PERSONAL CARE

Formulation Book.

Your Trusted Personal Care Ingredients Partner



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TABLE OF CONTENTS.

Introduction 6

Section I. **Skin Care Formulations**

EyeLastin Lift Serum 10
Beat the Blues Lotion 12
Blue Light Plus Intensive Defense Serum 14
Fresh Quench Gel 20
Moisture Lock Rescue Toner Gel 22
Beyond Belief 4-In-1 Toner 24
Moisture Oasis Cream Gel 26
ExtraOrdinary Face Cream 28
Super ExtraOrdinary Face Cream 30
Super C Serum 32
Second Spring Biphasic Serum 34

Section II. **Body Care Formulations** 37

Bountiful Bubbles Foaming Hand Cleanser 38
Quench Cream 40
SunRecover Milk Cream 42
Butter Believe it! Hand Cream 44

Section III. **Hair Care Formulations**

Scalp Savior Serum 50

Contact 52

PERSONAL CARE

Delivering the Future of Beauty.

Your Trusted Personal Care Ingredients Partner

At **NAGASE**, we are dedicated to enhancing beauty and wellness through innovative, science-backed solutions, combining nature's finest ingredients with the brightest minds in research.

NAGASE America offers a curated selection of high-performance ingredients designed to meet the ever-evolving needs of consumers around the globe.

NAGASE's science backed solutions for Personal Care are created at their Global Innovation Centers in:

- **Okayama, Japan** (R&D, Manufacturing, Holistic Sustainability)
- **Kobe, Japan** (Product & Process Innovation, Blue Sky Ideation)
- **Itasca, IL, USA** (Formulation Innovation & Sales Support)
- **Lyon, France** (Scientific Research)

Embracing our Foundations

At the heart of **NAGASE America** lies our unwavering dedication to our core values:

- **Efficacy:** Our focus on efficacy ensures our products deliver visible, measurable results, building trust and satisfaction in our brand through rigorous testing.
- **Innovation:** At our core is innovation, constantly venturing into new areas like bio-active complexes and smart technologies to create superior skincare and haircare solutions.
- **Sustainability:** We prioritize sustainability in every aspect, from eco-friendly manufacturing to renewable sourcing, aiming to reduce our environmental footprint for a better future.
- **Science:** We're committed to scientific excellence, utilizing cutting-edge research to ensure the safety and efficacy of our ingredients. Our approach guarantees high-quality, evidence-backed products.

Innovate with Nature, Inspire with Science

Our strategic supplier partnerships are at the heart of our mission to enhance beauty and wellness, blending tradition with technology to meet the sophisticated demands of today's consumers.

This synergy enables us to not only anticipate trends but also set new standards in the personal care industry, ensuring that every product we offer is a testament to our commitment to excellence.

SOLUTIONS PARTNER	INGREDIENTS
BIONAP	All natural bioactives from the Mediterranean used in anti-aging, skin care, hair care, and sensitive skin applications
NAGASE Viita	All natural bioactives and multifunctional ingredients for use in anti-aging, skin care, hair care, and gentle cleansing products
PRIMIENT	All natural, non-GMO starch-based derivatives for rheology, film forming, foam enhancement, and feel
PRINOVA	Vitamins, specialty oils, polymers and gums
SHIN-ETSU	Unique silicone-based products for luxurious textures, emulsification, film forming, and other performance benefits

Some Functions of our Product Lines

Anti-aging, Antioxidants, Antipollution, Brightening, Circulation, Collagen Enhancing, Dark Circle Improvement, Elastin and Elastin Fiber Formation, Film Formers, Foam Boosting, Gentle Cleansing, Hair Loss Reduction, Inflammation Reduction, Instant Lift/ Tightening effect, Intense Moisturization, Pore Reduction, Radiance, Skin Protection, Unique Textures

Applications

- Skin Care
- Body Care
- Hair Care
- Oral Care
- Sensitive Skin
- Baby Care
- Intimate Care
- Sun Care
- Color Cosmetics

All data, formulations, and information provided herein are based on our present knowledge and experience. The information provided is not a guarantee of the freedom to practice within the intellectual property landscape in any way. These formulations and supporting information are intended to provide a starting guideline for consideration in our customers' product development process. **NAGASE America LLC** makes no guarantees on the formulations in terms of marketability, efficacy or robustness. The descriptions, formulations, manufacturing directions, data and information furnished by **NAGASE America LLC** hereunder are provided gratis and **NAGASE America LLC** assumes no obligation or liability for this content or results obtained, all such being given and accepted at the user's risk.



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SECTION I

True Beauty and Sustainability Begins with the Ingredients.

Skin Care Formulations

Formulations serve as the fundamental building blocks of skin care, blending science and art to create products that nurture, protect, and rejuvenate the skin. Our starting formulas are meticulously crafted to harness the potency of **NAGASE America**'s ingredient portfolio, marrying scientific innovation with the wisdom of nature. From creams to serums, each product is engineered to address specific skin concerns, whether it be hydration, anti-aging, or brightening.

By understanding the efficacy of the ingredients used in these formulas, we empower formulators to make informed choices, unlock the secrets to radiant skin, and embark on a journey towards lasting beauty and well-being.

FORMULATION NUMBER I2L-107-21

EyeLastin Lift Serum

This high-water content fluid serum is designed to deliver an instant but gentle lifting sensation to tired skin while helping to restore skin firmness. **Pullulan** is a natural film former providing an instant lifting effect and lubricity. Naturally derived from citrus, **Glucosyl Naringin** promotes elasticity and boosts skin resilience by promoting elastin production and stimulating elastin fiber formation (the only active on the market clinically shown to stimulate elastin fiber formation), helping to restore skin firmness.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	Water, DI	Water	Diluent	87.16
	Rheocare C plus (BASF)	Carbomer	Thickener/Rheology	0.05
B	AMP Ultra PC 2000 (Angus)	Aminomethyl Propanol	pH adjustment	0.04
C	**Pullulan** (NAGASE)	Pullulan	Film Forming, Texture, Lubricant	5
D	Water, DI	Water	Diluent	5
	GN (NAGASE)	Glucosyl Naringin / Naringin	Promotes Elastin and Elastin Fiber Formation	1
E	Water, DI	Water	Diluent	0.5
	Zemea (Dow/Tate & Lyle)	Propanediol	Humectant	0.5
	Euxyl PE9010 (Ashland)	Phenoxyethanol (and) Ethylhexylglycerin	Preservative	0.75
	Citric Acid	Citric Acid	pH adjustment	QS
				100



Figure 1.
EyeLastin Lift Serum application

Procedure

1. Prepare Phase D first. Put magnetic stir bar in beaker with water and begin mixing SLOWLY. Sprinkle in the GN (it will sit on surface of water). It will slowly settle into the water and dissolve.
2. Combine Phase A and mix until carbomer is hydrated.
3. Add Phase B, neutralizing pH to 6.0.
4. Sprinkle in Phase C and mix until completely dissolved.
5. When Phase D is completely dissolved and homogeneous, add to main batch.
6. Premix first three materials in Phase E and add to batch.
7. Adjust pH to 5.5-5.7 if needed.

Specifications

- **Appearance:** Slightly hazy yellowish serum (yellowish color comes from GN's natural citrus origin)
- **pH:** 5.2-5.7
- **Viscosity:** Water thin

FORMULATION NUMBER I2L-107-81

Beat the Blues Lotion

Developed to combat the effects of exposure to Blue Light – melasma, ROS, collagen and elastin degradation. Natural powerful antioxidant **AA2G** is a stable form of Vitamin C that effectively brightens and helps the skin achieve a homogeneous color. **AA2G** has cutting edge color and pH stability, and long-lasting residual concentration, and is suitable for vegan formulations. Its bioavailability allows Vitamin C to be continuously taken up by the skin over an extended period, boosting collagen and hyaluronan production, reducing the effect of wrinkles and facial sagging. **Glucosyl Naringin** is naturally derived from citrus. It promotes elasticity and boosts skin resilience by promoting elastin production and stimulating elastin fiber formation (the only active on the market clinically shown to stimulate elastin fiber formation), helping to restore skin firmness. **KSP-101** delivers superior skin feel and glide, with a mattifying and soft-focus effect.



