# Unveiling The Secret To Super Hybrid Formulations

Step by Step Examples on Building Stable Benchmarks Combining Clinical Skincare, Color, and Mineral SPF





## Flushed Velvet Blush Putty, SPF 43.5, Broad Spectrum (MU-BL 002)

PHASE	INCI NAME (TRADE NAME)	USAGE (WT%)
A	Distilled Water	30.0
	Propanediol	5.00
	Biosaccharide Gum-1 (Fucocert®)	1.00
	Magnesium Sulfate	1.00
	Glycerin	1.00
	Preservative	0.50
B <sub>1</sub>	Zinc Oxide (and) Coco- Caprylate/Caprate (and) Polyhydroxystearic Acid (and) Polyglyceryl-3 Polyricinoleate (and) Triethoxycaprylylsilane (and) Lecithin (S-Block DZ CocoDerm)	31.50
	C13-15 Alkane (Hemisqualane from Sugar Cane) (and) Quaternium-90 Bentonite (and) Triethyl Citrate (G-Gel Eco-HMS)	5.00
B <sub>2</sub>	Rice Bran Wax	1.00
Dz	Behenyl Behenate (Dermowax BB)	2.00
	Solid Coconut Oil	1.00
	Dicaprylyl Ether (Cetiol OE)	7.08
	Safflower oil / Palm oil aminopropanediol esters (Omega6 CERAMIDE®)	0.50
	Silica (MSS-500)	5.00
С	Sorbitan Olivate (Olivem 900)	5.00
U U	Glyceryl Behenate (Compritol 888 CG ATO)	0.50
	Polygyceryl-4 Diisotearate/Polyhydroxystearate/Sebacate (Isolan GPS)	2.00
D	Caprylic/Capric Triglycerides	0.40
U	Polyhydroxystearic acid (and) Caprylic/Capric Triglyceride (and) Isostearic Acid (and) Lecithin (and) Polyglyceryl-3 Polyricinoleate (Applecare PDS 300)	0.04
	Red Iron Oxide	0.32
	Yellow Iron Oxide	0.08
	Red 7 Lake	0.08

#### **Processing Method:**

- 1. Mix Phase A at RT with propeller until all is dissolved.
- 2. Dispersion mix Phase B1 until G-gel is completely dispersed.
- 3. Mix Phase D with a dispersion blade at 70C for 20-30 minutes (until homogenous consistency/appearance). Pass through 3 roller mill (7:3, 3:1 gap size).
- 4. Add Phase D to Phase B1 and dispersion mix at 500-800 RPM for 5 minutes. Scrape the edges to ensure pigment is evenly dispersed.
- 5. Add Phase B<sub>2</sub> to Phase B<sub>1</sub>D and gently mix by hand until Silica is incorporated. Microwave using 10 second intervals and mix until the temperature reaches 80C. Then dispersion mix at 500-800 RPM for 5 minutes.
- 6. Add Phase C to BD. Dispersion mix at 500 RPM until emulsifier is fully dissolved and temperature is at 85C.
- 7. Heat Phase A to about 80C and slowly add to Phase BCD while dispersing at a high shear (1000-1500 RPM). Lower RPM to 500 RPM once all water is incorporated (Low shear prevents bubbles). Continue mixing for 5 minutes.

- SPF: 43.5, FDA protocol, 1 subject
- 🌢 CW: 370 nm, Broad Spectrum
- 50°C oven: Ongoing (5 weeks stable)
- Freeze-Thaw: Passed 3 Cycles



## Benchmark Product: ELF Putty Blush

This Putty Blush has a soft, bouncy texture that not only gives a burst of vibrant color, but also shields your skin from the sun's rays! As you effortlessly blend it in, the soft putty-like texture seamlessly transforms into a velvety, soft matte finish. Our hybrid blush combines soothing anti-aging skincare actives with color cosmetics. This versatility empowers you to wear it solo or alongside other makeup products, allowing you to effortlessly elevate your beauty routine.

## **Formulator Focus**

The combination of S-Block DZ CocoDerm, G-Gel Eco-HMS, and Applecare PDS-300 creates an ultra-stable mineral SPF platform that enhances the delivery of skin health-boosting biotech actives like Fucocert<sup>®</sup> and Omega6 Ceramides<sup>®</sup>.

