

Distinctive® Squalane Butter 45

INCI: Squalane (and) Caprylic/Capric Triglyceride (and) Behenyl Behenate (and) Tribehenin

July 3, 2012 rev

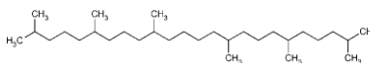
DC3821

Natural Defense for Skin and Hair

Squalane is a highly emollient and conditioning substance providing relief from dry, irritated skin and scalp. Studies have shown that squalane helps boost cellular renewal and protects the skin by replenishing essential lipids to help revitalize the skin, and combat environmental aggressors and moisture loss. With a molecular structure most resembling sebum, squalane is readily absorbed by the skin, restoring skin softness and elasticity for a healthier, more youthful complexion.



Distinctive® Squalane Butter 45 is a soft butter derived from 100% renewable, plant-based emollients. This colorless, odorless material melts at skin temperature to provide a soft, luxurious skin feel. It is an excellent alternative to lanolin, offering improved aesthetics and superior product stability. Use of Distinctive® Squalane Butter 45 in the oil phase helps protect skin against trans-epidermal water loss and environmental aggressors. It contains 45% stabilized plant squalane to mimic skin's natural lipid chemistry, offering superb bio-functionality, ideal for numerous personal care applications.



BENEFITS

- ◆ Emollient
- ◆ Restructuring
- ◆ Barrier protection/ Reduces TEWL
- ◆ Conditioning
- ◆ Moisturizing
- ◆ Luxurious skin feel
- ◆ Enhanced gelling properties
- ◆ Highly skin compliant
- ◆ Excellent substitute for lanolin
- ◆ Soothing

APPLICATIONS

- ◆ Moisturizers
- ◆ Cleansers
- ◆ Hair and scalp treatments
- ◆ Sun care
- ◆ Sensitive skin
- ◆ Anti-aging
- ◆ Color cosmetics
- ◆ Baby products

TYPICAL PROPERTIES

Appearance	Waxy solid
Color	White to off-white
Odor	Characteristic

FORMULATION GUIDELINES

Recommended use level	1-8%
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RESOURCES OF
NATURE

AMMEREX

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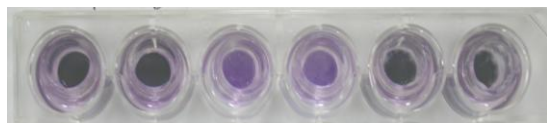
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DEFENSE AGAINST ENVIRONMENTAL INSULTS

EpiDerm™ viability, assayed by MTT method

Water 1% SDS Squalane Butter 45
+1% SDS



Distinctive® Squalane Butter 45 protected skin substitutes against SDS-induced damage. In the absence of Squalane Butter 45, SDS damaged cells, as demonstrated by the weak formazan generation in the middle 2 wells.

QUANTIFICATION OF PROTECTIVE EFFECT

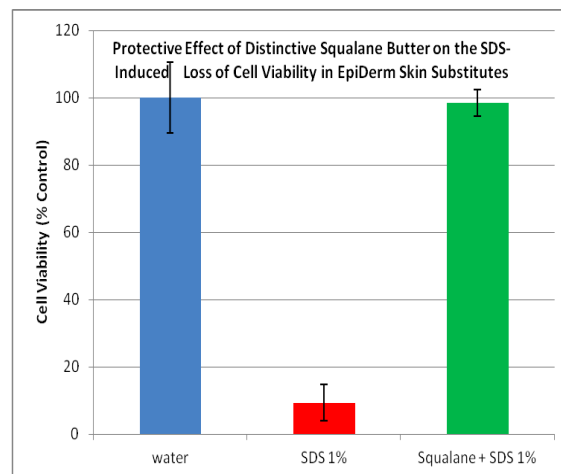
Viability of skin substitute

TEST MATERIAL	% WATER CONTROL	P VALUE
Water	100.0	1.000
SDS 1%	9.3	0.000
Squalane Butter 45 + SDS 1%	98.5	0.382

SDS causes nearly 90% keratinocyte viability loss as compared with the non-treated water control. In contrast, skin substitutes incubated with Distinctive® Squalane Butter 45 are nearly 99% resistant to the detergent-caused damage.

