



Cola[®]Moist 200

Cationic Humectant



Milder, Safer, and Rehydrating

Stronger hydrating power than glycerin
EO-free, 1,4-Dioxane-free
Safe and non-irritating



Cola®Moist 200 is a cationic humectant with a high charge density and outstanding water binding properties. It is highly hygroscopic at all humidities, attracting and binding water extremely effectively, and provides a higher humidity protective gradient on both skin and hair to enhance moisturization. Cola®Moist 200 functions as an osmo-regulator to prevent dehydration and its powerful hydrating properties limit water evaporation and retain moisture. Cola®Moist 200 is an important functional ingredient with both strong ionic bonding and hydrogen bonding within the deposited humectant film matrix.

Benefits

- Safe and non-irritating
- Increases softness and elasticity of skin
- Reduces fly-away in hair
- Leaves no tacky feeling
- Non-greasy, water-soluble, non-staining
- Stable at a broad range of temperatures and pH
- Compatible with a wide variety of formulations
- Stronger hydrating power than glycerin
- Easily formulated into many emulsion products

Applications

Personal Care

- Soap bars
- Liquid soaps
- Facial cleansers

Skin Care

- Dry skin lotions and creams
- Daily wear moisturizers

Hair Care

- Shampoos
- Conditioning creams and rinses
- Frizz/flyaway control
- Volumizing products

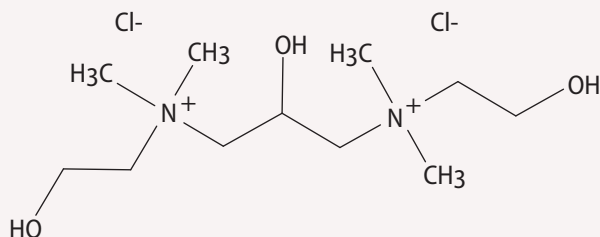
Baby and Sensitive Skin Care

INCI Hydroxypropyl Bis-Hydroxyethyltrimonium Chloride

CAS 110528-94-4 EC# 807-137-2

LISTINGS US (TSCA); Canada (NDSL); EU (REACH); China (IECIC)

Reg. # 01-2120076848-38-0000



TYPICAL PROPERTIES

Appearance	Clear Liquid
pH (10% aqueous)	6.0
Solids, %	70.0
Color, Gardner	2

Safer for end-users

Eye Irritation

MatTek EpiOcular™ - In vitro epidermal keratinocytes (2% solid solution)

- ET-50 Results "greater than 256 mins ... indicating 'non-irritating' classification."

HET-CAM - Hen's Egg Test Chorioallantoic Membrane Test (5% solid solution)

- Practically no ocular irritation potential in vivo, score of 2.5

Acute Skin Irritation

48 Hour Occlusive skin patch test on 53 Test Subjects (5.0% solid solution)

- 53/53 showed no visible skin reaction (0)
- No potential for dermal irritation

Bacteria Mutation

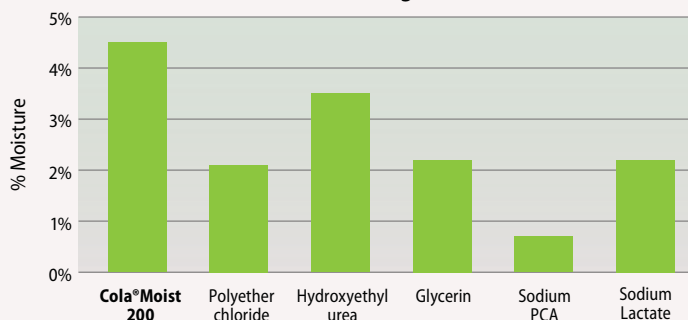
Ames test - in vitro method of checking for mutagenetic behavior (5.0% active solution)

- No detectable genotoxic activity

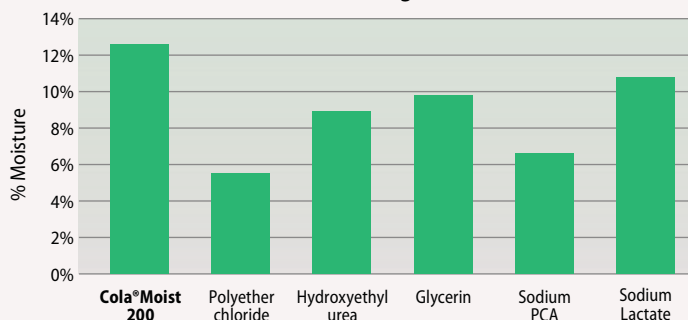
Performance in dry climates

Cola®Moist 200 showed superior results over comparative products at humidity levels of 10% and 30% while also providing excellent moisturization at higher levels of humidity as well. Cola®Moist 200 is beneficial for moisturization in skin care products intended for use in dry climates.

