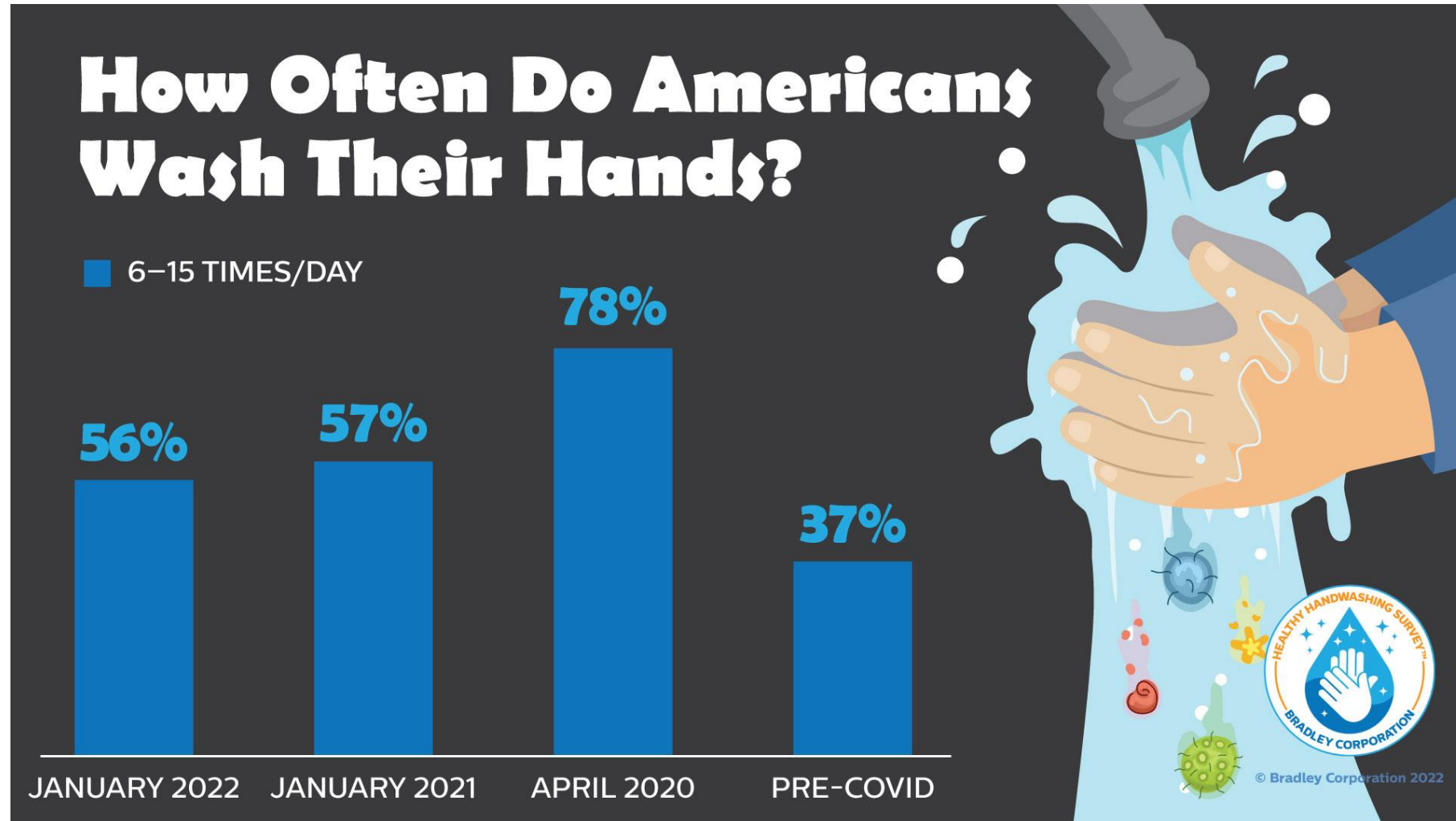


# New Products and News, June 2022

Dennis Abbeduto, Personal Care Business Manager



# Handwashing Pre- and Post-COVID

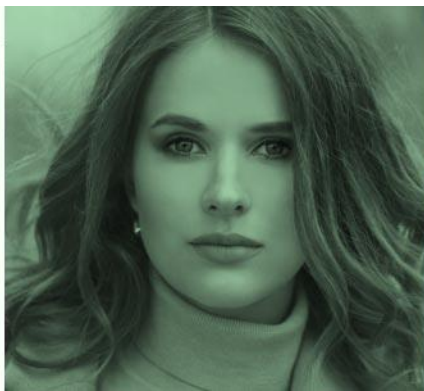


# New Specialties and Additives



# Suga<sup>®</sup>Det LSDG

*Powerful Foam Boosting for Sulfate-Free Formulations*



## Foam Drives Delight

- Foam is a key interest driver for many personal care products
  - Hand washes
  - Body washes
  - Shampoos
  - Facial cleansing
- Formulators are keenly interested in ease of use
  - Liquid products
  - Good compatibility with other ingredients
- Clean and sustainable goals must still be achieved
  - Free from suspect ingredients
  - High natural content
  - Excellent consumer and environmental safety



# The Many Facets of Sustainable Product Development

- Sustainable product development is not only achieved through biorenewable ingredients
- Manufacturing carbon footprint
  - How much energy does it take to make a batch?
  - How much labor is spent adding ingredients?
  - How much mixing time is spent?
- Product design
  - Lighter, more compact products
  - Refills in less rigid packaging

