

# Milk & Honey Bedtime Beverage

This calming chai and honey-infused beverage is made with high-quality U.S. dairy ingredients, including reduced fat milk, milk protein isolate and micellar casein concentrate. Providing a warm escape, this creamy and nutritious drink is a delicious way to wind down after a busy day or intense workout. Each serving packs 20g of dairy protein and half of the U.S. daily value for calcium.



## MARKET INSIGHTS

- Food and beverage products can use herbs and spices to achieve a sense of calm and relaxation before bedtime. The desire to reduce stress has potential to influence more evening-focused innovations formulated for relaxation.<sup>1</sup>
- Globally, 53% of consumers believe hot drinks can offer health benefits, unlocking new opportunities for hot drinks that claim to improve health and general well-being. Additionally, 71% of consumers consider re-creating café-style hot drinks achievable or very achievable, increasing the popularity of premium hot drinks for at-home consumption.<sup>2</sup>
- Globally, higher-protein diets have been shown to promote gains in muscle mass, especially when paired with resistance training; avoid muscle mass loss during caloric restriction; and decrease the natural loss of muscle mass that accompanies aging. The consumption of protein also stimulates the rebuilding of muscle tissue while at rest.<sup>3</sup>

## INGREDIENTS

	Usage Levels (%)
<b>Reduced-fat milk, ultrafiltered</b>	<b>68.00</b>
Water	19.70
Honey	7.00
<b>Milk protein isolate</b>	<b>2.50</b>
<b>Micellar casein concentrate</b>	<b>2.30</b>
Cinnamon, ground	0.19
Cardamom, ground	0.11
Ginger, ground	0.10
Cloves, ground	0.04
Nutmeg, ground	0.03
Black pepper, ground	0.03
<b>Total</b>	<b>100.00</b>

INGREDIENTS: Reduced-fat ultrafiltered milk, water, honey, milk protein isolate, micellar casein, cinnamon, cardamom, ginger, cloves, nutmeg and black pepper.

Contains: milk

## BENEFITS OF USING U.S. DAIRY

### Reduced-fat milk

- Contributes to nutrient value with protein, calcium and magnesium while enhancing viscosity

### Milk protein isolate

- Adds U.S. dairy protein, calcium, magnesium and phosphorus to boost nutrition, which may reduce the need for additional fortification
- Provides protein enhancement and a complementary and clean dairy flavor without adding significant levels of lactose
- Offers emulsification, foaming and whipping and heat stability characteristics

### Micellar casein concentrate

- Novel ingredient offering high-quality protein with a clean flavor
- Offers flexibility to adjust texture (creaminess) and viscosity
- Excellent fit in shelf-stable, protein-fortified beverages because of its heat stability
- Low level of lactose, mild flavor and delivery of calcium and phosphorus

## NUTRITIONAL CONTENT

### U.S. Label

Nutrition Facts	
Serving Size 1 cup (240mL)	
Servings Per Container 1	
Amount Per Serving	
<b>Calories 180</b>	Calories from Fat 30
% Daily Value*	
<b>Total Fat 3.5g</b>	<b>5%</b>
<b>Saturated Fat 2g</b>	<b>10%</b>
<b>Trans Fat 0g</b>	
<b>Cholesterol 20mg</b>	<b>7%</b>
<b>Sodium 100mg</b>	<b>4%</b>
<b>Potassium 40mg</b>	<b>1%</b>
<b>Total Carbohydrate 19g</b>	<b>6%</b>
<b>Dietary Fiber 0g</b>	<b>0%</b>
<b>Sugars 19g</b>	
<b>Protein 20g</b>	<b>40%</b>
<b>Vitamin A</b>	<b>15%</b>
<b>Vitamin C</b>	<b>0%</b>
<b>Calcium</b>	<b>50%</b>
<b>Iron</b>	<b>0%</b>
<b>Phosphorus</b>	<b>35%</b>
<b>Magnesium</b>	<b>4%</b>
*Percent Daily Values are based on a diet of 2,000 calories depending on your calorie needs:	
Calories:	2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Potassium	Less than 3,500mg 3,500mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Protein	50g 65g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

### Per 100g



<b>Calories</b>	72kcal
<b>Total Fat</b>	1g
Saturated Fat	1g
Trans Fat	0.1g
Cholesterol	9mg
<b>Total Carbohydrates</b>	7g
Dietary Fiber	0g
Sugars	7g
<b>Protein</b>	8g
Calcium	215mg
Magnesium	5mg
Phosphorus	134mg
Potassium	15mg
Sodium	40mg
Iron	0.1mg
Vitamin A	287IU
Vitamin C	0.1mg

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## PREPARATION

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1. Add water to a batch mixer and heat to 113°F (45°C).
2. Add milk protein isolate and micellar casein, and mix slowly.
3. Add the milk.
4. Mix slowly for 15 to 20 minutes.
5. Add the honey and continue mixing.
6. Blend spices together and add them to the milk/protein powder mix.
7. Allow to mix for 5 minutes.
8. Pasteurize the mixture at 194°F (90°C) for 2 seconds.
9. Hot-fill in containers.
10. Serve chilled or warm.
11. Store refrigerated.

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<sup>1</sup>Mintel Announces Six Key Global Food and Drink Trends for 2017. Mintel website.

<http://www.mintel.com/press-centre/food-and-drink/mintel-announces-six-key-global-food-and-drink-trends-for-2017>. Updated November 11, 2016. Accessed May 2, 2017.

<sup>2</sup>Top Trends in Hot Drinks 2017. GlobalData. <http://www.reportlinker.com/p04806050/Top-Trends-in-Hot-Drinks.html>. Accessed May 2, 2017.

<sup>3</sup>Devries MC, Phillips SM. Supplemental Protein in Support of Muscle Mass and Health: Advantage Whey. *J Food Sci*. 2015;80 Suppl:A8-A15. Doi:10.1111/1750-3841.12802.

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 Institute for Dairy Ingredient Processing at South Dakota State University ©2017 U.S. Dairy Export Council.