



ELAROMA - CAmHy™ (Citric Acid)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White crystalline powder
Physical Form	White crystalline powder
Odor	Odorless
Molecular Weight	210.14 g/mol
Density / Specific Gravity	1.54 g/cm ³
Viscosity	Not applicable (solid at room temperature)
Refractive Index	n _{20/D} 1.359
pH (aqueous solution)	1.85 (50g/L at 25°C) ~2.2 (1% solution) 2.2 (0.1 N solution at 25°C)
Assay / Purity	≥99.0% (ACS reagent) 99.5-100.5% (USP Food Grade) ≥98%
Chemical Properties	
pKa	pKa1: 3.13 pKa2: 4.76 pKa3: 6.4
Ionic Nature	Weak organic acid
Incompatibilities	Oxidizing agents, bases, reducing agents, nitrates, metals.
Hazardous Decomposition Products	Carbon monoxide, Carbon dioxide.
Thermal Properties	
Melting Point	135-152 °C
Boiling Point	Decomposes before boiling
Flash Point	173.9 °C / 345 °F
Autoignition Temperature	345 °C / 653 °F 1010 °C
Decomposition Temperature	>170 °C
Thermal Stability	Stable under normal conditions. Loses water of crystallization when heated to about 40-50 °C.
Solubility	
Solubility in Water	Very soluble (~1630 g/L at 20°C)

Property	Specification
Solubility in Ethanol	Freely soluble
Solubility in Methanol	95% in methanol
Solubility in Acetone	Freely soluble
Solubility in Diethyl Ether	Sparingly soluble
Solubility in Glycerol	Very soluble
Solubility in Chloroform	Insoluble
Solubility in Benzene	Insoluble

2. Processing Methods

Basic Liquid Skin Cleanser

A high-foaming, economical skin cleanser formulation.

Key Ingredients	Indicative Dosage (% w/w)
Water	qs to 100.00
Sodium C14-16 Olefin Sulfonate	25.00
Cocamidopropyl Betaine	10.00
Cocamide DIPA	4.00
Sodium Chloride	0.40
Citric Acid	qs to pH 5.5
Fragrance	qs
Preservative	qs



Antibacterial and Anti-Dandruff Shampoo

A shampoo formulation designed for antibacterial and anti-dandruff applications.

Key Ingredients	Indicative Dosage (% w/w)
Hydroxypropyl Guar Hydroxypropyltrimonium Chloride	0.2
Disodium EDTA	0.1
Sodium Laureth Sulfate	17.0
Cocamide Methyl MEA	1.5
Cocamidopropyl Hydroxysultaine	3.0
Polyquaternium Salt	71.5
Avocado Oil PEG-11 Esters	0.5
Sodium Benzoate	0.4
Allantoin	0.1
Hydrolyzed Corn Starch	3.0
Hexamidine Diisethionate	0.05
Preservative	0.6
Conditioner	2.0
Fragrance	0.6
Citric Acid	0.03
Water	Balance

Apple Jam

A standard recipe for apple jam production.

Key Ingredients	Indicative Dosage (% w/w)
Fruit Pulp	1 kg
Sugar	1 kg
Citric Acid	3 g
Pectin (Grade 150 Rapid set)	12 g
Color (Orange red)	0.2 g
Flavor (Apple)	1 mL
Sodium Benzoate	1 g

3. Dosing by Application



Application	Recommended / Max Dosage
Carbonated Soft Drinks	0.05% - 0.15%
Fruit Juices	0.1% - 0.2%
Jams & Jellies	0.5% - 0.6%
Shampoos, Lotions, Deodorants (pH adjustment)	0.1% - 1.0%
Hair Conditioners & Soaps	Up to 2% - 4%
Exfoliating Products (as an AHA)	5% - 10%
Bath Bombs	Up to 30%
General Purpose Cleaning	0.1% - 10%
Light Descaling / Hard Water Stain Removal	5% - 7% solution
Oral Solution (for Metabolic Acidosis)	10 to 30 mL of solution (containing citric acid and sodium citrate) after meals and at bedtime, as directed by a physician.

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

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