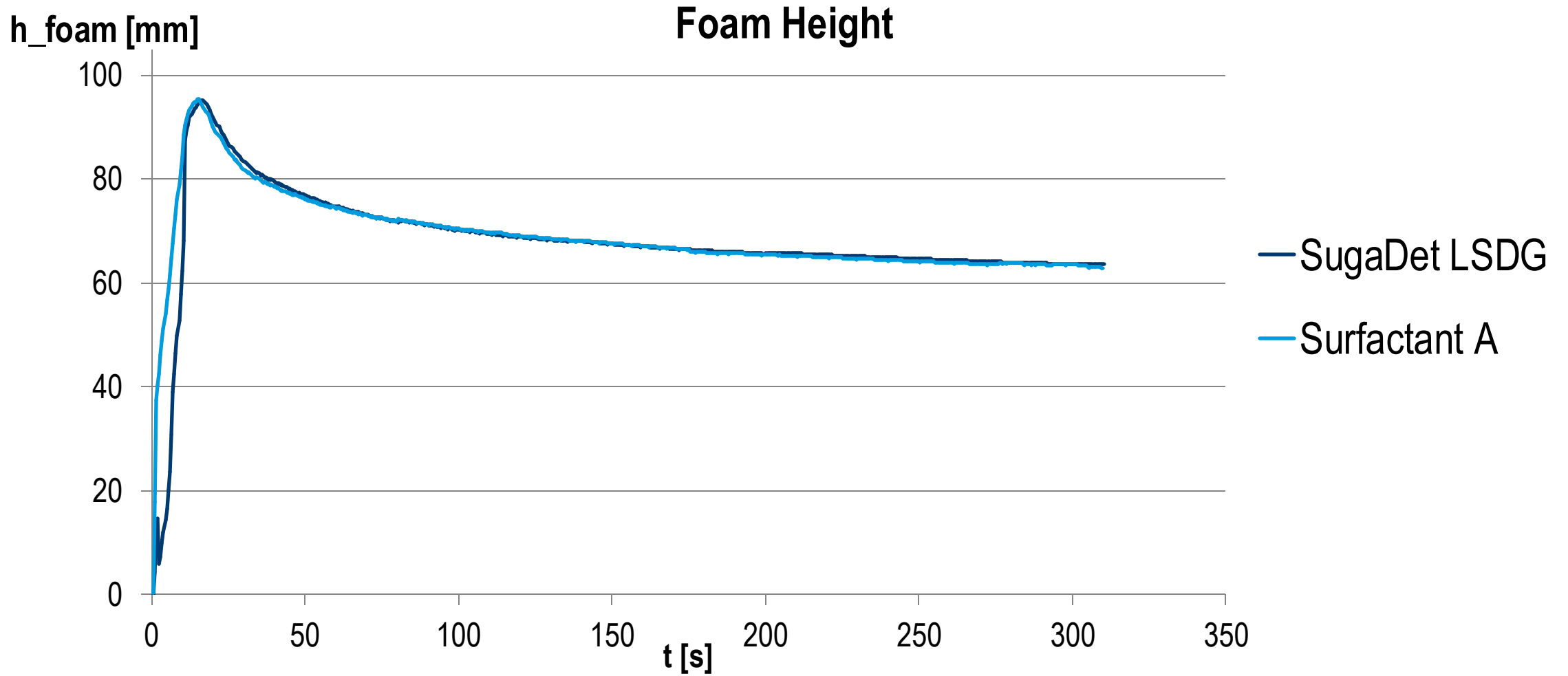


# Suga<sup>®</sup>Det LSDG

## Powerful Foam Booster for Sulfate-free Formulations

INCI Name	Decyl Glucoside, Disodium Lauryl Sulfosuccinate
Global Clearances	Globally approved, REACH registered
Physical Form	Clear liquid, 40% solids
Key Features	<p><b>High foam</b> volume with excellent detergency</p> <p><b>Easy to use liquid format</b> for Disodium Lauryl Sulfosuccinate</p> <p><b>Low irritation</b> profile</p> <p><b>Can be combined</b> with a wide variety of additional surfactants</p> <p>Can be used to create <b>clear, high active, gentle</b> formulations</p>
Suggested Applications	<p>All types of gel cleansers</p> <p>Pump foaming applications</p> <p>Aerosol foams</p>
Certifications	<p>Available RSPO Mass Balanced</p> <p>ISO 16128 0.88</p> <p>USDA BiopREFERRED Pending</p> <p><b>Patent Pending</b></p>

