

INNOVA

Vercatech CAPRYFORCE ECO



Description and applications:

100% natural multifunctional ingredient with excellent antimicrobial properties that reduces the TEWL (clinically tested).

The mixture is specially optimized to cover a broad type of applications and formulae even the most challenging. With pH independent antimicrobial activity allows you to harmonize the preservative system for most of all your portfolio.

Low irritation probability as per their low and synergetic content of active matter.

This ingredient was granted EcoCert and COSMOS compliance in the EU and 100% natural origin according ISO16128.

Vercatech CAPRYFORCE ECO is a readily biodegradable ingredient according to the OECD 301.

Ideal for sun care and formulations with high amounts of pigments and all type of emulsions.

INCI:

Propanediol, Caprylyl Glycol, Phenylpropanol

Appearance:

Colorless liquid

Origin

Palm oil origin. Vercatech CAPRYFORCE ECO is obtained from sustainable palm oil with RSPO Mass Balance certificate. MB certificate number B M T – R S P O – 0 0 1 2 0 6.

Recommended use level

O/W: 2,5 – 4,0 %

W/O: 2,0 – 3,0 %

Aqueous systems: 2,0 – 3,0 %

Surfactant based products: 2,0 – 4,0%

pH-range

independent

independent

independent

independent



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Formulation Advices:

In emulsions Vercatech Capryforce ECO is recommended to be added at the water phase, at the beginning, before the emulsification/homogenization step, because of Caprylyl Glycol contain, to minimize risk of destabilization. It withstands hot processes.

For surfactant bases, Vercatech Capryforce ECO is recommended to be added at the beginning of the process before adding the surfactants.

At 3%, Vercatech Capryforce ECO is fully soluble in water. At 4% Vercatech Capryforce ECO is practically soluble in water.

Always is recommended the use of a chelator in any formulae (Vercare PHYTA), that supports and boosts the antimicrobial efficacy

