

EMD
PERFORMANCE
MATERIALS



 MADE TO
STRENGTHEN
EMBLICA®

Formulation examples booklet

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15	MSAS.895.08.06.18 Rep' hairing Serum – All day treatment for damaged hair	O/W Lotion	1.0%	RonaCare® Nicotinamide Timiron® Glam Silver Ronastar® Golden Sparks Oxynex® L-CV Liquid	»



TECHNICAL DATASHEET

1.30165 Emblica® Cosmetic ingredient

INCI: Phyllanthus Emblica Fruit Extract (for EU: <i>Phyllanthus Emblica</i> Extract)			
CHEMICAL COMPOSITION:	Chemical name	CAS NO.	Chem. Formula
	Standardized extract of <i>phyllanthus emblica</i> fruits	90028-28-7	--
APPEARANCE:	Fine powder with yellow to yellow brown color		
ODOR:	Characteristic		
STORAGE:	Protected from light. Tightly closed. Dry. Store at +15 °C to +25 °C		
SHELF LIFE:	Minimum 3 years		
TECHNICAL ASPECTS:	pH value (1% in water)	Solubility	Key actives
	3.0 – 4.0	Dispersible in water (Water-soluble fraction: min. 80 %; Lipid-soluble fraction: max. 20 %)	Contains min. 60% low molecular weight hydrolysable tannins, Emblicanin A & Emblicanin B being the key bio-active ingredients
FUNCTION:	Cascading antioxidant, skin lightener		
APPLICATIONS:	Daily skin care, anti-aging products Skin brightening Anti-freckles, anti-spots products Sun care – sunscreens & after-sun Hair & scalp care – hair treatments, shampoo, conditioner		
USE LEVEL:	0.2 – 0.5 % in anti-aging products 1 – 2 % in skin-lightening products		
FORMULATION ASPECTS:	Conduct manufacturing in stainless steel vessels; Avoid contact with iron or copper. Add Emblica® – predispersed in water – at approx. 30 °C to the formulation. The pH of the formulation should be acidic (best below pH 5.5). AHAs support the efficacy of lightening formulations and reduce a possible color shift. Addition of small amount of sodium metabisulfite (0.1%) along with ascorbic acid (0.05 %) reduces a discoloration of the product as well. Combination with RonaFlair® Boroneige® offers options to realize whiter formulations. Select electrolyte-tolerant gelling agents to produce gels. Protect the finished product from light and heat.		
EFFICACY STUDIES*:	In vitro <ul style="list-style-type: none">• Long-term antioxidant activity and stability; ROS quenching• Protection of the proteins of the extracellular matrix• Chelating of free iron and copper• Anti-pollution effects after urban dust challenge (PM10)• Effect on melanin synthesis in keratinocytes/ melanocytes co-culture Ex vivo <ul style="list-style-type: none">• Protection from pollution-induced skin alterations• Effect on several biomarkers following blue light and IR-A Irradiation In vivo <ul style="list-style-type: none">• Skin brightening study• Anti-freckles study• Prevention of UV-induced skin pigmentation <p>*<i>In vitro/Ex vivo/In vivo</i> modes of action do not necessarily represent the mode of action in the final product formulation.</p>		
KEY PROPERTIES/ CLAIMS:	Natural and standardized active ingredient Cascading antioxidant providing long-term efficacy Multifunctional antioxidant; Protection against oxidative stress Anti-pollution benefits – preventive and protective effect Blue light and IR -A protection Excellent skin brightening properties Excellent hyperpigmentation appearance reducing properties Supports and maintains a flawless skin		
DATE OF ISSUE:	June 2020		
NOTES	For further information, see Specification and Safety Data Sheet and RonaProfile (Cosmetic Ingredient Dossier)		

Natural Antioxidant Serum



MBRA2017160 - Formulation example

INGREDIENTS		INCI US	[%]
A			
Embllica®	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	0.50
RonaCare® Isoquercetin	(1)	ISOQUERCETIN	0.10
Glycerol, anhydrous	(1)	GLYCERIN	5.00
B			
Titriplex® III	(1)	DISODIUM EDTA	0.10
Keltrol® CG-T	(2)	XANTHAN GUM	0.30
Water, demineralized		WATER	ad 100
C			
Preservatives		PRESERVATIVES	q.s.