Water Binding 10% R.H.



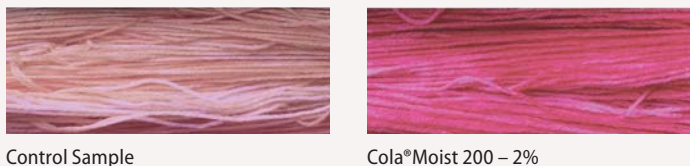
Water Binding 30% R.H.



Efficacy

Rubine Dye Test - Substantivity

Solutions of Cola®Moist 200, at concentrations of 2.0% and 0.2% active in water, were applied to a non-mercerized cotton skein and rinsed with water before the rubine dye solution was applied. After 30 seconds, the rubine dye solution was rinsed from the substrate with water. Cola®Moist 200 displayed strong color values at both levels indicating the retention of Cola®Moist 200 on the test substrate.

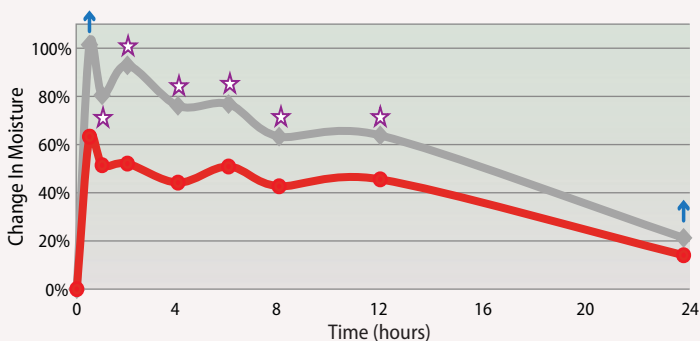


Solutions were also prepared using 30% of a sulfate / betaine / alkanolamide shampoo base, and either 2.0% or 0.2% Cola®Moist 200. Both solutions again showed strong color values similar to that displayed in the water solutions alone. This test indicates that the substantivity of Cola®Moist 200 is not affected by the presence of anionic surfactants and can be used in conjunction with shampoo or liquid hand soap bases to give the desired moisturization properties.

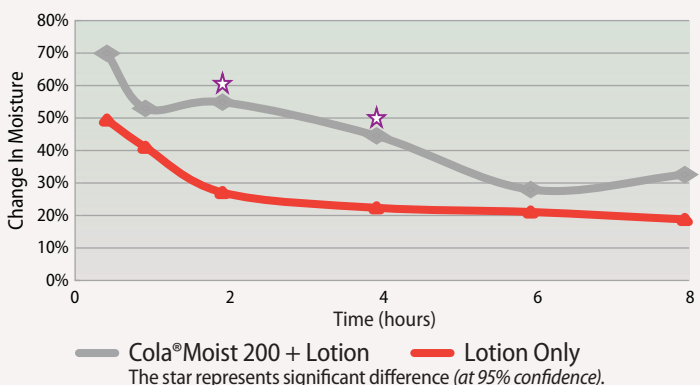
Leave-On Moisturization

Cola®Moist 200 (5%) was added to a commercial lotion and moisturization was compared to the base lotion. Lotions were applied to the forearms of eight healthy skin volunteers and skin moisturization was measured with Nova DPM 9003 at baseline and 0.5, 1, 2, 4, 6, 8, 12, 24 hours after application. Cola®Moist 200 significantly improved moisturization over the base lotion at most time points over the 24 hour study, with clear directional improvement at the others.

Study 1 National Brand "B" Lotion + 5% Cola®Moist 200
Measurements were collected over 24+ hours.

