

Extratan™

DIHYDROXYACETONE

For a natural tan without sun exposure

Formulation Examples

DIHYDROXYACETONE FORMULATION EXAMPLES

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SPF 8 Self Tanner Liquid Crystal with Arlatone 2121

FC-DHA-00101

Ingredients	INCI Name	[wt.%]	Suppliers
A			
1 Water, demineralized	Aqua (Water)	49.95	
2 Disodium EDTA	Disodium EDTA	0.10	Dow
3 Glycerin	Glycerin	2.00	Active Organics
4 Xanthan Gum	Xanthan Gum	0.30	CP Kelco
5 Arlatone 2121	Sorbitan Stearate & Sucrose Cocoate	2.50	Croda
B			
6 Octinoxate	Octyl methoxycinnamate	7.50	Merck
7 HALLBRITE® OS USP	Ethylhexyl Salicylate	5.00	Hall Star
8 Zenigloss Q-SE	Polyquaternium 57 (and) PEG-8 Ricinoleate)	2.50	Zenitech
9 Lexorez® TL-8	Trimethylpentanediol/Adipic Acid Copolymer	3.00	Inolex
10 Zenigloss SE	Castor Isostearate Succinate and PEG 8 Ricinoleate	2.50	Zenitech
11 Tocopheryl Acetate	Tocopheryl Acetate	0.10	M.C.Biotec
12 BHT	BHT	0.05	M.C.Biotec
13 Dioctyl Sebacate	Diethylhexyl Sebacate	5.00	Alzo International
C			
14 Arlasolve DMI	Dimethyl Isosorbide	3.00	Croda
15 TRANSCUTOL CG	Ethoxydiglycol	5.00	Gattefosse
16 Extratan	Dihydroxyacetone	5.00	M.C.Biotec
17 Black Walnut Extract	Black Walnut Extract	0.50	Vegetech
D			
18 Water	Water	5.00	
19 Sodium Metabisulfite	Sodium Metabisulfite	0.30	M.C.Biotec
20 Citric Acid	Citric Acid	q.s.	Jungbunzlauer
E			
21 DIOCID	Caprylyl Glycol, Phenoxyethanol, Hexylene Glycol	0.70	Centerchem
Total		100.00	

Procedure:

1. Disperse Xanthan gum in some of water of phase A at room temperature, let it fully hydrate (15 min). Disperse Arlatone 2121 in remained water of phase A, slowly heat to 80°C with moderate stirring.
2. Add hydrated Xanthan gum and remained ingredients to Lamellar/water phase with moderate stirring, maintain 75°C.
3. Slowly add heated phase B to above phase A with intensive stirring. Begin cooling with gentle stirring.
4. Add phase C at 40°C with stirring, followed by phase D and E, and continue cooling to room temperature.

M.C.Biotec hopes that the technical information and suggestions for use contained herein will be of interest to you, but they are not to be construed as warranties or inducements to infringe any particular patent.

O/W Self-Tanning Cream with Tego® Care 150 as Emulsifier

FC-DHA-00201

	Ingredients	INCI Name	[wt.%]	Suppliers
	A			
1	TEGO® Care 150	Glyceryl Stearate (and) Steareth-25 (and) Ceteth-20 (and) Stearyl Alcohol	9.00	Evonik Goldschmidt GmbH
2	TEGO® Alkanol 18	Stearyl Alcohol	1.00	Evonik Goldschmidt GmbH
3	Paraffin liquid	Mineral oil	8.50	Merck KGaA
4	Octyldodecanol	Octyldodecanol	2.50	Cognis GmbH
5	TEGOSOFT® CT	Caprylic/Capric Triglycerides	2.00	Evonik Goldschmidt GmbH
	B			
6	Butane-1,3-diol	Butylene glycol	3.00	Kyowa Hakko USA
7	Sorbitol USP Powder	Sorbitol	3.00	Lipo Chemicals, Inc.
8	Water	Water	48.50	
	C			
9	Extratan	Dihydroxyacetone	5.00	M.C.Biotec Inc.
10	Troxerutin	Troxerutin	1.50	M.C.Biotec Inc.
11	TRANSCUTOL CG	Ethoxydiglycol	1.50	Gattefosse
12	Water, demineralized	Water (Aqua)	13.50	
	D			
13	Pink love 2	Perfume	0.50	Symrise
14	Diocide	Caprylyl Glycol, Phenoxyethanol, Hexylene Glycol	0.50	Centerchem Inc.
	Total		100.00	