Procedure:

Mix the ingredients of phase B until homogenous.
Disperse the ingredients of phase A in Glycerin and add phase B while stirring. Add phase C.

Suppliers:

- (1) Merck KGaA, Darmstadt, Germany /
EMD Performance Materials
- (2) CP Kelco

Notes:

Appearance: Light yellowish serum of low viscosity;
pH value (20°C): 4.78;
Viscosity: 2000 cPs (Brookfield RVT; Spdl. Helipath D,
20 rpm, 20 °C);
Stability: 3 months at room temperature, 40°C, 50°C and 4°C;

Anti-pollution Serum

Fight early signs of age



MSAS.907.08.06.17 - Formulation example

INGREDIENTS		INCI US	[%]
A1			
RonaCare® Ectoin	(1)	ECTOIN	1.00
Emblica®	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	0.70
Solagum™ AX	(2)	XANTHAN GUM (AND) ACACIA GUM	1.50
Water, demineralized		WATER	ad 100
A2			
RonaCare® Isoquercetin	(1)	ISOQUERCETIN	0.20
1,2-Propanediol	(1)	PROPYLENE GLYCOL	8.50
B			
RonaCare® Potassium Sorbate	(1)	POTASSIUM SORBATE	0.50
RonaCare® Sodium Benzoate	(1)	SODIUM BENZOATE	0.50
C			
RonaFlair® White Sapphire	(1)	ALUMINA (OR ALTERNATIVELY: SYNTHETIC SAPPHIRE)	2.00
D			
Citric acid, 30% solution		WATER (AND) CITRIC ACID	q.s.

Procedure:

Disperse the gelling agent in water and then add the rest of phase A1. Premix phase A2 and heat it to 50°C, check that RonaCare® Isoquercetin is fully dissolved. Add phase A2 to phase A1. Add phase B to phase A and homogenize. Add phase C and stir until homogenous. Finally add phase D to adjust the pH to 5-5.2.

Notes:

Appearance: satiny pale yellow gel;
 pH value (23°C): 5.1;
 Viscosity: 9,200 cP (Fungilab expert, Spindle R3, 5 rpm) at 23°C;
 Stability: 3 months at room temperature, 4°C and 45°C;

Keep away from light and heat.

Suppliers:

- (1) Merck KGaA, Darmstadt, Germany / EMD Performance Materials
- (2) Seppic

Natural Skin Brightening Serum



US-A48-13-16-4 - Formulation example

INGREDIENTS		INCI US	[%]
A			
Emblica®	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	1.00
RonaCare® Luremin®	(1)	SORBITOL (AND) DIHYDROXY METHYLCHROMONE	1.00
Glycerol, anhydrous	(1)	GLYCERIN	3.50
Titriplex® III	(1)	DISODIUM EDTA	0.05
SolaGum AX	(1)	ACACIA GUM (AND) XANTHAN GUM	0.75
Water, demineralized	(2)	WATER	ad 100
B			
Preservatives		PRESERVATIVES	q.s.
C			
Sodium Hydroxide, 10% Sol	(1)	WATER (AND) SODIUM HYDROXIDE	q.s.

Procedure:

Predisperse RonaCare® Luremin™ and Emblica® in Glycerin and add the remaining ingredients of phase A. Then add phase B ingredient. Adjust to pH 4.0-4.5 with phase C.

Suppliers:

- (1) Merck KGaA, Darmstadt, Germany / EMD Performance Materials
- (2) Seppic

Notes:

Appearance: amber thin liquid gel;
pH (25°C): 4.30;
Viscosity: 1,000 cps (Brookfield Viscometer, RVT, Helipath, Spindle D at 10 rpm);
Stability: 3 months at Room Temperature, 4°C, 40°C, 5 cycles
FTC (-5°C to 40°C), 2 weeks at 45°C, 50°C;

Used an opaque package (color appear darker at 45°C, 50°C after 2 weeks).

