Colonial Chemical

New Products, Fall 2021

Dennis Abbeduto, Personal Care Business Manager

Back to School, Back to Handwashing!

- Handwashing with soap could protect about 1 out of every 3 young children who get sick with diarrhea [2, 3] and almost 1 out of 5 young children with respiratory infections like pneumonia [3, 5].
- Although people around the world clean their hands with water, very few use soap to wash their hands. Washing hands with soap removes germs much more effectively [9].
- Handwashing education and access to soap in schools can help improve attendance [10, 11, 12].
- Good handwashing early in life may help improve child development in some settings [13].

https://www.cdc.gov/handwashing/why-handwashing.html

Topics Covered Today

Cola®Det COCO	*High active, high biobased concentrate*
Colonial S18PF	*Palm-free conditioning active*
Cola®Quat Q80	*Multifunctional silicone quat*
Cola®Mate BD-RM	*Low irritation sulfosuccinate with new preservative package*
Cola®Moist BE 200 MB	*Improved with new data, new preservative, RSPO*

RSPO Updates

Cola®Teric CAHS update

Suga®Citrate L1C data highlight

ColaLipid Sustainability Improvements

Cola®Det COCO

High active, high biobased concentrate

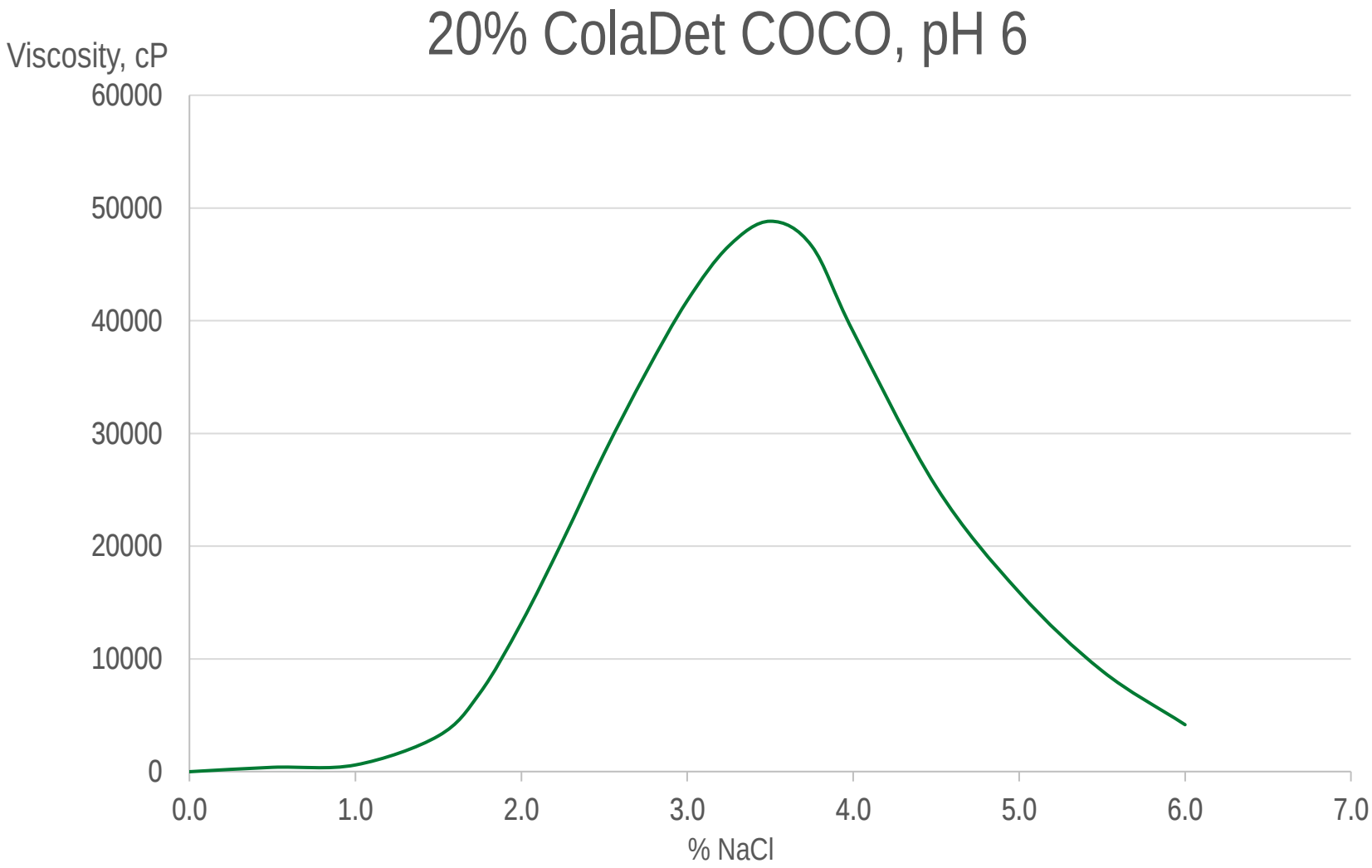





Cola®Det COCO

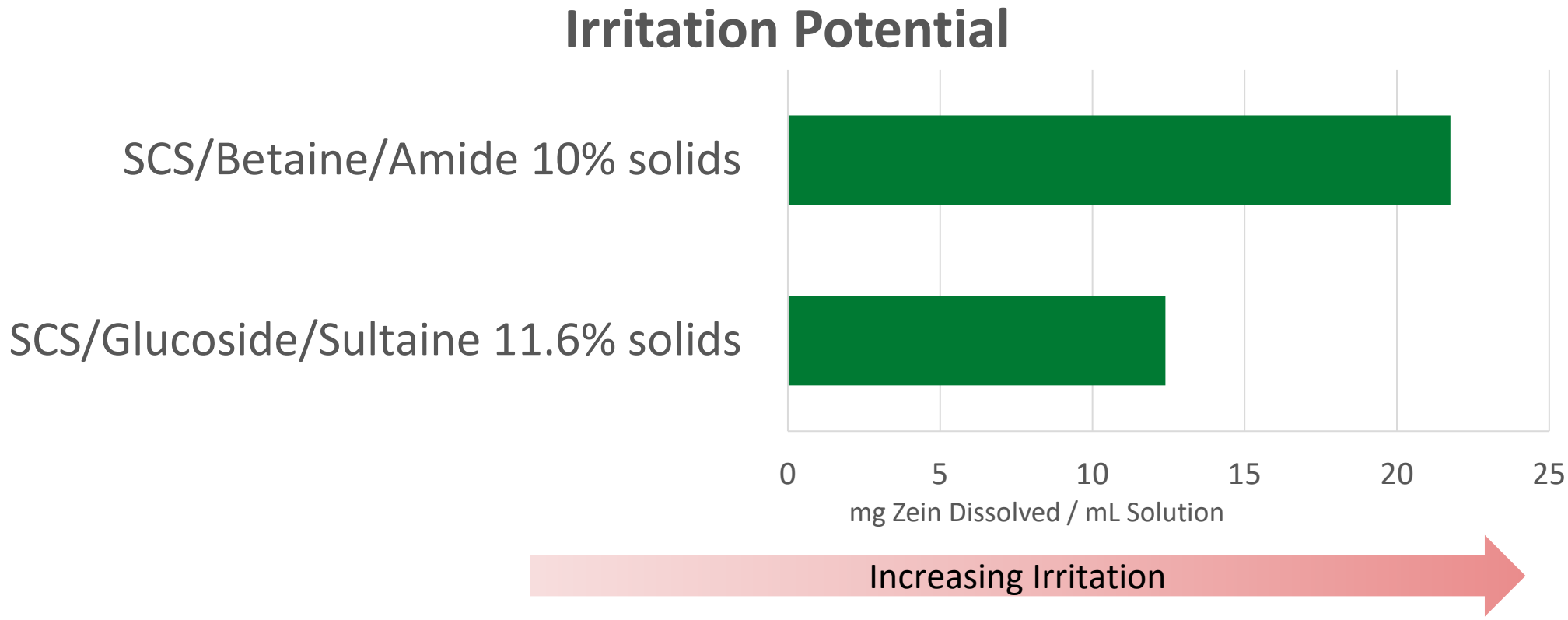
High Active, High Biobased Concentrate	
INCI Name	Sodium Coco-Sulfate, Coco-Glucoside, Cocamidopropyl Hydroxysultaine
Global Clearances	Globally approved, REACH registered
Physical Form	Lamellar phase liquid at 25C
Key Features	**60+% solids** surfactant concentrate **High biobased** content (nearly 100%!) **Low use** rate for optimal cost performance **High foam** volume with luxurious creamy feel **Optimized** for lower irritation than traditional sulfate-based systems **Disperses easily** in water for cold processing