Procedure:

1. Separately heat phase A and phase B to approx. 65°C.
2. Add phase A to phase B while stirring. Homogenize. Or, combine the hot water (phase B) and oil phase (phase A) without stirring (to avoid the building of the water-in-oil form) and start afterwards with the homogenisation. During cooling, keep a constant horizontal and vertical movement of the emulsion.
3. Add phase C at 35 -45°C, followed by phase D

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Self Tanning Cream Containing Tyrosine Enhancer

FC-DHA-00301

Ingredient	INCI Name	[wt.%]	
A			
1 Deionized water	Water (Aqua)	70.15	
B			
2 Amigel®	Sclerotium Gum	0.70	Alban Muller Industrie
C			
3 MONTANOV 68	Cetearyl Alcohol, Cetearyl Glucoside	5.00	SEPPIC
4 Behenyl Alcohol	Behenyl Alcohol	1.50	Sasol Germany GmbH
5 Glyceryl Stearate	Glyceryl Stearate	1.00	BASF Corporation
6 Jojoba oil	Simmondsia Chinensis (Jojoba) Seed Oil	2.00	Desert Whale Jojoba Co., Inc.
7 DC200fluid/200cts	Dimethicone	3.00	Dow Corning
8 Lanol 99	Isononyl Isononanoate	2.00	SEPPIC
9 Paraffinum Liquidum	Mineral Oil	3.00	Sasol Wax GmbH
10 Amiox	Helianthus Annuus (Sunflower) Seed Oil, Rosmarinus Officinalis (Rosemary) Leaf Extract	0.05	Alban Muller Industrie
D			
11 Butane-1,3-diol	Butylene glycol	3.00	Kyowa Hakko USA, Inc.
12 Fragrance	Parfum	0.200	
13 Extratan	Dihydroxyacetone	4.00	M.C.Biotec
14 Tyr-Ol	Oleoyl Tyrosine (and) Butylene Glycol (and) Oleic Acid	1.5	Croda, Inc.
E			
15 Water	Aqua	2.00	
16 Sodium Metabisulfite		0.15	Universal Preserv-A-Chem
17 Diocide	Caprylyl Glycol, Phenoxyethanol, Hexylene Glycol	0.75	Centerchem Inc.
Total		100.00	

Procedure:

1. Heat phase A to 75°C.
2. Add phase B to phase A with stirring.
3. Heat phase C to 75°C. Add phase C in A+B and homogenise. Leave to cool in a hot water bath while stirring slowly.
4. At 40°C, add phases D then E while stirring.

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Sunny Glow Self Tanning Cream with Glittering, Shimmering and Sun Protection

FC-DHA-00401

Ingredient	INCI Name	[wt. %]	Suppliers
A			
1	Neo heliopan 303	Octocrylene	2.00 Symrise
2	Neo heliopan AV	Octyl Methoxycinnamate	4.00 Symrise
3	Neo Heliopan OS	Ethylhexyl Salicylate	2.00 Symrise
4	Dow Corning® 556 FLUID	Phenyl Trimethicone	5.50 Dow Corning
5	Dow Corning® 2502	Cetyl Dimethicone	2.00 Dow Corning
6	Crodamol GTCC	Caprylic/Capric Triglyceride	3.00 Croda, Inc.
7	Span 60	Sorbitan Stearate	5.00 Uniqema
8	Lipocol O-20	Oleth-20	1.80 Lipo Chemicals
9	Lipocol C-20	Ceteth-20	2.50 Lipo Chemicals
	Jojoba Oil Golden	Jojoba oil	2.00 Desert Whale Jojoba
	Tocopheryl Acetate	Tocopheryl Acetate	0.50 M.C.Biotec Inc.
B			
10	Water, demineralized	Water (Aqua)	30.00
11	Liponic EG-1	Glycereth-26	4.00 Lipo Chemicals
12	Natrosol 250 HHR	Hydroxyethyl Cellulose	0.80 Hercules Inc.
C			
13	Water, demineralized	Water (Aqua)	17.30
14	Extratan	Dihydroxyacetone	4.00 M.C.Biotec Inc.
	Troxerutin	Troxerutin	1.50 M.C.Biotec Inc.
	TRANSCUTOL CG	Ethoxydiglycol	1.50 Gattefosse
D			
15	Dow Corning® 245 FLUID	Cyclopentasiloxane	6.00 Dow Corning
16	Dow Corning® HMW 2220	Divinyldimethicone / Dimethicone Copolymer (and) C12-13 Pareth-3 (and) C12-13 Pareth-23	3.00 Dow Corning
17	Tyr-OI	Oleoyl Tyrosine (and) Butylene Glycol (and) Oleic Acid	1.00 Croda, Inc.
18	Sepicide HB2	Phenoxyethanol (and) Methylparaben (and) Butylparaben (and) Ethylparaben (and) Propylparaben (and) Isobutylparaben	0.15 Seppic S.A.
19	BHT	BHT	0.15 Merck KGaA
E			
2	Fragrance	Parfum	0.30

