Ball Mill technology.
 1977

Company formed to develop the UWA potential MCP technology after successful trials.

#### 2000

Joined with Samsung Coring to develop production sale MCP technology.

#### 2002

ZinClear products first launched DOW market presentation.

#### 2005

ANO lists on ASX – UWA owns 62 million shares.

#### 2009

· Merck signs exclusive agreement with Antaria for sale of Alusion.

#### 2010

- UWA owns 20.4%.
- Ankla Pty Ltd owns 9.3% (company related to current Chairman, Lev Mizikovsky).
- Market capitalisation \$8.12 million.

#### 2010

Tax losses of \$33 million.

### · 1

- Pre-curser raw material shortage will be rectified by 1<sup>st</sup> week of April of 2017 when 24 tonnes arrives in the warehouse and we currently have approximately \$900,000 of sales orders ready to invoice and ship once we the rigorous testing regime.
- The current capitalisation as of yesterday is \$31.6 million.
- XP powder sales are a small percentage of our overall revenue and no other products are affected at this stage.

#### 2019

- We have witnessed significant growth in the sales of XP Powder, particularly in the USA, with one customer ordering six times (up to 500%) more volume of orders from the prior year.
- Current production of 15T per week (from 7T per week FY17).
- Lift production to increase of 31T per week from 1 May 2019 (estimated).
- Lift production to 40T in late 2019, annual capacity of 2,200T.

#### 2020

- The Board has been informed by our US distributor that over 50% of its original 180T stock holdings in XP powder has been sold in the past 4 months.
- The Board of ANO confirms the current new bulk intermediate manufacturing facility is progressing well and we are still on track for our TGA audit in February / March 2021 as previously announced in the recent COVID update announcement.

#### 2021

- Market capitalisation of \$259 million.
- Brisbane facility expands TGA license to manufacture dispersions.

- Publicly listed on ASX since 2005 (code: ANO).
- Debt free NTA 33.75 million as of 31 December 2021.
- Australia's largest Zinc Oxide manufacturer with capacity of 5000T.
- Stock Available ex US & Netherlands warehouses.
- Working on dual listing on NASDAQ aiming for early 2023.
- Our Products:
  - 6 Vegan/Organic Zinc & Zinc Based Powders.
  - 4 Vegan/Organic Zinc & Zinc Based Dispersions.
  - 4 Vegan Classic Zinc & Zinc Based Dispersions.
  - 4 Vegan Premium Classic Zinc & Zinc Based Dispersions.
  - 4 Vegan Bulk SPF 50+ Rated Intermediate Sunscreen Products (under development)



## **Testimonials**



### **ZINC**

### Mark Chandler, President of ACT Solutions Corp.

#### Our Products:

- We at ACT Solutions Corp have found so much value in the exciting new ZinClear XP dispersions. Two incredible example formulations have been developed in our US labs using the ZinClear XP53 Coconut dispersion which have caused quite a stir in the industry for their tactile and visual properties (non-greasy and non-whitening), high biobased content, cold-processibility, and high in-vitro SPF. Coconut Care SPF uses 32.5% of the wonderful coconut dispersion (approximately 17% ZnO) to achieve an in-vitro SPF of over 70, and Coconut Luxe Ultimate Sun Defense employs 39% coconut dispersion (roughly 21%) yielding an in-vitro SPF of 74.0.
- Yes, ZinClear XP Powder is exceptional! Achieving good SPF with ZnO can be difficult, but here are two strategies as shown in the formulations attached for getting excellent efficiency with ZinClear technology. The two attached formulations with 20% and 17.5% active ZnO respectively have in-vitro SPF readings above 100, with Critical Wavelengths of greater than 372nm. Both feel wonderful and do not leave a white cast on the skin.

### Julian Hewitt, Director of JPH SunCare Technologies Ltd.

#### ZinClear IM50 CCT

This is a fluid, easy to use dispersion of zinc oxide that offers excellent transparency on skin due to Antaria's "index-matching" zinc oxide technology. The fact that the ZnO is pre-dispersed means that the most challenging aspect of working with any inorganic sunscreen – dispersing the powder – has already been done for you, making this product easy to formulate with. In terms of efficacy, with the right formulation, ZinClear IM50CCT can deliver as much as 2 SPF units per % of ZnO. All components of the dispersion are natural or naturally-derived, so it is COSMOS-approved and fits perfectly with the trend for natural formulations.