## **Ingredient Highlights**

#### FUCOCERT ®

is an advanced bio-fermented active that leverages the power of fucose polysaccharides to deliver moisture, anti-aging benefits and skin structure improvement. Enjoy healthy, happy skin without the redness and discomfort caused by external aggressors.

#### OMEGA 6 CERAMIDE ®

uses the latest in ezymatic biocatalytic technology to fuse a natural ceramide-like molecular structure with plant-sourced Omega fatty acids. The result is an advanced biomimetic skin active that is even more effective than traditional ceramides at skin barrier repair and restoration in addition to providing soothing anti-inflammatory properties.

#### S-BLOCK DZ COCODERM

is the new generation of sensory UV-grade mineral dispersions designed for modern high performance sun care. It features a high slip sensory during application with a medium moisturizing after-feel. It is non-nano, has an enhanced active loading of 78%, and gives predictable SPF and broad-spectrum benefits. Its excellent multi-system compatibility simplifies both formulation development and the manufacturing process.

#### **G-GEL ECO-HMS**

is an organoclay gel designed for clean beauty applications. It greatly boosts suspension and sensory of color cosmetic chassis, making it a crucial ingredient in stabilizing high concentrations of color pigments with mineral SPF.

#### **Applecare PDS-300**

is widely known for its use in wetting and dispersing traditional pigments. In this formulation it is used to disperse specialty and pearlescent pigments therefore allowing for the development of a consistent brilliant shine.

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# Stress Free Sun Elixir, SPF 50, Broad Spectrum (SU-WO 019)

PHASE	INCI NAME (TRADE NAME)	USAGE (WT%)
Α	Distilled Water	34.5
	Biosaccharide Gum-1 (Fucocert <sup>®</sup> )	0.50
	Propanediol	4.00
	Magnesium Sulfate	1.00
	Preservative	0.50
В	Zinc Oxide (and) Coco- Caprylate/Caprate (and) Polyhydroxystearic Acid (and) Polyglyceryl-3 Polyricinoleate (and) Triethoxycaprylylsilane (and) Lecithin (S-Block DZ CocoDerm)	31.5
	C13-15 Alkane (Hemisqualane from Sugar Cane) (and) Quaternium-90 Bentonite (and) Triethyl Citrate (G-Gel Eco-HMS)	4.00
	Dicaprylyl Carbonate (Cetiol CC)	10.0
	Undecane (and) Tridecane (Cetiol Ultimate)	7.00
С	Polygyceryl-4 Diisotearate/Polyhydroxystearate/Sebacate (Isolan GPS)	5.50
D	Fragrance	Q.S.
	Propanediol (and) Aqua (and) Sophora Japonica Flower Extract (Resistress®)	1.50

## **Processing Method**

- 1. Premix Phase A with a propeller blade at 500 RPM for 5 minutes or until all the magnesium sulfate is fully dissolved at room temperature.
- 2. Use a dispersion blade to premix S-Block DZ CocoDerm and G-Gel Eco-HMS (500-1000 RPM) at room temperature until it is a smooth paste. Then add the remaining ingredients in Phase B and mix until homogenous.
- 3. Add Phase C to Phase B and homogenize at 4000 RPM for 3 5 minutes with Silverson Homogenizer at room temperature.
- 4. Add Phase D to combined Phase ABC and propeller mix for 5 minutes until completely homogenous.

- SPF: 50; FDA protocol
- CW: 373 nm, Broad Spectrum
- Viscosity at 10 rpm: 10,120 cP
- 50°C oven: 1 month stable
- Freeze-Thaw: Passed 3 Cycles

## Benchmark Product: Shiseido Urban Environment Oil-Free Mineral Sunscreen, SPF 42

Need a simplified skincare routine? With the Stress Free Sun Elixir, you can get sun protection and many skin benefits all in one. This lightweight water-in-oil emulsion provides SPF 50 while supplying your skin with stress relieving, moisturizing, and anti-aging benefits! The skin is left feeling velvety smooth and protected from the sun with just one product!

# **Formulator Focus**

The combination of S-Block DZ CocoDerm and G-Gel Eco-HMS creates an ultra-stable mineral SPF emulsion that enhances the delivery of skin health-boosting biotech actives like Fucocert<sup>®</sup> and Resistress<sup>®</sup>. As a result, you'll be able to cover a huge spectrum of benefit claims using a single active-functional chassis, everything from high-powered hydration, broad spectrum SPF, anti-oxidation, anti-redness, skin rejuvenation, to non-comedogenic, oil-free, and microbiome-friendly.