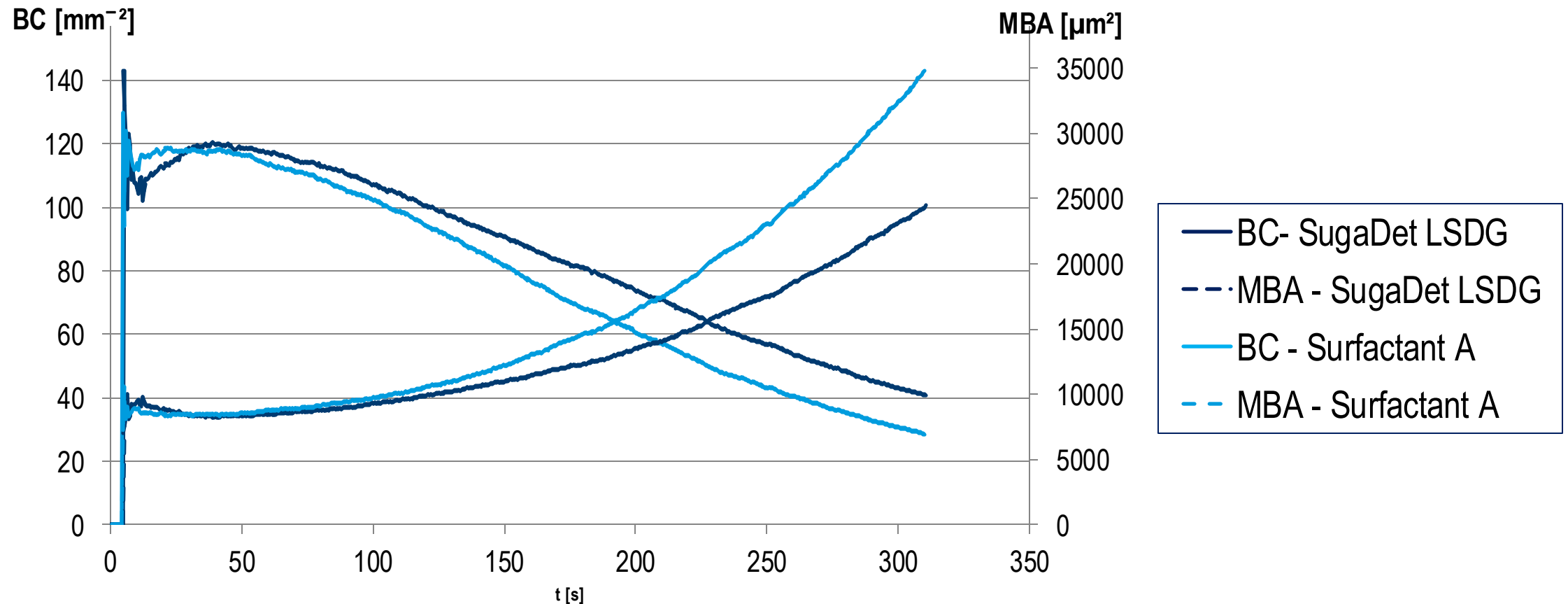
# SugaDet LSDG Performance





# SugaDet LSDG Performance

## Bubble Count and Size



# Suga®Det LSDG in Formulation

## Foaming Skin Cleanser (Sulfate-Free)

#2079

INCI Name	Trade Name	%	Function
Water	Water	qs to 100.00	Carrier
Glycerin	Glycerin	5.00	Humectant
Disodium Lauryl Sulfosuccinate, Decyl Glucoside	<b>Suga®Det LSDG</b>	10.00	High Foam Cleanser
Sodium Laurylglucosides Hydroxypropylsulfonate	<b>Suga®Nate 160NC</b>	15.00	Ultra-Mild Cleanser
Cocamidopropyl PG-Dimonium Chloride Phosphate	<b>Cola®Lipid C</b>	0.50	Skin Conditioning
Sodium Benzoate, Potassium Sorbate	Euxyl® K712 <sup>1</sup>	1.00	Preservative
Fragrance	Fragrance	0.10	Fragrance
Citric Acid	Citric Acid 50%	qs to pH 5.0 – 5.5	pH Adjuster

<sup>1</sup>Schülke & Mayr

