

# COLA<sup>®</sup>MOIST 200

## HUMECTANT & MOISTURIZER

### benefits

Look for the following benefits from Cola<sup>®</sup>Moist 200:

- Extremely hygroscopic and imparts a pleasant moist feeling to skin and hair.
- Increases softness and elasticity of skin and hair.
- Even in high concentrations, it is safe to skin and eye.
- Mild pleasant odor, very light color.
- Stable at a broad range of temperatures and pH's.
- Compatible with anionic, cationic, and nonionic ingredients.
- Easy to formulate into all types of emulsion products.

Cola<sup>®</sup>Moist 200 has been tested and is a safe material when used in combination with other normal skin care raw materials.

### applications

Because Cola<sup>®</sup>Moist 200 has excellent moisturizing effects and safety on skin, this product is especially useful as a humectant for cosmetics and toiletries. Cola<sup>®</sup>Moist 200 can be used equally well in either wash-off or leave-on products.

- Skin Care Products: creams, lotions, tonics, shower gels, etc.
- Hair Care Products: shampoos, conditioners, anti-dandruff shampoos, etc.
- Sun Care Products: pre and post sun care creams, lotions, gels, etc.
- Make-up Products: foundations, lipsticks, etc.
- Health Care



CTFA/INCI: Hydroxypropyl Bis-Hydroxyethylidimonium Chloride  
Patented



### description

Colonial Chemical has been conducting research and development efforts toward the invention of new and improved humectants, useful as non-occlusive moisturizers for personal care products.

There are a number of humectants in the marketplace that attract moisture at high humidity levels, but a need has long existed for enhanced performance under severely dry, low humidity conditions for extended periods of time.

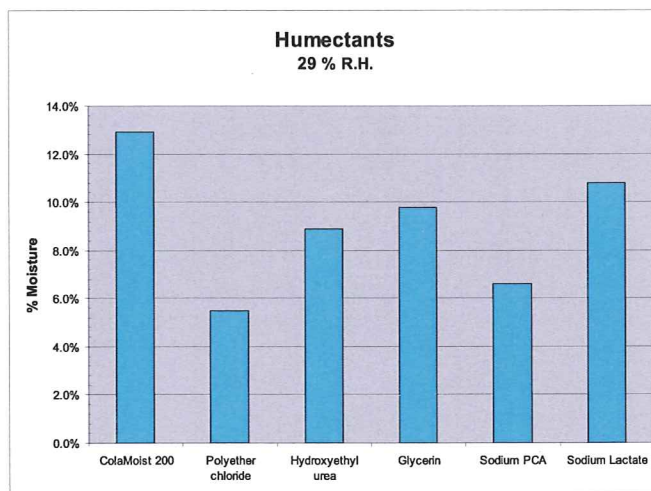
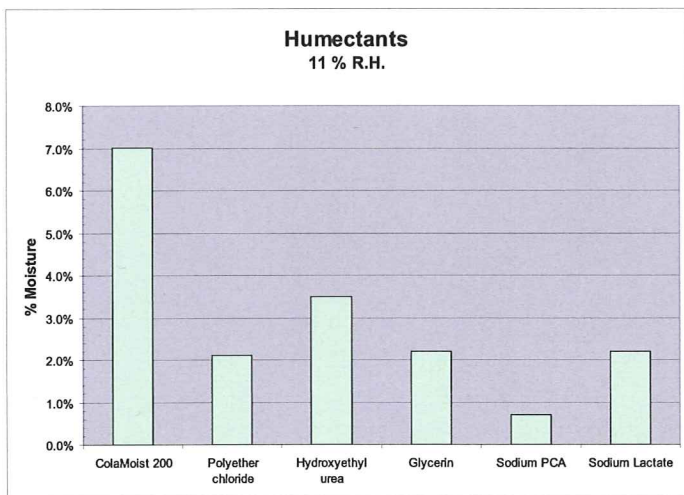
Colonial Chemical now offers Cola<sup>®</sup>Moist 200, a highly ionized water soluble compound that enhances water bonding structures. It is highly hygroscopic at all humidities, attracting and binding water extremely effectively, and provides a higher humidity protective gradient on both skin and hair, to enhance moisturization. It functions as an osmoregulator to prevent dehydration. Its powerful hydrating properties limit water evaporation and serve to retain moisture. Its performance benefits are due to both strong ionic bonding and hydrogen bonding within the hydrated deposited humectant film matrix.