Figure 2. Blue light exposure may cause melasma, ROS, collagen and elastin degradation

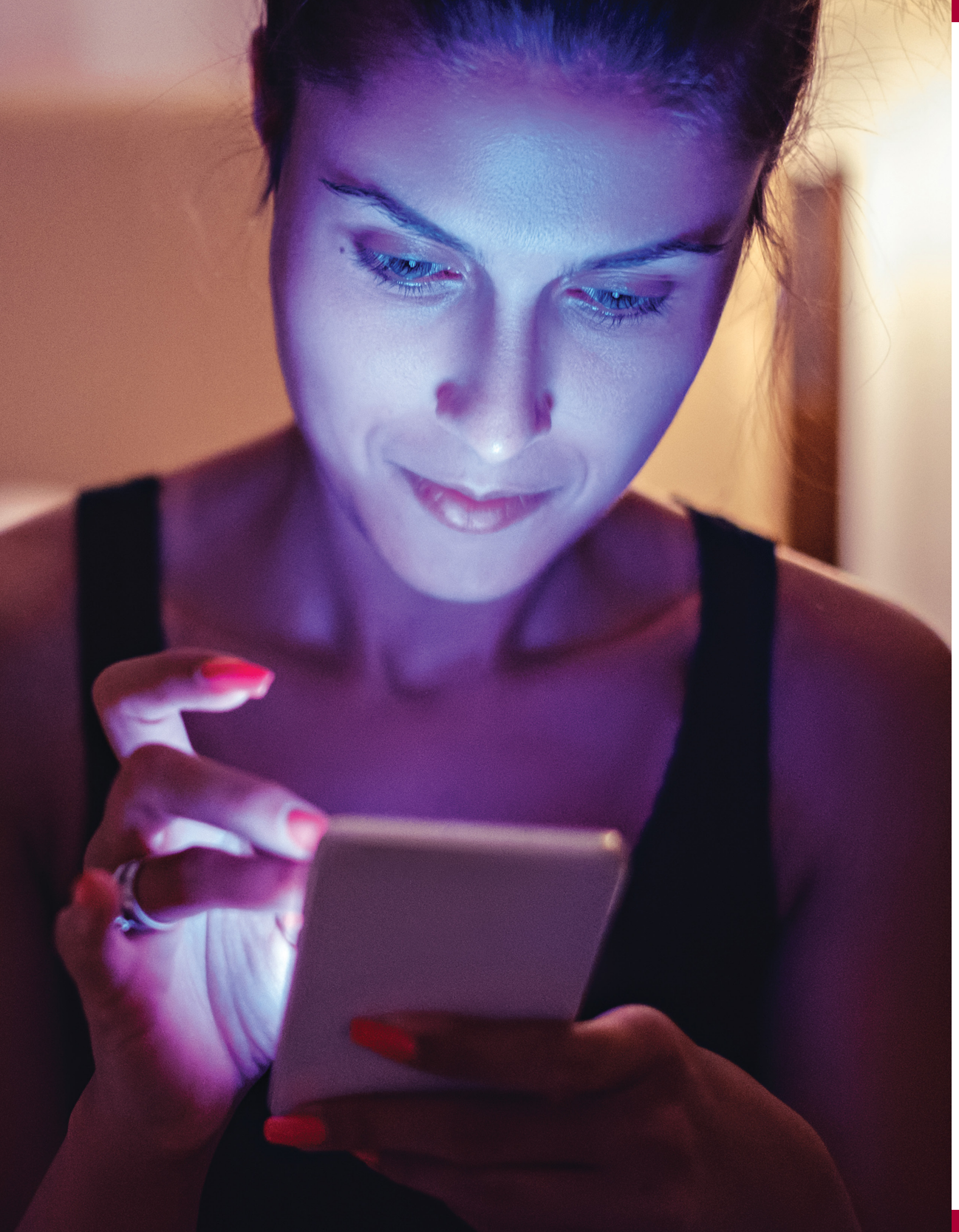
Procedure

1. Heat Phases A and B separately to 75C.
2. At 75C combine Phases A & B. Mix well.
3. Premix Phase C and add to AB. Allow to cool with mixing on.
4. Prepare Phase D and adjust this Phase pH to 5.6-6 with 10% AMP Soln. Add to Phase ABC.
5. Premix Phase E. When homogeneous add to main batch.
6. Premix F and add to main batch. Adjust pH as necessary.

Specifications

- **Viscosity:** Thin cream/lotion
- **pH:** 5.3 – 5.8

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	Water, DI	DI Water	Diluent	57.487
	Glycerin	Glycerin	Humectant	3.000
	Rheocare C plus (BASF)	Carbomer	Rheology	0.400
B	Eumulgin SG (BASF)	Sodium Stearoyl Glutamate	Emulsifier	0.500
	Lanette O-NA (BASF)	Cetearyl Alcohol	Emulsifier	2.000
	En Sense Luxe PTIS (Acme-Hardesty)	Pentaerythritol Tetra Isostearate	Emollient	1.500
	En Sense Silk ALB (Acme-Hardesty)	Alkyl Benzoate	Emollient	2.000
	Butyrospermum Parkii (Shea) Oil	Butyrospermum Parkii (Shea Butter)	Emollient	2.000
	Dodecane	Dodecane	Feel/Slip/Glide	1.500
	KSP-101 (Shin-Etsu)	Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer	Feel/Slip/Glide/Soft-Focus/ Mattifying	1.000
C	Water, DI	DI Water	Diluent	1.000
	AMP Ultra PC 2000 (Angus)	Aminomethyl propanol	pH adjustment	0.280
D	Water, DI	DI Water	Diluent	5.000
	AA2G (NAGASE)	Ascorbyl Glucoside	Stabilized Vitamin C Derivative – Brightening/Collagen	2.000
	10% Solution Citrate Buffer	Sodium Citrate	Buffer	2.000
	10% Solution AMP PC 2000 (Angus)	Aminomethyl propanol	pH adjustment	5.333
E	Water, DI	DI Water	Diluent	10.000
	GN (NAGASE)	Glucosyl Naringin/Naringin	Promotes Elastin and Elastin Fiber Formation	1.000
F	Water, DI	DI Water	Diluent	0.500
	Zemea (Tate & Lyle/Dow)	Propanediol	Humectant	0.500
	Euxyl PE9010 (Ashland)	Phenoxyethanol (and) Ethylhexylglycerin	Preservative	1.000
				100



FORMULATION NUMBER I2L-108-109

Blue Light Plus Intensive Defense Serum

Developed with clinically tested materials, this intense serum/lotion helps skin combat and recover from the effects of exposure to Blue Light – DNA damage, melasma, ROS, collagen, and elastin degradation.

Natural, powerful antioxidant **AA2G** is a stable form of Vitamin C that effectively brightens and helps the skin achieve a homogeneous color. AA2G has cutting edge color and pH stability, long-lasting residual concentration, and is suitable for vegan formulations. Its bioavailability allows Vitamin C to be continuously taken up by the skin over an extended period, boosting collagen and hyaluronan production, reducing the effect of wrinkles and facial sagging. **Olea-HT 10** is a standardized powdered extract obtained from by-products of the Sicilian olive oil production. It protects DNA, strengthens the intracellular antioxidant defenses, and scavenges free radicals. This protects keratinocytes and fibroblasts from blue light-induced cell proliferation damage, promotes collagen synthesis and decreases the production of MMP-1 and MMP-12.