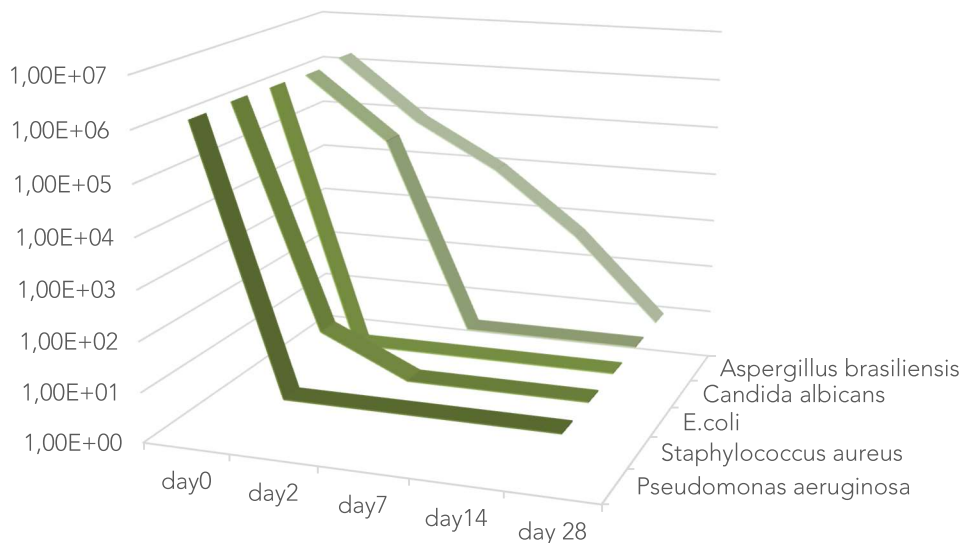
Efficacy spectrum

	G+	G-	Y	F
pH Independent	√√	√√	√√	√√

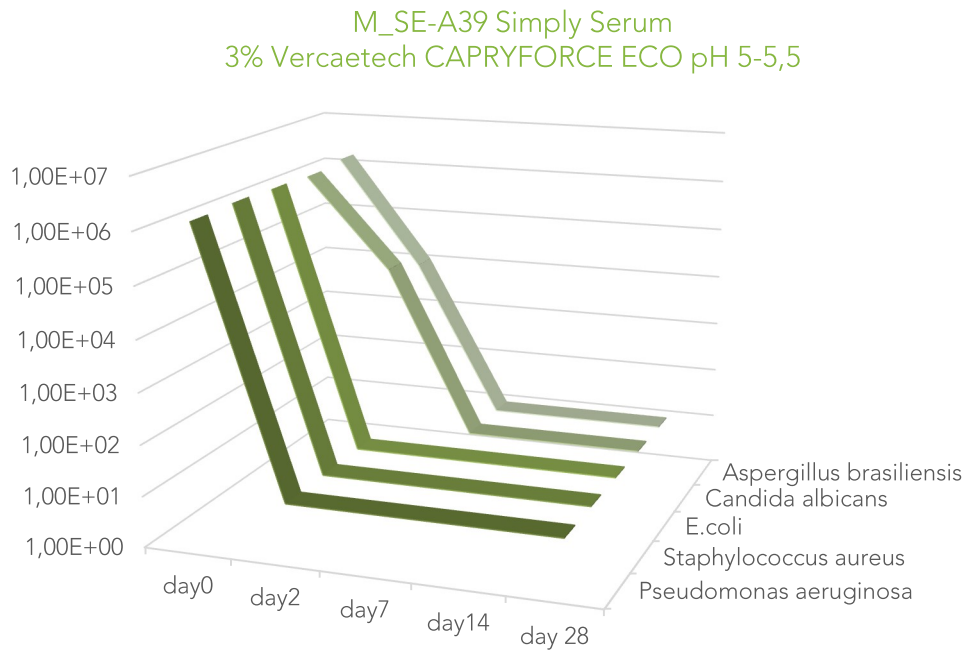
Very good √√ , good √ , Insuficient –

- Results on Emulsions

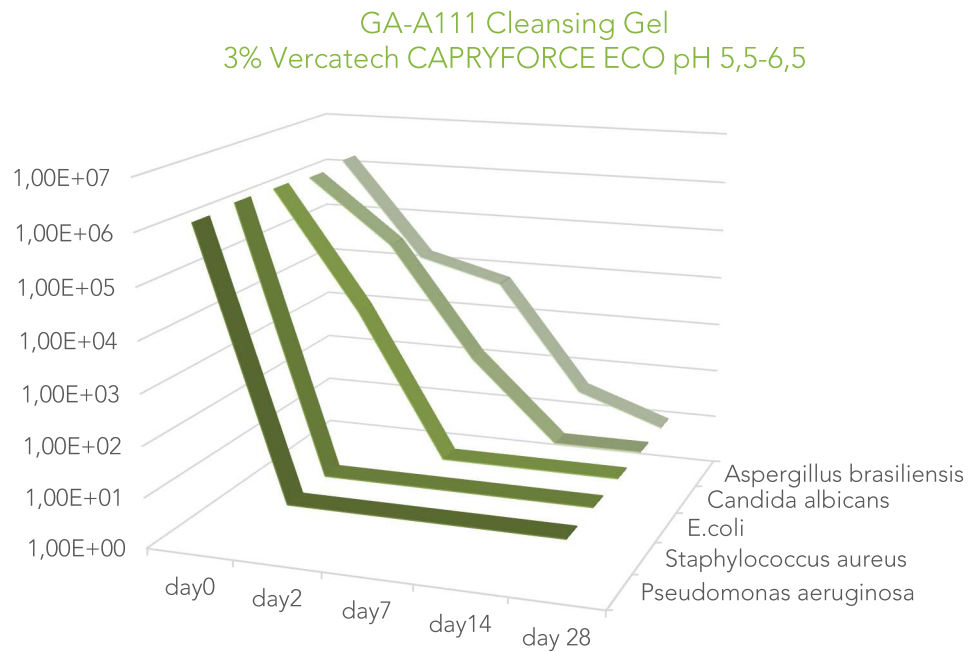
M_C-A390 Sublime protect & Energy Skin
3% Vercatech CAPRYFORCE ECO pH 5-5,5



- Results on Serums



- Results on Gel



Formulae Example:

