



Breakfast Bites

Start the morning right with portable, protein-packed breakfast bites. On-the-go consumers will appreciate its convenience. Consumers looking for satiety with a higher protein diet will appreciate that it has 70% more protein than similar cheesy on-the-go products in the market.* Sodium-conscious consumers will be delighted that a serving has 40% less sodium than similar cheesy on-the-go products.*



*Contains 40% less sodium and 70% more protein than similar cheesy on-the-go products in the market. Protein has been increased from 12 g per serving in similar on-the-go products to 21 g per serving in this product. Sodium has been reduced from 480 mg per serving in similar on-the-go products to 270 mg per serving in this product. See nutrition information for total fat, saturated fat and cholesterol content.

Market Insights:

- Breakfast is known as the most important meal of the day — 58% of surveyed adults believe breakfast is more important than lunch or dinner
- Yet 30% of surveyed adults eat breakfast less than four times a week — leaving untapped potential for convenient breakfast foods
- Nutrition studies show that higher protein diets can increase satiety, or a feeling of fullness
- Protein content is often low in breakfast meals, and consuming protein at breakfast can help balance protein intake throughout the day
- Some consumers are trying to reduce the amount of sodium in their diet
- This format allows for line extensions using reduced-fat cheeses or for other eating occasions such as cheese pizza filling for an afternoon snack, or Brie and berry filling for an upscale appetizer.

Preparation:

Filling:

1. Blend IQF frozen scrambled eggs, diced yellow onion and green bell pepper, Cheddar and Romano cheeses, and black pepper uniformly.
2. Weigh 18 grams of filling per piece.

Dough:

1. Blend the MPC 80, nonfat dry milk powder, whey permeate, WPC 80 and water together. Allow to hydrate for 30 minutes.
2. Dry blend bread flour, whole wheat flour, oats, Fibersol-2 and yeast.
3. Melt butter.
4. Heat the hydrated dairy ingredients to 110°F.
5. Combine egg substitute, honey and melted butter. Add to dry ingredients and mix at low speed with a dough hook for 12 minutes.
6. Allow dough to proof so it doubles in size (about 1 hour at 106°F).
7. Form 30 gram balls of dough.

Assembly:

1. Roll out 30 grams of dough to about 1/4" thickness.
2. Place approximately 18 grams of filling on the dough layer.
3. Completely enclose filling to keep cheese in the dough during baking.
4. Bake at 400°F on parchment-covered baking sheets for approximately 12 minutes. Adjust time as necessary based on product size.

Ingredients:	Usage Levels (%)
Dough Formula – 84g	(62.64)
Bread flour	19.60
Water	14.03
Whole wheat flour	4.60
Milk Protein Concentrate 80	3.80
Unsalted butter	3.39
Clover honey	3.07
Egg substitute (Original Egg Beaters®, ConAgra Foods)	2.94
Nonfat dry milk powder	2.51
Soluble fiber (5g) (ADM/Matsutani, Fibersol® -2)	2.51
Rolled oats	2.14
Whey permeate	1.94
Whey Protein Concentrate 80	1.66
Yeast, dry active	0.45
Filling Formula (50.1g)	(37.36)
IQF frozen scrambled eggs (Michael's Foods)	17.44
Medium Cheddar cheese, shredded	17.44
Diced yellow onion	0.95
Diced green bell peppers	0.76
Romano cheese, shredded	0.71
Black pepper	0.06
Total	100.00%

Benefits of Using Dairy Ingredients:

Milk protein concentrate:

- Adds dairy protein and calcium
- Helps build body and texture of the bread

Nonfat dry milk powder:

- Helps build body and texture of the bread
- Contributes to browning of the crust

Whey permeate:

- Enhances flavors and salt perception, allowing for a reduction in added salt
- Improves surface browning while providing a clean dairy flavor

Whey protein concentrate:

- Boosts protein content and is easily digested and absorbed by the body
- Contains all of the essential amino acids required for good health

Cheese/butter:

- Distinct and exciting taste
- Cheese flavor and functionality can be tailored to specific applications

Nutrition Facts

Serving Size (127g)	
Amount Per Serving	
Calories 340	Calories from Fat 130
% Daily Value*	
Total Fat 15g	23%
Saturated Fat 8g	40%
Trans Fat 0g	
Cholesterol 135mg	45%
Sodium 270mg	11%
Total Carbohydrate 36g	12%
Dietary Fiber 5g	20%
Soluble Fiber 3g	
Sugars 8g	
Protein 21g	42%
Vitamin A 10%	Vitamin C 2%
Calcium 25%	Iron 10%
Thiamin 20%	Riboflavin 25%
Phosphorus 25%	
*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
Protein	50g 65g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

Want to meet consumer demand for healthier, more convenient products? E-mail the U.S. Dairy Export Council® (USDEC) U.S. Ingredients Program at TechSupport@InnovateWithDairy.com for information on consumer and product research, formulation and prototype assistance, and other services to help you develop and launch your next successful product. For additional sample formulations and the latest on dairy ingredients, visit www.InnovateWithDairy.com.

Developed at the Wisconsin Center for Dairy Research, University of Wisconsin-Madison. ©2010 United States Dairy Export Council. Note: This formula serves as a reference. Product developers are encouraged to modify the formula to meet manufacturing and finished product specification needs.