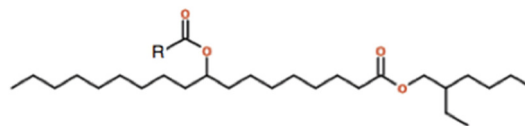


## CocoEstolide<sup>TM</sup>

*An exciting new plant-based emollient ester with enhanced stability properties, exceptional moisturization characteristics and a light, satiny feel.*



R= any fatty acid chain length that results from the reaction between an oleic acid and coconut fatty acid

CocoEstolide<sup>TM</sup> esters represent a revolutionary new class of patented molecules synthesized from a mixture of coconut and other natural seed oils. When used in skincare, haircare and decorative applications, CocoEstolide<sup>TM</sup> imparts a luxurious feel, good absorption and superior functionality as an emollient. The product's excellent oxidative and hydrolytic stability properties provide considerably longer shelf-life than most natural oils.



### SKIN

- Outstanding moisturization benefits
- Unique lubricious feel that imparts a residual substantive film on the skin
- Improves skin barrier function
- Superior hydrating properties
- Semi -occlusive agent
- Sheen appearance
- Fast absorption
- Smooth, light, satiny, non-greasy feel
- **Applications:** facial creams, body lotions, antiperspirant systems

### HAIR

- Reduces coefficient of friction on hair
- Imparts a satiny, smooth feel while providing shine and moisture retention
- **Applications:** shampoos and conditioners

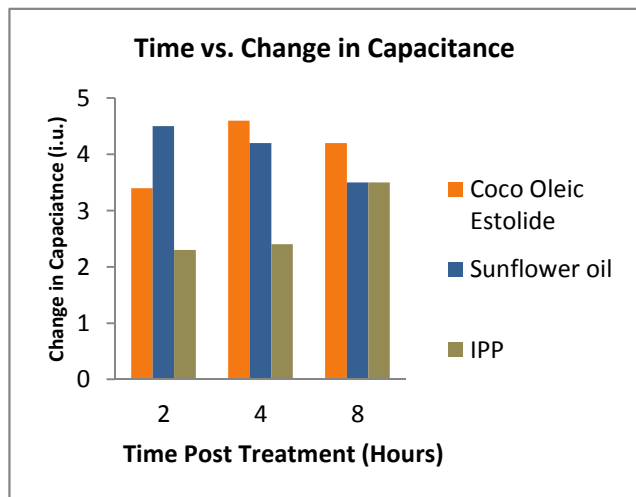
### DECORATIVE COSMETICS

- Smooth product texture provides enhanced sensory appeal
- High Refractive Index imparts shine and gloss
- **Applications:** lipsticks and other color cosmetics



Oleic recovered from a vegetable or plant source such as palm, soy, canola, olive or sunflower.

*Corneometer Study – 10 subjects*



The Corneometer measures dielectric constant in the stratum corneum (SC). The higher the capacitance measured, the more hydrated the SC. CocoEstolide<sup>TM</sup> showed a greater increase in moisturization than competing materials at 4 hours and 8 hours post treatment.

CocoEstolide <sup>TM</sup> Physical Data	
Appearance	Light Yellow
Acid Value (mg KOH/g)	0.05 – 0.1
Odor	Low
Oxidative Stability Index @110°C	38 hours
Shelf Life	3+ years
Viscosity @ 40°C	40 cSt max.
Refractive Index @20°C	1.45
Iodine Value (mg I <sub>2</sub> /g)	0 – 16
Flash Point (°C)	264 – 284
Density @ 25°C	0.88 – 0.92
Molecular Weight (g/mol)	675 – 775
Sensory After-Feel	Light, satiny

DESCRIPTION	Esterified oligomerization of oleic acid and saturated coconut fatty acids
INCI NAME	Ethylhexyl Coco-Oleate Estolide
CAS NUMBER	1365346-35-5
REGULATORY	Listed on TSCA chemical inventory Currently in the process of EU REACH and global registration
STORAGE & HANDLING	Employ normal safety precautions; Store in closed containers in a cool, dry area; Avoid freezing or excessive heat
SAFETY	In a Repeated Insult Patch Test with 50 subjects, CocoEstolide <sup>TM</sup> did not indicate a potential for dermal irritation or allergic contact sensitization
GUIDELINES FOR USE	Recommended usage levels range from 0.5% to 15.0%, depending on application
APPLICATIONS	A wide range of skin, hair and decorative personal care products

*To order samples or for more information contact (949) 390-5910*