0

Total

100.00

Procedure:

1. In a glass vessel, dissolve Liponic EG-1 in the water of phase B, Add Natrosol 250 HHR, homogenize and heat to 75°C.
2. In a separate glass vessel, weight sunscreens (303 + AV + OS) in phase A, followed by 556, 2502, Crodamol GTCC and Span 60. Homogenize. Add Liposorb O-20 and Lipocol C-20, jojoba oil and Tocopheryl acetate to "2". Heat it to 70°C.
3. Mix phase C in another vessel.
4. Add "1" (previously homogenized and with viscosity increased) to "2", under constant mechanical agitation. Cool it down to 40°C
5. Add "3" in "4", with stirring.
6. Separately add the ingredients in phase D. Homogenize it completely.
7. Add fragrance and mix well.

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Self-tanning O/W Cream with Sunscreens

FC-DHA-00501

Ingredients	INCI Name	Wt. %	Suppliers
A			
1 Lexemul® 561	Glyceryl stearate (and) PEG-100 stearate	5.00	Inolex
2 Tego Alkanol 16	Cetyl alcohol	1.00	Evonik
3 Stearic acid	Stearic acid	2.00	Lonza
4 DC200fluid/200cts	Dimethicone	4.00	Dow Corning
5 DC345fluid	Cyclomethicone	2.00	Dow Corning
6 NEOBEE® 1053	Caprylic/capric acid triglyceride	2.50	Stepan
7 Jojoba oil	Simmondsia chinensis (jojoba) seed oil	1.00	Active Concepts LLC
8 Isopropyl palmitate	Isopropyl palmitate	3.50	M.C.Biotec Inc.
9 Eusolex 2292	Octyl methoxycinnamate	2.00	Merck KGaA
10 Eusolex 9020	Butyl methoxydibenzoylmethane	1.00	Merck KGaA
11 Tocopheryl Acetate	Tocopheryl acetate	0.50	M.C.Biotec Inc.
B			
12 demineralised water	Water (Aqua)	48.70	
13 Euxyl PE9010	Phenoxyethanol, Ethylhexylglycerin	0.80	Schulke & Mayr
14 Glycerin	Glycerin	2.00	Merck
15 Butane-1,3-diol	Butylene glycol	4.00	Kyowa Hakko
16 Arlasolve DMI	Dimethyl isosorbide	2.50	Croda
C			
17 demineralised water	Water (Aqua)	10.00%	
18 Extratan	Dihydroxyacetone	5.00%	M.C.Biotec Inc.
19 Troxerutin	Troxerutin	2.50	M.C.Biotec Inc.
Total		100.0%	

Procedure:

- Mix the ingredients of phase A and heat to 75°C.
- Heat phase B to 80° C and add to above "1" and stir thoroughly. Cool the resulting emulsion to 50°C and homogenise.
- At 30° C add aqueous phase C to the above emulsion and stir thoroughly.