Pure Essence Multi-Action Serum



MSAS.968.08.09.19 - Formulation example

INGREDIENTS		INCI US	[%]
A			
RonaCare® Ectoin	(1)	ECTOIN	2.00
RonaCare® Troxerutin	(1)	TROXERUTIN	2.00
RonaCare® Potassium Sorbate	(1)	POTASSIUM SORBATE	0.50
RonaCare® Sodium Benzoate	(1)	SODIUM BENZOATE	0.50
B			
Solagum™ AX	(2)	XANTHAN GUM (AND) ACACIA GUM	1.00
Glycerol 85%	(1)	GLYCERIN (AND) WATER	8.50
Water, demineralized		WATER	ad 100
C			
Emblica®	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	2.00
Water, demineralized		WATER	10.00
D			
RonaCare® Sodium Hydroxide Solution about 32%		WATER (AND) SODIUM HYDROXIDE	q.s.

Procedure:

Disperse Solagum™ AX in water and glycerin and stir until a homogeneous gel is obtained. Add one by one the ingredients of phase A into phase B and stir until all are well solubilized. Add premixed phase C and stir until homogeneous. Adjust pH to 5.4-5.5 with phase D.

Suppliers:

- (1) Merck KGaA, Darmstadt, Germany / EMD Performance Materials
- (2) Seppic

Notes:

Appearance: dark yellow aqueous gel;
pH value (24°C): 5.0. pH value tends to decrease during the first month before stabilizing;
Viscosity: 350 cP (Fungilab Expert, Spindle R3, 100 rpm) at 24°C;
Stability: 3 months at room temperature, 4°C and 45°C;

Store away from heat and light.

The Pure Essence Multi-Action Serum is an incredibly soft water-like essence enriched with a highly concentrated cocktail of multitasking natural active ingredients – everything that your skin needs to stay youthful and healthy. RonaCare® Ectoin protects from environmental stress and provides sustainable moisturizing. Emblica®, the ayurvedic key piece strengthens and brightens while RonaCare® Troxerutin, an effective bioflavonoid, soothes the skin. How to use? Pour a few drops of the essence into the palm of your hands and apply it on your face. Then, gently pat it into your skin.

Delicate Fairness Gel



MC-FW-120912/A - Formulation example

INGREDIENTS		INCI US	[%]
A			
RonaCare® Ectoin	(1)	ECTOIN	1.00
RonaCare® Allantoin	(1)	ALLANTOIN	0.30
1,3-Butanediol	(1)	BUTYLENE GLYCOL	4.00
Titriplex® III	(1)	DISODIUM EDTA	0.10
Keltrol® CG-T	(2)	XANTHAN GUM	0.30
Water, demineralized		WATER	ad 100
B			
RonaCare® AP	(1)	BIS-ETHYLHEXYL HYDROXYDIMETHOXY BENZYL MALONATE	1.00
RonaCare® Bisabolol nat.	(1)	BISABOLOL	0.20
Olivem® 1000	(3)	CETEARYL OLIVATE (AND) SORBITAN OLIVATE	3.50
Lanette® O	(4)	CETEARYL ALCOHOL	2.00
Miglyol® 812 N	(5)	CAPRYLIC/CAPRIC TRIGLYCERIDE	4.00
Arlamol™ HD	(6)	ISOHEXADECANE	3.00
Xiameter® PMX-0345	(7)	CYCLOPENTASILOXANE (AND) CYCLOHEXASILOXANE	1.00
Xiameter® PMX-200 (5cs)	(7)	DIMETHICONE	1.00
Aristoflex® AVC	(8)	AMMONIUM ACRYLOYLDIMETHYLTAURATE/VP COPOLYMER	0.50
C			
Sepiplus™ 400	(9)	POLYSORBATE 20 (AND) POLYACRYLATE-13 (AND) POLYISOBUTENE	1.50
D			
Emblica®	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	1.00
RonaFlair® Boroneige® SF-3	(1)	BORON NITRIDE	3.00
(S)-Lactic acid about 90%	(1)	LACTIC ACID (AND) WATER	0.10
Sodium Disulfite, EMPROVE®	(1)	SODIUM METABISULFITE	0.10
Triethanolamine, 50%		TRIETHANOLAMINE	0.40
Water, demineralized		WATER	10.00
Preservatives		PRESERVATIVES	q.s.