## **Ingredient Highlights**

## FUCOCERT<sup>®</sup>

is an advanced bio-fermented active that leverages the power of fucose polysaccharides to deliver moisture, anti-aging benefits and skin structure improvement. Enjoy healthy, happy skin without the redness and discomfort caused by external aggressors.

## **RESISTRESS**<sup>®</sup>

is an extract rich in polyphenols, derived from Sophora japonica flowers using a patented enzymatic bioconversion process that enriches it with quercetin dimers. It stimulates your skin's antioxidant system to defend against oxidative stress and boost skin cell regeneration, helping to reduce signs of premature aging and skin burnout.

## S-BLOCK DZ COCODERM

is the new generation of sensory UV-grade mineral dispersions designed for modern high performance sun care. It features a high slip sensory during application with a medium moisturizing after-feel. It is non-nano, has an enhanced active loading of 78%, and gives predictable SPF and broad-spectrum benefits. Its excellent multi-system compatibility simplifies both formulation development and the manufacturing process.

## **G-GEL ECO-HMS**

is an organoclay gel designed for clean beauty applications. It greatly boosts suspension and sensory of color cosmetic chassis, making it a crucial ingredient in stabilizing high concentrations of color pigments with mineral SPF.



# CeraLuxe Lip & Cheek Balm, SPF 50, Broad Spectrum (MU-BL 003)

PHASE	INCI NAME (TRADE NAME)	USAGE (WT%)
<b>A</b> 1	Zinc Oxide (and) Coco- Caprylate/Caprate (and) Polyhydroxystearic Acid (and) Polyglyceryl-3 Polyricinoleate (and) Triethoxycaprylylsilane (and) Lecithin (S-Block DZ CocoDerm)	31.50
	C13-15 Alkane (Hemisqualane from Sugar Cane) (and) Quaternium-90 Bentonite (and) Triethyl Citrate (G-Gel Eco-HMS)	8.00
A <sub>2</sub>	Caprylic/Capric Triglycerides	0.60
<b>11</b>	Polyhydroxystearic acid (and) Caprylic/Capric Triglyceride (and) Isostearic Acid (and) Lecithin (and) Polyglyceryl-3 Polyricinoleate (Applecare PDS 300)	0.06
	Red Iron Oxide	0.48
	Yellow Iron Oxide	0.12
	Red 7 Lake	0.12
B <sub>1</sub>	Rice Bran Wax	5.00
	Candelila Wax	2.00
	Behenyl Behenate (Dermowax BB)	4.00
	Solid Coconut Oil	11.00
B <sub>2</sub>	Safflower oil / Palm oil aminopropanediol esters (Omega6 Ceramide®)	0.50
С	Isodecyl Isononanoate (Dermol 109)	14.00
Ŭ	Dicaprylyl Ether (Cetiol OE)	12.62

#### **Processing Method:**

- 1. Mix Phase A1 with dispersion blade until all G-Gel is evenly dispersed in S-Block.
- 2. Mix Phase A<sub>2</sub> at 70C with a dispersion mixer for 30 minutes. Place through a 3 roller mill two times (7:3, 3:1). Add A<sub>2</sub> to A<sub>1</sub> and let dispersion mix for 5 minutes. Scrape the edges to ensure pigment is evenly dispersed.
- 3. Add Phase B1 to A and microwave in 10 second increments, stirring until it reaches 80C. Dispersion mix until homogenous (5 minutes).
- 4. Add Phase B<sub>2</sub> and dispersion mix for 5 min. Ensure all is melted and homogenous.
- 5. Weight Phase C in a separate vessel and pour in while mixing. Let mix for 3 minutes at 300 RPM (Low shear prevents bubbles).
- 6. Weigh Phase D in a seperate vessel and slowly add into ABC and mix for 5 minutes at 300 RPM.

- SPF: 50, FDA protocol, 1 subject
- CW: 370 nm, Broad Spectrum
- 50°C oven: Ongoing (3 weeks stable)
- Freeze-Thaw: Passed 3 Cycles

# Benchmark Product: Rare Beauty Melting Cream Blush

Do you love the allure of a monochromatic look? Our versatile balm serves as a dual-purpose wonder, shielding your cheeks and lips from the sun's damaging rays. As you blend it in, the initial melting sensation transforms into a powdery soft finish, imparting a plush radiance to your lips and cheeks. With its soothing properties and anti-aging benefits, our balm nurtures your skin whether worn solo or in tandem with other makeup essentials.