PROTECTIVE EFFECT

EpiDerm™ viability determined under different conditions



Distinctive® Squalane Butter 45 protected EpiDerm™ viability

MOISTURE INTENSE SERUM

Formula: RON 15-96-1

PHASE	INGREDIENT	% BY WEIGHT
A	Water	qs
A	Propanediol	3.00
A	Xanthan Gum	0.30
A	Glycerin	10.00
A	Distinctive® Emul-Lipid LB	4.00
B	Dimethicone	1.00
B	Cetyl Alcohol	0.50
B	Isododecane	4.00
B	Distinctive® Squalane Butter 45	5.00
B	Butyrospermum Parkii (Shea) Butter	2.00
B	C12-15 Alkyl Benzoate	2.00
C	Preservative	qs
		100.00

To the main vessel, add water and begin mixing with a propeller mixer. Premix Propanediol and Xanthan Gum and add to batch. Begin heating to 75-80°C. While heating, add Glycerin. At 75-80°C, add Distinctive® Emul-Lipid LB. Mix at 75-80°C for 20 minutes or until Distinctive® Emul-Lipid LB is fully hydrated.

In a side container, combine Phase B ingredients and heat to 75-80°C. Add Phase B to Phase A, mix 15 minutes, until uniform.

Begin cooling batch. At 40°C, add Phase C ingredients. Cool to room temperature.

SELF ASSESSMENT CONSUMER STUDY: A panel of 108 consumers completed a survey after using the Moisture Intense Serum and the findings strongly support that the Moisture Intense Serum formulated with *Distinctive® Squalane Butter 45* is a highly desirable product for gentleness, sensory, and hydration skin care benefits yielding a very high overall panelist satisfaction score of over 94%.

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EXFOLIATING CLEANSER

Formula: RON16-29-4

PHASE	INGREDIENT	% BY WEIGHT	
A	Water	qs	To the main vessel, add water and begin mixing with a propeller mixer. Begin heating to 75-80°C. Premix Xanthan Gum and Glycerin. While heating, add Phase A ingredients, one at a time. Mix at 75-80°C for 20 minutes or until Distinctive® Emul-Lipid LB is fully hydrated.
A	Aloe Barbadensis Powder	0.10	
A	Xanthan Gum	0.20	
A	Glycerin	8.00	
A	Distinctive® Emul-Lipid LB	5.00	
B	DC Odyssey Oil	1.50	In a side container, combine Phase B ingredients and heat to 75-80°C. Add Phase B to Phase A, mix 15 minutes, until uniform. Begin cooling batch.
B	Cetearyl Alcohol	3.00	
B	Distinctive® Squalane Butter 45	2.00	
C	Sodium Cocoyl Isethionate	2.00	At 35°C, add Phase C. Mix until uniform
D	Sodium Polyacrylate	0.80	At 30°C, add Phase D. Mix until uniform.
E	Preservative	Qs	At 30°C, add Phase E. Mix until uniform. Homogenize, if necessary before adding Phase F ingredients.
F	Fragrance	qs	Add Phase F ingredients. Mix until uniform.
F	Scrubbing Beads/Exfoliant	qs	
		100.00	Add Phase G ingredients. Mix until uniform.

TONER

Formula: RON16-35-2

PHASE	INGREDIENT	% BY WEIGHT	
A	Water	qs	To the main vessel, add water and begin mixing with a propeller mixer. Add the remainder of Phase A ingredients, one at time, mixing well between each addition.
A	Disodium EDTA	0.20	
A	Butylene Glycol	5.00	Once homogenous, add Phase B. Homogenize if necessary.
A	Polyacrylate Crosspolymer-6	0.50	
A	DC Instalift™ Goji	1.00	
A	Distinctive® Oat	2.00	
A	Distinctive® Squalane Butter 45	4.00	
A	PEG-6 Caprylic/Capric Glycerides (and) Caprylic/Capric Glycerides (and) Polyglyceryl-3 Oleate (and) Polyglyceryl-10 Mono/Dioleate	2.30	
B	Preservative	qs	
		100.00	

