



g Cola®Lipid

Naturally-Derived Biomimetic Phospholipids

Patents - Cola®Lipid DLO 6,331,293 B1
Cola®Lipid RC 6,451,775 B1

INTRODUCTION

The **Cola®Lipid** products are multifunctional, natural triglyceride phospholipids similar to phospholipids that occur naturally in the body. **Cola®Lipids** can be used in a variety of personal care products.



BENEFITS

- Sustainable
- Naturally derived
- Mimics natural phospholipids
- Highly substantive to hair and skin
- Broad spectrum antimicrobial activity
- Non-irritating to eyes and skin
- Reduces irritation of anionic activity
- Deposits essential fatty acids on skin
- Repairs damaged skin and hair

APPLICATIONS

- Creams, lotions, tonics, shower gels, facial washes, etc.
- Conditioners, shampoos, hair tonics, hair creams, etc.
- Pre- and post-sun care creams, lotions, gels, etc.
- Foundations, lipsticks, etc.
- Health care products
- Baby products

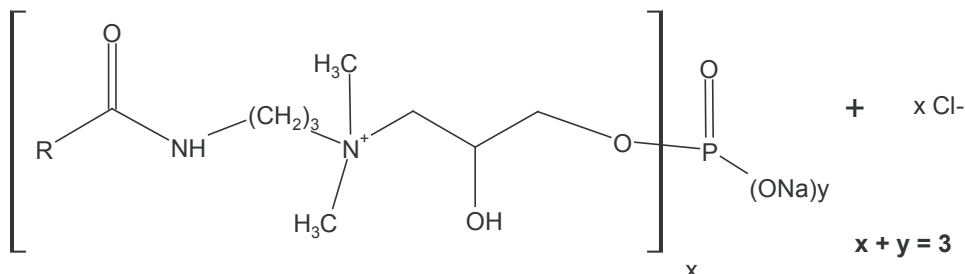
GREENSTAR RATINGS

Cola®Lipid C	4.53
Cola®Lipid BP	5.19
Cola®Lipid SAFL	5.20
Cola®Lipid SUN	5.19
Cola®Lipid OL	5.19
Cola®Lipid ST	5.12
Cola®Lipid RC	5.30
Cola®Lipid DLO	6.71
Cola®Lipid GS	5.19
Cola®Lipid M	4.54

greenstarproducts.org



STRUCTURE



<u>COLA[®]LIPID</u>	<u>INCI NAMES</u>	<u>SOURCE</u>	<u>PRIMARY R-GROUP</u>
C	Cocamidopropyl PG-Dimonium Chloride Phosphate	Coconut	Coco
SAFL	Linoleamidopropyl PG-Dimonium Chloride Phosphate	Safflower	Linoleyl
SUN	Sunflowerseedamidopropyl PG-Dimonium Chloride Phosphate	Sunflower	Linoleyl
OL	Sodium Olivamidopropyl PG-Dimonium Chloride Phosphate	Olive	Oleyl
ST	Stearamidopropyl PG-Dimonium Chloride Phosphate	Palm	Stearyl
RC	Sodium Ricinoleamidopropyl PG-Dimonium Chloride Phosphate	Castor	Ricinoleyl
DLO	Dimer Dilinoleamidopropyl PG-Dimonium Chloride Phosphate	Dimer Acid	Di-linoleyl
SIL	Linoleamidopropyl PG-Dimonium Chloride Phosphate PEG-8 Dimethicone Complex	Sunflower	Linoleyl
BP	Sodium Borageamidopropyl PG-Dimonium Chloride Phosphate	Borage	Linoleyl
GS	Sodium Grapeseedamidopropyl PG-Dimonium Chloride Phosphate	Grapeseed	Linoleyl
M	Myrstamidopropyl PG-Dimonium Chloride Phosphate	Coconut	Myristyl