Cola<sup>®</sup>Moist 200 represents a new development in humectants and moisturizers for skin care products. It is safe and non-irritating and can be easily formulated into a wide array of cosmetic compositions. It will keep the skin moist, without leaving a tacky feeling. It can also find use in hair care products and bath and shower products.

Cola<sup>®</sup>Moist 200 has stronger hydrating power than that of glycerin. It is non-greasy, water soluble, non-staining, does not clog pores, does not interfere with normal skin respiration and will not cause drag on product rub-out. Cola<sup>®</sup>Moist 200 is an important functional ingredient with many desired properties for the formulator.

# moisturization

In order to test the effectiveness of **Cola<sup>®</sup>Moist 200**, a series of tests were run comparing **Cola<sup>®</sup>Moist 200** with well-known humectants and moisturizers. A selection of glycerin, sodium pyroglutamate (sodium PCA), sodium lactate, hydroxyethyl urea, and polyether chloride were tested at various humidity levels in a humidity cabinet. **Cola<sup>®</sup>Moist 200** showed superior results over all these products at humidity levels of 11% and 29%, while also providing excellent moisturization at higher levels of humidity as well. **Cola<sup>®</sup>Moist 200** represents a breakthrough in moisturization for skin care products intended for use at humidity levels where available moisture in the air will be low. This is particularly useful to the formulators who are working on moisturizers for use in winter applications or for use in dry climates.



# toxicity

## Eye

**Cola<sup>®</sup>Moist 200** was tested for eye irritation using the chorioallantoic membrane technique (HET-CAM). **Cola<sup>®</sup>Moist 200** received a score of 2.5, indicating the product is non-irritating to the human eye.

## Skin

To evaluate the potential irritation to skin, a 48 hour "patch test" was performed with **Cola<sup>®</sup>Moist 200** diluted to 5.0 % activity. The patch sites were inspected at 48 hours and at 72 hours for gross changes. It was observed that there was a complete absence of skin change. Under the conditions of this test, **Cola<sup>®</sup>Moist 200** did not indicate a potential for dermal irritation.

## Mutagenicity

**Cola<sup>®</sup>Moist 200** was tested for mutagenicity using the Ames test methodology. The Ames test is an *in vitro* method of checking for mutagenetic behavior. A strain of bacteria (*S. typhimurium*) which are deficient in a particular enzyme are treated with the product. If any mutations give rise to the production of the deficient enzyme, bacteria colonies will grow and be detected. This method is compliant with the OECD TG 471, Bacterial Reverse Mutation Test (1997) guidance document. Using this method, **Cola<sup>®</sup>Moist 200** at a 5% level was shown to have no detectable genotoxic activity.

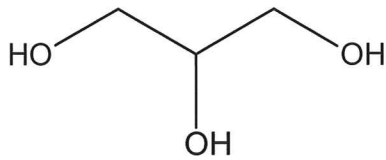
*Colonial Chemical does not animal test.*