Procedure:

Heat phase A up to 75°C and mix until uniform. Combine phase B and heat to 75°C. Add phase A to phase B while stirring. Homogenize. Cool to 60-65°C, add phase C and stir until uniform. Cool down to room temperature and add phase D while stirring.

Notes:

Appearance: beige cream gel (o/w);
 pH value (23°C): 5.5;
 Viscosity: 35,000 cps (Brookfield RVT T-B, 12 rpm, with heliopan, 60s) at 23°C;
 Stability: 3 months at RT and 40°C and 1 month at FTC (-18°C to +40°C);

Suppliers:

- | | |
|--------------------------------------|------------------|
| (1) Merck KGaA, Darmstadt, Germany / | (6) Croda |
| EMD Performance Materials | (7) Dow Chemical |
| (2) CP Kelco | (8) Clariant |
| (3) Hallstar | (9) Seppic |
| (4) BASF AG | |
| (5) IOI Oleo GmbH | |

Radiant Skin Brightener



MBRA0282012 - Formulation example

INGREDIENTS		INCI US	[%]
A			
Titriplex [®] III	(1)	DISODIUM EDTA	0.10
Preservatives		PRESERVATIVES	q.s.
Water, demineralized		WATER	ad 100
B			
Cutina GMS	(2)	GLYCERYL STEARATE	0.80
Eumulgin B 2	(2)	CETEARETH-20	1.70
Cetiol [®] V	(2)	DECYL OLEATE	7.00
Isopropyl Palmitate	(2)	ISOPROPYL PALMITATE	7.00
Xiameter [®] PMX-200 Silicone Fluid (350cs)	(3)	DIMETHICONE	0.50
Lanette [®] 18	(2)	STEARYL ALCOHOL	2.00
C			
Embllica [®]	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	1.50
Water, demineralized		WATER	5.00
D			
Timiron [®] Starlight Gold	(1)	MICA (AND) TITANIUM DIOXIDE (AND) TIN OXIDE	3.00
Water, demineralized		WATER	13.50
E			
Sepiplus 400	(4)	POLYACRYLATE-13 (AND) POLYISOBUTENE (AND) POLYSORBATE 20	2.50

Procedure:

Heat phases A and B separately to 80°C. Add phase A to phase B while stirring. Add phase C to A/B at approx. 30°C. Homogenize. Then incorporate dispersed phase D. Finally add phase E and mix well.

Notes:

Appearance: shimmering yellowish soft cream (o/w);
pH value (20°C): 4.2;
Viscosity: 38,000 cPs (Brookfield RVT; Helipath, spindle D, 20 rpm) at 20°C;
Stability: 3 months at room temperature, 40°C, 50°C and 4°C;

Suppliers:

- (1) Merck KGaA, Darmstadt, Germany / EMD Performance Materials
- (2) BASF AG
- (3) Dow Chemical
- (4) Seppic

