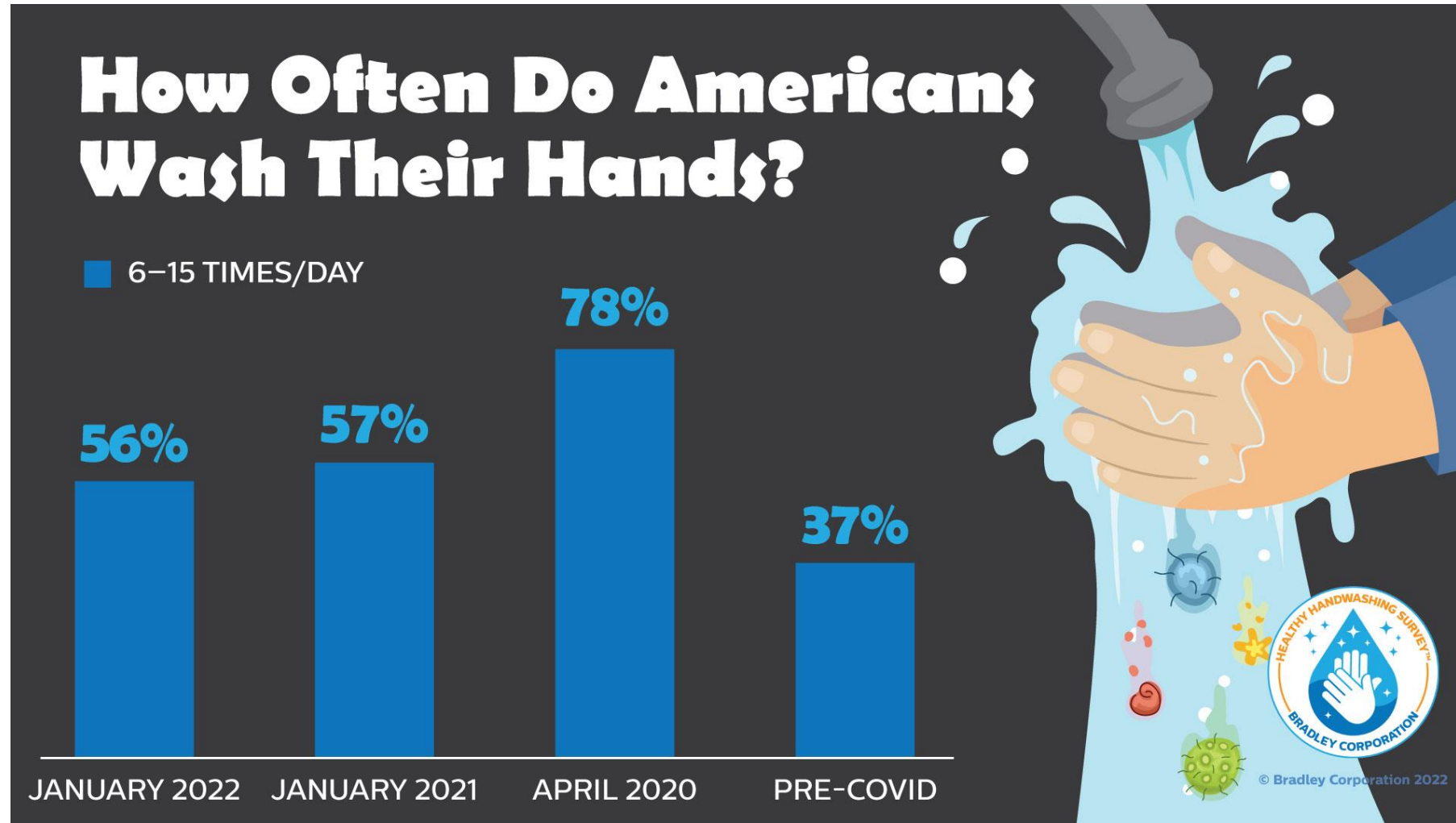


New Products and News, June 2022

Dennis Abbeduto, Personal Care Business Manager



Handwashing Pre- and Post-COVID



Infographic courtesy of Bradley Corporation: <https://www.bradleycorp.com/handwashing>