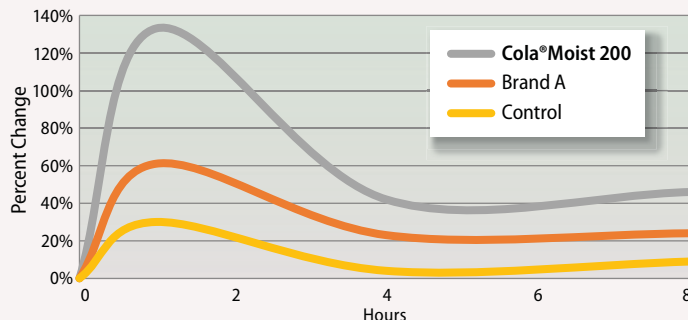


Study 2 National Brand "C" Lotion + 5% Cola®Moist 200
Measurements were collected over 8+ hours.



Leave-On Moisturization (cont.)

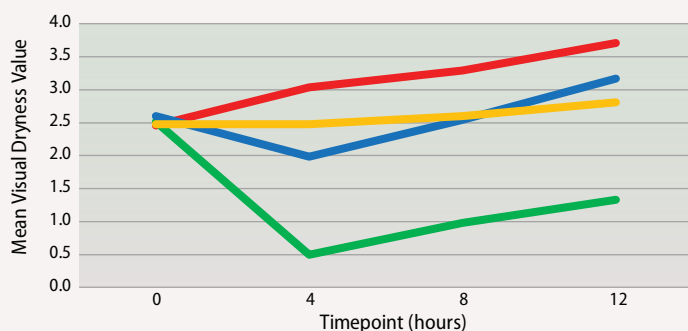
Cola®Moist 200 was evaluated in a skin moisturization study against a leading glycerin replacement. Each test article was added at 5% as supplied to a neutral lotion base. Moisturization measurements were made with a Nova DPM 9003. Results are expressed in percent improvement over baseline (pre-application) measurements. Cola®Moist 200 significantly improved moisturization over the base lotion and the competitive material throughout the 8-hour study.



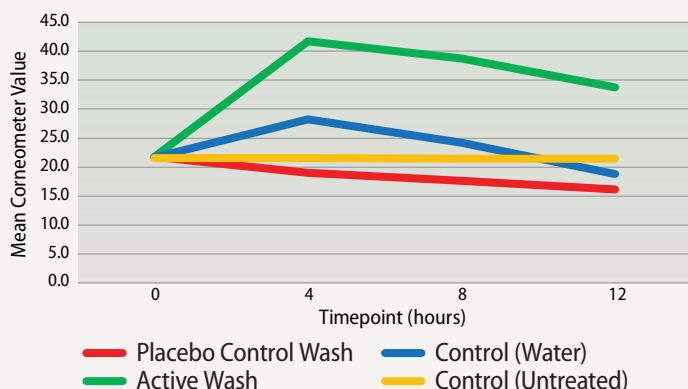
Rinse-Off Moisturization

A sulfate-free body wash was compared to the same body wash containing 3% Cola®Moist 200 (as supplied). A placebo control wash, active wash, water control and untreated control was applied to four sites on the legs of 26 healthy, dry skin volunteers (Dryness Score 1.5 – 3.0). Skin moisturization was measured with expert visual grading and Corneometer® at baseline and 4, 8, 12 hours after application. The sulfate-free body wash with Cola®Moist 200 significantly improved moisturization over all other conditions throughout the 12 hour study.

Study 1 Mean Visual Dryness Results
Higher numbers indicate drier skin appearance.



Study 2 Mean Corneometer Results
Higher numbers indicate more moisture retained.



The Right Choice for Safer, Milder and More Hydrating Formulations

Moisture Lock Conditioner

No. 1004

A mild, efficacious conditioner free of harsh quats that leaves hair soft, shiny, and provides long lasting moisture to reduce frizz. It will not build up or weigh down hair.

INGREDIENT / INCI	%
1 Water	qs to 100.00
2 Lanette® O / Cetearyl Alcohol	5.00
3 Cola®Lipid SAFL / Linoleamidopropyl PG-Dimonium Chloride Phosphate	5.00
4 Cola®Moist 200 / Hydroxypropyl Bis-Hydroxyethyl-dimonium Chloride	1.00
5 Dow Corning® 556 / Phenyl Trimethicone	1.50
6 Green Tea / Fragrance	0.10
7 Euxyl® PE9010 / Phenoxyethanol and Ethylhexylglycerin	1.00

Opaque Liquid, pH: 6.0, Viscosity: 25,000 cP

- Heat water to 60°C. Add ingredients 2-3. Homogenize. Cool to 45°C. Add remaining ingredients. Homogenize and fill containers.