Anti-blemish Brightening Moisturizer



90322013 - Formulation example

INGREDIENTS		INCI US	[%]
A			
RonaCare® AP	(1)	BIS-ETHYLHEXYL HYDROXYDIMETHOXY BENZYL MALONATE	2.00
Revidrate	(2)	ETHYLHEXYL PALMITATE (AND) SORBITAN OLEATE (AND) SORBITAN LAURATE (AND) MYRISTYL PHOSPHO-MALATE	3.00
Avocadin HU25	(3)	PERSEA GRATISSIMA (AVOCADO) OIL (AND) PHYTOSTEROLS (AND)OLEA EUROPAEA (OLIVE) FRUIT OIL	2.00
KP-545	(4)	ACRYLATES/DIMETHICONE COPOLYMER (AND) CYCLOPENTASILOXANE	2.00
Schercemol GTO Ester	(5)	TRIETHYLHEXANOIN	5.00
Glucate SS	(5)	METHYL GLUCOSE SESQUISTEARATE	1.00
Glucamate SSE-20	(5)	PEG-20 METHYL GLUCOSE SESQUISTEARATE	2.00
Lanette O	(6)	CETEARYL ALCOHOL	3.00
B			
RonaCare® Ectoin	(1)	ECTOIN	1.00
1,3 Butanediol		BUTYLENE GLYCOL	3.00
Water, demineralized		WATER	ad 100
C			
Aristoflex AVC	(7)	AMMONIUM ACRYLOYLDIMETHYLTAURATE/VP COPOLYMER	1.00
D			
Sodium Hyaluronate (1%)	(8)	WATER (AND) HYALURONIC ACID	5.00
Preservatives		PRESERVATIVES	q.s.
E			
Emblica®	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	2.00
Sodium Disulfite, EMPROVE®	(1)	SODIUM METABISULFITE	0.05
Water, demineralized		WATER	5.00

Procedure:

Heat phase A and phase B separately to 75-80°C. Add phase B into Phase A while stirring. Homogenize until uniform. Cool to 55°C under gentle stirring and then add phase C. Add phase D and phase E below 45°C and stir until room temperature.

Notes:

Appearance: light beige lotion (o/w);
pH value (20°C): 3.9;
Viscosity: 11,000 mPa.s (Brookfield DV-II+ Pro, 50 rpm, spindle 6, 5 seconds) at 20°C;
Stability: 3 months at room temperature and 45°C;

Suppliers:

- | | |
|---|---------------------------------------|
| (1) Merck KGaA, Darmstadt, Germany /
EMD Performance Materials | (5) Lubrizol |
| (2) Sederma GmbH | (6) BASF |
| (3) Crodarom | (7) Clariant |
| (4) Shin Etsu Silicones | (8) Bloomage Freda Biopharm Co., Ltd. |

Anti-age spot Lotion SPF 6, UVA



MSAS.627.08.01.12 - Formulation example

INGREDIENTS		INCI US	[%]
A			
Eusolex® UV-Pearls® OB-S	(1)	WATER (AND) OCTOCRYLENE (AND) SORBITOL (AND) AVOBENZONE (AND) SILICA (AND) PVP (AND) CHLORPHENESIN (AND) PHENOXYETHANOL (AND) DISODIUM EDTA	15.00
RonaCare® Ectoin	(1)	ECTOIN	2.00
Titriplex® III	(1)	DISODIUM EDTA	0.10
Carbopol® Ultrez 21	(2)	ACRYLATES/C10-30 ALKYL ACRYLATE CROSSPOLYMER	0.40
Sodium Hydroxide, 10%	(1)	WATER (AND) SODIUM HYDROXIDE	0.05
Water, demineralized		WATER	ad 100
B			
Tegosoft P	(3)	ISOPROPYL PALMITATE	7.00
Cetiol® LC	(4)	COCO-CAPRYLATE/CAPRATE	4.00
Cetiol® PGL	(4)	HEXYLDECANOL (AND) HEXYLDECYL LAURATE	4.00
C			
Lecigel	(5)	SODIUM ACRYLATES COPOLYMER (AND) LECITHIN	0.50
Novemer EC-1 Polymer	(2)	ACRYLATES/ACRYLAMIDE COPOLYMER (AND) MINERAL OIL (AND) POLYSORBATE-85	1.00
D			
Embllica®	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	1.00
Preservatives		PRESERVATIVES	q.s.
Fragrance		FRAGRANCE	q.s.