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O/W Self Tanning Cream Comprising Flavonoids

FC-DHA-00601

Ingredients	INCI	wt. %	Suppliers
A			
1 TEGO® Care 150	Glyceryl Stearate, Steareth-25, Ceteth-20, Stearyl Alcohol	8.00	Evonik Goldschmidt
2 Lanette O	Cetearyl Alcohol	1.50	Cognis GmbH
3 TEGOSOFT® liquid	Cetearyl Ethylhexanoate	5.50	Degussa AG
4 NEOBEE® 1053	Caprylic/Capric Triglyceride	5.50	Stepan
5 ABIL® Wax 2434	Stearoxy Dimethicone	1.00	Evonik Goldschmidt
6 ABIL® 350	Dimethicone	0.50	Evonik Goldschmidt
7 Tocopheryl Acetate	Tocopheryl Acetate	0.50	M.C.Biotec Inc.
B			
8 RonaCare® Ectoin	Ectoine	0.30	Merck KGaA
9 Butane-1,3-diol	Butylene glycol	2.00	Kyowa Hakko Chemical
10 Water	Aqua (water)	47.80	
C			
11 Sodium Metabisulfite	Sodium Metabisulfite	0.10	M.C.Biotec Inc.
12 Troxerutin	Troxerutin	2.50	M.C.Biotec Inc.
13 Colorona® Bronze	Mica and Iron oxides	5.00	Merck KGaA
14 Extratan	Dihydroxyacetone	5.00	M.C.Biotec Inc.
15 Mahakanni	Eclipta prostrata extract & water	1.50	M.C.Biotec Inc.
16 Arlasolve DMI	Dimethyl isosorbide	2.50	Croda
17 Water	Aqua (water)	10.00	
D			
18 Fragrance	Perfume	0.10	
19 Diocide	Caprylyl Glycol, Phenoxyethanol, Hexylene Glycol	0.70	Centerchem Inc.
Total		100.00	

Procedure:

1. Heat phase A and B separately to 80°C.
2. Slowly add phase B to A with stirring and homogenized. Cool the mixture with stirring and homogenized
3. Add Phase C to above “2” at 40°C, and then add Phase D

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Touch of Sun Day Care Self Tanning Cream

FC-DHA-00701

	Ingredients	INCI	[%]	Suppliers
	A			
1	Tego Care 150	Glyceryl stearate, steareth-25, ceteth-20, stearyl alcohol	8.00	Degussa-Goldschmidt AG
2	Lanette O	Stearyl alcohol	1.50	Cognis GmbH
3	Tegosoft liquid	Cetearyl ethylhexanoate	5.00	Degussa-Goldschmidt AG
4	Miglyol 812 N	Caprylic/capric triglyceride	5.00	Sasol Germany GmbH
5	Abil Wax 2434	Stearoxy dimethicone	1.00	Degussa-Goldschmidt AG
6	Dow Corning 200 (100cs)	Dimethicone	0.50	Dow Corning
7	(-)-Alpha-Bisabolol Natural	Bisabolol	0.20	Symrise
	B			
8	Ronastar® Silver	Calcium Aluminum Borosilicate, Silica, CI 77891 (Titanium Dioxide), Tin Oxide	1.00	Merck KGaA
9	Glycerin	Glycerin	2.00	
10	Deionized water	Water (Aqua)	62.80	
	C			
11	Extratan	Dihydroxyacetone	5.00	M.C.Biotec Inc.
12	Sodium metabisulfite	Sodium metabisulfite	0.20	M.C.Biotec Inc.
13	Water	Water (Aqua)	9.00	
	D			
14	Diocide	Caprylyl Glycol, Phenoxyethanol, Hexylene Glycol	0.70	Centerchem
15	Fragrance	Parfum	0.10	
	Total		100.00	

Procedure:

1. Separately heat phase A and phase B to 80°C.
2. Add phase B slowly to phase A while stirring. Homogenize. Cool down while stirring and add phase C at 40°C, followed by adding Phase D.