Suggested Applications	All types of gel cleansers Pump foaming applications Aerosol foams
Certifications	ISO 16128 (0.97), 97% USDA certified biobased content, RSPO MB available upon request

Viscosity Performance



Reduced Irritation

- ColaDet COCO has lower irritation potential than a more traditionally formulated SCS-based system, even at higher solids.



Creamy Coco Hand Wash # 4039

INCI Name	*Trade Name*	*%*	*Function*
Water	Water	qs to 100.00	Carrier
Sodium Coco-Sulfate, Cocamidopropyl Hydroxysultaine, Coco-Glucoside	*Cola®Det COCO*	15.00	High foam, natural surfactant blend
Sodium Laurylglucosides Hydroxypropylsulfonate	*Suga®Nate 160NC*	7.25	Non-irritating anionic, improves mildness
Sodium Benzoate *and* Potassium Sorbate	Euxyl® K712 [1]	1.00	Preservative
Fragrance	WS Calming Fragrance [2]	0.20	Fragrance
Citric Acid	Citric Acid, 50%	0.35	pH adjuster
Sodium Chloride	Sodium Chloride	1.30	Viscosity build

[1]Schülke and Mayr, [2]Orchidia Fragrances

TYPICAL PROPERTIES Appearance: **Clear, Viscous Liquid**
pH: 5.0 – 5.5
Viscosity: 5,000 – 7,000 cP

2-in-1 Shampoo # 1058

INCI Name	*Trade Name*	*%*	*Function*
Water	Water	qs to 100.00	Carrier
Polyquaternium-10	UCARE™ Polymer JR-30M [1]	0.30	Conditioning aid
Sodium Coco-Sulfate, Cocamidopropyl Hydroxysultaine, Coco-Glucoside	*Cola®Det COCO*	20.00	High foam, natural surfactant blend
Linoleamidopropyl PG-Dimonium Chloride Phosphate	*Cola®Lipid SAFL*	2.00	Increases deposition of PQ-10
Sodium Benzoate *and* Potassium Sorbate	Euxyl® K712 [2]	1.00	Preservative
Fragrance	Oud Fragrance [3]	0.20	Fragrance
Citric Acid	Citric Acid, 50%	qs to pH	pH adjuster
Sodium Chloride	Sodium Chloride	0.50	Viscosity build

[1]Dow, [2]Schülke and Mayr, [3]Orchidia

TYPICAL PROPERTIES Appearance: **Clear, Viscous Liquid**
pH: 5.0 – 5.5
Viscosity: 5,000 – 10,000 cP