Procedure:

Sprinkle Carbopol in water. When the polymer is hydrated, mix at low speed. Add the Sodium Hydroxide solution and further ingredients of phase A. Stir phase B into phase A. Add phase C and mix until homogenous. Finally add phase D and mix well. If needed, adjust the pH value to 5.0-5.5.

Notes:

Appearance: off-white lotion;
pH value (20°C): 5.1;
Stability: 3 months at room temperature and 45°C;

Use an opaque packaging.

Suppliers:

- (1) Merck KGaA, Darmstadt, Germany / EMD Performance Materials
- (2) Lubrizol
- (3) Evonik
- (4) BASF
- (5) Lucas Meyer Cosmetics

Day Cream with Natural Anti-pollution Power



MSAS.921.05.08.17 - Formulation example

INGREDIENTS		INCI US	[%]
A			
RonaCare® Ectoin	(1)	ECTOIN	1.00
Solagum™ AX	(2)	XANTHAN GUM (AND) ACACIA GUM	0.60
Water, demineralized		WATER	ad 100
A2			
RonaCare® Isoquercetin	(1)	ISOQUERCETIN	0.20
1,2-Propanediol	(1)	PROPYLENE GLYCOL	6.00
A3			
Montanov 202	(2)	ARACHIDYL ALCOHOL (AND) BEHENYL ALCOHOL (AND) ARACHIDYL GLUCOSIDE	3.00
B			
Eusolex® T-AVO	(1)	TITANIUM DIOXIDE (AND) SILICA	7.00
C			
Organic apricot oil	(3)	PRUNUS ARMENIACA (APRICOT) KERNEL OIL	6.00
Myritol® 318	(4)	CAPRYLIC/CAPRIC TRIGLYCERIDE	14.00
DUB Zenoat	(5)	PROPANEDIOL DICAPRYLATE	5.00
D			
RonaCare® Bisabolol nat.	(1)	BISABOLOL	0.50
E			
Emblica®	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	0.70
RonaCare® Potassium Sorbate	(1)	POTASSIUM SORBATE	0.50
RonaCare® Sodium Benzoate	(1)	SODIUM BENZOATE	0.50
Water, demineralized		WATER	6.00
F			
Citric acid, 30% solution		WATER (AND) CITRIC ACID	q.s.

Procedure:

Disperse the gelling agent in the water of phase A1 then add RonaCare® Ectoin. Premix phase A2 and heat it to 50°C, check that RonaCare® Isoquercetin is fully dissolved. Mix phase A1 and phase A2, then add phase A3 and heat to 85°C. Disperse phase B in phase A. Prepare phase C and heat it to 85°C. Pour phase C in phase A/B without stirring and then homogenize while high stirring. Cool down under gentle stirring. At T<35°C, add phase D and then add premixed phase E. Complete cooling and add phase F to adjust the pH to 5-5.5.

Notes:

Appearance: yellow cream (o/w);
pH value (23°C): 5.3;
Viscosity: 37,000 cP (Fungilab Expert, spindle R5, 5 rpm) at 23°C;
Stability: 3 months at room temperature, 4°C and 45°C ;

Suppliers:

- (1) Merck KGaA, Darmstadt, Germany /
EMD Performance Materials
- (2) Seppic
- (3) Phytocos
- (4) BASF
- (5) Stearinerie Dubois