### TYPICAL PROPERTIES

**Appearance:** Clear Liquid  
**pH:** 5.0 – 5.5  
**Viscosity:** < 50 cP

# Suga®Det LSDG in Formulation

## Body Wash (Sulfate-Free)

#2080

INCI Name	Trade Name	%	Function
Water	Water	qs to 100.00	Carrier
Caesalpinia Spinosa Gum	Solagum™ Tara <sup>1</sup>	1.25	Thickener
Disodium Lauryl Sulfosuccinate, Decyl Glucoside	<b>Suga®Det LSDG</b>	30.00	High Foam Cleanser
Water and Glycol Distearate and Sodium Hydroxypropylphosphate Decylglucoside Crosspolymer and Cocamidopropyl Hydroxysultaine and Sodium Stearoyl Lactylate	<b>Suga®Det Eco Pearl</b>	3.00	Pearlizing agent
Sodium Benzoate, Potassium Sorbate	Euxyl® K712 <sup>2</sup>	1.00	Preservative
Fragrance	Fragrance	0.20	Fragrance

<sup>1</sup>Seppic, <sup>2</sup>Schülke & Mayr

<b>TYPICAL PROPERTIES</b>	<b>Appearance:</b>	Pearlescent Liquid
	<b>pH:</b>	5.0 – 5.5
	<b>Viscosity:</b>	5,000 – 8,000 cP