Colonial S18PF

Palm-free conditioning active

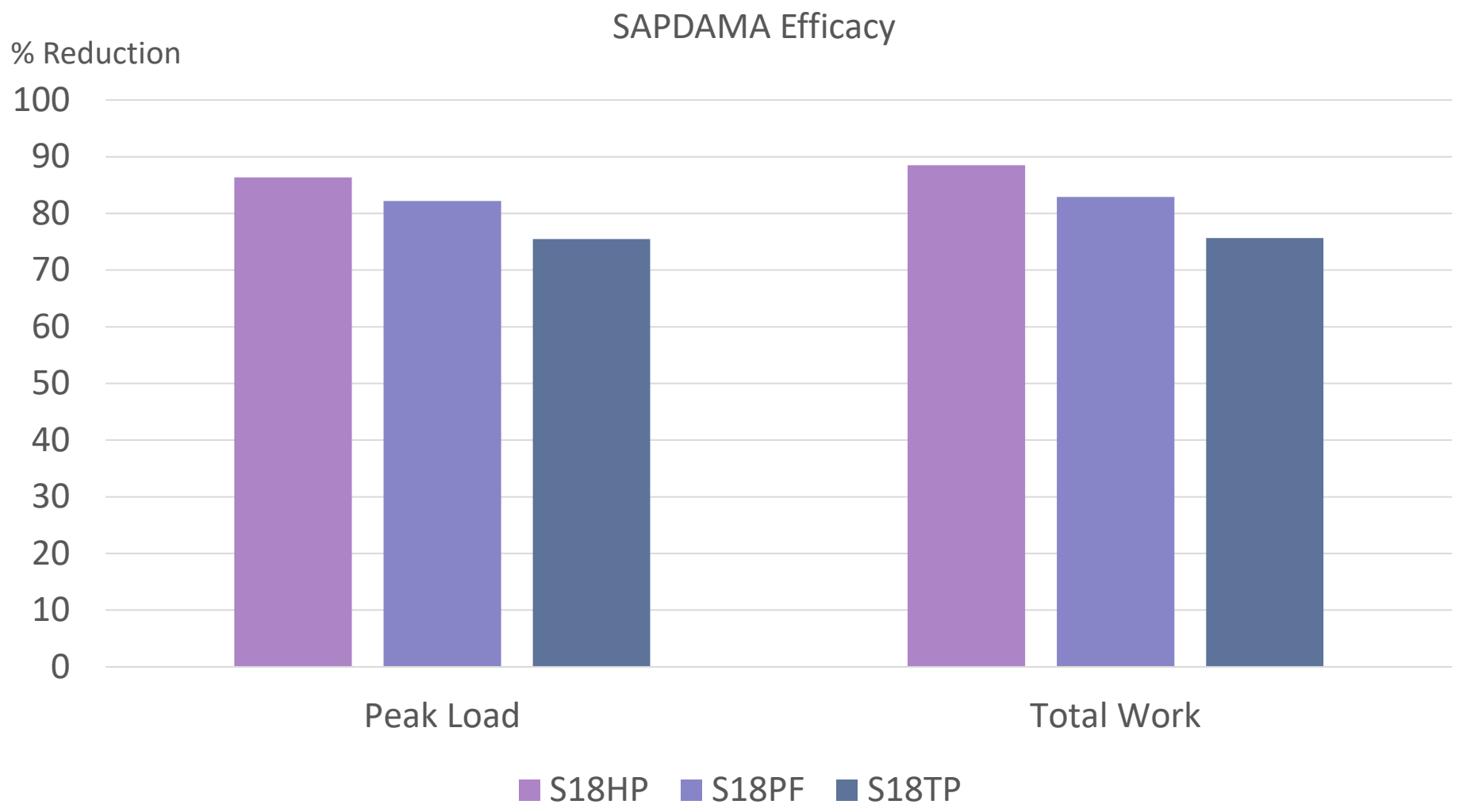





Colonial S18PF

Biodegradeable Palm-Free Conditioning Active	
INCI Name	Stearamidopropyl Dimethylamine
Global Clearances	Globally approved (REACH under evaluation)
Physical Form	Yellow waxy flake, anhydrous, solvent-free
Key Features	Primary **ingredient for all types** of opaque conditioners Creates **"Quat-free"** amine salts when neutralized with organic acids • α-Hydroxy acids/β-Hydroxy acids • Amino acids • Fatty acids **Biodegradable** **Does not build up** on hair or scalp Excellent **wet and dry** comb force reductions
Suggested Applications	Opaque conditioners of all types, including bars Hair masks Co-wash/pre-poo/no-poo products
Certifications	ISO 16128 (0.72)

Colonial S18XX Combing



Palm-Free Conditioner Bar # 1053

INCI Name	*Trade Name*	*%*	*Function*
Brassica Alcohol	SustOleo™ BA [1]	36.00	Bar solidifier
Theobroma Cacao (Cocoa) Seed Butter	Biochemica® Cocoa Butter Deodorized [2]	22.70	Payout modifier, nourishing
Vitis Vinifera (Grape) Seed Oil	Grapeseed Oil	20.00	Payout modifier, nourishing
Stearamidopropyl Dimethylamine	*Colonial S18PF*	16.00	Conditioning
Lactic Acid	PURAC® FCC 88 [3]	4.80	Neutralizing agent
Fragrance	Fragrance	0.50	Fragrance
Dye	Dye	qs	Color

[1]Inolex, [2]Hallstar, [3]Corbion

TYPICAL PROPERTIES

Appearance:	Solid, opaque bar
pH (10%):	4.0 – 5.0

Cola®Quat Q80

Multifunctional silicone quat






ColaQuat Q80

Silicone Quat	
INCI Name	Quaternium 80, Propylene Glycol
Global Clearances	Globally approved, including REACH
Physical Form	Clear Liquid, water soluble, 50% active in PG
Key Features	**Substantive** silicone **Multiple benefits** in hair care formulations • Smoothness • Shine • Antistatic • Heat protection Excellent **wet and dry** comb force reductions **Low buildup**, does not weigh down hair Additional skin softening benefits
Suggested Applications	2 in 1 shampoos Shine and conditioning sprays Conditioners

Smooth & Shine Conditioner (Palm-Free) # 1061

INCI Name	*Trade Name*	*%*	*Function*
Water	Water	qs to 100.00	Carrier
Lactic Acid	PURAC® FCC 88 [1]	0.60	Neutralizing agent
Quaternium-80 *and* Propylene Glycol	*Cola®Quat Q80*	1.50	Shine, lubricity
Vitis Vinifera (Grape) Seed Oil	Grapeseed Oil	6.00	Nourishing
Cocos Nucifera (Coconut) Oil	Coconut Oil	2.00	Nourishing
Stearamidopropyl Dimethylamine	*Colonial S18PF*	2.00	Conditioning
Brassica Alcohol	SustOleo™ BA [2]	5.50	Viscosity
Sodium Benzoate and Potassium Sorbate	Euxyl® K 712 [3]	1.00	Preservative
Fragrance	Oatmilk and Sage Fragrance [4]	0.20	Fragrance