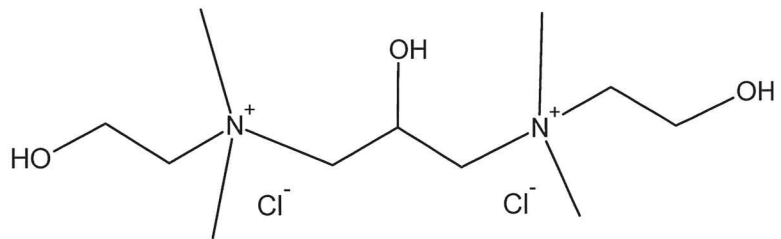
# rubine dye test

Evaluation of the substantivity of Cola<sup>®</sup>Moist 200 utilized the Rubine Dye Test. At concentrations of 2.0% and 0.2% active in water alone, Cola<sup>®</sup>Moist 200 displayed strong color values at both levels indicating the retention of Cola<sup>®</sup>Moist 200 on the cotton substrate. Test substrates were thoroughly rinsed before application of the Rubine Dye. Solutions were also prepared using 30% of Cola<sup>®</sup>Det NANA, a sulfate/betaine/alkanolamide shampoo base, and either 2.0% or 0.2% Cola<sup>®</sup>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<sup>®</sup>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.

## structure



Glycerin



Cola<sup>®</sup>Moist 200

## properties of Cola<sup>®</sup>Moist 200

Color, Gardner	3 max
pH (10% active)	5 - 7
Activity, %	70.0

# formulations

## replenishing creme rinse

COMPOUND	Wt. %
Water	86.30
Hydroxyethyl Cellulose	0.70
Glycol Distearate	2.00
Cola <sup>®</sup> Moist 200	1.50
Cetearyl Alcohol	2.50
Cola <sup>®</sup> Quat HRC	6.70
Cola <sup>®</sup> Lipid SAFL	0.30
<b>TOTAL</b>	<b>100.00</b>

### PROCEDURE:

*Charge water: Carefully add hydroxyethyl cellulose with good agitation. Heat to 50 – 60°C and add remaining ingredients and continue heating to 70°C. Cool to 45°C and adjust pH to 4.5 to 5.0. Add color, fragrance and preservative as required. Continue agitation and cooling until pearl develops.*



*formulations continued on back...*

## formulations continued...

### hand & body lotion

This is a superior product designed for after-bath use on traditionally dry areas such as hands, elbows and shoulders for enhanced moisturizing. The Cola<sup>®</sup>Moist 200 & Cola<sup>®</sup>Lipid SAFL are strongly substantive toward skin and the overall formula is non-greasy providing a pleasant after feel.

	COMPOUND	Wt. %
I.	Cola <sup>®</sup> Lipid SAFL	4.00
	Water	81.00
	Cola <sup>®</sup> Moist 200	2.00
II.	Steareth-2	2.00
	Light Mineral Oil	4.00
	Cetearyl Alcohol	3.00
	Octyldodecyl Myristate	2.50
	Dimethicone 100cs	1.50
	<b>TOTAL</b>	<b>100.00</b>

#### PROCEDURE:

Combine ingredients for Part I and II separately and heat to 65°C. Homogenize Part II into I with continued heating until sufficiently mixed. Cool to 40°C while stirring. Add fragrance, color and preservative as needed.

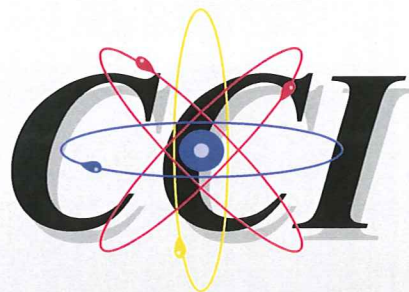
### moisturizing sulfate-free body wash

COMPOUND	Wt.%
Water	40.50
Suga <sup>®</sup> Nate 160	23.50
Cocoyl Taurate	12.00
Cola <sup>®</sup> Teric LMB	11.00
Cola <sup>®</sup> Mate DSLS	7.80
Cola <sup>®</sup> Moist 200	3.00
Suga <sup>®</sup> Quat L1010	2.00
Fragrance	0.20
<b>TOTAL</b>	<b>100.00</b>
Citric Acid, 50%	q.s. to pH 6.50

Appearance: Clear Thick Liquid  
pH (10% aqueous): 6.5  
Solids,%: 41%  
Viscosity, 25°C: 21,800 cps

#### PROCEDURE:

Heat water and Colonial Monolaurin with stirring until uniform. Add remaining ingredients in order given with continued stirring. When homogeneous, cool to room temperature using slow sweep agitation.



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#### WARRANTY

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