#### ZinClear XP65 COCO

This easy to use zinc oxide dispersion combines high efficacy with transparency on skin. The high solids content of the dispersion. The carrier oil, coco-caprylate/caprate, is ideal for a variety of cosmetic applications with its light, soft skin feel. The high solids content of the dispersion provides the formulator with flexibility, allowing for other emollients to be combined with to tailor the skin feel to different requirements. In terms of efficacy, with the right formulation, ZinClear XP65COCO can deliver as much as 2 SPF units per % of ZnO. All components of the dispersion are natural or naturally-derived, so it is COSMOS-approved and fits perfectly with the trend for natural formulations.

#### **REEF SAFETY**

#### Mark Chandler, President of ACT Solutions Corp.

#### Reef Safety Review:

- 4,000 to 6,000 tons of sunscreen enters reef areas annually.
- 90% of snorkeling/diving tourists are concentrated on 10% of the world's reefs.
- Oxybenzone leaches coral of its nutrients and damages DNA, bleaching it of its fluorescent colour. Only 62 parts per trillion of Oxybenzone is needed to inflict this damage.
- Organic UV filters can induce the lytic viral cycle in zooxanthellae with latent infections. Zooxanthellae are single-celled dinoflagellates that live in symbiosis with marine invertebrates such as corals, jellyfish, and sea anemones.
- Oxybenzone can react with chlorine, producing hazardous reactive by-products that can concentrate in swimming pools and wastewater treatment plants.
- UV filters are not completely removed during waste water treatment and may carried over into the environment.
- Gene expression models of the effect of nanoparticle TiO2 on Caribbean reef-building coral using Montastraea faveolata have been studied. Though there was significant zooxanthellae expulsion in all the colonies, there was no link to mortality in the star coral.
- Nanoparticle ZnO had a higher solubility in seawater than that of larger-sized ZnO and thus potentially more toxic towards algae, but it is relatively less toxic towards crustaceans and fish. The toxicity of nanoparticle ZnO is mainly attributed to dissolved Zn2+ ions.
- At high enough concentrations, ZnO encapsulated nanoparticles are shown to be toxic to mussels, but these levels are unlikely to be reached in natural marine water.
- Zinc Oxide is the superior choice for formulating a reef-safe sunscreen product.

PRODUCT NAME	INCI INGREDIENT	ABSORPTION RANGE	ACTIVE %	IN-VITRO SPF	CERTIFICATES	
Organic ZinClear XP53 Coconut	Zinc Oxide	UVA & UVB	53 ± 2	Broad Spectrum Critical Wavelength:	ORGANIC	
	Cocos Nucifera Oil			371nm	VEGAN ECOCERT COSMOS	
	Polyglyceryl-3 Polyricinoleate					
	Isostearic Acid					
Organic ZinClear XP57 Coconut Alusion	Zinc Oxide	UVA & UVB	57 ± 2	Broad Spectrum Critical Wavelength: 372nm	ORGANIC VEGAN ECOCERT COSMOS	
	Cocos Nucifera Oil			3721111		
	Aluminium Oxide					
	Polyglyceryl-3 Polyricinoleate					
	Isostearic Acid					
Organic ZinClear XP57 Coconut Blended Alusion	Zinc Oxide	UVA & UVB 57 ±	57 ± 2	Broad Spectrum Critical Wavelength:	ORGANIC VEGAN ECOCERT COSMOS	Ve
	Cocos Nucifera Oil			370nm		
	Aluminium Oxide					
	Polyglyceryl-3 Polyricinoleate					
	Isostearic Acid					
Organic ZinClear XP55 Sunflower	Zinc Oxide	UVA & UVB	55 ± 2	Broad Spectrum Critical Wavelength:	ORGANIC VEGAN ECOCERT COSMOS	
	Helianthus Annus Seed Oil			370nm		
	Polyglyceryl-3 Polyricinoleate					
	Isostearic Acid					
Organic ZiNClear XP50 Sunflower Alusion	Zinc Oxide	UVA & UVB 50 ± 2	50 ± 2	Broad Spectrum Critical Wavelength:	ORGANIC	
	Helianthus Annus Seed Oil			371nm	VEGAN ECOCERT	
	Aluminium Oxide				COSMOS	
	Polyglyceryl-3 Polyricinoleate					
	Isostearic Acid					
Organic ZinClear XP50 Sunflower Blended Alusion	Zinc Oxide	UVA & UVB	50 ± 2	Broad Spectrum Critical Wavelength:	ORGANIC	
	Helianthus Annus Seed Oil			371nm	VEGAN ECOCERT	
	Aluminium Oxide				COSMOS	
	Polyglyceryl-3 Polyricinoleate					
	Isostearic Acid					
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# TDS /egan/ Organic Dispersions