[1]Corbion, [2]Inolex, [3]Schülke & Mayr, [4]Orchidia Fragrances

TYPICAL PROPERTIES Appearance: **Opaque**
pH: **4.5 – 5.0**
Viscosity: **30,000 – 40,000 cP**

Cola®Mate BD-RM

Low irritation sulfosuccinate with new preservative package






Cola®Mate BD-RM

Palm-free, Mild Foam and Viscosty Booster	
INCI Name	Disodium Ricinoleamido MEA- Sulfosuccinate
Global Clearances	Globally compliant, not REACH registered
Physical Form	Clear Liquid, 40% solids
Key Features	**Reduces irritation** of traditional surfactants **Improves foam volume and feel** in sulfate-free systems **Improves viscosity performance** in a wide variety of cleansers **Completely palm-free**, from natural castor oil **Free from** objectionable preservatives
Suggested Applications	Baby washes Sensitive skin cleansing Facial cleansers Frequent use cleansers Anti-dandruff shampoos
Certifications	ISO 16128 (0.64)

Cola®Moist BE 200 MB

Powerful, highly substantive humectant

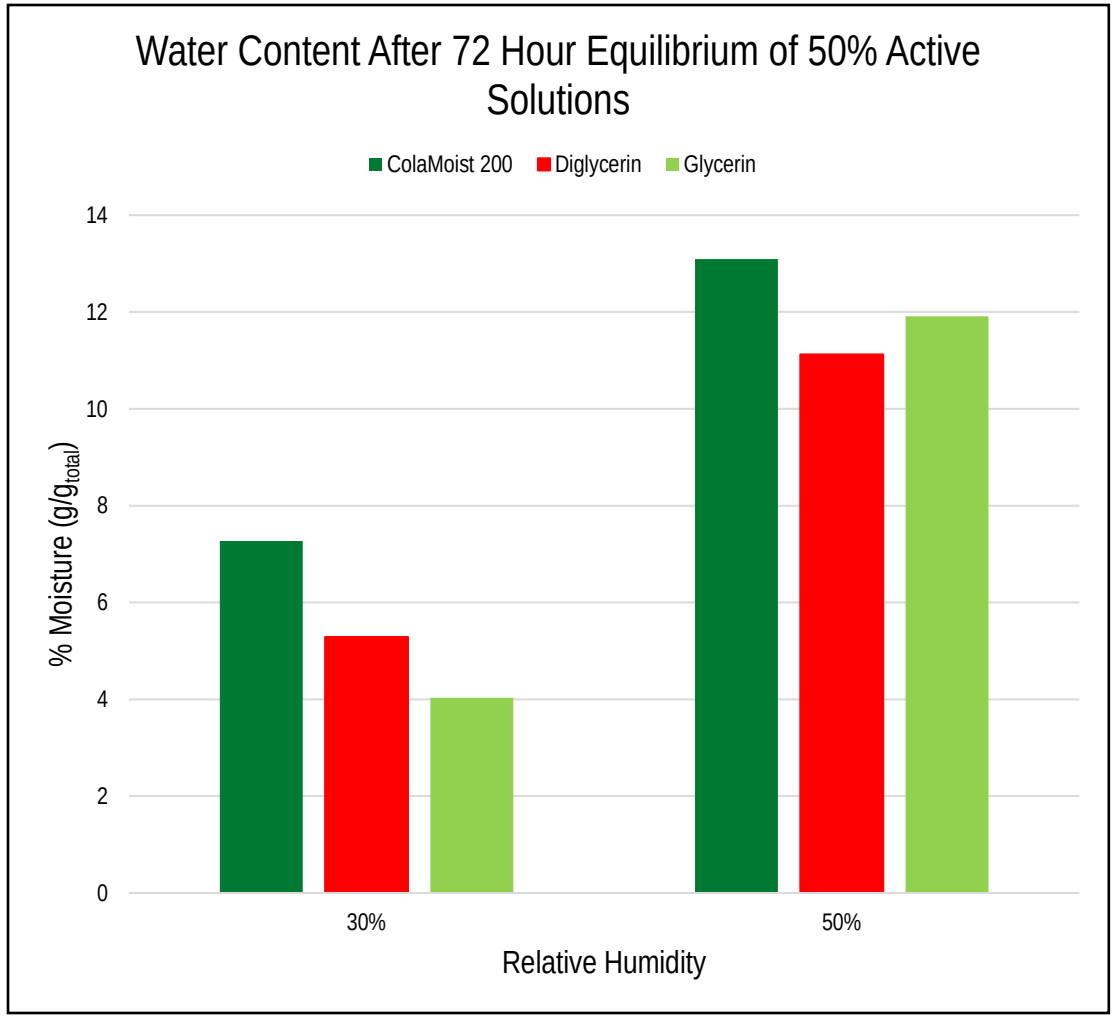





Cola®Moist BE 200 MB

Powerful, Highly Substantive Humectant	
INCI Name	Hydroxypropyl Bis-Hydroxyethyldimonium Chloride
Global Clearances	TSCA, NDSL, REACH, AICIS
Physical Form	Clear Liquid
Key Features	**Substantive humectant** moisturizer **Non-occlusive**, non-tacky Broad pH, temperature **stability** **Low irritation** potential **Non-sensitizer** Works in **rinse-off applications**
Suggested Applications	Facial cleansers Daily wear or intensive care moisturizers Baby care products Sunscreens
Certifications	RSPO Mass Balance