Glucosyl Naringin is naturally derived from citrus. It promotes elasticity and boosts skin resilience by promoting elastin production and stimulating elastin fiber formation (the only active on the market clinically shown to stimulate elastin fiber formation), helping to restore skin firmness. **KSP-101** delivers superior skin feel and glide, with a mattifying and soft-focus effect. **Trehalose 100** delivers natural and sustained moisturization, as well as powerful antioxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation).

Vitamin E Acetate helps protect skin from free radicals and is an effective moisturizing agent. **TEXTURLUX Rheo** provides excellent aesthetics, enhanced rheology and stability.

Blue Light Plus Intensive Defense Serum

Formulation Table

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	Water, DI	DI Water	Diluent	47.17
	Butylene Glycol	Butylene Glycol	F/T stability	4.00
	EDETA (BASF)	Disodium EDTA	Chelating Agent	0.05
	Carbopol Ultrez 10 (Lubrizol)	Carbomer	Rheology	0.45
B	Eumulgin SG (BASF)	Sodium Stearoyl Glutamate	Emulsifier	0.50
	Lanette O-NA (BASF)	Cetearyl Alcohol	Emulsifier	2.00
	En Sense Luxe PTIS (Acme-Hardesty)	Pentaerythritol Tetraisostearate	Emollient	1.50
	En Sense Silk ALB (Acme-Hardesty)	Alkyl Benzoate	Emollient	2.00
	Vitamin E Acetate (Prinova)	Tocopheryl Acetate	Antioxidant	0.20
	Butyrospermum Parkii (Shea) Oil	Butyrospermum Parkii (Shea) Oil	Emollient	2.00
	Dodecane	Dodecane	Feel/Slip/Glide	1.50
	KSP-101 (Shin-Etsu)	Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer	Feel/Slip/Glide	1.00
C	Water, DI	DI Water	Diluent	1.00
	AMP Ultra PC 2000 (Angus)	adjust pH to 5.6-5.8	pH adjustment	0.30
D	Water, DI	DI Water	Diluent	5.00
	AA2G (NAGASE)	Ascorbyl Glucoside	Stabilized Vitamin C Derivative – Brightening/Collagen	2.00
	Citrate Buffer	Citric Acid 1.0% | Soduim Citrate 15.0% | DI Water 84.0%	Buffer	2.00
	50% KOH	Potassium Hydroxide	pH adjustment	5.33
E	Water, DI	DI Water	Diluent	10.00
	GN (NAGASE)	Glucosyl Naringin/Naringin	Promotes Elastin and Elastin Fiber Formation	1.00
	Glycerin	Glycerin	Humectant	4.00
	Trehalose 100 (NAGASE)	Trehalose	Moisturization, Antioxidant, Itch reduction, Strengthens barrier function	2.00
	Olea-HT 10 (Bionap)	Olea Europaea (Olive) Fruit Extract, Maltodextrin	Natural ingredient to protect skin from Blue Light damage	0.50
F	Water, DI	DI Water	Diluent	0.50
	Zemea (Tate & Lyle/Dow)	Propanediol	Humectant	0.50
	Euzyl PE9010 (Shulke)	Phenoxyethanol (and) Ethylhexylglycerin	Preservative	1.00
G	**TEXTURLUX Rheo** (Primient)	Hydroxypropyl starch phosphate	Rheology/Stability	2.50
				100

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Blue Light Plus Intensive Defense Serum

Procedure

1. **Premix the first 2 ingredients in Phase E:** Charge water into beaker and begin slowly stirring. Sprinkle GN on top of water and allow to slowly dissolve into the water.
2. **Phase A:** Charge water into a suitable container with turbine mixing, adding Phase A in listed order, mixing well between additions, and dispersing carbomer. Begin heating to 75C.
3. Mix Phase B in a separate container in listed order. Begin heating to 75C.
4. When Phase A and Phase B are both at 75C combine Phases A & B. Mix well.
5. Premix Phase C and add to Phase AB to adjust pH to 5.5-6.0.
6. Allow main batch to cool while mixing.
7. Prepare Citrate Buffer in Phase D.
8. Prepare Phase D in listed order and adjust pH to 5.0-5.5 with 50% KOH.
9. When the temperature of the main batch is at 40C, add Phase D to Phase ABC.
10. **When the first 2 ingredients in Phase E are fully dissolved**, continue adding the remaining ingredients in Phase E, mixing well between each addition.
11. When Phase E is homogeneous add to main batch.
12. Premix F and add to main batch. Adjust pH as necessary to 5.0-5.5.
13. Add Phase G with good mixing, mix until smooth and homogeneous.

Specifications

- **Appearance:** Off-white / light beige serum / lotion
- **pH:** 5.0 – 5.8



FORMULATION NUMBER I2L-108-23A

Fresh Quench Gel

This PEG-Free silky, lightweight gel cream has a fresh water breaking sensation that feels soothing to the skin while delivering intense hydration. The combination of polyglycerol modified emulsifiers **KSG-710** and **KF-6104** allows the formation of a stable W/O emulsion that upon rub-in provides a water break effect. **USG-1010** elastomer gel enhances the sensory leaving a light and soft, dry after-feel on the skin. **DM-Fluid A-6cs** has a narrow distribution of MW and won't cause eye irritations nor instability, and has a light, non-greasy feel. **Trehalose 100** delivers natural and sustained moisturization, as well as powerful antioxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation).

Procedure

1. Combine phase A in order listed with dispersing blade mixing and mix until smooth and uniform.
2. Premix Phase B in a separate vessel, mixing well until homogeneous.
3. Slowly add Phase B to Phase A with mixing at 500rpm - gradually increasing mixing to 900rpm during addition.
4. When all of Phase B is added to Phase A, increase mixing to 1800 rpm for 3 minutes.

Specifications

- **Appearance:** White cream / gel



Figure 3.
Fresh Quench Gel has a fresh water breaking sensation that feels soothing to the skin while delivering intense hydration.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	**KSG-710** (Shin-Etsu)	Dimethicone & Dimethicone/ Polyglycerin-3 Crosspolymer	Feel: Self-Emulsifiable Silicone Elastomer	4
	USG-1010 (Shin-Etsu)	Dimethicone & Dimethicone/ Vinyl Dimethicone Crosspolymer	Feel: Silicone Elastomer	2
	KF-6104 (Shin-Etsu)	Polyglyceryl-3 Polydimethylsiloxyethyl Dimethicone	Silicone co-Emulsifier	0.5
	DM-Fluid A-6cs (Shin-Etsu)	Dimethicone	Silicone Fluid	11
B	DI Water	DI Water	Diluent	63.1
	Trehalose 100 (NAGASE)	Trehalose	Moisturization, Antioxidant, Itch reduction, Strengthens barrier function	3
	1,3-Butylene Glycol	Butylene Glycol	Humectant	5
	Glycerin	Glycerin	Humectant	10
	Sodium Citrate	Sodium Citrate	Stability	0.2
	Sodium Chloride	Sodium Chloride	Stability	0.5
	Phenoxyethanol (Acme-Hardesty)	Phenoxyethanol	Preservative	0.7
				100

FORMULATION NUMBER I2L-107-155-A / I2L-108-91

Moisture Lock Rescue Toner Gel

A refreshing and moisturizing toner in a quick break, unique gel form. **Trehalose 100** is a potent antioxidant and powerful moisturizer - protecting against TEWL, strengthening barrier function, and inhibiting the release of Inflammatory factor (IL-1α) caused by drying.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	Water, DI	Water	Diluent	81.550
	Rheocare C Plus (BASF)	Carbomer	Rheology modifier	0.150
	AMP Ultra PC 2000 (ANGUS)	Aminomethyl propanol	Neutralizing agent	QS
	SD-40 Alcohol	SD-40 Alcohol	Astringent	7.500
B	Water, DI	Water	Diluent	5.000
	Trehalose 100 (NAGASE)	Trehalose	Moisturization, itch reduction, strengthens barrier function	3.000
	1% Sodium Hyaluronate in Water	Water & Sodium Hyaluronate	Active	1.000
C	Water, DI	Water	Diluent	0.500
	Pentylene Glycol	Pentylene Glycol	Humectant	0.500
	Euxyl PE9010 (Ashland)	Phenoxyethanol & Ethylhexylglycerin	preservative	0.800
D	Citric Acid	Citric Acid	pH adjustment	QS
				100

Procedure

1. Phase A - add water into beaker with propeller mixer.
2. Slowly sprinkle in carbomer and mix until fully dispersed.
3. When carbomer completely dispersed, neutralize with AMP to pH 6.0.
4. Add Ethanol, mix well.
5. Premix Phase B. When homogeneous add to Phase A and mix well.
6. Premix Phase C. When homogeneous add to Phase AB and mix well.
7. Phase D - adjust pH to 5.25-5.5 with Citric Acid.