## **Formulator Focus**

The combination of S-Block DZ CocoDerm, G-Gel Eco-HMS, and Applecare PDS-300 creates an ultra-stable mineral SPF platform with a pH-steady environment, perfectly in synch with high tech microbiome-wellness actives like Omega6 Ceramides<sup>®</sup>.

## **Ingredient Highlights**

## OMEGA 6 CERAMIDE ®

uses the latest in ezymatic biocatalytic technology to fuse a natural ceramide-like molecular structure with plant-sourced Omega fatty acids. The result is an advanced biomimetic skin active that is even more effective than traditional ceramides at skin barrier repair and restoration in addition to providing soothing anti-inflammatory properties.

## S-BLOCK DZ COCODERM

is the new generation of sensory UV-grade mineral dispersions designed for modern high performance sun care. It features a high slip sensory during application with a medium moisturizing after-feel. It is non-nano, has an enhanced active loading of 78%, and gives predictable SPF and broad-spectrum benefits. Its excellent multi-system compatibility simplifies both formulation development and the manufacturing process.

## **G-GEL ECO-HMS**

is an organoclay gel designed for clean beauty applications. It greatly boosts suspension and sensory of color cosmetic chassis, making it a crucial ingredient in stabilizing high concentrations of color pigments with mineral SPF.

## **Applecare PDS-300**

is widely known for its use in wetting and dispersing traditional pigments. In this formulation it is used to disperse specialty and pearlescent pigments therefore allowing for the development of a consistent brilliant shine.



## Gliding Glow Beam Stick, SPF 30, Broad Spectrum (CF-F 019 v2)

PHASE	INCI NAME (TRADE NAME)	USAGE (WT%)
Α	Distilled Water	11.0
^	Propanediol	5.00
	Biosaccharide Gum-1 (Fucocert®)	1.00
	Magnesium Sulfate	1.00
	Preservative	0.50
B <sub>1</sub>	Zinc Oxide (and) Coco- Caprylate/Caprate (and) Polyhydroxystearic Acid (and) Polyglyceryl-3 Polyricinoleate (and) Triethoxycaprylylsilane (and) Lecithin (S-Block DZ CocoDerm)	27.0
	C13-15 Alkane (Hemisqualane from Sugar Cane) (and) Quaternium-90 Bentonite (and) Triethyl Citrate (G-Gel Eco-HMS)	6.00
B <sub>2</sub>	Rice Bran Wax	6.50
-	Solid Coconut Oil	1.00
	Dicaprylyl Ether (Cetiol OE)	8.45
	Safflower oil / Palm oil aminopropanediol esters (Omega6 CERAMIDE®)	0.50
	Silica (MSS-500)	2.00
С	Sorbitan Olivate (Olivem 900)	5.00
	Glyceryl Behenate (Compritol 888 CG ATO)	0.50
D	Synthetic Fluorphlogopite (and) C.I. 77891 (and) Tin Oxide (Timiron SynWhite Satin)	3.00
	Mica (and) Bismuth Oxychloride (and) Iron Oxides (Chroma-Lite Brown)	0.75
	Mica (and) Bismuth Oxychloride (and) Iron Oxides (Chroma-Lite Bronze)	1.00
	Mica (and) C.I. 77891 (and) C.I. 77491 (Colorona Transgold MP-28)	3.10
	Mica (and) C.I. 77499 (and) C.I. 77491 (and) C.I. 77891 (Colorona Aborigine Amber)	0.80
	Polyhydroxystearic acid (and) Caprylic/Capric Triglyceride (and) Isostearic Acid (and) Lecithin (and) Polyglyceryl-3 Polyricinoleate (Applecare PDS 300)	1.40
	Coco Caprylate/Caprate	10.00
	Synthetic Fluorphlogopite (and) C.I. 77891 (and) C.I. 77491 (and) Tin Oxide (Colorona SynRussian Gold)	4.50