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Transparent W/O Smooth Self-Tanning Lotion

FL-DHA-00101

	Ingredients	INCI	[%]	Suppliers
	A			
1	Dow Corning 3225 C	Cyclomethicone, dimethicone copolyol	23.60	Dow Corning Merck KGaA
	B			
2	Extratan	Dihydroxyacetone	5.00	M.C. Biotec Inc.
3	Butane-1,3-diol	Butylene Glycol	35.50	Textron Tecnica, S.L.
4	Water, demineralized	Aqua (Water)	35.30	
	C			
5	Diocide	Caprylyl Glycol, Phenoxyethanol, Hexylene Glycol	0.60	Centerchem
	Total		100.00	

Procedure:

1. Mix phase B and add it to phase A with stirring.
2. Add phase C to above "1".

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After Sun Light Tanning Lotion containing bisabolol

FL-DHA-00201

Ingredients	INCI Name	Wt. %	Supplier
A			
1 Tego® Care 450	Polyglyceryl-3 Methylglucose Distearate	1.50	Evonik-Goldschmidt
2 Cetearyl Alcohol	Cetearyl Alcohol	1.15	Croda
3 Glyceryl Stearate	Glyceryl Stearate	1.15	Gattefosse s.a.s.
4 Crodamol OS	Ethylhexyl Stearate	8.00	Croda
5 Nikkol Olive Squalane	Squalane	5.00	Nikkol
6 RonaCare® Bisabolol	Bisabolol	0.20	Merck KGaA
7 DC345fluid	Cyclomethicone	2.00	Dow Corning
B			
8 Deionized Water	Water	55.10	
9 Keltrol CG-RD	Xanthan Gum	0.10	CP Kelco
C			
10 Glycerin	Glycerin	5.00	Merck KGaA
11 Phenonip	Phenoxyethanol, Methylparaben, Ethylparaben, Butylparaben, Propylparaben, Isobutylparaben	0.50	Clariant
D			
12 Alcohol	Alcohol	5.00	
13 Fragrance	Perfume	0.30	
E			
14 Deionized Water	Water (Aqua)	8.00	
15 Extratan	Dihydroxyacetone	4.00	M.C.Biotec Inc.
16 Troxerutin	Troxerutin	2.50	M.C.Biotec Inc.
17 Sodium Metabisulfite	Sodium Metabisulfite	0.50	M.C.Biotec Inc.
Total		100.00	

Procedure:

1. Separately heat phase A to 70°C, and phase B to 75°C.
2. With stirring add phase B to phase A, cool to 50°C, homogenize and cool to 30°C. Then add phases C, D and E one after the other and stir till cold.

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Self Foaming Self tanning Lotion Containing PHOENOMULSE CE-1 and MFA Complex

FL-DHA-00301

Ingredient	INCI Name	Wt.%	Supplier
A			
1 Purified Water	Water (Aqua)	44.60	
2 Glycerin 99.5%	Glycerin	2.00	Norman, Fox & Co.
B			
3 ENDIMULSE 165-V	Glyceryl Stearate (and) PEG-100 Stearate	4.50	Coast Chemicals
4 CRODAMOL CAP	Cetearyl Ethylhexanoate (and) Isopropyl Myristate	2.50	Croda
5 ADOL 52	Cetyl alcohol	0.80	Ashland Chemicals
6 LIPONATE NEB	C12-C15 Alkyl Benzoate	1.60	Lipo Chemicals
C			
7 DOW CORNING 245	Cyclopentasiloxane	8.20	Dow Corning
D			
8 BOTANISTAT PF-64	Phenoxyethanol (and) Caprylyl Glycol (and) Ethylhexylglycerin (and) Hexylene Glycol	1.00	Botanigenics, Inc.
9 SEPIGEL 305	Polyacrylamide (and) C13-14 Isoparaffin (and) Laureth-7	2.00	Seppic
E			
10 CRODAROM NUT A	Water (and) Propylene Glycol (and) Walnut Extract	0.10	Croda
11 Fragrance		0.50	
F			
12 Water		5.00	
13 Extratan	Dihydroxyacetone	5.00	M.C.Biotec
14 Sodium Metabisulfite		0.10	M.C.Biotec
G			
15 MFA Complex	Saccharum Offic. (sugar cane) Extract (and) Citrus Medica Limonum (lemon) Extract (and) Pyrus Malus (apple) Extract (and) Camellia Sinensis Leaf Extract	0.10	Barnet Products Corp.
16 PLANTAREN 2000	Decyl Glucoside	7.00	Cognis Corp
H			
17 PHOENOMULSE CE-1	Polyhydroxystearic Acid (and) Isononyl Isononanoate (and) Ethylhexyl Isononanoate (and) Sodium Cocamidopropyl PG-Dimonium Chloride Phosphate (and) Methyl Perfluorobutyl Ether (and) Methyl Perfluoroisobutyl Ether	15.00	Phoenix Chemical, Inc.
Total		100.00	