Specifications

- **Appearance:** Clear gel
- **pH:** 5.25-5.5
- **Viscosity:** Thick gel



Figure 4.
Moisture Lock Rescue Toner Gel is a refreshing and moisturizing toner in a quick break, unique gel form.

FORMULATION NUMBER I2L-108-53 / I2L-108-99

Beyond Belief 4-In-1 Toner

A collagen & elastin enhancing, deep hydration & brightening toner. It delivers an intense collagen and elastin boost to reset the clock on mature skin. **AA2G**, NAGASE'S vegan Vitamin C derivative, has cutting edge color and pH stability, and long-lasting residual concentration. Its unique bioavailability means AA2G is cleaved by the skin's natural enzyme and Ascorbic Acid is delivered to the skin, promoting Collagen and Hyaluronan production, reducing the effect of wrinkles and facial sagging, and brightening to the skin. **Glucosyl Naringin** is naturally derived from citrus. It promotes elasticity and boosts skin resilience, encouraging elastin and elastin fiber formation, helping to restore skin firmness.**Trehalose 100** delivers natural and sustained moisturization, as well as powerful antioxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation). **MG-60** imparts a smooth texture and provides protection against skin irritation.

Procedure

1. **Phase A premix:** Charge water into beaker and begin slowly stirring. Sprinkle GN on top of water and allow to slowly dissolve.
2. When GN is fully dissolved into the water, continue adding the remainder of Phase A in listed order. Mix until homogeneous.
3. Add Alcohol in Phase B. Adjust pH to 5.0-5.5 with 20% AMP.
4. Premix Phase C in listed order, adjusting pH to 5.3-5.8.
5. When Phases AB and Phase C are fully dissolved and homogeneous, add Phase C to Phase AB - **mixing well**.
6. Premix Phase D. When main Phase (ABC) is homogeneous, add Phase D. Mix well.

Specifications

- **Appearance:** Hazy liquid
- **pH:** 5.0-5.5
- **Viscosity:** 100cps



Figure 5.
Beyond Belief 4-In-1 Toner delivers an intense collagen and elastin boost to reset the clock on mature skin.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	Water	Water	Diluent	54.250
	GN (NAGASE)	Glucosyl Naringin/Naringin	Promotes Elastin and Elastin Fiber Formation	1.000
	Glycerin	Glycerin	Humectant	
	Hydrolite 5 Green (Symrise)	Pentylene Glycol	Humectant	3.500
	MG-60 (NAGASE)	Maltooligosyl Glucoside, Hydrogenated Starch Hydrolysate	Protection against skin irritation/ Texture	1.700
	Trehalose 100 (NAGASE)	Trehalose	Moisturization, antioxidant, itch reduction, strengthens barrier function	3.000
	1% Sodium Hyaluronate in water	DI Water, Sodium Hyaluronate	Moisturizing active	1.000
B	Alcohol	Ethanol	Astringent	2.000
	20% AMP (Angus)	To pH => 5.6-5.8	pH adjustment	QS
C	Water, DI	Water (Aqua)	Diluent	8.000
	AA2G (NAGASE)	Ascorbyl Glucoside	Stabilized Vitamin C Derivative – Brightening/ Collagen	6.000
	Citrate Buffer	Citric Acid 1.0% Soduim Citrate 15.0% DI Water 84.0%	Buffer	2.000
	20% AMP Solution	To pH => 6.0	pH adjustment	5.350
D	Zemea (DOW)	Propanediol	Humectant/ Preservative enhancement	2.000
	Euxyl K940 (Ashland)	Phenoxyethanol, Benzyl Alcohol, Ethylhexylglycerin*, Tocopherol	Preservative	1.000
				100

FORMULATION NUMBER I2L-108-67 / I2L-108-87

Moisture Oasis Cream Gel

This formulation provides an oasis of moisturization with a fresh after-feel. **KSG-210** and **KF-6017** allows the formulation of a stable W/O cream, which contains a large amount of water. In this emulsion, the water phase has a larger particle size than conventional emulsions formulated with non-crosslinked emulsifiers. The large particle size is key to providing a *fresh* skin feel. The amount of **KF-6017** added can control particle size. Viscosity can be adjusted by the ratio between **KSG-210** and **KSG-15**.

Trehalose 100 for natural and sustained moisturization, and powerful antioxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation).

Procedure

1. Combine phase A in order listed with dispersing blade mixing and mix until smooth and uniform.
2. Combine Phase A and mix until carbomer hydrated.
3. Slowly add Phase B to Phase A with mixing at 500rpm - gradually increasing mixing to 900rpm during addition.
4. When all of Phase B is added to Phase A, increase mixing to 1800 rpm for 3 minutes.

Specifications

- **Appearance:** White lotion



Figure 6.
Moisture Oasis Cream Gel procides great moisturization with a fresh after-feel.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	**KSG-210** (Shin-Etsu)	Dimethicone PEG-10/15 Crosspolymer (&) Dimethicone	Thickener, emulsifier, moisturizing effect, viscosity adjustment	3
	KSG-15 (Shin-Etsu)	Dimethicone/Vinyl Dimethicone Crosspolymer (&) Cyclopentasiloxane	Elastomer Gel, smooth silky unique feeling	1
	KF-6017 (Shin-Etsu)	PEG-10 Dimethicone	Emulsifier, soft moist effect, particle size adjustment	0.15
	DM-Fluid A6cs (Shin-Etsu)	Dimethicone	Easy spread, fast absorption, aesthetics, light feel	8.9
	DI Water	DI Water	Diluent	74.25
B	**Trehalose 100** (NAGASE)	Trehalose	Active - Moisturization, Antioxidant, Itch reduction, Strengthens barrier function	3
	1,3-Butylene Glycol	Butylene Glycol	Humectant	8
	Sodium Citrate	Sodium Citrate	Stability	0.2
	Sodium Chloride	Sodium Chloride	Stability	0.5
	Phenoxyethanol (Acme-Hardesty)	Phenoxyethanol	Preservative	1
				100

FORMULATION NUMBER I2L-108-71

ExtraOrdinary Face Cream

This organic rich formulation with a fresh after-feel demonstrates the application of **X-22-6695B**, a self-emulsifying elastomer gel with natural ingredients containing 4% liquid shea butter and 4% hemp seed oil. **KF-56A** is an elastomer gel with a high natural origin index of 0.65. This PEG-free W/O emulsion also contains **KF-6105** which helps to improve the stability and control the particle size of the emulsion.

Natural powerful antioxidant **AA2G** is a stable form of Vitamin C that effectively brightens and helps the skin achieve a homogeneous color. Its bioavailability allows Vitamin C to be continuously taken up by the skin over an extended period, boosting collagen and hyaluronan production. **Trehalose 100** delivers natural and sustained moisturization, as well as powerful antioxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation).