#### **Processing Method:**

- 1. Mix Phase A at RT with propeller until everything is completely dissolved.
- 2. Mix Phase D with a dispersion blade at 70C for 20 minutes (until homogenous).
- 3. Dispersion mix Phase B1 at RT until G-Gel is fully dispersed.
- 4. Add Phase B<sub>2</sub> to B<sub>1</sub> and gently mix by hand until Silica is incorporated. Microwave using 10 second intervals and mix until the temperature reaches 80C. Then dispersion mix at 500-800 RPM for 5 minutes.
- 5. Add Phase C to B and dispersion mix for another 5 minutes until homogenous.
- 6. Add Phase D to BC and mix for 3-5 min. Scrape the edges to ensure pigment is evenly dispersed.
- 7. Heat Phase A to about 80C and slowly add to Phase BCD while dispersing at 300-500 RPM. (Low shear prevents bubbles) Continue mixing for 5 minutes.

- SPF: 30, FDA protocol, 1 subject
- 单 CW: 370 nm, Broad Spectrum
- 50°C oven: Ongoing (3 week stable)
- Freeze-Thaw: Passed 3 Cycles

# Benchmark Product: Benefit Watt's Up! Cream Highlighter

This highlighter stick formula glides effortlessly on the skin and leaves you with a beautiful, longlasting glow with a powdery finish. The texture provides a "weightless" sensory intended for layering over existing applied SPF on the high points of the face.

## **Formulator Focus**

The combination of S-Block DZ CocoDerm, G-Gel Eco-HMS, and Applecare PDS-300 creates an ultrastable mineral SPF platform that enhances the delivery of skin health-boosting biotech actives like Fucocert<sup>®</sup> and Omega6 Ceramides<sup>®</sup>.

## **Ingredient Highlights**

## FUCOCERT ®

is an advanced bio-fermented active that leverages the power of fucose polysaccharides to deliver moisture, anti-aging benefits and skin structure improvement. Enjoy healthy, happy skin without the redness and discomfort caused by external aggressors.

## OMEGA 6 CERAMIDE ®

uses the latest in ezymatic biocatalytic technology to fuse a natural ceramide-like molecular structure with plant-sourced Omega fatty acids. The result is an advanced biomimetic skin active that is even more effective than traditional ceramides at skin barrier repair and restoration in addition to providing soothing anti-inflammatory properties.

## S-BLOCK DZ COCODERM

is the new generation of sensory UV-grade mineral dispersions designed for modern high performance sun care. It features a high slip sensory during application with a medium moisturizing after-feel. It is non-nano, has an enhanced active loading of 78%, and gives predictable SPF and broad-spectrum benefits. Its excellent multi-system compatibility simplifies both formulation development and the manufacturing process.

#### **G-GEL ECO-HMS**

is an organoclay gel designed for clean beauty applications. It greatly boosts suspension and sensory of color cosmetic chassis, making it a crucial ingredient in stabilizing high concentrations of color pigments with mineral SPF.

## **Applecare PDS-300**

is widely known for its use in wetting and dispersing traditional pigments. In this formulation it is used to disperse specialty and pearlescent pigments therefore allowing for the development of a consistent brilliant shine.



# Fake-cation GlowScreen Liquid Bronzer, SPF 30, Broad Spectrum (CC-F 022)

PHASE	INCI NAME (TRADE NAME)	USAGE (WT%)
<b>A</b> 1	Zinc Oxide (and) Coco- Caprylate/Caprate (and) Polyhydroxystearic Acid (and) Polyglyceryl-3 Polyricinoleate (and) Triethoxycaprylylsilane (and) Lecithin (S-Block DZ CocoDerm)	27.00
	C15-19 Alkane (and) Quaternium-90 Bentonite (and) Triethyl Citrate (G-Gel Silkane)	5.00
	Caprylyl Methicone	4.00
A <sub>2</sub>	Mica (and) Bismuth Oxychloride (and) Iron Oxides (Chroma-Lite Yellow)	4.75
<b>A</b> 2	Mica (and) Bismuth Oxychloride (and) Iron Oxides (Chroma-Lite Brown)	2.25
	Mica (and) Bismuth Oxychloride (and) Iron Oxides (Chroma-Lite Black)	0.75
	Coco Caprylate/Caprate	4.95
	Polyhydroxystearic acid (and) Caprylic/Capric Triglyceride (and) Isostearic Acid (and) Lecithin (and) Polyglyceryl-3 Polyricinoleate (Applecare PDS 300)	0.70
В	Water	20.0
	Alpha-glucan oligosaccharide (and) Polymnia sonchifolia root juice (and) Maltodextrin (and) Lactobacillus (Ecoskin®)	3.00
	Propanediol	3.00
	Glycerin	2.00
	Sodium Chloride	1.00
	Preservative	0.50
<b>C</b> 1	Cetyl PEG/PPG-10/1 dimethicone and hexyl lautrate and Polygluceryl-4 isostearate (Gransurf W9)	2.00
	Dimethicone (and) Polysilicone-11 (Gransil DMG-3)	6.00
	PEG-10 dimethicone (Gransurf 67)	5.00
C <sub>2</sub>	Dimethicone (2 cSt)	4.90
02	Silica Silyate (Dowsil Vm-2270 Aerogel Fine Particles)	0.20
D	Fragrance	Q.S
0	Biosaccharide gum-4 (and) 1,2-hexanediol (Pollustop®)	1.00
	Mica (and) C.I. 77499 (and) C.I. 77491 (and) C.I. 77891 (Colorona Aborigine Amber)	2.00