Cola[®]Lipid

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TYPICAL PROPERTIES

Cola [®] Lipid	Appearance (25°C)	Color, Gardner	% Solids	pH (10% DW)
C	Clear yellow liquid	3 Max.	45 - 48	6.5 - 7.5
BP	Pale yellow liquid	4 Max.	30 - 35	6.5 - 7.5
SAFL	Clear amber liquid	4 Max.	29 - 31	7.0 - 8.0
SUN	Clear amber liquid	4 Max.	29 - 31	7.0 - 8.0
OL	Clear Liquid	4 Max.	29 - 31	6.5 - 8.0
M	Waxy white solid	4 Max.	45 - 47	6.5 - 7.5
ST	Waxy white solid	N/A	40 - 42	6.0 - 8.0
RC	Clear pale liquid	4 Max.	29 - 31	6.5 - 8.0
DLO	Clear amber liquid	4 Max.	29 - 31	7.0 - 8.0
SIL	Clear light amber liquid	4 Max.	29 - 31	6.5 - 8.0
GS	Clear Liquid	4 Max.	29 - 31	6.5 - 8.0



FORMULATIONS

FOAMING FACIAL CLEANSER

Compound	Wt.%
Water	58.00
Cola [®] Mate DSLS	22.00
Cola [®] Teric LMB	8.00
Cola [®] Lux LO	5.00
Cola [®] Lipid C	4.00
Glycerin	2.00
Croda Antil 171	1.00
Total	100.00

PROCEDURE:

Blend ingredients in order given with sufficient stirring until uniform. Adjust pH to 5.5 with citric acid.

BARRIER LOTION

Compound	Wt.%
Part A	
Cola [®] Lipid DLO	4.50
Water	82.50
Part B	
Steareth - 2	2.00
Mineral Oil	4.00
Cetearyl Alcohol	3.00
Octyldodecyl Myristate	2.50
Dimethicone (100cS)	1.50
Total	100.00

PROCEDURE:

Add ingredients in each phase separately and heat to 65°C. Homogenize Part B into Part A with continued heating. Stir cool to 45°C. Add fragrance, coloring and preservative as required, then fill.

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FORMULATIONS

ANTIMICROBIAL HAND CLEANSER

Compound	Wt.%
Water	87.00
Cola [®] Mate ODS	8.50
Cola [®] Lipid C	2.50
Chlorhexidine Gluconate (20%)	2.00
Total	100.00

PROCEDURE:

Blend ingredients in order given.
Viscosity can be increased with the addition of Glucamate DOE-120.

BABY WIPES

Compound	Wt.%
Cola [®] Lipid C	2.00
Malic acid	0.40
Water	97.60
Total	100.00

PROCEDURE:

Add all ingredients; adjust pH to 5.5.

DEEP MOISTURIZING CREAM

Compound	Wt.%
Part A	
Water	84.50
Potassium Hydroxide (45%)	0.40
Cola [®] Fax CPE	1.00
Cola [®] Lipid ST	2.50
Germaben II-E	0.60
Part B	
Titanium Dioxide	0.50
Part C	
Cetyl Alcohol	2.00
Myristyl Myristate	3.00
Isopropyl Palmitate	4.00
Dimethicone (100cS)	1.00
Lanolin Alcohol	0.50
Total	100.00

PROCEDURE:

Heat Part A with agitation to 60°C, add Part B, continue mixing. Separately heat Part C to 60°C. Homogenize Part C into Part A for a sufficient time to ensure good emulsification. Stir, cool to 45°C, add fragrance and package.

MOISTURIZING SUNSCREEN (SPF 15)

Compound	Wt.%
Part A	
Cola [®] Fax CPE	1.00
Cola [®] Lipid ST	2.50
Water	78.70
Potassium Hydroxide (45%)	0.40
Germaben II-E	0.40
Titanium Dioxide	0.40
Part B	
Cetyl Alcohol	2.00
C 12-15 Alkyl Benzoate	1.60
Isopropyl Palmitate	2.00
Dimethicone (200/350cS)	1.00
Octylmethoxy Cinnamate	6.00
Menthyl Anthranilate	3.00
Stearth-2	1.00
Total	100.00

PROCEDURE:

Heat Part A with agitation to 60°C. Separately heat Part B to 60°C. Homogenize Part B into Part A for a sufficient time to ensure good emulsification. Stir, cool to 45°C, add fragrance and package.