



MONK FRUIT CORP.

**PRODUCT-SPECIFIC TECHNICAL INFORMATION
DOCUMENTS**

Monk Fruit Juice Concentrate MFC-J3.5



MonkFruit CORP.

The World's Leading Monk Fruit Company



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TECHNICAL DATA SHEET: MFC-J3.5

Last Updated: 03 November 2020



Identity

Product name: Monk Fruit Juice Concentrate

Product code: MFC-J3.5

Botanical name: *Siraitia grosvenorii*

Synonyms: Luo han guo juice concentrate

Country of Origin: China

Availability: Year-round

Plant part: Fruit

FDA GRAS: GRN627

INCI name: *Siraitia grosvenorii* Fruit Extract

Brix for single strength juice: 17°Brix

Key Facts

Natural	Yes
Organic compliant	Yes
GMO-free	Yes
Contains Allergens	No
BSE/TSE	No
Irradiated or Fumigated	No
Gluten Free	Yes
Complies with vegetarian and vegan diets	Yes
Food grade	Yes



Applications

Monk fruit can be used to reduce sugar in:

- Beverages
- Dairy
- Cereals
- Baked Goods
- Packaged Foods
- Confectionary

Certifications

GMP	
HACCP	
ISO9001	
ISO22000	
FSSC 22000	
BRC	
Halal	
Kosher	
Non-GMO	

Product Benefits

- Naturally very sweet fruit juice with clean taste profile
- Labelled as food, not food additive
- Fruit Source gives clean label
- No bitterness, astringency and off notes compared to alternatives in the market
- pH and heat stable

Compositional Analysis

Component	g/100g
Mogroside V	3.6
Other mogrosides	1.3
Protein	0.0
Other ¹	9.4
Total sugars	55.0
Sucrose	27.1
Glucose	15.2
Fructose	12.7
Lactose	0.0
Maltose	0.0
Lipid	0.0
Fiber	0.0
Ash	0.1
Moisture	30.6

1. Other includes minerals, melanoidins and flavonoids.



Sweetness Potency Guide – MFC-J3.5

Sugar Replaced (°brix)	Usage (grams of MFC-J3.5 per 100g finished product)		
	Milk	pH 7	pH 3.2
0	0	0	0
0.5	0.02	0.03	0.05
1.0	0.04	0.06	0.10
1.5	0.06	0.10	0.15
2.0	0.09	0.15	0.21
2.5	0.13	0.20	0.27
3.0	0.17	0.26	0.34
3.5	0.21	0.32	0.41
4.0	0.27	0.39	0.50
4.5	0.33	0.47	0.59
5.0	0.39	0.55	0.68
5.5	0.46	0.64	0.79
6.0	0.54	0.74	0.90
6.5	0.63	0.84	1.02
7.0	0.72	0.94	1.15
7.5	0.83	1.06	1.29
8.0	0.94	1.17	1.44
8.5	1.05	1.30	1.59
9.0	1.18	1.43	1.76
9.5	1.31	1.56	1.94
10.0	1.46	1.70	2.12

Example: Use 0.68 grams of Monk Fruit Juice Concentrate (MFC-J3.5) per 100g of finished product to replace 5 grams of sugar in 100g with a pH of 3.2.





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PRODUCT SPECIFICATION

Product Name	Monk Fruit Juice Concentrate	
Product Code	MFC-J3.5	
Manufactured by	Guilin GFS Monk Fruit Corp.	
Manufacturing Address	5 Liangfeng Road, Yanshan, Guilin, Guangxi 541006, People's Republic of China	
Country of Origin	People's Republic of China	
Item	Specification	Method
Process Data		
Plant Source	<i>Siraitia grosvenorii</i>	N/A
Plant Part Used	Fresh Fruit	N/A
Organoleptic Data		
Appearance	Thick juice concentrate	GFS in-house method
Texture	Clarified homogeneous thick juice concentrate	GFS in-house method
Color	Light yellow to amber	GFS in-house method
Odor	Characteristic of monk fruit juice concentrate with no off or foreign odor	GFS in-house method
Taste	Characteristic of monk fruit juice concentrate with no off or foreign flavor	GFS in-house method
Chemical and Physical Characteristics		
Mogroside V	≥ 3.30%, ≤ 3.70% (w/w)	GFS in-house method
Brix	≥ 65.0, ≤ 70.0	GFS in-house method
Turbidity (at 10°Brix)	≤ 15 NTU	GFS in-house method
Color Absorbency (at 10°Brix, 440 nm)	≤ 0.20	GFS in-house method
Clarity (at 10°Brix, 625 nm)	≥ 90.0%	GFS in-house method
pH (at 65.0-70.0°Brix)	≥ 3.5, ≤ 4.5	GFS in-house method
Heavy Metals		
Arsenic	≤ 0.4 mg/kg	GB 5009.11-2014
Lead	≤ 0.5 mg/kg	GB 5009.12-2017
Mercury	≤ 0.1 mg/kg	GB 5009.17-2014
Copper	≤ 5.0 mg/kg	GB 5009.13-2017
Cadmium	≤ 0.3 mg/kg	GB 5009.15-2014
Zinc	≤ 10.0 mg/kg	GB 5009.14-2017