M_C-A390 Sublime, Protect & Energy Skin

A			
INGREDIENT	INCI	SUPPLIER	%
Deionized Water	Water	-	58,7
Vercare Phyta	Sodium Phytate	Jover	0,1
Vercatech CAPRYFORCE ECO	Propanediol (and) Caprylyl Glycol (and) Phenylpropanol	Jover	3,0
Siligel™	Xanthan Gum (and) Lecithin (and) Sclerotium Gum (and) Pullulan	Lucas Meyer Cosmetics IFF	1,0
B			
Vercare ELLEGANT	Propylene Glycol Diheptanoate, Triethyl Citrate	Jover	15,0
Vercare ISOLA	Isoamyl Laurate	Jover	6,0
Biophilic™ H	Hydrogenated Lecithin (and) C12-16 Alcohols (and) Palmitic Acid	Lucas Meyer Cosmetics IFF	4,0
Lipolami ER	Silybum Marianum Ethyl Ester	Alban Muller	2,0
Rapeseed Wax 6237	Hydrogenated Rapeseed Oil	Kahlwax	5,0
C			
Riboxyl™	Ribose	Lucas Meyer Cosmetics IFF	1,0
IBR-UrBioTect® 1901	Vegetable Glycerin (and) Benzyl Alcohol (and) Benzoic Acid	Lucas Meyer Cosmetics IFF	1,0
IBR-Snowflake®	1001: Water (and) Leucojum Aestivum Bulb Extract All Natural 1003: Glycerin (and) Water (and) Leucojum Aestivum Bulb Extract	Lucas Meyer Cosmetics IFF	2,0
Rosality™	Pentylene Glycol, Rosa Damascena Flower Water, Rosa Damascena Flower Oil	Lucas Meyer Cosmetics IFF	1,0
D			
Parfum Litsea Cubeba & Lavandin	Parfum (Fragrance)	Vanessence	0,2

1. Mix phase A, add Siligel under medium stirring, until total dispersion, heat at 75°C | 2. Premix phase B and heat at 75°C | 3. Add B into A with Silverson to make the emulsion | 4. Add C one by one under medium stirring | 5. Add phase D under medium stirring | Adjust pH 5-5,5



M_SE-A39
Simply Serum

A			
INGREDIENT	INCI	SUPPLIER	%
Deionized Water	Water	-	95,2
Vercare Phyta	Sodium Phytate	Jover	0,1
Vercatech CAPRYFORCE ECO	Propanediol (and) Caprylyl Glycol (and) Phenylpropanol	Jover	3,0
Riboxyl™	Ribose	Lucas Meyer Cosmetics IFF	0,5
B			
Siligel™	Xanthan Gum (and) Lecithin (and) Sclerotium Gum (and) Pullulan	Lucas Meyer Cosmetics IFF	1,0
C			
Vercare Antiox 70	Tocopherol (and) Helianthus Anuus (Sunflower) Seed Oil	Jover	0,2

1. Mix phase A under medium stirring | 2. Add B, increase stirring rate up to maxim level 2,500 rpm 15 minutes | 3. Add C under medium stirring | 4. Adjust pH 5-5,5

GA-A111
Cleansing Gel

A			
INGREDIENT	INCI	SUPPLIER	%
Deionized Water	Water	-	68,6
Vercare Phyta	Sodium Phytate	Jover	0,1
GLYCERECO	Glycerin	Jover	5,0
Vercatech CAPRYFORCE Eco	Propanediol (and) Caprylyl Glycol (and) Phenylpropanol	Jover	3,0
Sepimax Zen	Polyacrylate crosspolymer-6	Seppic	0,8
CLEAROSA	Hydroxypropylmethyl Cellulose	Jover	0,5
B			
Vercarem P4C	Polyglyceryl-4 Caprate, Aqua	Jover	20,0
IBR-UrBioTect® 1901	Inula Helenium Extract	Lucas Meyer Cosmetics IFF	2,0

1. Mix phase A add Clearosa under medium stirring | 2. Add phase B one by one under medium stirring | 3. Adjust pH 5,5-6,5



M_L-A75
Solar Mineral SPF 50

A

INGREDIENT	INCI	SUPPLIER	%
Deionized Water	Water	-	40,4
Vercare Phyta	Sodium Phytate	Jover Scientech	0,1
Xanthan Gum	Xanthan Gum	-	0,5
Ecogel™	Lysolecithin, Sclerotium Gum, Xanthan Gum, Pullulan	Lucas Meyer Cosmetics IFF	1,8
Vercatech CAPRYFORCE ECO	Propanediol, Caprylyl Glycol, Phenyl Propanol	Jover Scientech	4,0

B

Lysofix™ Liquid	Glycerin (and) Glycine Soja (Soybean) Seed Extract	Lucas Meyer Cosmetics IFF	5,0
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C