Procedure:

1. Add Glycerin to water of phase A, and mix at 70-75°C until uniform.
2. Heat Phase B to 70-75°C until all solids are dissolved.
3. Add above "2" to "1" at 70-75°C and mix for approximately 15-30minutes to emulsify. Cool to 60-65°C
4. Add Phase C to above "3", and mix well.
5. At 55-60°C add ingredients in Phase D to above "4"
6. At 45°C add Phase E to above "5", and mix well.
7. Premix Phase F and then add to above "6" at 40°C and mix well.
8. Add Phase G to above "7" and mix well. Cool to 12-18°C, and then add Phase H and mix well.

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W/O Self Tanning Lotion with flavonoids

FL-DHA-00401

Ingredients	INCI	Wt.%	Supplier
A			
1 ABIL® EM 97	Bis-PEG/PPG-14/14 Dimethicone, cyclopentasiloxane	1.50	Evonik Goldschmidt GmbH
2 ABIL® EM 90	Cetyl PEG/PPG-10/1 Dimethicone	1.30	Evonik Goldschmidt GmbH
3 DC345fluid	Cyclomethicone	13.00	Dow Corning
4 DermoL.TM. 816	Ethylhexyl Palmitate	2.00	Alzo, Inc.
5 USG 103	Cyclopentasiloxane, Dimethicone/Vinyldimethicone, crosspolymer	5.00	Shin-Etsu Silicones of America
6 Tegosoft® DEC	Diethylhexyl Carbonate	5.00	DegussaAG
7 Fragrance	Perfume	0.30	
8 (-)-alpha-Bisabolol natural	Bisabolol	0.2	Symrise
B			
9 Sodium Metabisulfite	Sodium Metabisulfite	0.50	M.C.Biotec
10 Troxerutin	Troxerutin	2.50	M.C.Biotec
11 Colorona® Bronze	Mica and Iron oxides	5.00	Merck KGaA
12 Extratan	Dihydroxyacetone	5.00	M.C.Biotec Inc.
13 Rona® Care Ecotin	Ecotine	0.30	EMD Chemicals Inc.
14 Butane-1,3-diol	Butylene glycol	17.80	Kyowa Hakko Chemical
15 Arlasolve DMI	Dimethyl isosorbide	5.00	Croda
16 Magnesium Sulfate	Magnesium Sulfate	2.00	
17 Alcohol	Alcohol	8.00	
18 Phenonip	phenoxyethanol, methylparaben, ethylparaben, butylparaben, propylparaben, isobutylparaben	0.80	Clariant
19 Deionized water	Aqua (water)	29.80	
Total		100.00	

Procedure:

1. Add magnesium sulfate to water of Phase B with stirring, and subsequently add the remained ingredients of Phase B.
2. Slowly add Phase B to phase A with stirring, and the mixture is homogenized.

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W/Si Self Tanning Gel

FG-DHA-00101

Ingredients	INCI	[%]	Suppliers
A			
1 Dow Corning 5225 C	Cyclopentasiloxane, PEG/PPG-18/18 dimethicone	20.00	Dow Corning
2 DM-Fluid-A-6cs	Dimethicone	4.00	S. Black GmbH
3 Simmondsia chinensis (Jojoba) Seed Oil	Simmondsia chinensis (Jojoba) Seed Oil	3.00	Jan Dekker International
4 Tocopherol Acetate	Tocopheryl acetate	0.50	M.C.Biotec Inc.
B			
5 RonaCare® Ectoin	Ectoin	0.30	Merck KGaA
6 Butane-1,3-diol	Butylene glycol	28.00	Kyowa Hakko Chemical
7 Glycerin	Glycerin	3.00	
8 Dipropylenglycol	Dipropylene glycol	10.00	BASF AG
9 Sodium chloride	Sodium chloride	1.00	Merck KGaA
10 Ethanol 96%	Alcohol	5.00	Merck KGaA
11 1% Caramel in water	Caramel	2.00	D.D.Williamson
12 Black Walnut Extract	Black walnut extract	0.50	Vegetech
13 Water, demineralized	Aqua (water)	9.00	
C			
14 Extratan	Dihydroxyacetone	5.00	M.C.Biotec Inc.
15 Water, demineralized	Aqua (water)	8.50	
D			
16 Fragrance	Parfum	0.20	
Total		100.00	

Procedure:

Mix phase B and incorporate it into phase A. subsequently add phases C and D with stirring. Homogenize.