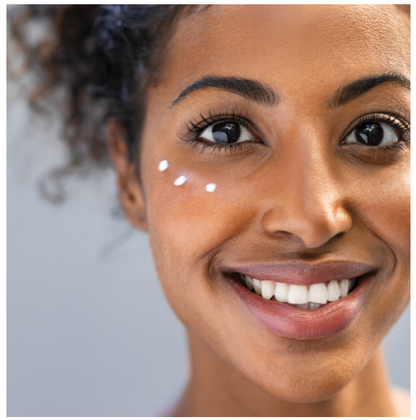


Figure 7.
ExtraOrdinary Face Cream is an organic rich formulation with a fresh after-feel.

Procedure

1. Combine phase A with propeller mixing and mix until smooth and uniform.
2. Premix Phase B in a separate vessel, mixing well until homogeneous. **NOTE:** Adjust pH of water/AA2G portion of Phase B as indicated before adding the remaining materials in Phase B.
3. Slowly add Phase B to Phase A with mixing at 500rpm - gradually increasing mixing to 900rpm during addition.
4. When all of Phase B is added to Phase A increase mixing to 3000 rpm for 5 minutes.

Specifications

- **Appearance:** White cream

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	**X-22-6695B** (Shin-Etsu)	Jojoba oil (and) Lauryl Dimethicone/ Polyglycerin-3 Crosspolymer (proposed)	Thickener, emulsifier, moisturizing effect	3
	X-25-7055 (Shin-Etsu)	Coco-Caprylate/Caprate (&) Vinyl Dimethicone/Lauryl Dimethicone Crosspolymer	Thickener, emulsifier, moisturizing effect	2
	KF-6105 (Shin-Etsu)	Lauryl Polyglyceryl-3 Polydimethylsiloxyethyl	Emulsifier, soft moist effect	1.5
	Cetiol LC (BASF)	Coco-Caprylate/Caprate	Emollient & Feel	4
	Cetiol Ultimate (BASF)	Undecane & Tridecane	Emollient & Feel	3
	Myritol 312 (BASF)	Caprylic/Capric Triglyceride	Emollient & Feel	3.25
	Cannabis Sativa Seed Oil	Cannabis Sativa Seed Oil	Emollient, Feel & Protection	1
B	DI Water	DI Water	Diluent	61.85
	AA2G (NAGASE)	Ascorbyl Glucoside	Stabilized Vitamin C Derivative – Brightening/Collagen	12
	Adjust pH to 5.5-5.8 with 50% KOH			
	Trehalose 100 (NAGASE)	Trehalose	Active - Moisturization, Antioxidant, Itch reduction, Strengthens barrier function	2
Premix	Sodium Citrate	Sodium Citrate	Stability	0.2
	Sodium Chloride	Sodium Chloride	Stability	0.5
	Glycerin	Glycerin	Humectant	5
	Phenoxyethanol (Acme-Hardesty)	Phenoxyethanol	Preservative	0.7
				100

FORMULATION NUMBER I2L-108-73 / I2L-108-97

Super ExtraOrdinary Face Cream

This organic rich face cream has a silky texture that delivers intense hydration to the skin. The combination of the polyglycerol modified emulsifiers **X-22-6695B** and **KF-6105** allows the formation of a stable W/O emulsion that contains a large amount of water. In this formula the emulsion has a smaller particle size due to the higher level of **KF-6105**. **X-25-7055**, an elastomer gel in a natural derived base oil, helps to stabilize the system and adds a soft afterfeel on the skin.

Natural powerful antioxidant **AA2G** is a stable form of Vitamin C that effectively brightens and helps the skin achieve a homogeneous color. AA2G has cutting edge color and pH stability, and long-lasting residual concentration, and is suitable for vegan formulations. Its bioavailability allows Vitamin C to be continuously taken up by the skin over an extended period, boosting collagen and hyaluronan production, reducing the effect of wrinkles and facial sagging. **Trehalose 100** delivers natural and sustained moisturization, as well as powerful antioxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation).

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	**X-22-6695B** (Shin-Etsu)	Jojoba oil (and) Lauryl Dimethicone/ Polyglycerin-3 Crosspolymer (proposed)	Thickener, emulsifier, moisturizing effect	3
	X-25-7055 (Shin-Etsu)	Coco-Caprylate/Caprate (&) Vinyl Dimethicone/Lauryl Dimethicone Crosspolymer	Thickener, emulsifier, moisturizing effect	2
	KF-6105 (Shin-Etsu)	Lauryl Polyglyceryl-3 Polydimethylsiloxyethyl	Emulsifier, soft moist effect	1.5
	Cetiol LC (BASF)	Coco-Caprylate/Caprate	Emollient & Feel	4
	Cetiol Ultimate (BASF)	Undecane & Tridecane	Emollient & Feel	3
	Myritol 312 (BASF)	Caprylic/Capric Triglyceride	Emollient & Feel	3.25
	Hemp Seed Oil	Cannabis Sativa Seed Oil	Emollient, Feel & Protection	1
	DI Water	DI Water	Diluent	53.85
B	**AA2G** (NAGASE)	Ascorbyl Glucoside	Stabilized Vitamin C Derivative – Brightening/Collagen	20
		Adjust pH to 5.5 with 50% KOH		QS
	Trehalose 100 (NAGASE)	Trehalose	Moisturization, itch reduction, strengthens barrier function	2
	Sodium Citrate	Sodium Citrate	Stability	0.2
	Sodium Chloride	Sodium Chloride	Stability	0.5
	Glycerin	Glycerin	Humectant	5
	Phenoxyethanol (Acme-Hardesty)	Phenoxyethanol	Preservative	0.7
				100

Procedure

1. Combine phase A with propeller mixing and mix until smooth and uniform.
2. Premix Phase B in a separate vessel, mixing well until homogeneous. **NOTE:** Adjust pH of water/AA2G portion of Phase B as indicated before adding the remaining materials in Phase B.
3. Slowly add Phase B to Phase A with mixing at 500rpm - gradually increasing mixing to 900rpm during addition.
4. When all of Phase B is added to Phase A increase mixing to 3000 rpm for 5 minutes.

Specifications

- **Appearance:** White cream
- **Texture:** Soft cream



Figure 8.
Super ExtraOrdinary Face Cream is an organic rich face cream that has a silky texture and delivers intense hydration to the skin.

FORMULATION NUMBER I2L-108-81 / I2L-108-95

Super C Serum

A natural serum promoting brightening, collagen and hyaluronan production, moisturization and wrinkle reduction. **AA2G**, NAGASE'S vegan Vitamin C derivative, has cutting edge color and pH stability, and long-lasting residual concentration. Its unique bio-availability means AA2G is cleaved by the skin's natural enzyme and Ascorbic Acid is delivered to the skin, promoting Collagen and Hyaluronan production, reducing the effect of wrinkles and facial sagging, and brightening the skin. **Trehalose 100** delivers natural and sustained moisturization, as well as powerful antioxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation). **Pullulan** is a natural film-former providing an instant lifting effect, lubricity, and texture creation.