Volumizing Shampoo (Sulfate-Free)

No. 1037

This volumizing shampoo is free from sulfates and gives the hair a light feel while adding moisture and volume.

INGREDIENT / INCI	%
1 Water	qs to 100.00
2 Cola®Teric LMHS / Lauramidopropyl Hydroxysultaine	15.00
3 Suga®Nate 160NC / Sodium Laurylglucosides Hydroxypropylsulfonate	13.00
4 Cola®Mate LA-40 / Disodium Lauryl Sulfosuccinate	8.00
5 Cola®Moist 200 / Hydroxypropyl Bis-Hydroxyethyl-dimonium Chloride	3.00
6 Poly Suga®Quat S-1210P / Polyquaternium-81	2.00
7 WS Apple Fragrance / Fragrance	0.20
8 Microcare® SB / Sodium Benzoate (and) Potassium Sorbate	1.00
9 Citric Acid	qs to pH

Clear viscous liquid, pH 5.0 – 5.5, Viscosity: 5,000 – 10,000 cP

- Combine ingredients 1 – 3 and heat to 45-50°C. Add ingredient 4 and mix until completely dissolved. Add ingredients 5 – 6 while cooling to 40°C. Once below 40°C, add remaining ingredients. Adjust to pH 5.0 – 5.5 with citric acid.

STORAGE AND HANDLING

Cola®Moist 200 should be stored in sealed containers at temperatures not exceeding 120°F (49°C). Shelf life is 24 months from date of manufacture. Cola®Moist 200 is shipped in poly 55-gal drums, net weight 450 lbs (204.1 kg). Safety Data Sheet may be downloaded at www.colonialchem.com.

Foaming Oil Cleanser

No. 2048

Foaming, hydrating oil wash, gentle enough for the face and body. This anhydrous, sulfate-free oil cleanser will create a soft foam and won't strip skin.

INGREDIENT / INCI	%
1 Soybean Oil / Glycine Soja (Soybean) Oil	68.30
2 Pelemol® CCT / Caprylic Capric Triglyceride	15.00
3 Cetiol® CC / Dicaprylyl Carbonate	3.00
4 Cola®Carb TDC / Trideceth-7 Carboxylic Acid	10.00
5 Cola®Moist 200 / Hydroxypropyl Bis-Hydroxyethyl-dimonium Chloride	3.00
6 MIPA / Monoisopropanolamine	0.60
7 Lemongrass Oil / Cymbopogon Citratus (Lemongrass) Oil	0.20

Clear Liquid, pH 7.0, Viscosity: 50 cP

- Combine ingredients 1-5 in order with moderate mixing. Adjust to pH 7.0 with ingredient 6. Heat to 40 – 45°C and continue mixing until clear. Once clear, begin cooling and add ingredient 7.

Hydrating Body Wash (Sulfate-Free)

No. 2045

Easy-to-mix formulation for a hydrating sulfate-free body wash that cleanses and locks in moisture. Skin will be fragrant and feel soft after shower.

INGREDIENT / INCI	%
1 Water	qs to 100.00
2 Cola®Det DEF-61 / Water (and) Sodium C14-16 Olefin Sulfonate (and) Cocamidopropyl Hydroxysultaine (and) Cocamide MIPA	30.00
6 Cola®Moist 200 / Hydroxypropyl Bis-Hydroxyethyl-dimonium Chloride	3.00
7 Oud Fragrance / Fragrance	0.20
8 Euxyl® K712 / Sodium Benzoate (and) Potassium Sorbate	1.00
9 Citric Acid	qs to pH

Clear liquid, pH 5.0 – 5.5, Viscosity: 5,000 – 10,000 cP

- Add ingredients 1 – 5 in order, mixing until homogeneous. Adjust to pH 5.0 – 5.5 with Citric Acid.



Colonial Chemical

225 Colonial Drive · South Pittsburg, TN 37380
Phone: 423-837-8800 · Fax: 423-837-3888
www.colonialchem.com

Innovative Specialty Surfactants