#### **Processing Method:**

- 1. Mix Phase A2 with a dispersion blade mixer at 70C for 20 minutes (until homogenous).
- 2. In a seperated vessel, mix Phase A1 (main vessel) with a dispersion blade at room temperature.
- 3. Premix Phase B in a seperate vessel and mix until all homogenous and dissolved,
- 4. Add Phase A2 to Phase A1 and dispersion mix for 500 RPM until it is completely homogenous.
- 5. Add Phase C1 to A and dispersion mix for 500 RPM until it is completely homogenous.
- 6. Premix Phaze C2 into a slurry. While homogenizing (4000-4500 RPM) slowly add Phase C2 to the mix.
- 7. Add Phase B while dispersion mixing at 500-800 RPM. Continue mixing for 5 minutes.
- 8. Add Phase D at <40C and paddle mix at 300 RPM. Slowly add the pigment. Continue mixing for 5 minutes after all pigment is added.

- Viscosity @ 10 RPM: 27,240 cP
- SPF: 30, FDA protocol, 1 subject
- 厳 CW: 370 nm, Broad Spectrum
- 50°C oven: Ongoing (4 weeks stable)
- Freeze-Thaw: Passed 3 Cycles

## Benchmark Products: Charlotte Tillbury Flawless Filter; Drunk Elephant Bronzing Drops

Get ready to achieve a stunning, sun-kissed look while keeping your skin healthy and protected with our Fake-cation GlowScreen. This bronzing product doesn't just enhance your glow; it hydrates your skin, providing a burst of moisture to keep you looking luminous all day.

## **Formulator Focus**

The combination of S-Block DZ CocoDerm, G-Gel Silkane, and Applecare PDS-300 creates an ultra-stable mineral SPF platform with a silky-smooth, silicone-like application. This provides a pH compatible environment for microbiome-friendly polysaccharides like Ecoskin<sup>®</sup> and Pollustop<sup>®</sup>, which in turn helps maximize their skin wellness and restoration benefits.

## **Ingredient Highlights**

#### **ECOSKIN**<sup>®</sup>

is a vegan pre/postbiotic complex for radiant skin. The unique combination of polysaccharides and probiotics rebalances the skin's microbial barrier by regenerating the cutaneous surface, helping it achieve a healthy, hydrated equilibrium. This active is made from glucooligosaccharides obtained by enzymatic synthesis from vegetable substrates, a 100% vegetable juice obtained from Yacon tubers and inactivated Lactobacillius probiotic bacteria.

## POLLUSTOP®

is a high molecular weight polysaccharide designed to stop external skin irritants in their tracks. It forms a powerful matrix on your skin to provide barrier protection from UV, environmental, and domestic pollution.

## S-BLOCK DZ COCODERM

is the new generation of sensory UV-grade mineral dispersions designed for modern high performance sun care. It features a high slip sensory during application with a medium moisturizing after-feel. It is non-nano, has an enhanced active loading of 78%, and gives predictable SPF and broad-spectrum benefits. Its excellent multi-system compatibility simplifies both formulation development and the manufacturing process.

#### **G-GEL SILKANE**

is an organoclay gel designed to deliver high end silicone sensory in silicone-free formulations. It greatly boosts suspension and slip of color pigments, making it a crucial ingredient in stabilizing color cosmetics with mineral actives.