New Equilibrium Moisture Content Data



- Method

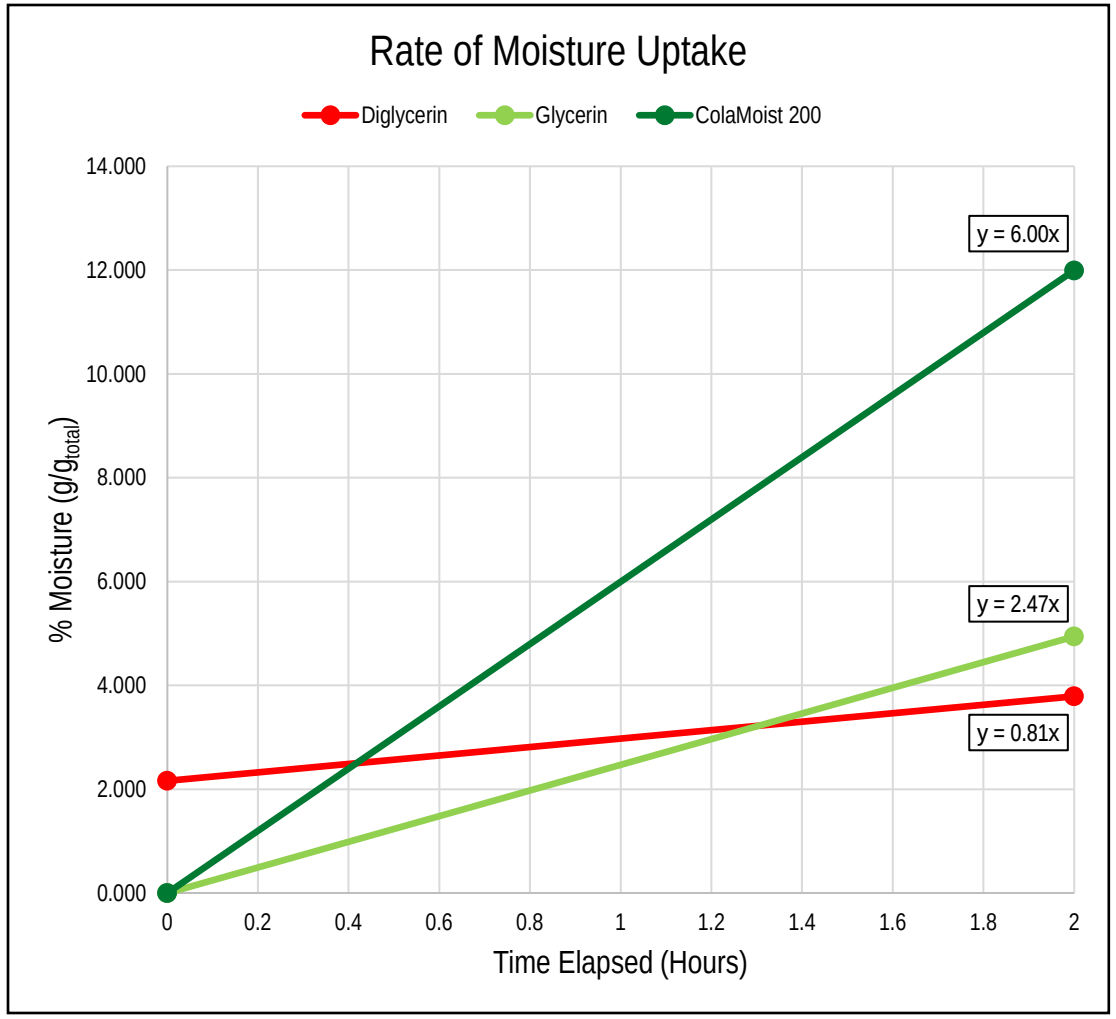
  - Prepare solutions (~50% Active ± 5%), 3 grams of each is weighed in a weigh boat and placed inside a humidity chamber.

    - Water content determined by Karl Fischer

  - The solutions are weighed periodically to determine the trend of moisture loss and allowed to fully equilibrate (~72 hours for these solutions)

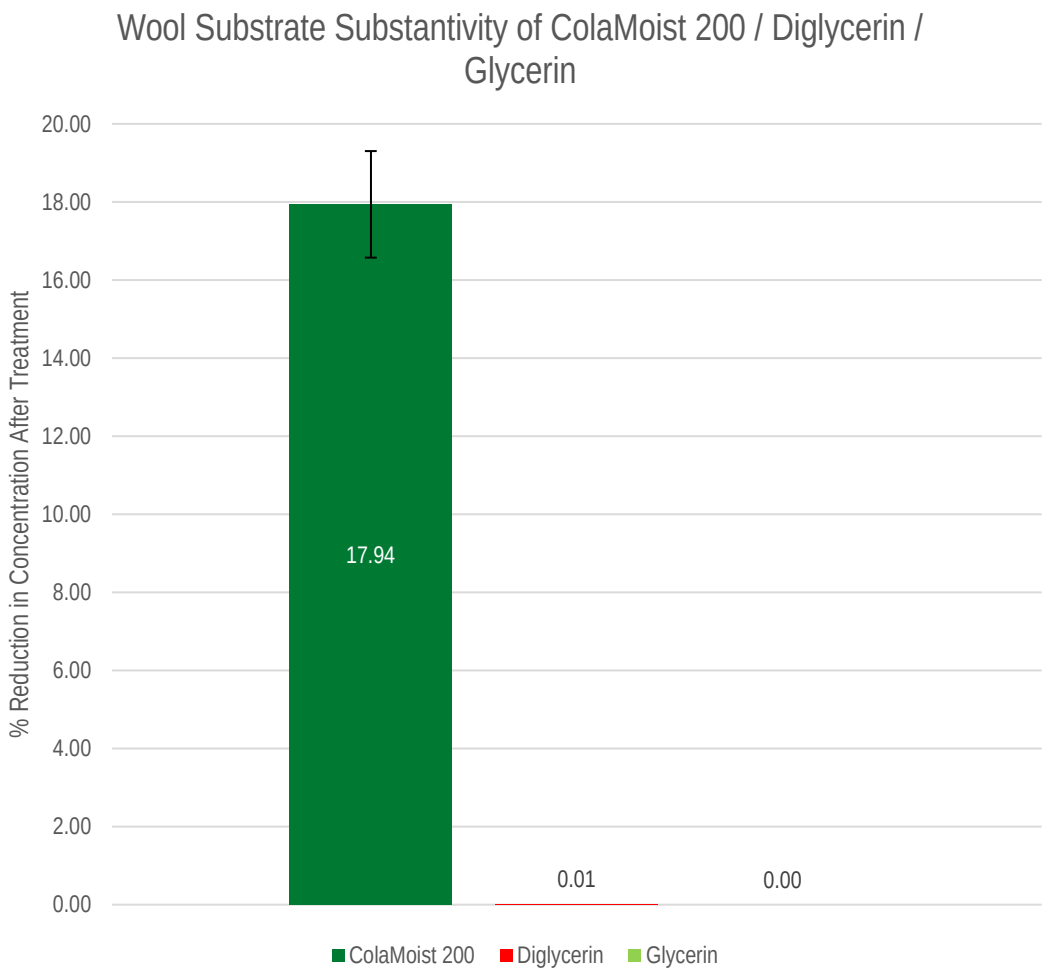
  - This graph demonstrates the effectiveness of the humectant molecules at two relative humidity levels.