M.C.Biotec hopes that the technical information and suggestions for use contained herein will be of interest to you, but they are not to be construed as warranties or inducements to infringe any particular patent.

Self-Tanning Gel with Tanning Accelerator

FG-DHA-00201

	Ingredients	INCI Name	% W/W	Supplier
	A			
1	Deionised Water	Aqua	89.20	
2	Diocide	Caprylyl Glycol, Phenoxyethanol, Hexylene Glycol	0.70	Centerchem
3	Titriplex III	Disodium EDTA	0.10	Merck
4	Extratan	Dihydroxyacetone	5.00	M.C. Biotec Inc.
5	Troloxerutin	Troloxerutin	2.50	M.C. Biotec
6	Arlasolve DMI	Dimethyl isosorbide	2.50	Croda
	B			
7	Amaze XT	Dehydroxanthan Gum	1.00	National Starch
	Total		100.00	

Procedure:

1. Premix the ingredients in Phase A in order, mixing well.
2. Add phase B slowly to phase A with stirring until uniform.

M.C. Biotec hopes that the technical information and suggestions for use contained herein will be of interest to you, but they are not to be construed as warranties or inducements to infringe any particular patent.

DHA Clear Spray

FS-DHA-00101

Ingredient	INCI Name	Wt. %	Supplier
A			
1 Water,	Water	to 100.0	
2 1,3-propylene glycol	Propylene glycol	10.00	
3 DHA (Extratan)	Dihydroxyacetone	8.0	M.C.Biotec Inc.
4 Sepicide HB2	Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Butylparaben (and) Isobutylparaben (and) Propylparaben	0.50	Seppic S.A.
B			
5 RH-40	PEG-40 Hydrogenerated castol oil	0.50	BASF
6 Fragrance		0.10	

Procedure:

1. Add DHA into water, and mix to clear solution. Add remaining ingredients into Phase A.
2. Mix fragrance with RH 40 then add into Phase A. Stir for 15 minute to clear solution.

M.C.Biotec hopes that the technical information and suggestions for use contained herein will be of interest to you, but they are not to be construed as warranties or inducements to infringe any particular patent.

Sunny Radiance Quick Drying Pump Spray

FS-DHA-00201

Ingredient	INCI Name	Wt. %	Supplier
A			
1 Dow Corning® 9011	Cyclopentasiloxane & PEG-12 Dimethicone Crosspolymer	15.00	Dow Corning
2 Dow Corning® 245 FLUID	Cyclomethicone	17.00	Dow Corning
3 Huile de Palmotene	Palmotene Oil	0.30	Bertin
4 RonaCare® Bisabolol nat.	Bisabolol	0.20	Merck KGaA
5 Promyristyl PM-3	PPG-3 Myristyl Ether	1.00	Croda, Inc.
6 Fragrance	Perfume	0.30	
B			
7 Water	Water	56.50	
8 Extratan	Dihydroxyacetone	5.00	M.C.Biotec Inc.
9 Sodium Metabisulfite	Sodium Metabisulfite	0.10	M.C.Biotec Inc.
10 Sodium Chloride	Sodium Chloride	0.50	VEL
11 Dow Corning® HMW 2220	Divinyldimethicone / Dimethicone Copolymer (and) C12-13 Pareth-3 (and) C12-13 Pareth-23	0.50	Dow Corning
12 Empicol ESB-3	Sodium Laureth Sulfate	1.50	Albright & Wilson
13 Mahakanni	Eclipta prostrata extract & water	1.50	M.C.Biotec Inc.
14 10% Citric Acid	Citric acid (and) water	0.10	
C			
15 Sepicide HB2	Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Butylparaben (and) Isobutylparaben (and) Propylparaben	0.50	Seppic S.A.
Total		100.00	

Procedure:

1. Mix all ingredients of the phase A until homogeneous
2. Mix all ingredients of Phase B together.
3. Add phase B quickly to phase A while moderate stirring. Continue to stir for 10 minutes.
4. Add phase C and mix 5 min.
5. The product will show its complete phase separation a few hours after production.