White & Bright SPF 15, Broad Spectrum



MDA-A-145-08 - Formulation example

INGREDIENTS		INCI US	[%]
A			
Eusolex [®] OCR	(1)	OCTOCRYLENE	10.00
Eusolex [®] 9020	(1)	AVOBENZONE	2.00
RonaCare [®] AP	(1)	BIS-ETHYLHEXYL HYDROXYDIMETHOXY BENZYL MALONATE	2.00
Oxynex [®] K liquid	(1)	PEG-8 (AND) TOCOPHEROL (AND) ASCORBYL PALMITATE (AND) ASCORBIC ACID (AND) CITRIC ACID	0.10
Arlacel [™] 165	(2)	GLYCERYL STEARATE (AND) PEG-100 STEARATE	3.00
Span [™] 60	(2)	SORBITAN STEARATE	2.00
Parteck [®] LUB STA 50	(1)	STEARIC ACID	2.00
Floraesters 60	(3)	JOJOBA ESTERS	1.00
Shea Butter	(4)	BUTYROSPERMUM PARKII (SHEA) BUTTER	3.50
Tegosoft [®] TN	(5)	C12-15 ALKYL BENZOATE	5.00
Miglyol [®] 812 N	(6)	CAPRYLIC/CAPRIC TRIGLYCERIDE	3.00
Avocado Oil	(7)	PERSEA GRATISSIMA (AVOCADO) OIL	3.00
Xiameter [®] PMX-0345	(8)	CYCLOPENTASILOXANE (AND) CYCLOHEXASILOXANE	5.00
Xiameter [®] PMX-200 Silicone Fluid (100cs)	(8)	DIMETHICONE	0.50
B1			
RonaCare [®] Ectoin	(1)	ECTOIN	0.30
Titriplex [®] III	(1)	DISODIUM EDTA	0.10
Glycerol 85%	(1)	GLYCERIN (AND) WATER	5.00
Water, demineralized		WATER	ad 100
B2			
Keltrol [®] CG-RD	(9)	XANTHAN GUM	0.20
C			
Emblica [®]	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	2.00
RonaCare [®] Luremin [®]	(1)	SORBITOL (AND) DIHYDROXY METHYLCHROMONE	2.00
Water, demineralized		WATER	5.00
D			
Preservatives		PRESERVATIVES	q.s.
Fragrance		FRAGRANCE	q.s.

Procedure:

Disperse phase B2 into phase B1 and stir until homogenous. Heat phases A and B to 80°C. Add phase A to phase B slowly while stirring. Homogenize. Cool to 40°C and add phase C and D while stirring. Adjust pH value 5.0-5.5 if necessary.

Notes:

Appearance: light beige soft cream (o/w);
pH (23°C): 4.9;
Viscosity: 33,000 mPa.s (Brookfield RV DV II+, Helipath spindle C, 10 rpm) at 23°C;
Stability: 3 months at 40°C, FTC (-5°C to 40°C), 5°C, RT and 1 week at 50°C;

Suppliers:

- | | |
|--|----------------------------------|
| (1) Merck KGaA, Darmstadt, Germany / EMD Performance Materials | (5) Evonik Nutrition & Care GmbH |
| (2) Croda | (6) IOI Oleo GmbH |
| (3) Lehmann & Voss & Co. | (7) Gustav Heess GmbH |
| (4) H. Erhard Wagner GmbH | (8) Dow Chemicals |
| | (9) CP Kelco |

Rep'hairing Serum

All day treatment for damaged hair



MSAS.895.08.06.18 - Formulation example

INGREDIENTS		INCI US	[%]
A			
RonaCare® Nicotinamide	(1)	NIACINAMIDE	1.00
Glycerol 85%	(1)	GLYCERIN (AND) WATER	5.00
Olivem® 1000	(2)	CETEARYL OLIVATE (AND) SORBITAN OLIVATE	3.00
Keltrol® CG-SFT	(3)	XANTHAN GUM	0.50
Avicel® PC 591	(4)	MICROCRYSTALLINE CELLULOSE (AND) CELLULOSE GUM	2.00
Water, demineralized		WATER	ad 100
B			
Oxyxex® L-CV Liquid	(1)	ALCOHOL (AND) TOCOPHEROL (AND) CAPRYLIC/CAPRIC TRIGLYCERIDE (AND) ASCORBYL PALMITATE (AND) ASCORBIC ACID (AND) CITRIC ACID	0.05
Refined Avocado Oil	(5)	PERSEA GRATISSIMA (AVOCADO) OIL	3.50
Castor oil, pressed	(5)	RICINUS COMMUNIS (CASTOR) SEED OIL	3.50
C			
Timiron® Glam Silver	(1)	ALUMINA (AND) TITANIUM DIOXIDE (AND) TIN OXIDE	1.00
Ronastar® Golden Sparks	(1)	CALCIUM ALUMINUM BOROSILICATE (AND) SILICA (AND) TITANIUM DIOXIDE (AND) TIN OXIDE	0.50
D			
Emblica®	(1)	PHYLLANTHUS EMBLICA FRUIT EXTRACT	1.00
Water, demineralized		WATER	5.00
E			
RonaCare® Potassium Sorbate	(1)	POTASSIUM SORBATE	0.60
Water, demineralized		WATER	5.00
F			
RonaCare® Benzyl Alcohol	(1)	BENZYL ALCOHOL	1.00
Fragrance		FRAGRANCE	q.s.