Vercare TRIHEPTA	Triheptanoin	Jover Scientech	27,0
Enhance US	Zinc Oxide, Titanium Dioxide, Silica	AD Particles	18,0

D

Elix-IR™	Water (and) Glycerin (and) Polygonum Aviculare Extract	Lucas Meyer Cosmetics IFF	1,0
IBR-UrBioTect® 1901	Inula Helenium Extract	Lucas Meyer Cosmetics IFF	1,0
Tazman Pepper™ AF	Glycerin (and) Water (and) Tasmania Lanceolata Fruit/Leaf Extract	Lucas Meyer Cosmetics IFF	1,0
Parfum Litsea Cubeba & Lavandin	Parfum (Fragrance)	Vanessence	0,2

1. Mix phase A add Xanthan Gum and Ecogel under medium stirring | 2. Add Lysofix under medium stirring | 3. Mix phase C and heat to 65°C | 4. Add phase C into AB under medium stirring to make the emulsion | 5. Add phase D one by one under medium stirring | 6. Adjust pH 5,0-5,5



Additional Efficacy Test:

TEWL: Measurement of trans epidermal water loss to evaluate the effectiveness of the skin's barrier function.

Main objective

To assess the barrier effect (only application in the forearm area at T0) compared with placebo at times T2H+T4H+T6H+T8H.

Design

Kinetic study in 10 healthy volunteers from 1 day of experimental phase to 5 times.

Population characteristics

10 healthy volunteers who met the inclusion criteria and none for exclusion.

Variables to study:

Improvement of the barrier effect with Tewameter® instrumental assessment compared to placebo.

T-A185/T-A186

A			
INGREDIENT	INCI	SUPPLIER	%
Deionized Water	Water	-	98,0/96,0
Vercatech Capryforce Eco	Propanediol, Caprylyl Glycol, Phenyl Propanol	Jover Scientech	2,0/4,0

1. Mix phase A under medium stirring

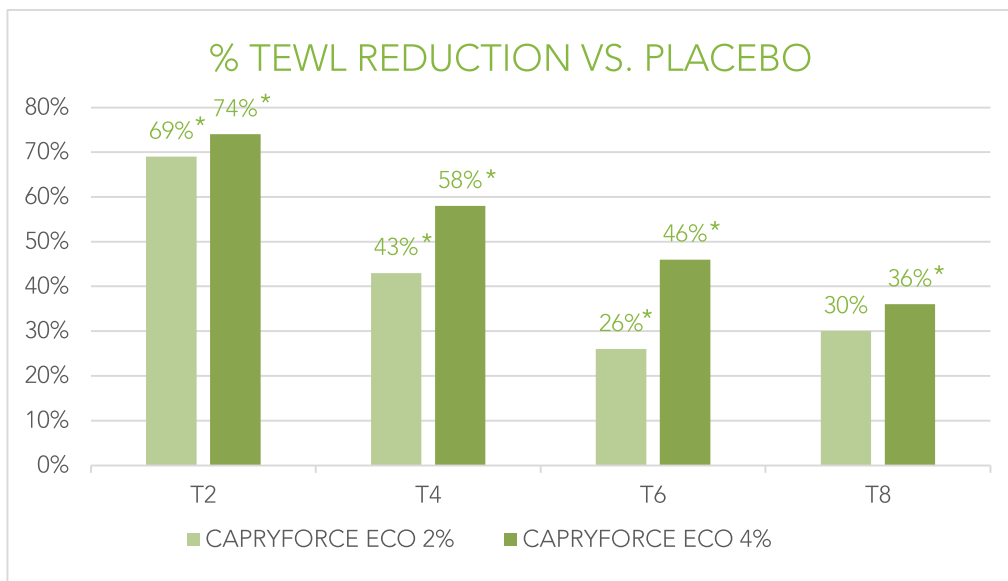
Placebo

A			
INGREDIENT	INCI	SUPPLIER	%
Deionized Water	Water	-	100

Safety assessment:

- Reactions considered as undesirable effects related to the research product.
- Assessment of reactions observed by the subjects.





Graphic 1: The reduction percentage of TEWL from CAPRYFORCE ECO vs. placebo (deionized water) (*p<0.05)

Therefore, Vercatech CAPRYFORCE ECO forms a protective film on the skin and improves the barrier effect of the skin after 8 hours (T8h) of its application.

None of the 10 volunteers have reported unpleasant symptoms during the application of the product in the area to be tested (forearm). The product has had good skin compatibility.