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Microbiology		
Total Plate Count (CFU/mL)	n=5, c=0, m=10 ²	GB 4789.2-2016
Yeast	≤ 20 CFU/mL	GB 4789.15-2016
Mold	≤ 20 CFU/mL	GB 4789.15-2016
Coliforms (CFU/mL)	n=5, c=0, m=0	GB 4789.3-2016
E. coli	Negative in 25 mL	AOAC No. 990.11
Enterobacteriaceae	< 1 CFU/mL	GB 4789.41-2016
Staphylococcus aureus (CFU/mL)	n=5, c=0, m=0	GB 4789.10-2016
Salmonella (in 25 mL)	n=5, c=0, m=0	GB 4789.4-2016
Listeria	Negative in 25 mL	GB 4789.30-2016
Notes: n = number of samples c = maximum number of samples beyond m m = microbiological limit that separates good from marginally acceptable quality		

Shelf Life:	36 months refrigerated (≤4°C); 12 months ambient
Storage & Transport Conditions:	Store and transport refrigerated (≤4°C) or at ambient temperature away from direct sunlight
Packaging Materials:	Inner: Aseptic bag; Outer: Plastic drum
Packaging Details:	20 kg x 1 bag/Plastic drum; 5 kg x 3 bags/Plastic drum; 5 kg x 2 bags/Plastic drum