Procedure:

Sprinkle Avicel® PC 591 in water and stir for about 20 min. Add premixed Xanthan Gum and Glycerin and stir until homogenous. Solubilize RonaCare® Nicotinamide in the gel. Then add Olivem® 1000. Heat separately phase A and phase B to 78-80°C. Pour phase B into phase A and homogenize. Add phase C and stir until completely dispersed. Cool slowly to room temperature while gentle stirring. At T<30°C, add successively premixed phase D, premixed phase E and phase F. Adjust pH to 5.5 if necessary.

Suppliers:

- (1) Merck KGaA, Darmstadt, Germany / EMD Performance Materials
- (2) Univar
- (3) Azelis Germany GmbH
- (4) Masso
- (5) IES Labo

Notes:

Appearance: light beige serum with silver and gold interferences;
 pH (23°C): 5.3. pH value tends to decrease during the first week before stabilizing;
 Viscosity: 27,000 cP (Fungilab Expert, Spindle R4, 5 rpm) at 23°C. The product reaches its final viscosity after one month;
 Stability: 3 months at room temperature, 4°C and 45°C
 Store away from light and heat;

A bundle of valuable active ingredients with a blend of effect pigments for vital hair inside and out: The active ingredient Emblica® nourishes and strengthens the hair from root to tip. In addition, RonaCare® Nicotinamide will help promote hair quality. The combination of pigments, Timiron® Glam Silver and Ronastar® Golden Sparks adds luminosity with their subtle silver and gold interference. For best results, rub the serum between your palms and smooth through either wet or dry hair. Best if used daily.

Products are warranted to meet the specifications set forth on their label/packaging and/or certificate of analysis at the time of shipment or for the expressly stated duration. EMD provides information and advice on application technologies and relevant regulations based upon its current knowledge and opinion. EMD MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE REGARDING OUR PRODUCTS, THEIR APPLICATION OR ANY INFORMATION PROVIDED IN CONNECTION THEREWITH. EMD shall not in any event be liable for incidental, consequential, indirect, exemplary or special damages of any kind resulting from any use or failure of the products. Customer is responsible for and must independently determine the suitability of EMD's products for its products, intended use and processes. The foregoing information and suggestions are also provided without warranty of non-infringement as to intellectual property rights of third parties and shall not be construed as any inducement to infringe the rights of third parties. Customer shall be responsible for obtaining any applicable third party intellectual property licenses. All sales are subject to EMD's complete Terms and Conditions of Sale. Prices are subject to change without notice. EMD reserves the right to discontinue products without prior notice.

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EMD Performance Materials Corp.

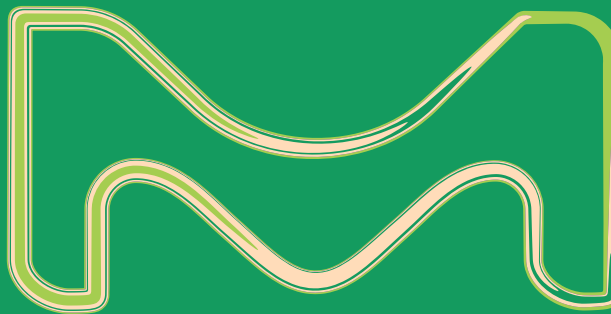
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