Procedure

1. Combine phase A with propeller mixing. Premix glycerin and xanthan gum before adding. Mix until homogeneous.

2. Adjust pH to 5.5-5.8

3. Premix Phase B. When homogeneous and at pH of 5.6-6.0 add to Phase A.

4. Premix Phase C. When homogeneous add to Phase AB. Mix well.

Specifications

- **Appearance:** Clear liquid
- **pH:** 5.3-5.6
- **Viscosity:** 150cps



Figure 9.
Super C Serum promotes brightening, collagen and hyaluronan production, moisturization and wrinkle reduction.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	Deionized Water	Aqua (Water)	Diluent	32.80
	Pullulan (NAGASE)	Pullulan	Film Former/Texture Creation	0.20
	Trehalose 100 (NAGASE)	Trehalose	Moisturization, itch reduction, strengthens barrier function	3.00
	Glycerin	Glycerin	Humectant	3.00
	Keltrol CG-T (CP Kelco)	Xanthan Gum	Rheology Modifier	0.40
	Adjust pH to 5.5-5.8			
B	Deionized Water	Aqua (Water)	Diluent	30.00
	AA2G (NAGASE)	Ascorbyl Glucoside	Stabilized Vitamin C Derivative – Brightening/Collagen	20.00
	Citrate Buffer	Citric Acid 1.0% Soduim Citrate 15.0% DI Water 84.0%	Buffering Agent	2.00
	Potassium Hydroxide (50% Aqueous Solution)	Adjust pH to 5.6-6.0	pH adjustment	6.90
C	Euxyl PE9010 (Ashland)	Phenoxyethanol and Ethylhexyl Glycerin	Preservative	0.70
	Zemea (DOW)	Propanediol	Humectant/preservative boost	1.00
				100

FORMULATION NUMBER I2L-108-105

Second Spring Biphasic Serum

This biphasic serum supports the skin's natural powers of renewal, helping to brighten complexion, maintain firmer moisturized skin, and minimize the appearance of fine lines and wrinkles. **AA2G**, a vegan Vitamin C derivative, has cutting edge color and pH stability, and long-lasting residual concentration. Its unique bioavailability allows Vitamin C to be continuously taken up by the skin over an extended period, promoting collagen and hyaluronan production, reducing the effect of wrinkles and facial sagging, and brightening the skin. **Renegrape** is a natural AHA derived from Sicilian white grapes. Clinical studies show it has an epidermal renewal effect on the skin, reducing the appearance of wrinkles and age spots, and improving the signs of acne. **Trehalose 100** delivers natural and sustained moisturization, as well as powerful antioxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation). **Vitamin E Acetate** helps protect skin from free radicals and is an effective moisturizing agent.

Procedure

1. Combine the first 3 ingredients of Phase A with propeller mixing.
2. Adjust pH to 5.0 - 5.5. Then add remaining ingredients of Phase A.
3. Premix Phase B and when homogeneous, adjust pH of Phase B to 5.0-5.5 with 50% KOH.
4. Add Phase B to Phase A. Mix until homogeneous.
5. Premix Phase C and add to Phase AB. Adjust pH to 5.0-5.5 with 50% KOH as needed.
6. Premix Phase D and add to Phase ABC.
7. Fill components while main tank is mixing vigorously.

Specifications

- **Appearance:** 2 phase liquid (brown clear bottom, clear water white top)
- **pH:** 5.0-5.5
- **Viscosity:** 100cps



Figure 10.
Second Spring Biphasic Serum helps minimize the appearance of fine lines and wrinkles.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	Deionized Water	Aqua (Water)	Diluent	36.70
	Renegrape (Bionap)	Vitis Vinifera (Grape) Juice Extract	Natural AHA, Epidermal renewal	2.00
	Edeta BD (BASF)	Disodium EDTA	Chelating Agent	0.10
	Adjust pH to 5-5.5			
	Vitamin E Acetate (Prinova)	Vitamin E Acetate	Antioxidant	0.20
	Trehalose 100 (NAGASE)	Trehalose	Moisturization, Antioxidant, Itch reduction, Strengthens barrier function	2.00
B	Deionized Water	Aqua (Water)	Diluent	10.00
	AA2G (NAGASE)	Ascorbyl Glucoside	Humectant	2.00
	Adjust pH to 5-5.5 with 50% KOH			
C	Euxyl PE9010 (Ashland)	Phenoxyethanol and Ethylhexyl	Preservative	1.00
	Zemea (DOW)	Glycerin Propanediol	Humectant/preservative booster	2.00
	Adjust pH to 5-5.5 with 50% KOH			
D	Eutanol G (BASF)	Octyldodecanol	Emollient	14.00
	Cetiol C5 (BASF)	Coco-Caprylate	Emollient	10.00
	EnSense Silk ALB (Acme-Hardesty)	C13-15 Alkane	Emollient	10.00
	Myritol 312 (BASF)	Caprylic/Capric Triglyceride	Emollient	10.00
				100



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SECTION II

Embrace the Essence of Advanced Body Care.

Body Care Formulations

In the realm of self-care, body care formulations stand as pillars of nourishment and pampering, offering a holistic approach to maintaining skin health and vitality. From luxurious lotions to soothing creams, these starting formulas are carefully designed to cater to the diverse needs and preferences of individuals. They address concerns ranging from hydration and cleansing to renewal and recovery, which is on trend with today's *skinification* of body care.

FORMULATION NUMBER I2L-107-73

Bountiful Bubbles Foaming Hand Cleanser

98% Naturally derived formulation with excellent foam and sensorial benefits. **Trehalose 100** delivers natural and sustained moisturization; **MG-60** provides improved foam richness, smooth texture, and protection against skin irritation.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
	Water, DI	Water	Diluent	72.175
A	**Trehalose 100** (NAGASE)	Trehalose	Moisturizing - strengthens skin barrier function, Itch reduction	2.000
B	**MG-60** (NAGASE)	Hydrogenated Starch Hydrolysate	Anti-inflammatory, foam booster	5.000
C	Jarfactant 425N (Aurorium)	Alkyl Polyglucoside C8-C16	Surfactant	18.000
	Dehyton PK 45 (BASF)	Cocamidopropyl Betaine, 45%	Co-Surfactant	1.500
	Tetrasodium Glutamate Diacetate	Tetrasodium Glutamate Diacetate	Chelating Agent	0.250
D	Kathon CG (DuPont)	Methylchloroisothiazolinone / Methylisothiazolinone	Preservative	0.075
	Green Tea Fragrance (Premier Specialties)	Frag #EE19-40083 FP:174F	Fragrance	1.000
	Citric Acid	Citric Acid	pH adjustment	QS
				100



Figure 11.
Bountiful Bubbles Foaming Hand Cleanser use

Procedure

1. Mix water and Trehalose 100.
2. Add MG-60 and mix well.
3. Add Phase C in listed order and mix well.
4. Add Phase D and adjust pH to 6.5-7.0.
5. Put into foaming pump component.

Specifications

- **pH:** 6.5-7.0
- **Viscosity:** Water thin

FORMULATION NUMBER I2L-107-123 / I2L-108-27

Quench Cream

Luxurious, moisture replenishment for dry skin, that absorbs quickly. **Trehalose 100** is a potent antioxidant and powerful natural moisturizer - protecting against TEWL, strengthening barrier function, and inhibiting the release of Inflammatory factor (IL-1α) caused by drying. **MG-60** offers a smooth texture, and protection against skin irritation. Moisturization and nurturing is enforced with **Grapeseed Oil** for natural emollience. **TEXTURLUX Rheo** provides excellent aesthetics and enhanced rheology.

Procedure

1. Phase A into beaker with propeller mixer.
2. Premix Phase B, then add to Phase A and begin heating to 70C.
3. In a side beaker, add components of Phase C and heat to 70C.
4. When both Phase AB and Phase C are at 70C, combine and mix well.
5. Begin cooling. At 40-45C add Phase D, adjusting pH to 5.5 and mix well.
6. Homogenize until smooth and glossy, (about 2 minutes in the lab).