M.C.Biotec hopes that the technical information and suggestions for use contained herein will be of interest to you, but they are not to be construed as warranties or inducements to infringe any particular patent.

Self Tanning Lotion for Pump-Spray Comprising Aqueous-alcoholic System

FS-DHA-00301

Ingredients	INCI	[%]	Suppliers
1 Extratan	Dihydroxyacetone	5.00	M.C. Biotec Inc.
2 Mahakanni	Eclipta prostrata extract & water	1.00	M.C. Biotec Inc.
3 Troxerutin	Troxerutin	1.50	M.C. Biotec Inc.
4 Ethanol 96%	Alcohol	38.50	Merck KGaA
5 Tagat L 2	PEG-20 Glyceryl Laurate	7.00	Degussa-Goldschmidt AG
6 Butylene glycol	Butylene glycol	5.00	
7 Water, demineralized	Aqua (Water)	42.00	
Total		100.00	

Procedure:

Mix together all materials while stirring.

M.C. Biotec hopes that the technical information and suggestions for use contained herein will be of interest to you, but they are not to be construed as warranties or inducements to infringe any particular patent.

Self tanning mousse for pump with tyrosine enhancer

FO-DHA-00101

Raw Material	INCI Name	Wt. %	Supplier
A			
1 Deionised Water	Water (Aqua)	78.19	
2 Plexajel ASC	Aqua, Glycerin, Polyacrylimidomethylpropane Sulfonate, Polyquaternium-4, Phenoxyethanol	10.00	Guardian
B			
3 Phenonip	Phenoxyethanol, Methylparaben, Ethylparaben, Butylparaben, Propylparaben, Isobutylparaben	1.00	Clariant
4 Extratan	Dihydroxyacetone	4.50	M.C. Biotec Inc.
5 N-acetyl tyrosine	acetyl tyrosine	0.2	M.C. Biotec Inc.
6 BHT	BHT	0.1	M.C. Biotec Inc.
7 Transcutol P	Ethoxydiglycol	5.00	Gattefossé
8 EMAL 228 D/JM	Sodium Laureth Sulfate	1.00	Kao Chemicals Europe
C			
9 25% Citric Acid	Citric Acid, Aqua	0.01	M.C. Biotec Inc.
Total		100.00	

Procedure:

1. Premix the ingredients in Phase A until uniform
2. Add phase B to phase A in order, homogenizing until uniform
3. Adjust the pH to 3.5 to 4.0 using phase C

M.C. Biotec hopes that the technical information and suggestions for use contained herein will be of interest to you, but they are not to be construed as warranties or inducements to infringe any particular patent.

Self Tanning Shower Solution

FH-DHA-00101

	Ingredients	INCI	[wt.%]	Suppliers
1	Water demineralized	Aqua (water)	71.35	
2	Extratan	Dihydroxyacetone	5.00	M.C.Biotec Inc.
3	Troloxerutin	Troloxerutin	0.75	M.C.Biotec Inc.
4	Ronacare® Ectoin	Ectoine	0.30	Merck KGaA
5	Colorona® Bronze	Mica and Iron oxides	5.00	Merck KGaA
6	Butane-1,3-diol	Butylene glycol	4.00	Kyowa Hakko Chemical
7	Glycerin	Glycerin	2.00	Merck KGaA
8	Transcutol CG	Ethoxydiglycol	5.00	Gattefosse
9	Arlasolve DMI	Dimethyl isosorbide	2.50	Croda
10	Polysorbate 80	Polysorbate 80	0.50	M.C.Biotec Inc.
11	Crodarom Nut A	Water (and) Butylene glycol (and) Walnut Extract	1.50	Croda
12	Aloe Barbadosis Leaf extract	Aloe Barbadosis Leaf extract	1.00	M.C.Biotec Inc.
13	Caramel	Caramel	0.10	
14	Diocide	Caprylyl Glycol, Phenoxyethanol, Hexylene Glycol	0.70	Centerchem
15	Perfume	Perfume	0.30	
	Total		100.00	

Procedure:

All materials are stirred to uniform

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