New Specialties and Additives



Suga[®]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

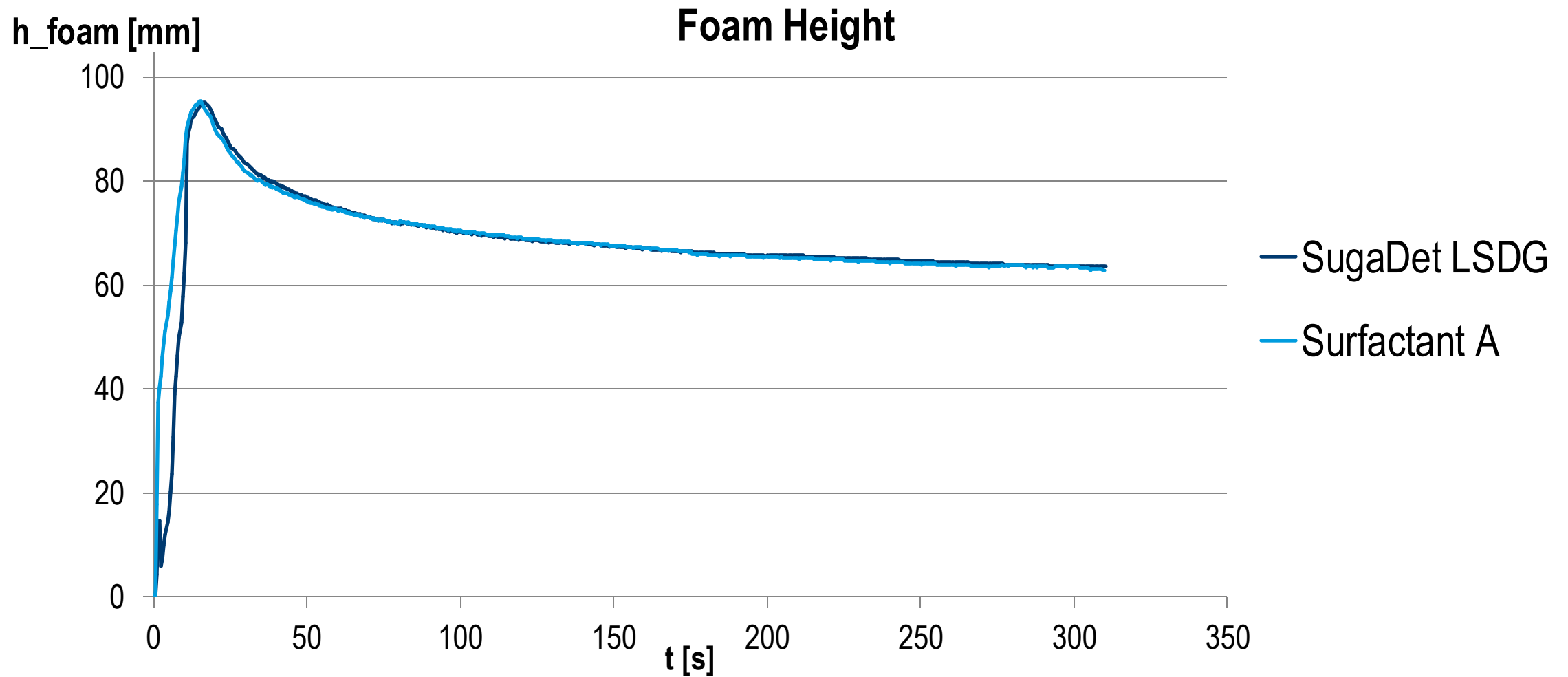


Suga®Det LSDG

Powerful Foam Booster for Sulfate-free Formulations

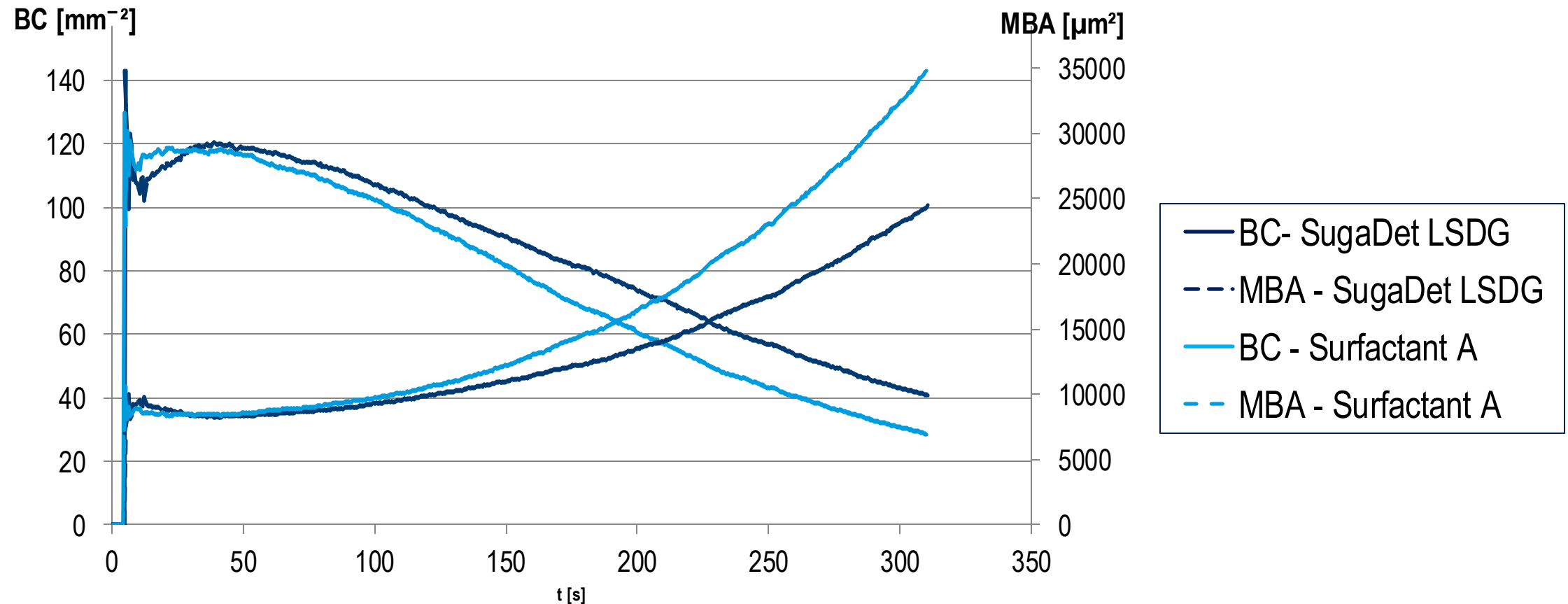
INCI Name	Decyl Glucoside, Disodium Lauryl Sulfosuccinate
Global Clearances	Globally approved, REACH registered
Physical Form	Clear liquid, 40% solids
Key Features	High foam volume with excellent detergency Easy to use liquid format for Disodium Lauryl Sulfosuccinate Low irritation profile Can be combined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

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	Suga®Det LSDG	10.00	High Foam Cleanser
Sodium Laurylglucosides Hydroxypropylsulfonate	Suga®Nate 160NC	15.00	Ultra-Mild Cleanser
Cocamidopropyl PG-Dimonium Chloride Phosphate	Cola®Lipid C	0.50	Skin Conditioning
Sodium Benzoate, Potassium Sorbate	Euxyl® K712 ¹	1.00	Preservative
Fragrance	Fragrance	0.10	Fragrance
Citric Acid	Citric Acid 50%	qs to pH 5.0 – 5.5	pH Adjuster