Faster Adsorption



- This graph shows the rate at which the products will uptake moisture over a two-hour period.
- The samples are equilibrated and weighed at 10% relative humidity. Next, the chamber is adjusted to 50% relative humidity. The samples are then weighed after two hours at this higher relative humidity level.
- ColaMoist more than doubles the rate of glycerin and has a rate in excess of six times that of diglycerin.

Substantivity



- Method

  - Substantivity to a wool substrate of each product is seen here.
  - Wool swatches are soaked in each product solution, rinsed, and the rinse water added back to the product solution.
  - The solutions are then analyzed by HPLC to determine if there is a reduction in concentration compared to solutions not treated with wool swatches.
  - Experiment is run in triplicate.

RSPO Update






RSPO Updates

- 2021 IS the year of RSPO!
- Already commercial:
  - ColaMate DSLS MB
  - ColaMate LA-40 MB
  - ColaMate LA-100 MB
  - ColaFax CPE MB
  - ColaFax CPE-K MB
  - Colonial Monolaurin MB
- Available soon:
  - Poly SugaMulse
  - Poly SugaQuats
  - SugaNates
  - And MORE!

9-2222-17-100-00

ColaTeric CAHS Update



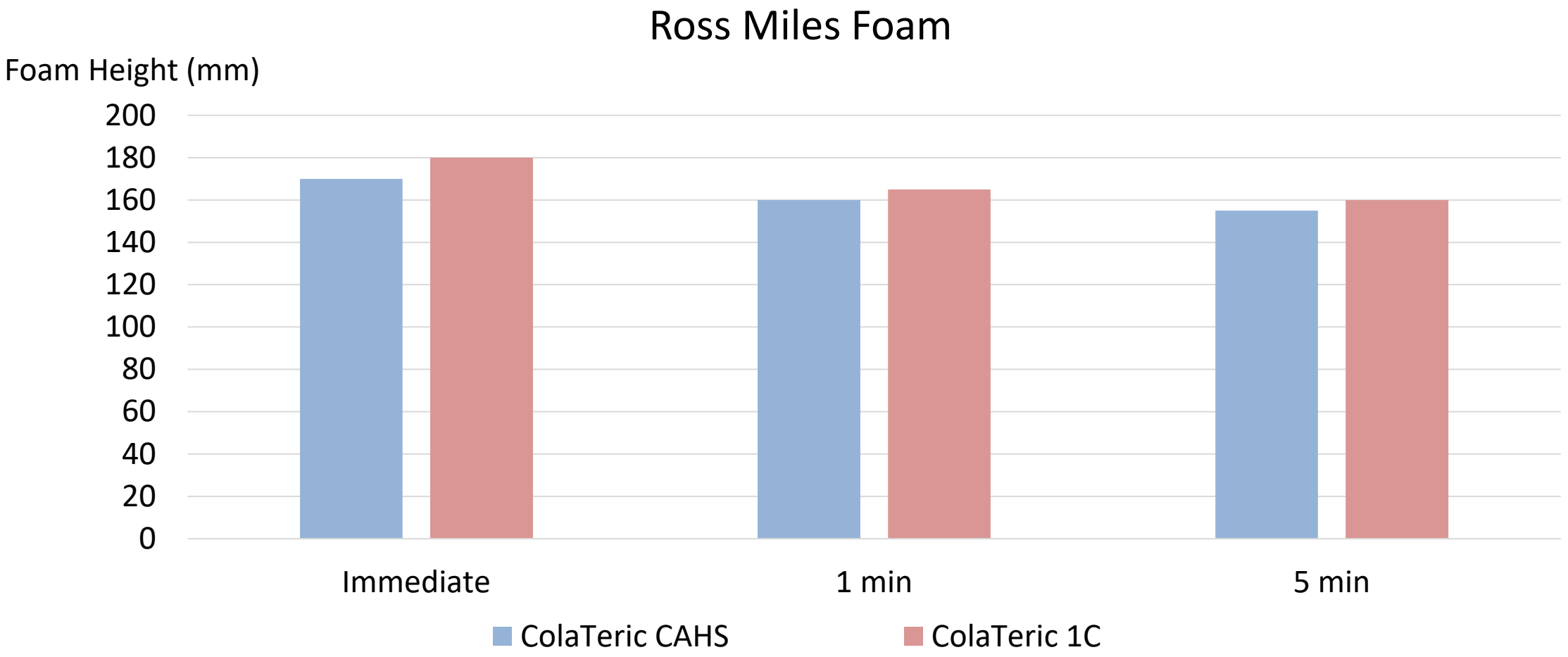



Cola®Teric CAHS

- *INCI:* Sodium Cocoamphohydroxypropylsulfonate
- *CAS:* 68604-73-9
- *Listings:* US (TSCA); Canada (DSL); New Zealand (NZIoC); Philippines (PICCS); Taiwan (TCSI); Australia (AIIC)