Specifications

- **Appearance:** Glossy cream/lotion
- **pH:** 5.25-5.75
- **Viscosity:** Thick cream/lotion

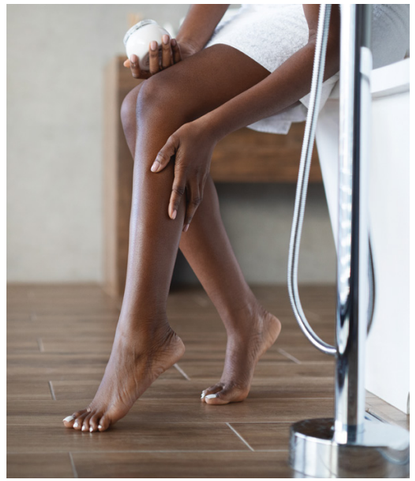


Figure 12.
Quench Cream is a luxurious, moisture replenishment for dry skin, that absorbs quickly.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	Water, DI	Water	Diluent	55.88
	Tetrasodium Glutamate Diacetate	Tetrasodium Glutamate Diacetate	Chelating agent	0.10
	Butylene Glycol	Butylene Glycol	Humectant	4.00
	Trehalose 100 (NAGASE)	Trehalose	Moisturization, Antioxidant, Itch reduction, Strengthens barrier function	1.00
	MG-60 (NAGASE)	Maltooligosyl Glucoside/ Hydrogenated Starch Hydrolysate	Anti-inflammatory, skin protection	1.00
B	Activsoft C-17 (Innospec)	Guar Hydroxypropyltrimonium Chloride	Conditioning agent	0.35
	Zemea (Tate & Lyle/Dow)	Propanediol	Humectant	1.25
	Glycerin	Glycerin	Humectant	1.25
C	**Grapeseed Oil** (Prinova)	Grapeseed Oil	Anti-age/moisturization	2.50
	Theobroma Grandiflorum Seed Butter	Theobroma Grandiflorum Seed Butter	Anti-age/moisturization	2.50
	Dodecane	Dodecane	Silicone replacement	7.50
	Cetiol C5 (BASF)	Coco-Caprylate	Emollient	7.00
	Butyrospermum Parkii (Shea) Butter	Butyrospermum Parkii (Shea) Butter	Emollient	2.50
	Jarplex SB-WD (Aurorium)	Shea Butter Glycerides & Water	Emollient	3.00
	Tocopheryl Acetate (Prinova)	Tocopheryl Acetate	Antioxidant	0.50
	Lanette 18 (BASF)	Stearyl Alcohol	Emulsifier/Emollient	1.00
	Lanette 16 (BASF)	Cetyl Alcohol	Emollient/Thickening Agent	2.00
	TEXTURLUX Rheo (Primient)	Hydroxypropyl Starch Phosphate	Rheology modifier	0.80
	Incroquat Behenyl TMS (Croda)	Behentrimonium Methosulfate & Cetearyl Alcohol	Emulsifier	5.00
D	Citric Acid	Citric Acid	pH adjustment	0.12
	Euxyl PE 9010 (Ashland)	Phenoxyethanol (and) Ethylhexylglycerin	Preservative	0.75
				100

FORMULATION NUMBER I2L-108-111B

SunRecover Milk Cream

Pampers and repairs the skin after sun exposure. **AA2G**, NAGASE'S vegan Vitamin C derivative, has cutting edge color and pH stability, and long-lasting residual concentration. It reduces oxidative stress and prevents UV-induced damage. AA2G's unique bio-availability means it is cleaved by the skin's natural enzyme and ascorbic acid is delivered to the skin, promoting collagen and hyaluronan production, reducing the effect of wrinkles and facial sagging, and brightening the skin. **Skin Save** counteracts solar aggression, providing skin relief. It reduces skin erythema, reduces skin redness, and has an anti-itch effect. **Trehalose 100** delivers natural and sustained moisturization, and powerful antioxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation). **Vitamin E Acetate** helps protect skin from free radicals and is an effective moisturizing agent. **TEXTURLUX Rheo** provides excellent aesthetics and enhanced rheology.



Figure 13.
SunRecover Milk Cream pampers and repairs the skin after sun exposure.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	Emulgade PL 68/50 (BASF)	Cetearyl alcohol, cetearyl glucoside	Emulsifier	5.5
	Butyrospermum parkii (shea) butter	Butyrospermum parkii (shea) butter	Emollient	8
	Myritol 312 (BASF)	Caprylic/capric triglyceride	Emollient	8
B	DI Water	Water	Diluent	42.62
	EDETA BD (BASF)	Disodium EDTA	Chelating Agent	0.05
	Arlacel LC (Croda)	Glyceryl Stearate, Sorbityl Laurate	Emulsifier	2.5
C	Glycerin	Glycerin	Humectant	7.5
	Vanzan NF-C (Vanderbilt Minerals)	Xanthan gum	Rheology	0.6
		Adjust pH to 5.25-5.5		
D	**Skin Save** (Bionap)	Olea europaea (olive) leaf extract, Opuntia-ficus indica stem extract, Capparis spinosa fruit extract, Maltodextrin	Reduces skin erythema, anti-itch, skin relief, counteracts solar aggression, reduces skin redness	1.5
	Trehalose 100 (NAGASE)	Trehalose	Moisturization, Antioxidant, Itch reduction, Strengthens barrier function	3
	DI Water	Water	Diluent	7
E	DI Water	Water	Diluent	8
	AA2G (NAGASE)	Ascorbyl Glucoside	Stabilized Vitamin C Derivative – Reduces oxidative stress/Prevents UV-induced damage/Brightening/ Collagen	2
		Adjust pH of Phase E to 5.25		
F	**Vitamin E Acetate** (Prinova)	Tocopheryl Acetate	Antioxidant	0.2
	Euxyl PE 9010 (Ashland)	Phenoxyethanol, ethylhexylglycerin	Preservative	1
G	**TEXTURLUX Rheo** (Primient)	Hydroxypropyl starch phosphate	Rheology	2.5
H	Adjust pH to 5.0-5.25 with 50% KOH	Water, Potassium hydroxide (50%)	pH adjustment	0.03
				100

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SunRecover Milk Cream

Procedure

1. Charge Phase A into beaker and begin heating to 80C.
2. Charge Phase B into beaker with propeller mixer. Mix well.
3. Premix Phase C then add to Phase B and begin heating to 80C. Mix for 10 minutes at 80C.
4. When both Phase A and Phase BC reach 80C and have mixed for 10 minutes, add Phase A to Phase BC. Mix well.
5. Homogenize for 3 minutes at 5000 rpm. Switch to sweep mixing.
6. Allow batch to begin cooling to 40C. Check pH and adjust to 5.25-5.5 as necessary with 50% KOH or 20% Citric Acid.
7. Charge water in Phase D to a beaker with mixing. Premix Skin Save and Trehalose 100, then add to water in Phase D. Mix until fully dissolved.
8. Charge water in Phase E to a beaker with mixing. Add AA2G and fully dissolve. Immediately adjust pH to 5.25 with 50% KOH.
9. When Phase ABC is at 40C, and pH is 5.25-5.5, add Phase D. Mix well.
10. Add Phase E. Mix well (note viscosity will decrease).
11. Premix Phase F and add to main batch with mixing. Recheck pH.
12. Add Phase G (TEXTURLUX Rheo) with good mixing. Allow to mix until fully dispersed and batch thickens.
13. Adjust pH to 5.2-5.5 as necessary and mix well.

Specifications

- **Appearance:** Glossy cream/lotion
- **pH:** 5.25-5.75
- **Viscosity:** Thick cream/lotion



FORMULATION NUMBER I2L-108-57 / I2L-108-103

Butter Believe it! Hand Butter

This organic-rich formulation provides intense moisturization and protection to dry hands. It demonstrates the application of **X-22-6695B**, a self-emulsifying elastomer gel with natural ingredients, to help nourish and moisturize dry skin. This PEG-free W/O emulsion also contains **KF-6105** which helps to improve the stability and control the particle size of the emulsion.