¹Schülke & 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 ¹	1.25	Thickener
Disodium Lauryl Sulfosuccinate, Decyl Glucoside	Suga®Det LSDG	30.00	High Foam Cleanser
Water and Glycol Distearate and Sodium Hydroxypropylphosphate Decylglucoside Crosspolymer and Cocamidopropyl Hydroxysultaine and Sodium Stearoyl Lactylate	Suga®Det Eco Pearl	3.00	Pearlizing agent
Sodium Benzoate, Potassium Sorbate	Euxyl® K712 ²	1.00	Preservative
Fragrance	Fragrance	0.20	Fragrance

¹Seppic, ²Schülke & Mayr

TYPICAL PROPERTIES

Appearance: Pearlescent Liquid
pH: 5.0 – 5.5
Viscosity: 5,000 – 8,000 cP

Suga®Det LSDG in Formulation

4X Concentrated Liquid Shampoo (Sulfate-Free)

#1062

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

¹Schülke & Mayr

TYPICAL PROPERTIES

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

Cola[®]Mate LA-100 MB

Dry Powder Surfactant	
INCI Name	Disodium Lauryl Sulfosuccinate
Global Clearances	Globally approved
Physical Form	White powder
Key Features	Dry powder surfactant for waterless cleansers RSPO certified natural palm feedstock Low irritation potential in formulation High foam performance Disperses easily in water for optimal performance
Suggested Applications	Syndet bars Powder to foam cleansers Pressed solid cleansers Anhydrous “pod” cleansers Typical use: 5 – 50%
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	<i>Suga[®]Nate 160 Dry</i>	10.00	Ultra-mild primary anionic cleanser
Disodium Lauryl Sulfosuccinate	<i>Cola[®]Mate LA-100 MB</i>	15.00	Foam boosting anionic cleanser
Kaolin	Kaolin Clay USP ¹	74.50	Clay
Fragrance	Natural Green Tea Fragrance ²	0.50	Fragrance

¹Charkit, ²Orchidia Fragrances

TYPICAL PROPERTIES

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

Detox & Soothe Powder Shampoo v2

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

¹Grain Processing Corporation, ²Charkit, ³Hallstar, ⁴Jedwards International, ⁵Orchidia Fragrances

TYPICAL PROPERTIES

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

Bubble Bath Bar

4044

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

¹SaltWorks, ²Jedwards International, ³Orchidia 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	Natural multifunctional with many benefits • Humectant • Irritation reduction • Formulation aid Purified byproduct of sugar beet processing Non-GMO origin
Suggested Applications	Skin care – lotions, tonics, toners, cleansers, micellar waters Oral care - Mouthwash Hair care – Conditioners, scalp care Typical use: 0.5 – 2.0%
Certifications	ISO 16128 1.0, USDA Biopreferred pending, COSMOS pending

Suga[®]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[®]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®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® D ¹	1.50	Thickener
Glycerin	Glycerin	10.00	Humectant
Sodium Carboxymethylcellulose	Aqualon™ CMC-7MF ²	1.00	Thickener
Calcium Carbonate	Calcium Carbonate	44.00	Abrasive
Flavor	Nat. Mint Extract ³	1.00	Flavor
Sodium Saccharine	Sodium Saccharine	0.20	Sweetener
Sodium Benzoate	Sodium Benzoate	0.20	Preservative
Sodium Laurylglucosides Hydroxypropylsulfonate	Suga®Nate 160NC	4.00	Surfactant

¹Vanderbilt Minerals, ²Ashland, ³Flavorchem

TYPICAL PROPERTIES

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

Suga[®]Nate 160NC in Oral Care

Mouthwash

#4049

INCI Name	Trade Name	%	Function
Sodium Laurylglucosides Hydroxypropylsulfonate	Suga[®]Nate 160NC	0.20	Surfactant, solubilizer
Flavor	Nat. Mint Extract ¹	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

¹Flavorchem

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!

Dennis Abbeduto: dennis@colonialchem.com

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

Join Our Mailing List: info@colonialchem.com

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

