



Monk Fruit Extract

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White to off-white powder
Physical Form	White to off-white powder
Odor	Characteristic
Molecular Weight	1287.43 g/mol
Density / Specific Gravity	1.0 g/cm ³ (bulk)
pH (aqueous solution)	3.0 - 7.0
Assay / Purity	Food and pharmaceutical grades are typically standardized by Mogroside V content, with common grades including 25%, 40%, 50%, 60%, and 80-85% Mogroside V by HPLC.
General	
CAS Number	88901-36-4
Chemical Properties	
pKa	12.82 ± 0.70 (Predicted)
Ionic Nature	Non-ionic
Incompatibilities	Oxidizing agents, strong acids.
Hazardous Reactions / Decomposition Products	When heated to decomposition (>120°C), material emits toxic fumes.
Thermal Properties	
Melting Point	~160°C (decomposes)
Boiling Point	Decomposes before boiling
Decomposition Temperature	>120°C
Thermal Stability	Stable up to 150°C for 30 minutes. Highly heat-stable, withstanding temperatures up to 200°C (392°F) without degrading, making it suitable for baking and high-heat applications.
Solubility	
Solubility in Water	Freely soluble / 100% water soluble.
Solubility in Ethanol	Soluble
Solubility in Methanol	Slightly soluble



2. Processing Methods

Low-Sugar Cookies

This formulation uses a blend of monk fruit extract and a bulking agent to replace sugar, suitable for everyday baking.

Key Ingredients	Indicative Dosage (% w/w)
All-Purpose Flour	45.00%
Butter, unsalted	25.00%
Erythritol	29.50%
Monk Fruit Extract (MV50)	0.10 - 0.30%
Egg	0.10%
Vanilla Extract	0.05%
Baking Soda	0.03%
Salt	0.02%

Carbonated Soft Drink

A zero-calorie carbonated beverage formulation using a high-purity monk fruit extract for a clean sweetness profile.

Key Ingredients	Indicative Dosage (% w/w)
Carbonated Water	q.s. to 100%
Citric Acid	0.15%
Sodium Benzoate	0.02%
Natural Flavor	0.10%
Monk Fruit Extract (MV50)	0.015 - 0.035%

3. Dosing by Application

Application	Recommended / Max Dosage
Carbonated Soft Drinks	0.015 - 0.035% (w/v)
Fruit Juice Drinks	0.010 - 0.025% (w/v)
Flavored Water	0.005 - 0.015% (w/v)
RTD Tea / Coffee	0.008 - 0.020% (w/v)
Plant-Based Milks	0.010 - 0.025% (w/v)
Baked Goods	0.015 - 0.040% (w/w of batter)
Dairy Products (Yogurt, Ice Cream)	Typically uses MV25 to MV40 grades; adjust dosage accordingly.



Application	Recommended / Max Dosage
Tabletop Sweeteners	0.5 - 2.0% (in a blend with a bulking agent like erythritol)

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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