Updated by: Katherine Keddell

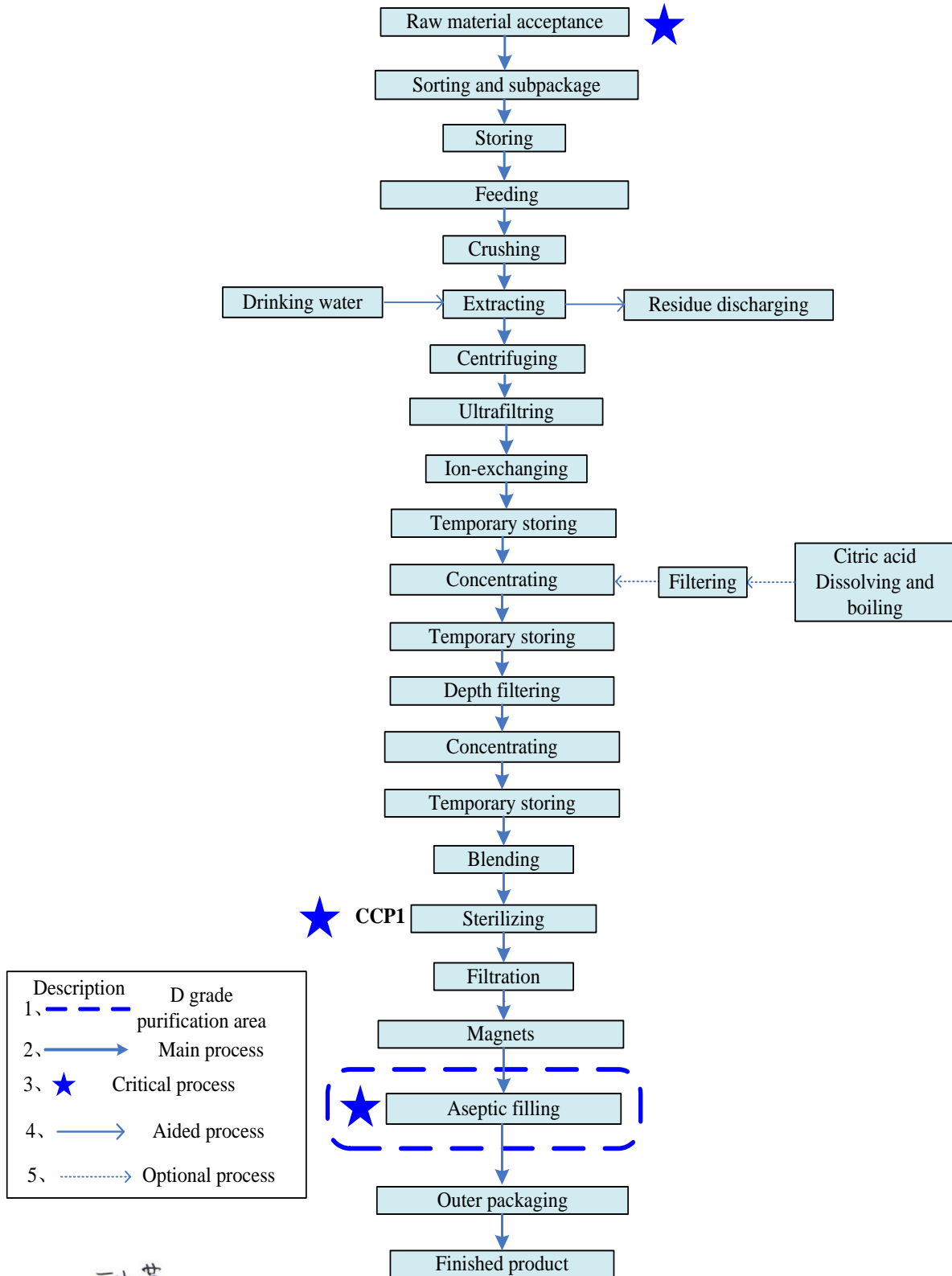
Date: Jan 18,2021

Approved by: Zhenhua Liang

Date: Jan 18,2021



Flow Chart of Monk Fruit Juice Concentrate MFC-J3.5



Signed: 王中荣
 Name: Wang Zhongrong
 Title: QC Manager
 Date: 11 Feb. 2020



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Nutrition Information – Monk Fruit Juice Concentrate (MFC-J3.5)

Nutrition Information (per serve)

Nutrition Facts	
Serving Size	1320 mg
Amount Per Serving	
Calories	0
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
<i>Trans</i> Fat 0g	0%
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 0g	0%
Dietary Fibre 0g	0%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 0g	0%
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 0mg	0%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutritional advice.





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Nutrition Information – Monk Fruit Juice Concentrate (MFC-J3.5)

Nutrition Information (per 100g)

Nutrition Facts	
Amount Per 100g	
Calories (kcal) 277	
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	0%
Cholesterol 0mg	0%
Sodium 16mg	1%
Total Carbohydrate 69g	25%
Dietary Fiber 0g	0%
Total Sugars 55g	
Added Sugars 0g	0%
Protein 0g	0%
Vitamin D 0mg	0%
Calcium 8mg	1%
Iron 0mg	0%
Potassium 0mg	0%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Notes to Nutrition Facts:

1. Total Carbohydrate is by subtraction.
2. Mogrosides are included in Total Carbohydrate.

Sincerely,

Dated: 03 November 2020

Camille Senioris

Camille Senioris

Vice President of Science, Quality and Regulatory Affairs





Process Description for Monk Fruit Juice Concentrate (MFC-J3.5)

Product Details	MFC-J3.5
Plant Source	Monk Fruit (<i>Siraitia grosvenorii</i>)
Factory Address	5 Liangfeng Road, Yanshan, Guilin, Guangxi 541006 - China
Country of Origin	People's Republic of China

Monk fruit juice concentrate is made entirely with processes and processing aids that conform with WHO Codex STAN 247-2005 – Codex General Standard for Fruit Juices and Nectars.

Macerated fruit is decocted in a counter current extractor at 80°C with deionised water. The supernatant (dilute juice) is passed through a centrifuge to remove large insoluble compounds, and is then allowed to cool to 50°C. The supernatant is then clarified by passing through a ceramic ultra-filtration membrane having a molecular weight cut-off of 100,000 daltons. This step removes protein and pectin from the supernatant.

The clarified supernatant is passed successively through a cation exchange resin and an anion exchange resin, removing both cationic and anionic substances while leaving the sugars and characterising mogrosides in the juice.

After processing through the resins the juice is concentrated using a thermal evaporator to 65° brix. The concentrate is then pasteurised and aseptically packed in 20 kg bags.

Sincerely,

Dated: 03 November 2020

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