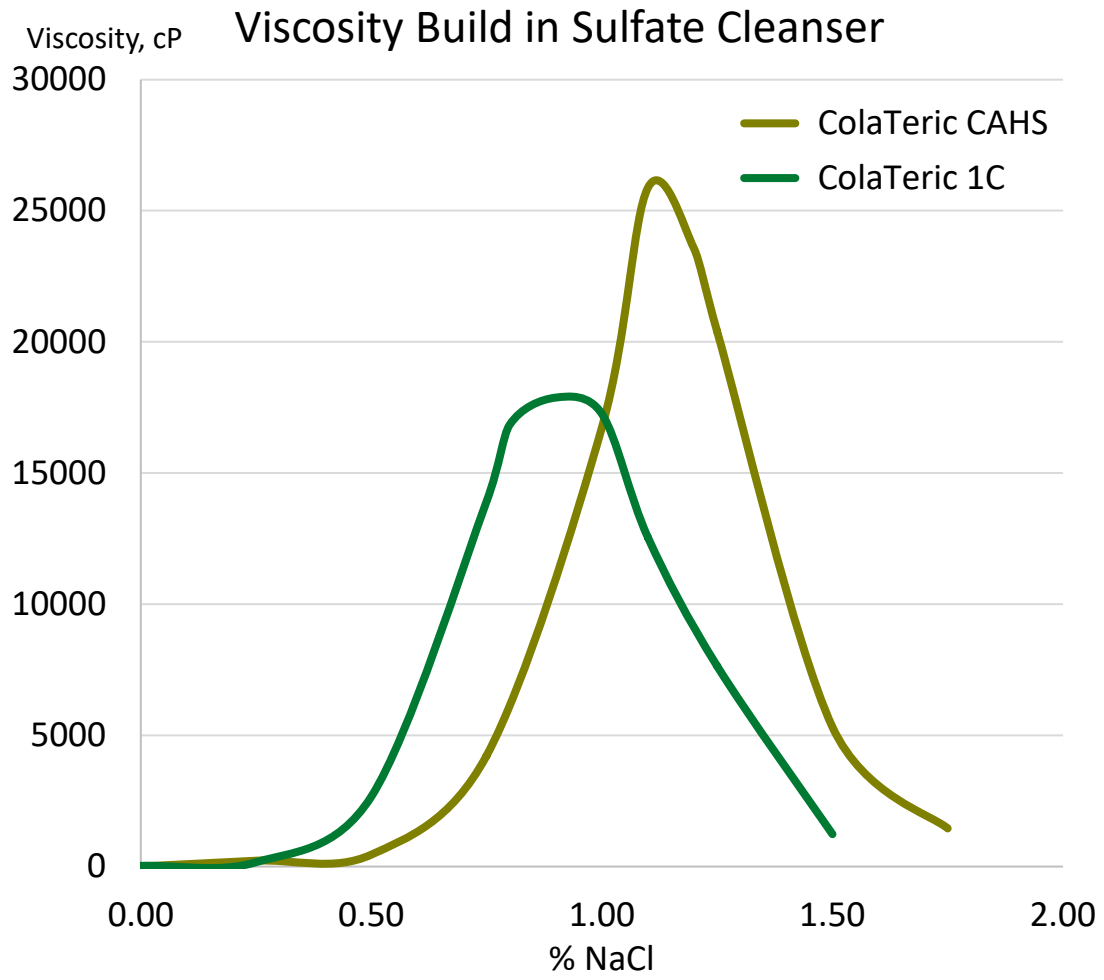
- Amphoacetate replacement with:
  - More biorenewable feedstocks (contains 81% USDA certified biobased content)
  - Improved hard water compatibility
  - Higher purity
  - Excellent mildness
    - Draize Equivalent @ 4% solids = 6.1 Minimally Irritating

Foam Performance



Viscosity Performance

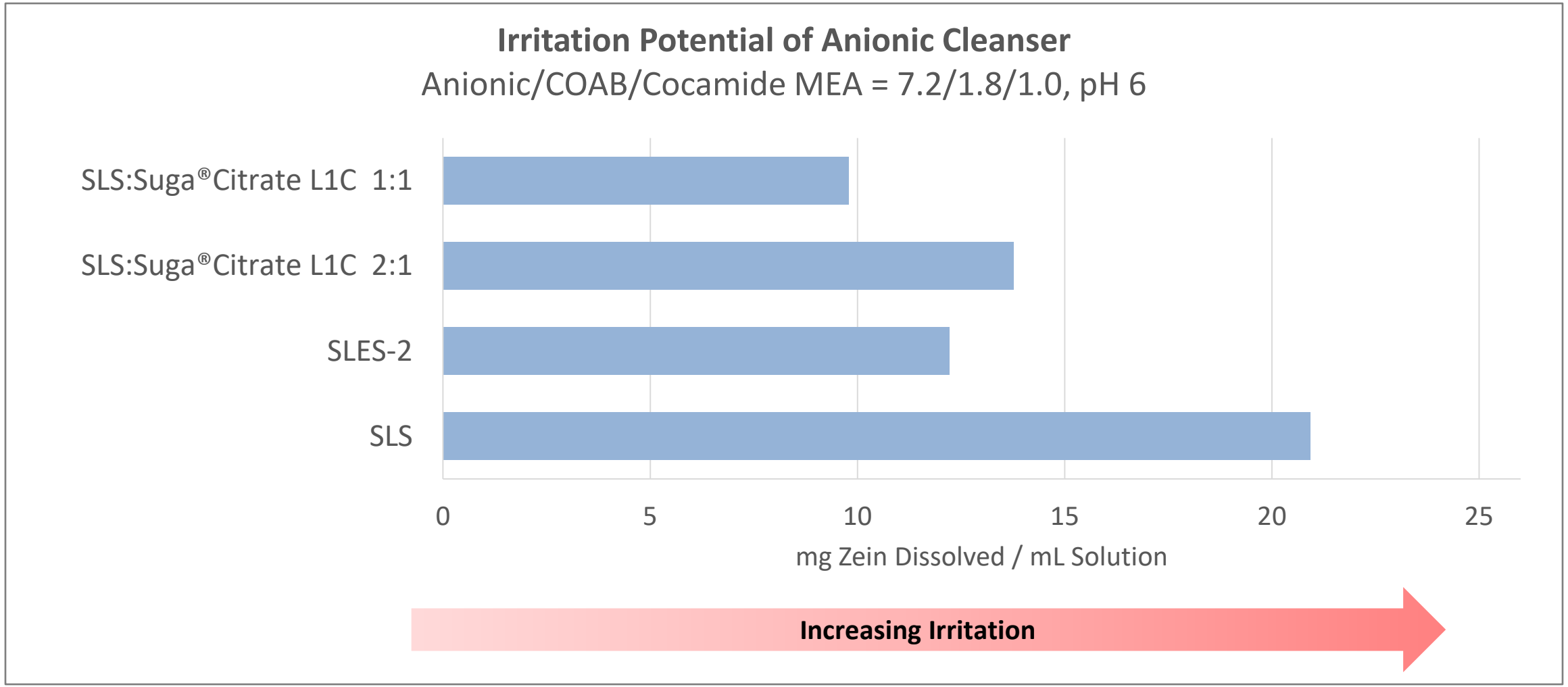
Ingredient	ColaTeric CAHS	Sodium Cocoamphoacetate
Water	74.63	74.46
Colonial SLS	10.00	10.00
Colonial SLES-2	10.00	10.00
ColaTeric CAHS	3.87	-
Sodium Cocoamphoacetate	-	4.04
ColaLiquid DC	1.50	1.50
Citric Acid 50%	qs to pH 6	qs to pH 6