Trehalose 100 provides natural and sustained moisturization, with powerful antioxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation). Moisturization and nurturing is enforced with Grapeseed Oil for natural emollience.

Procedure

1. Combine phase A in order listed in a glass beaker with a dispersing blade and mix until smooth and uniform. Begin heating to 65C.
2. Premix Phase B in a separate vessel, heating to 65C and mixing well until homogeneous. Add to Phase A and mix well.
3. In a separate vessel, mix Phase C in listed order, adjusting pH as noted, then heating to 65C and mixing well until homogeneous.
4. When Phases AB & C are both at 65C and homogeneous, **slowly** add Phase C to Phase AB with mixing at 500rpm - gradually increasing mixing to 900rpm during addition.
5. When all of Phase C is added to Phase AB, increase mixing to 1700 rpm for 4 minutes.
6. While mixing at 1700rpm, turn heat off and start to cool batch rapidly to 20C.
7. Let sit at ambient temperature for ~24 hours before taking viscosity.

Specifications

- **Appearance:** Thick white cream



Figure 14.
Butter Believe it! Hand Butter provides intense moisturization and protection to dry hands.

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	**X-22-6695B** (Shin-Etsu)	Simmondsia Chinensis (Jojoba) Seed Oil (and) Lauryl Dimethicone/ Polyglycerin-3 Crosspolymer	Moisturizing, Thickening, Emulsifier	3
	KF-6105 (Shin-Etsu)	Lauryl Polyglyceryl-3 Polydimethylsiloxyethyl Dimethicone	Co-emulsifier	1.5
B	**DM-Fluid A-2cs** (Shin-Etsu)	Dimethicone	Silicone Fluid	5
	DM-Fluid A-6cs (Shin-Etsu)	Dimethicone	Silicone Fluid	2.5
	Butyrospermum Parkii (Shea) Butter	Butyrospermum Parkii (Shea) Butter	Emollient	18
	Vegecare LW (Aurorium)	Glyceryl rosinate (and) Ricinus communis (castor) seed oil (and) Hydrogenated vegetable oil	Emollient	1.25
	Grapeseed Oil (Prinova)	Vitis Vinifera (Grape) Seed Oil	Emollient	2
C	DI Water	DI Water	Diluent	51.85
	Tetrasodium Glutamate Diacetate	Tetrasodium Glutamate Diacetate	Chelating Agent	0.2
	Citric Acid	ADJUST pH to 5.0-5.5	pH adjustment	QS
	Trehalose 100 (NAGASE)	Trehalose	Active - Moisturization, Antioxidant, Itch reduction, Strengthens barrier function	3
	Sodium Chloride	Sodium Chloride	Stability	0.7
	Glycerin	Glycerin	Humectant	7
	1,3-Butylene Glycol	Butylene Glycol	Humectant	3
	Phenoxyethanol (Acme-Hardesty)	Phenoxyethanol	Preservative	1
				100



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SECTION III

Unveil Your Hair's Natural Beauty.

Hair Care Formulations

Healthy, vibrant locks begin with healthy scalps.

Our first hair care formulation, **Scalp Savior Serum**, provides the foundation for a beautiful head of hair, beginning with the concept of a healthy, beautiful you.

FORMULATION NUMBER I2L-108-113

Scalp Savior Serum

A nutritive high active scalp serum that helps the scalp replenish moisture and functionality. **AGH** is naturally derived from citrus and stimulates surface circulation of the skin, helping to suppress hair loss and promote regrowth of thinning hair. **Olea-HT 10** has natural antioxidant activity to counteract stressor agents to the hair (UV, pollution, heat), protecting the hair shaft and helping to maintain hair integrity. **Opuntia Biocomplex SH** provides short- and long-term hydration, improves skin barrier function and protects against irritation. **Glucosyl Naringin** is naturally derived from citrus. It promotes elasticity and boosts skin resilience, encouraging elastin and elastin fiber formation, helping to restore skin firmness. **Trehalose 100** delivers natural and sustained moisturization, as well as powerful anti-oxidant activity. It provides itch reduction and strengthens barrier function (promoting lamellar structure formation). **MG-60** reduces TEWL and increases the tensile strength of hair. **Skin Save** gives overall skin relief from itch, solar aggression and redness, and reduces skin erythema.

Procedure

1. Phase C premix: Charge water into beaker with magnetic stirrer and begin slowly stirring. Combine the next 3 ingredients (GN, AGH, Skin Save). Sprinkle combined dry ingredients on top of water and allow to slowly dissolve.
2. Phase A: charge water and MG-60 into a container equipped with stirring and a dispersing blade. Mix until homogeneous.
3. Combine powders in Phase B. Add to Phase A, mixing at 600rpm for 10 minutes or until fully dissolved.
4. When Phase C is fully dissolved into the water, add to Phase AB. Mix until homogeneous.
5. Add Phase D in listed order to Phase ABC.
6. Premix Phase E. When main Phase ABCD is homogeneous, add Phase E. Mix well.
7. Check pH, adjust as necessary.

Specifications

- **Appearance:** Brown, clear liquid
- **pH:** 4.5
- **Viscosity:** 100cps



Figure 15. Scalp Savior Serum helps the scalp replenish moisture and functionality

PHASE	CHEMICAL NAME (COMPANY)	INCI	FUNCTION	%
A	Water, DI	Water	Diluent	68.50
	MG-60 (NAGASE)	Maltooligosyl Glucoside, Hydrogenated Starch Hydrolysate	Anti-inflammatory/mollifies the effect of surfactants, increase tensile strength of damaged hair, reduces TEWL	1.00
B	**Trehalose 100** (NAGASE)	Trehalose	Moisturization, Antioxidant, Itch reduction, Strengthens barrier function	3.00
	Olea-HT 10 (Bionap)	Olea Europaea (Olive) Fruit Extract, Maltodextrin	Maintains hair integrity: Natural antioxidant activity to counteract stressor agents, protects hair shaft, urban pollution protection, thermal protection	0.75
	Opuntia Biocomplex SH (Bionap)	Opuntia ficus-indica stem extract, Maltodextrin	Short- and long-term hydration, improves skin barrier function, protects against surfactant irritation	3.00
C	Glycerin	Glycerin	Humectant	10.00
	GN (NAGASE)	Glucosyl Naringin/Naringin	Promotes Elastin and Elastin Fiber Formation, Helps restore skin elasticity & firmness	1.00
	AGH (NAGASE)	α-Glucosyl Hesperidin	Stimulates surface circulation, Suppression of hair loss/regrowth of thinning hair, Enhances efficacy	3.00
	Skin Save (Bionap)	Olea europaea (olive) leaf extract, Opuntia ficus-indica stem extract, Capparis spinosa fruit extract, maltodextrin	Reduces skin erythema, anti-itch, skin relief, counteracts solar aggression, reduces skin redness	3.00
D	Wilbride S-753D (NOF Corporation)	PEG/PPG/Polybutylene Glycol-8/5/3 Glycerin	Emollient, superior touch & skin penetration enhancement	3.00
	D-Panthenol 75W (BASF)	Panthenol	Moisturizer, Provitamin	1.00
	Cetiol HE (BASF)	PEG-7 Glyceryl Cocoate	Emollient	1.00
E	Water, DI	Water	Diluent	0.50
	Zemea (Dow/Tate & Lyle)	Propanediol	Humectant	0.50
	Euzyl PE9010 (Ashland)	Phenoxyethanol (and) Ethylhexylglycerin	Preservative	0.75
	Citric Acid	Citric Acid	pH adjustment	QS
				100

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CONTACT

Get in Touch.

Your Trusted Personal Care Ingredients Partner

Our team of Personal Care experts are ready to collaborate, inspire, and assist in bringing your vision to life.

Get in touch and discover how **NAGASE** can make a difference in your next project today.

Want to Know More?

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