

Dulce de Leche Meal Replacement Beverage



INGREDIENTS

	Usage Levels (%)
Milk, whole	37.08
Sucrose	26.68
Corn syrup, 42 DE	19.27
Whey protein concentrate, 34% protein (WPC 34)	11.12
Cream, heavy	5.56
Sodium bicarbonate*	0.22
Vanilla extract	0.07
Total	100.00

*Increasing or decreasing sodium bicarbonate controls the color of the final product.

BENEFITS OF USING U.S. DAIRY

Whey Protein Concentrate 34 (WPC 34)

- Contributes to viscosity and opacity
- Imparts viscosity
- Unfolds to stabilize the globules after adsorption at the oil/water interface
- Provides emulsion stability by reducing fat globule mobility and minimizing coalescence
- Adds creamy mouthfeel

NUTRITIONAL CONTENT

U.S. Label

Nutrition Facts

Serving Size (41g)		Servings Per Container	
Amount Per Serving		Calories from Fat 15	
Calories 110		% Daily Value*	
Total Fat 1.5g			2%
Saturated Fat 1g			4%
Cholesterol 5mg			2%
Sodium 85mg			4%
Total Carbohydrate 20g			7%
Dietary Fiber 0g			0%
Sugars 16g			
Protein 2g			
Vitamin A 2%		Vitamin C 0%	
Calcium 2%		Iron 0%	

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than 65g	80g	
Saturated Fat	Less than 20g	25g	
Cholesterol	Less than 300mg	300mg	
Sodium	Less than 2,400mg	2,400mg	
Total Carbohydrate	300g	375g	
Dietary Fiber	25g	30g	

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

PREPARATION

1. **Prehydrate WPC 34 in water to make a 30% solution and let sit overnight at 5°C (41°F).***
2. **Place milk and cream in a steam-jacketed kettle. Add sodium bicarbonate to this mixture. The pH of this mixture should be 6.2 to 6.4 to avoid precipitation of the proteins. Heat mixture to 60°C (140°F).**
3. **Add hydrated WPC 34, sugar and corn syrup to milk mixture.**
4. **Cook to 70 to 71% solids (approximately 108°C or 226°F) with constant stirring.**
5. **Stir in vanilla.**
6. **Fill containers with hot mixture, cover and cool.**

*Note: Excess water will be boiled away during the cooking process

Rely on the dynamic lineup of U.S. dairy to meet consumer demands in 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](https://twitter.com/ThinkUSAdairy)

This formula serves as a reference. Product developers are encouraged to modify the formula to meet manufacturing and finished product specifications needs. Developed at the Wisconsin Center for Dairy Research, University of Wisconsin-Madison. ©2015 U.S. Dairy Export Council.