# Suga®Det LSDG in Formulation

## 4X Concentrated Liquid Shampoo (Sulfate-Free)

#1062

<i>INCI Name</i>	<i>Trade Name</i>	<i>%</i>	<i>Function</i>
Disodium Lauryl Sulfosuccinate, Decyl Glucoside	<b>Suga®Det LSDG</b>	60.00	High Foam Cleanser
Cocamidopropyl Hydroxysultaine	<b>Cola®Teric CBS-HP</b>	36.00	Viscosity build
Sodium Grapeseedamidopropyl PG-Dimonium Chloride Phosphate	<b>Cola®Lipid GS</b>	3.00	Conditioning
Sodium Benzoate, Potassium Sorbate	Euxyl® K712 <sup>1</sup>	0.50	Preservative
Fragrance	Fragrance	0.50	Fragrance

<sup>1</sup>Schülke & Mayr

### TYPICAL PROPERTIES

**Appearance:** Clear Liquid  
**pH:** 5.0 – 5.5  
**Viscosity:** 5,000 – 9,000 cP

# Cola<sup>®</sup>Mate LA-100 MB

Dry Powder Surfactant	
INCI Name	Disodium Lauryl Sulfosuccinate
Global Clearances	Globally approved
Physical Form	White powder
Key Features	<p><b>Dry powder</b> surfactant for waterless cleansers</p> <p><b>RSPO</b> certified natural palm feedstock</p> <p><b>Low irritation</b> potential in formulation</p> <p><b>High foam</b> performance</p> <p><b>Disperses easily</b> in water for optimal performance</p>
Suggested Applications	<p>Syndet bars</p> <p>Powder to foam cleansers</p> <p>Pressed solid cleansers</p> <p>Anhydrous “pod” cleansers</p> <p>Typical use: 5 – 50%</p>
Certifications	RSPO Mass Balance, ISO 16128 0.76

# Foaming Powder-to-Clay Mask

# 2076

<i>INCI Name</i>	<i>Trade Name</i>	<i>%</i>	<i>Function</i>
Sodium Laurylglucosides Hydroxypropylsulfonate	<b>Suga<sup>®</sup>Nate 160 Dry</b>	10.00	Ultra-mild primary anionic cleanser
Disodium Lauryl Sulfosuccinate	<b>Cola<sup>®</sup>Mate LA-100 MB</b>	15.00	Foam boosting anionic cleanser
Kaolin	Kaolin Clay USP <sup>1</sup>	74.50	Clay
Fragrance	Natural Green Tea Fragrance <sup>2</sup>	0.50	Fragrance

<sup>1</sup>Charkit, <sup>2</sup>Orchidia Fragrances

## **TYPICAL PROPERTIES**

**Appearance:** White, loose powder  
**pH (5%):** 5.5 – 6.5

# Detox & Soothe Powder Shampoo v2

<i>INCI Name</i>	<i>Trade Name</i>	<i>%</i>	<i>Function</i>
Sodium Laurylglucosides Hydroxypropylsulfonate	<b>Suga<sup>®</sup>Nate 160 Dry</b>	20.00	Ultra-mild primary anionic cleanser
Disodium Lauryl Sulfosuccinate	<b>Cola<sup>®</sup>Mate LA-100</b>	40.00	Foam-boosting anionic cleanser
Maltodextrin	Maltrin QD <sup>®</sup> M500 <sup>1</sup>	27.00	Filler
Kaolin	Kaolin Clay USP <sup>2</sup>	10.00	Filler
Aloe Barbadensis (Aloe Vera) Leaf	Biochemica <sup>®</sup> BioVera 200X Aloe <sup>3</sup>	0.50	Soothing additive
Vitis Vinifera (Grape) Seed Oil	Grape Seed Oil <sup>4</sup>	2.00	Fine powder control
Fragrance	Fragrance <sup>5</sup>	0.50	Fragrance

<sup>1</sup>Grain Processing Corporation, <sup>2</sup>Charkit, <sup>3</sup>Hallstar, <sup>4</sup>Jedwards International, <sup>5</sup>Orchidia Fragrances