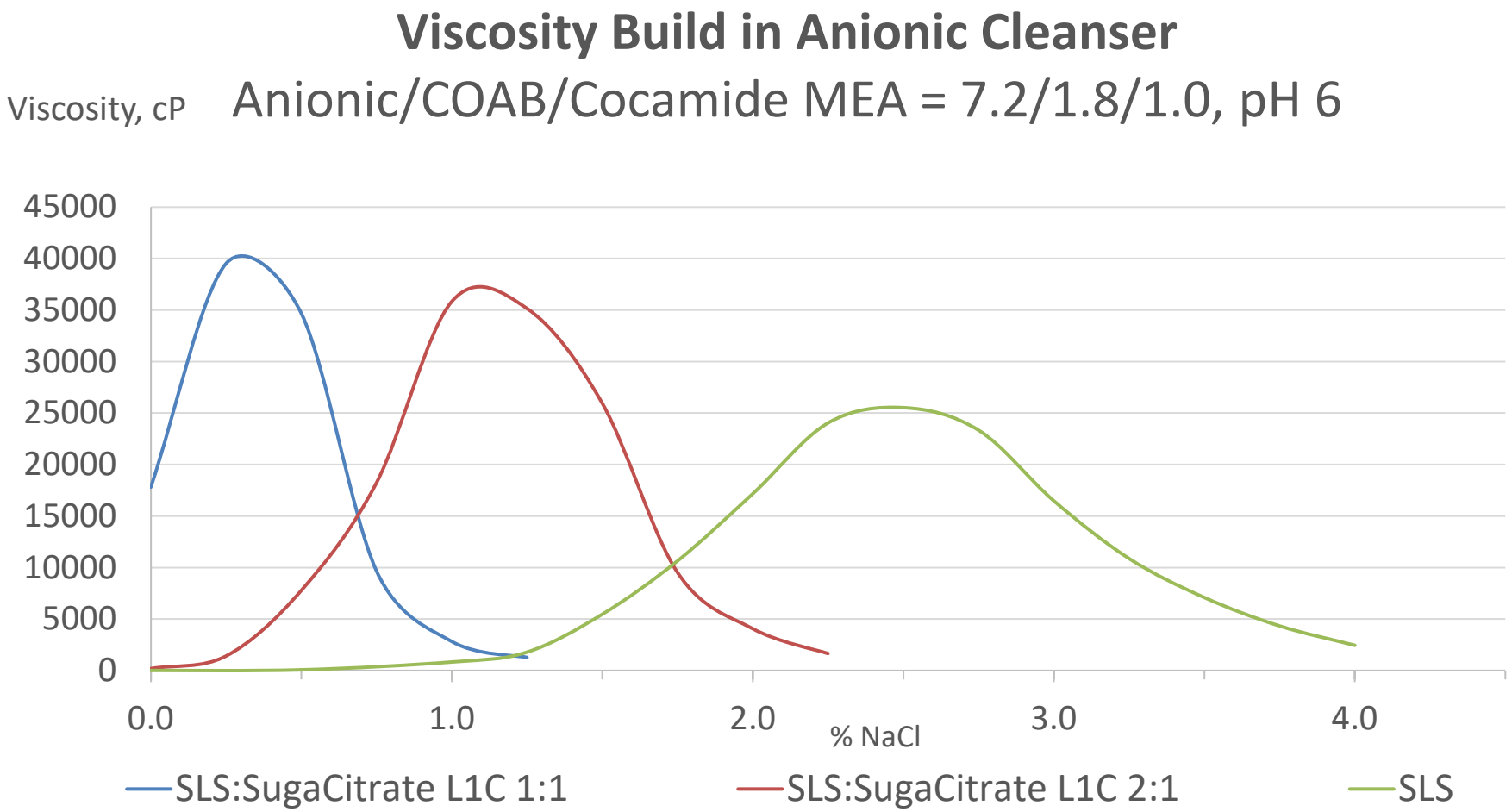
SugaCitrate L1C

Data highlight

Go Dioxane-Free The EASY Way!



Lower Irritation, Improved Viscosity Response



Improved Sustainability of ColaLipids

- ColaLipid SAFL
  - Now 92% USDA certified biobased content

- ColaLipid GS
  - Now 91% USDA certified biobased content

BRONTIDE® Natural Butylene Glycol
Just now

From Nature, For Nature. We create Brontide® butylene glycol with planet-friendly renewable resources like wheat and corn instead of petroleum because renewable resources are our best chance for a more sustainable future.

To build a better tomorrow, we work together with other companies such as @ColonialChemical, a pioneer of developing practical, useful products from sustainably sourced ingredients like Brontide® natural butylene glycol that has 50% less GHG emissions when compared to its petroleum-based counterpart.

We're proud our sustainable ingredient is being used in formulations by Colonial Chemical to provide customers better, planet-friendly solutions.

Like Comment Share

BRONTIDE® Natural Butylene Glycol
Just now

An award-winning match! We're proud to work with @ColonialChemical, fellow winner of the EPA Green Chemistry Challenge Award which honors groundbreaking scientific solutions to real-world environmental problems.

Colonial Chemical shares our commitment to the environment and more sustainable processes by making products based on environmentally benign chemical technologies. We're pleased our Brontide® natural butylene glycol helps Colonial Chemical provide more sustainable choices for their customers.

Like Comment Share

Thank you!

Dennis Abbeduto: dennis@colonialchem.com

Product TDS/SDS/Formulations: https://www.colonialchem.com

Formula Girls Podcast: https://apple.co/3dUq5fh