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SHIMMERING CREAM

Formula: RON16-31-2

PHASE	INGREDIENT	% BY WEIGHT
A	Water	q.s.
A	Glycerin	5.00
A	Distinctive® Emul-Lipid LB	5.00
B	DC Odyssey Oil	3.00
B	Helianthus Annuus (Sunflower) Seed Oil	2.00
B	Coco-Caprylate/Caprate	2.00
B	Cetearyl Alcohol	2.30
B	Distinctive® Squalane Butter 45	4.00
C	Distinctive® Oat	3.00
C	Preservative	q.s.
C	Fragrance	q.s.
D	Sodium Polyacrylate	0.45
		100.00

To the main vessel, add water and begin mixing with a propeller mixer. Begin heating to 75-80°C. While heating, add Phase A ingredients, one at a time. Mix at 75-80°C for 20 minutes or until Distinctive® Emul-Lipid LB is fully hydrated.

In a side container, combine Phase B ingredients and heat to 75-80°C. Add Phase B to Phase A, mix 15 minutes, until uniform. Begin cooling batch.

At 35°C, add Phase C ingredients. Mix until uniform.

At 30°C, add Phase D. Mix until uniform. Cool to Room Temperature.

FACE FINISHING MOISTURIZER

Formula: RON16-37

PHASE	INGREDIENT	% BY WEIGHT
A	Water	q.s.
A	Glycerin	4.00
A	Distinctive® Emul-Lipid LB	4.00
B	Cetyl Palmitate	1.50
B	Cetiol LC	2.00
B	Helianthus Annuus (Sunflower) Seed Oil	2.00
B	Cetearyl Alcohol	2.00
B	Distinctive® Squalane Butter 45	2.00
C	Distinctive® Oat	2.00
C	Gransil PSQ	2.00
C	Sodium Polyacrylate (and) Dimethicone (and) Cyclopentasiloxane (and) Trideceth-6 (and) PEG/PPG-18/18 Dimethicone	2.00
D	DC Instalift Goji	1.00
E	Preservative	qs
F	Ammonium Acryloyldimethyltaurate/VP Copolymer	0.45
		100.00

To the main vessel, add water and begin mixing with a propeller mixer. Begin heating to 75-80°C. While heating, add Phase A ingredients, one at a time. Mix at 75-80°C for 20 minutes or until Distinctive® Emul-Lipid LB is fully hydrated.

In a side container, combine Phase B ingredients and heat to 75-80°C.

Add Phase B to Phase A, mix 15 minutes, until uniform. Begin cooling batch.

At 35°C, add Phase C ingredients, one at a time, mixing well between each addition. Mix until uniform.

At 30°C, add Phase D. Mix until uniform.

At 30°C, add Phase E. Mix until uniform.

At 30°C, add Phase F. Mix until uniform. Homogenize if necessary.

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LIPGLOSS

Formula: RON16-41

PHASE	INGREDIENT	% BY WEIGHT	
A	Distinctive Squalane Butter 45	26.50	Add Phase A ingredients to main vessel and heat to 80-85°C.
A	Ozokerite	0.80	
A	Bis-Diglyceryl Polyacyladipate-2	4.20	Mix until uniform.
A	Tocopheryl Acetate	1.00	
A	Polyglyceryl-6 Polyricinoleate	10.00	Add Phase B ingredients, mix until uniform.
A	Hydrogenated Polyisobutene	31.20	
A	Polybutene	24.00	Cool to 70°C and pour.
B	Flavor	qs	
B	Mica (and) Titanium Dioxide	<u>2.00</u>	
		100.00	
		100.00	

REFERENCES

T.Haußa , S.Dante, N.Dencher, T.Haines, Squalane is in the midplane of the lipid bilayer: implications for its function as a proton permeability barrier. Biochimica et Biophysica Acta 1556 (2002) 149– 154.

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