## TYPICAL PROPERTIES

**Appearance:** White, Loose Powder  
**pH (5%):** 6.5 – 7.5

# Bubble Bath Bar

# 4044

<i>INCI Name</i>	<i>Trade Name</i>	<i>%</i>	<i>Function</i>
Sodium Bicarbonate	Sodium Bicarbonate	51.00	Fizz
Citric Acid	Citric Acid	26.00	Fizz
Disodium Lauryl Sulfosuccinate	<b>Cola<sup>®</sup>Mate LA-100</b>	8.00	Foam, oil/dye dispersion
Magnesium Sulfate	Epsom Salt <sup>1</sup>	5.00	Luxury additive
Sodium Chloride	Himalayan Pink Salt (fine grain) <sup>1</sup>	5.00	Luxury additive
Vitis Vinifera (Grape) Seed Oil	Grape Seed Oil <sup>2</sup>	4.00	Processing
Fragrance	Fragrance <sup>3</sup>	1.00	Fragrance
Dye	Dye	qs	Color

<sup>1</sup>SaltWorks, <sup>2</sup>Jedwards International, <sup>3</sup>Orchidia Fragrances

## TYPICAL PROPERTIES

**Appearance:** Pressed Powder Bar  
**pH (10%):** 6.0 – 7.0



# Colonial BetaNat

Natural Betaine Humectant



## Upcycling? Huh?

- Upcycling
  - Transforming waste or unwanted products into new, high value materials
- The food industry has been particularly diligent about upcycling for countless generations
  - Very little waste exists for most food crops
  - Livestock waste similarly transformed
- Upcycled products are not new to personal care
  - Palm kernel and other seed oils
  - Walnut shells as exfoliants
  - Cyclic silicones



## Natural Betaine (Trimethylglycine)

- Not to be confused with surfactant betaine
  - Not a surfactant
  - Completely natural in origin – byproduct of sugar beet processing
  - Functionally unique
  
- Known benefits
  - L Rigano, G Dell'Acqua and R Leporatti, “Benefits of Trimethylglycine (Betaine) in Personal-Care Formulations,” *Cosmetics and Toiletries*, December 2000.
  - Humectant
  - Skin plumping
  - Mitigates irritation of anionic surfactants
  - Improves efficacy of AHA/BHAs
  - Increases swell rate for hydrophilic polymers
  - Reduces dry mouth in oral care

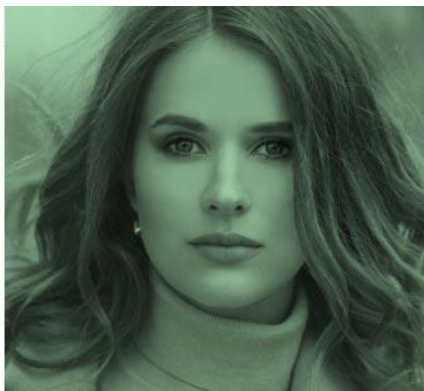


# Colonial BetaNat

## Natural Betaine Humectant

INCI Name	Betaine
Global Clearances	Globally approved, REACH registered
Physical Form	Crystalline solid, high purity
Key Features	<p><b>Natural multifunctional</b> with many benefits</p> <ul style="list-style-type: none"> <li>• Humectant</li> <li>• Irritation reduction</li> <li>• Formulation aid</li> </ul> <p><b>Purified byproduct</b> of sugar beet processing  <b>Non-GMO</b> origin</p>
Suggested Applications	<p>Skin care – lotions, tonics, toners, cleansers, micellar waters</p> <p>Oral care - Mouthwash</p> <p>Hair care – Conditioners, scalp care</p> <p>Typical use: 0.5 – 2.0%</p>
Certifications	ISO 16128 1.0, USDA Biopreferred pending, COSMOS pending

