

Low-Sugar Beverage with WPC 80



INGREDIENTS

	Usage Levels (%)
Water	90.62
Whey protein concentrate, 80% protein (WPC 80)	5.29
Cream	2.11
Pectin	1.37
Phosphoric acid	0.28
Mango flavor	0.20
Sucralose	0.10
Red color	0.02
Yellow color	0.01
Total	100.00

NUTRITIONAL CONTENT

Per 100mL	
Calories	30kcal
Total Fat	1g
Saturated Fat	0.5g
Trans Fat	0g
Cholesterol	5mg
Total Carbohydrates	2g
Dietary Fiber	0g
Sugars	0g
Protein	4g
Calcium	2.4mg
Vitamin C	3.6mg

PREPARATION

1. Hydrate stabilizer in half of the formula water at 85°C (185°F) and let swell for 10 minutes.
2. Agitate at 85°C (185°F) until completely dissolved and allow to cool to 60°C (140°F).
3. At the same time, reconstitute WPC 80 in the remaining formula water at ambient temperature with a high-speed mixer, add cream and let hydrate for 20 minutes with minimal agitation.
4. Add WPC 80 solution to stabilizer solution and add sweetener, flavor and colors.
5. Use 85% solution of phosphoric acid to adjust pH to 3.8.
6. Homogenize: first stage at 24.82 MPa (3600 psi) and second stage at 4.82 MPa (700 psi).
7. Heat to 88°C (190°F) for 45 seconds. Cool to 24°C (75°F).

Rely on the dynamic lineup of U.S. dairy to meet consumer demands for global product development. The U.S. Dairy Export Council (USDEC) offers resources on ThinkUSAdairy.org including a dairy ingredient supplier search, consumer, nutrition and product research, technical insights and prototype assistance to help develop and launch your next successful product.  @ThinkUSAdairy

This formula serves as a reference. Product developers are encouraged to modify the formula to meet manufacturing and finished product specification needs. Developed by the Dairy Products Technology Center, California Polytechnic State University. ©2014 U.S. Dairy Export Council.