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## **TDS Classic Dispersions**

PRODUCT NAME	INCI	RANGE OF ABSORPTION	ACTIVE %	Ac (nm)	VISCOSITY	NATURAL
ZinClear IM®50JJ	Zinc Oxide (and) Simmondsia Chinensis (Jojoba) Glyceryl Isostearate (and) Polyhydroxystearic Acid	UVA & UVB	50	Broad Spectrum 370nm	Pourable	Approved by ECOCERT RAW MATERIAL
ZinClear IM®50CCT	Zinc Oxide (and) Caprylic/Capric Triglyceride (and) Polyhydroxystearic Acid (and) Glyceryl Isostearate	UVA & UVB	50	Broad Spectrum 370nm	Pourable	Approved by ECOCERT RAW MATERIAL
ZinClear IM®50AB	Zinc Oxide (and) C12-15 Alkyl Benzoate (and) Polyhydroxystearic Acid (and) Isostearic Acid	UVA & UVB	50	Broad Spectrum 370nm	Pourable	
ZinClear IM®50L7	Zinc Oxide (and) Neopentyl Glycol Diheptanoate (and) Glyceryl Isostearate (and) Polyhydroxystearic Acid (and) Cetyl PEG/PPG-10/1 Dimethicone	UVA & UVB	50	Broad Spectrum 370nm	Pourable	

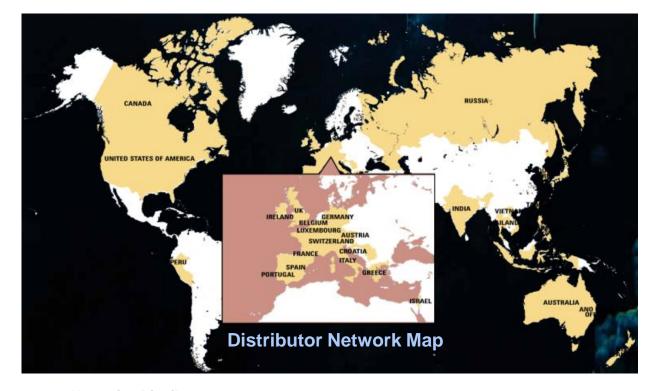
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## **Distributors**



- Austria → Lehmann & Voss & Co
- Australia → Advance ZincTek
- Belgium → Lehmann & Voss & Co
- Bulgaria → ANIKO Partners
- ightharpoonup Canada ightarrow Deveraux Specialties
- France → Lehmann & Voss & Co
- Germany → Lehmann & Voss & Co
- India → Connell Brothers, United Descaler
- Arr Israel ightarrow Y.S. Ashkenazi Agencies
- Italy → Eurosyn
- Luxembourg → Lehmann & Voss & Co
- New Zealand → Advance ZincTek
- Netherlands → Integrated Chemicals
- Peru → Quimica Suiza Industrial
- Portugal → Lehmann & Voss & Co
- South Africa → The Care CO
- South Korea → ENS Beauty Group
- Spain → Lehmann & Voss & Co
- Switzerland → Lehmann & Voss & Co
- Taiwan → Kosfarm
- V UK → Blagden
- USA → Deveraux Specialties
- Vietnam → Kapharm



### **Upcoming Distributors**

- Denmark
- Greece
- Japan
- Poland
- UK / Ireland