# Suga<sup>®</sup>Nate Oral Care



## Oral Care as Cosmetics

- Oral care products are regulated as cosmetics unless specific claims are made
  - Antimicrobial
  - Antigingivitis/Antiplaque
  - Oral Antiseptic
  - Toothache Relief, Tooth Desensitizer
  
- Limited number of detergents used in the past
  - SLS
  - Betaine
  
- These ingredients typically are sourced as special grades
  - Lower impurities
  - Better flavor profile



## Change is Happening in Oral Care

- The long-stagnant field of oral care is rapidly changing
  - Oral care now an extension of wellness
- New brands
  - Huppy
  - Spotlight Oral Care
  - Twice
- New product forms
  - Tablets (paste and mouthwash)
- New ingredient approaches
  - “Clean” ingredients (sulfate-free)
  - High natural ingredients



# Suga<sup>®</sup>Nate 160NC is SAFE for Oral Care

## Oral Irritation

- MatTek EpiGingival
  - 4% as supplied (1.6% solids):
    - ET50 could not be determined (>18 hours/1080 min)
  - **100% as supplied** (40% solids)
    - **ET50 could not be determined (>18 hours/1080 min)**
  - Bechmark SLS (**0.6%** solids)
    - ET50 **418.2min**
  
- MatTek EpiOral
  - 4% as supplied (1.6% solids)
    - ET50 could not be determined (>120 min)
  - **100% as supplied** (40% solids)
    - **ET50 could not be determined (>120 min)**





# Suga<sup>®</sup>Nate 160NC in Oral Care

## Gentle Toothpaste

#4048

INCI Name	Trade Name	%	Function
Water	Water	13.10	Diluent
Sorbitol	Sorbitol 70%	25.00	Humectant
Magnesium Aluminum Silicate	Veegum <sup>®</sup> D <sup>1</sup>	1.50	Thickener
Glycerin	Glycerin	10.00	Humectant
Sodium Carboxymethylcellulose	Aqualon <sup>™</sup> CMC-7MF <sup>2</sup>	1.00	Thickener
Calcium Carbonate	Calcium Carbonate	44.00	Abrasive
Flavor	Nat. Mint Extract <sup>3</sup>	1.00	Flavor
Sodium Saccharine	Sodium Saccharine	0.20	Sweetener
Sodium Benzoate	Sodium Benzoate	0.20	Preservative
Sodium Laurylglucosides Hydroxypropylsulfonate	<b>Suga<sup>®</sup>Nate 160NC</b>	4.00	Surfactant

<sup>1</sup>Vanderbilt Minerals, <sup>2</sup>Ashland, <sup>3</sup>Flavorchem

### TYPICAL PROPERTIES

**Appearance:** Opaque, white paste  
**pH (10%):** 7.5 – 8.0  
**Viscosity:** > 600,000 cP

# Suga<sup>®</sup>Nate 160NC in Oral Care

## Mouthwash

#4049

<i>INCI Name</i>	<i>Trade Name</i>	<i>%</i>	<i>Function</i>
Sodium Laurylglucosides Hydroxypropylsulfonate	<b>Suga<sup>®</sup>Nate 160NC</b>	0.20	Surfactant, solubilizer
Flavor	Nat. Mint Extract <sup>1</sup>	0.20	Flavor
Ethanol	Ethanol	10.00	Alcohol
Water	Water	qs to 100.00	Diluent
Sorbitol	Sorbitol 70%	5.00	Humectant
Sodium Saccharine	Sodium Saccharine	0.10	Sweetener
Sodium Benzoate	Sodium Benzoate	0.20	Preservative
Dye	Dye	qs	Dye

### <sup>1</sup>Flavorchem

### **TYPICAL PROPERTIES**

**Appearance:** Clear Liquid  
**pH:** 6.0 – 7.0  
**Viscosity:** < 100 cP

## Odds n' Ends

- RSPO Update
- Product Testing
- New Product Previews
- Formula Girls Podcast

# Thank you!

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

