

Whipped Toppings

CLT-10

Benefits of Gelcarin® GP 359 Carrageenan and Novagel® GP 2180 Cellulose Gel (Microcrystalline Cellulose)

- Controls syneresis
- Stabilizes the structural integrity of the foam
- Provides a smooth creamy texture

Comments

Gelcarin GP 359 carrageenan provides body, controls syneresis and eliminates separation of the fat phase. The iota carrageenan maintains over-run by increasing the products viscosity and forming a lattice network with casein micelles. The lattice network stabilizes the fat, air and protein matrix, resulting in a stabilized whipped cream that will retain stiffness and body. The carrageenan can be used in both heavy whipping creams at 28-35% fat and light creams at 18-22% fat. Gelcarin GP 359 carrageenan is recommended for use in both dairy and non-dairy applications.

Formulation (Stabilizer Only)

<u>Ingredients</u>	<u>Dairy</u>	<u>Non-dairy</u>
Water	59.00	60.00
Milk fat	20.00	-
Hydrogenated vegetable fat	-	24.00
Sucrose	8.00	7.00
Corn syrup	6.00	5.00
Nonfat milk solids	5.00	-
Novagel GP 2180 cellulose gel*	0.40 - 0.60	0.40 - 0.60
Gelcarin GP 359 carrageenan*	0.01 - 0.05	0.01 - 0.05
Sodium caseinate	-	2.50
Tween® 60**	0.30	0.30
Myverol® 18--30 emulsifier***	<u>0.15</u>	<u>0.12</u>
	100.00%	100.00%

* FMC BioPolymer

** ICI Americas

*** Eastman Kodak Company

Procedure

- Disperse the Novagel® GP 2180 cellulose gel in the water with rapid agitation.
- Dry blend the Gelcarin® GP 359 carrageenan with sucrose and disperse into the water slurry with continuous agitation.
- Add milk powder and/or sodium caseinate to the slurry.
- Heat the system to 63°C (145°F); then add the corn syrup solids.
- Separately heat the hydrogenated vegetable fat and emulsifiers to 60°C (140°F).
- Add the melted fat and emulsifier to the aqueous phase with constant agitation.
- If dairy based, add the fresh cream to the mixing vat at this time and heat.
- Pasteurize at 71-77°C (160-170°F) for 30 minutes.
- Homogenize at 2000 psi first stage and 500 psi second stage.
- Cool mix to 2-5°C (35-40°F) and age for 24 hours.

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REGULATORY STATUS:

Carrageenan "chondrus extract" is generally recognized as safe [GRAS] (see 21 CFR 182.7255) by experts in accordance with FDA food and drug regulations. Carrageenan is approved as a food additive under 21 CFR-172.620. Cellulose gel (microcrystalline cellulose) products are generally recognized as safe (GRAS) by experts in accordance with food and drug regulations.

PATENTS:

FMC Corporation does not warrant against infringement of patents of third parties by reason of any uses made of the product in combination with other material or in the operation of any process; purchasers assume all risks of patent infringement by reason of any such use, combination, or operation.

WARRANTY:

Because of the numerous factors affecting results, FMC BioPolymer ingredients are sold on the understanding that purchasers will make their own test to determine the suitability of these products for their particular purpose. The several uses suggested by FMC BioPolymer are presented only to assist our customers in exploring possible applications. All information and data presented are believed to be accurate and reliable, but are presented without the assumption of any liability by FMC BioPolymer.

TECHNICAL SERVICE:

The information contained in this bulletin is intended to be general in nature. Techniques and data pertaining to specific uses for FMC ingredients and new developments will be published periodically in the form of supplemental application bulletins.

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