## **Applecare PDS-300**

is widely known for its use in wetting and dispersing traditional pigments. In this formulation it is used to disperse specialty and pearlescent pigments therefore allowing for the development of a consistent brilliant shine.



## **Biotic Barrier Restoration Lotion (SC-F 032N)**

PHASE	INCI NAME (TRADE NAME)	USAGE (WT%)
<b>A</b> <sub>1</sub>	Water	68.50
	Aloe Juice Concentrate 10x	3.0
	DL-Panthenol	0.30
	Alpha glucan-oligosaccharide / Polymnia sonchifolia root juice / Maltodextrin / Lactobacilius (EcoSkin®)	2.0
	Preservative	1.0
A <sub>2</sub>	Tremella Fuciformis Sporocarp Extract (PhytoCare-HA CG 1M)	0.20
	Tremella Fuciformis Sporocarp Extract (PhytoCare-HA CG DH)	0.20
	Glycerin	10.0
В	Hydroxyethyl Acrylate/Sodium Acryloyldimethyl Taurate Copolymer (and) Water (and) C13-C14 Alkane (and) C15-C23 Alkane (and) Decyl Glucoside (and) Glycerin (Sensogel NOVUS)	4.0
	Jojoba Oil	10.0
	Bisabolol (Dragosantol 100)	0.30
	Vitamin E Acetate	0.50
	Fragrance	Q.S.

## **Processing Method**

- 1. Add Phase  $A_1$  to the main vessel and slowly mix using a dispersion blade (300-500rpm).
- 2. In a separate container, mix Phase  $A_2$  to create a slurry. While continuing to mix Phase  $A_1$ , add Phase  $A_2$  into the main vessel. Increase the speed to 500-600 rpm and continue mixing for 10 minutes.
- 3. Mix Phase B in a separate vessel until homogeneous.
- 4. Move the Phase B vessel to a Silverson homogenizer. Slowly add Phase A<sub>1+2</sub> into Phase B while homogenizing and increasing speed to 4000rpm. Continue homogenizing for 10 minutes.

- Viscosity at 10 rpm: 25,000 cP
- 50°C oven: 1 month stable
- Freeze-Thaw: Passed 3 Cycles

## Benchmark Product: La Roche-Posay Lipikar AP+M Triple Repair Body Moisturizer for Dry Skin

A deeply hydrating, microbiome-wellness daily lotion with a rich, water-fresh texture that delivers a multitude of active ingredients to soothe and heal damaged skin. Fast absorbing with a cushioned, hydrating afterfeel, this lotion features a high end sensory profile using a minimalist, stable chassis.

## **Formulator Focus**

The combination of Phytocare-HA CG 1M, Phytocare-HA CG DH and EcoSkin<sup>®</sup> actives creates an extremely powerful microbiome-rebalancing complex that promotes inside-out skin hydration and oxygenation. The addition of bisabolol, panthenol, aloe and vitamin E serves to complement the hydrating effect of this complex by offering additional anti-irritation and anti-oxidant benefits. Additionally, the use of Sensogel Novus as the primary thickener creates a stable, glycerin-based chassis that amplifies the hydration benefits of low cost humectants while retaining the sensory profile of premium formulations.

## **Ingredient Highlights**

#### **Ecoskin**<sup>®</sup>

is a vegan pre/postbiotic complex for radiant skin. The unique combination of polysaccharides and probiotics rebalances the skin's microbial barrier by regenerating the cutaneous surface, helping it achieve a healthy, hydrated equilibrium. This active is made from glucooligosaccharides obtained by enzymatic synthesis from vegetable substrates, a 100% vegetable juice obtained from Yacon tubers and inactivated Lactobacillius probiotic bacteria.

#### **Sensogel Novus**

is a very powerful polyol thickener which is used to great effect in this formula. Not only does it boost the viscosity of polylols like glycerin from a soft liquid into a structured gel, but also tamps down on the traditional stickiness associated with these types of ingredients.

## **PHYTOCARE-HA**

is a group of magic hydration powerhouse actives extracted from Snow Mushroom. Phytocare-HA CG 1M forms a moisture-restoring flexible film to hydrate and repair the skin, thus rebuilding skin elasticity. Phytocare-HA CG DH penetrates the skin to hydrate deep in the skin layers and promote the generation of hyaluronic acid in the dermis.





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