Additional Safety Tests:

HR IPT: Human Repeated Insult Patch test on reactive skin through external expert licensed laboratory.

STUDY SYNOPSIS

OBJECTIVE	This study intends to confirm the skin compatibility after one single application (1 st induction patch) and after repeated applications and absence of delayed cutaneous sensitizing potential of the product GEL VERCATECH CAPRYFORCE ECO, REF. GA-A119, BATCH 20210712 , after repeated application to the skin under exaggerated experimental conditions in human subjects.
STUDY DATES	Beginning: 19/07/2021 End: 28/08/2021
NAME REFERENCE BATCH NUMBER	GEL VERCATECH CAPRYFORCE ECO GA-A119 20210712
SUBJECT NUMBER	The skin compatibility of the test product was assessed in fifty-three (53) subjects.
SPECIFIC INCLUSION CRITERIA	Age: 18 to 70 years, Gender: male and female, Phototype (Fitzpatrick): I to IV, Type of skin: Reactive
CONCLUSION	Under the experimental conditions adopted the repeated applications of the product GEL VERCATECH CAPRYFORCE ECO, REF. GA-A119, BATCH 20210712 , under occlusive patch, on a panel of 53 subjects, induced no irritative reactions and the product has very good skin compatibility. Moreover, the repeated applications induced no allergic reactions.

Induction phase	
Type of reactivity on the induction site	Number and percentage of reactive subjects
None	0 / 0%

Challenge phase	
Type of reactivity on the induction site and virgin site	Number and percentage of reactive subjects
None	0 / 0%

Control time after patch removal	Number of reactive subjects	Types of reaction	Mean daily irritation score Mdis	% of reactive subjects
D3	0	None	0	0
D5	0	None	0	0
D8	0	None	0	0
D10	0	None	0	0
D12	0	None	0	0
D15	0	None	0	0
D17	0	None	0	0
D19	0	None	0	0
D22	0	None	0	0



VI. CONCLUSION

Under the experimental conditions adopted, the repeated applications of the product **GEL VERCATECH CAPRYFORCE ECO, REF. GA-A119, BATCH 20210712**, under occlusive patch, on a panel of 53 subjects, induced no irritative reactions and the product has very good skin compatibility.

Moreover, the repeated applications induced no allergic reactions.

Gel GA-A119

A				
INGREDIENT	INCI		SUPPLIER	%
Deionized Water	Water		-	94,0
Vercatech Capryforce ECO	Propanediol, Caprylyl Glycol (and) Phenylpropanol			4,0
CLEAROSA	Hydroxypropylmethyl Cellulose		Jover Scientech S.L	2,0

1. Mix phase A add Clearosa under medium stirring | 2. Adjust pH 7

OCL-200-EIT: ocular irritation assay to study the behavior of Vercatech CAPRYFORCE ECO on eyes

The test system used in this study was a Reconstructed human Cornea-like epithelium (RhCE) named **EpiOcular™ model**. The assay was performed in accordance to the OECD Test guideline No. 492: Reconstructed human Cornea like Epithelium (RhCE) test method for identifying chemicals not requiring classification and labelling for eye irritation or serious eye damage. The results obtained clearly showed that the product **GA-A118 with Vercaetch CAPRYFORCE ECO** was non-irritant. The formula of GA-A118 is enclosed as follows:

Gel GA-A118

A				
INGREDIENT	INCI		SUPPLIER	%
DEIONIZED WATER	Water		-	95,5
VERCATECH CAPRYFORCE ECO	Propanediol (and) Caprylyl Glycol (and) Phenylpropanol			2,5
CLEAROSA	Hydroxypropylmethyl Cellulose		Jover Scientech S.L	2,0

1. Mix phase A add Clearosa under medium stirring | 2. Adjust pH 7



Shelf life:

3 years as long as it is kept in closed original containers at recommended temperatures.

Storage:

Keep packaging unopened and undamaged. Store at room temperature in a clean and aerated place. In case of storage at temperatures below 0°C, let the frozen material recover the liquid state at room temperature. The product remains with the original properties.

Packaging:

25L, 1.000 L. (IBC optional)

Use:

Cosmetic ingredient.

SERVICES:

R&D Application Lab for consulting and customer support in:

- Texture Ideas
- Preservation proposals
- Support in general

Challenge tests through an external certified laboratory.

