

Worksheet 6-1: Label Analysis—Protein

Instructions: Use the pizza burger label to answer the questions that follow.



Flowery Branch Farm
Tomato & Basil Pizza Burger

Nutrition Facts			
Serving Size 1 Burger (67g)			
Servings Per Container 4			
Amount Per Serving			
Calories 120	Calories from Fat		
% Daily Value*			
Total Fat 6g	9%		
Saturated Fat 1.5g	8%		
<i>Trans</i> Fat 0g			
Polyunsaturated Fat 2.5g			
Monounsaturated Fat 1.5g			
Cholesterol 10mg	3%		
Sodium 280mg	12%		
Potassium 160mg	5%		
Total Carbohydrate 7g	2%		
Dietary Fiber 3g	10%		
Sugars 2g			
Protein 10g			
Vitamin A 4%	•	Vitamin C 10%	
Calcium 2%	•	Iron 6%	
*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
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less	2400mg	2400mg

100% VEGETARIAN

INGREDIENTS: Textured Soy Protein Concentrate with Water, Onion, Mushrooms, Tomato Paste (Tomatoes, Salt), Textured Wheat Gluten with Water, Corn Oil with TBHQ for Freshness, Mozzarella Cheese (Pasteurized Milk, Cultures, Salt, Enzymes), Provolone Cheese (Pasteurized Milk, Cultures, Salt, Enzymes), Egg Whites, Water, Red Bell Peppers, Dried Tomato, Contains Two Percent or Less of Potato Starch, Methylcellulose, Garlic, Autolyzed Yeast Extract, Cheddar Cheese Powder (Cheddar Cheese [Milk, Salt, Cheese Cultures, Enzymes], Whey, Buttermilk, Salt, Disodium Phosphate), Basil and Other Spices, Paprika for Color, Garlic, Natural and Artificial Flavors from Nonmeat Sources, Maltodextrin, Soybean Oil, Modified Corn Starch with Corn Syrup Solids, Lactic Acid, Salt, Canola Oil, Caramel Color, Soy Lecithin, Torula Yeast, Barley Malt Flour, Triacetin, Citric Acid, Dextrose.

CONTAINS SOY, WHEAT, MILK, AND EGG INGREDIENTS.

	than		
Total		300g	375g
Carbohydrate			
Dietary Fiber		25g	30g

Questions

1.

- What is the gram amount of protein listed per serving of this product? **10 grams**
- How many calories from protein does this represent?

The number of calories from protein is represented as follows: $10 \text{ grams} \times 4 \text{ kcal/gram} = 40 \text{ calories}$.

2. What would be the contribution (percentage of total protein) of this product toward the total amount of recommended protein for a person who weighs 55 kilograms?

The contribution (percentage of total protein) of this product toward the total amount of recommended protein for a person who weighs 55 kilograms is as follows:

$55 \text{ kilograms} \times 0.8 \text{ grams protein/kilogram} = 44 \text{ grams of protein (recommended)}$

$10 \text{ grams (product)} / 44 \text{ grams} \times 100 = 23\%$

23% of the recommended protein would come from this product alone.

Refer to page 200, Do the Math and Table 6-4

3.

- What is the percentage of total calories from fat of this product?

The percentage of total calories from fat of this product is as follows:

$6 \text{ grams} \times 9 \text{ kcal/gram} / 120 \text{ total kcal per serving} \times 100 = 45\%$

- How does this compare with a comparable amount of 90% lean ground beef?

67 grams of broiled 90% lean ground beef provides 7.86 grams of fat and 145 calories, meaning 49% of its calories come from fat. (It contains more saturated and less polyunsaturated fat than the veggie burger.)

4.

- What is the source of cholesterol in this product?

The 10 milligrams of cholesterol comes from cheese-based ingredients.

- Why is this level so low?

These ingredients are listed further down in the ingredient list and therefore are not present in high levels.

5.

- What is the level of iron in this product?

6% of the Daily Value per serving is the level of iron in this product.

- b. Is this considered high or low? Why?

This may seem low compared to the iron content of a ground beef patty.

6.

- a. What is the most abundant ingredient listed for this product?

The most abundant ingredient listed for this product is soy concentrates.

- b. What is the source of this ingredient?

The source of this ingredient is soybeans.

7. What are the sources of saturated fat in this product?

The sources of saturated fat in this product are cheese-based ingredients.

8.

- a. Is this type of protein easily digested and absorbed by the body?

It is absorbed but not as easily or completely as the protein in a meat-containing product.

- b. Why or why not?

The proteins in animal foods are more easily digested by humans than proteins from plant foods, though protein from legumes such as soybeans is nearly as digestible as animal protein.

Worksheet 6-2: Intake Analysis—Protein

<u>Eating Plan E (1 Day's Intake)</u>	<u>Eating Plan F (1 Day's Intake)</u>	<u>Eating Plan G (1 Day's Intake)</u>
¾ cup Nature's Path flax cereal	2 scrambled eggs	1 cup honey dew melon
½ cup soy milk	1 cup whole milk	1 cup fresh strawberries
½ cup acai juice + seltzer water	2 slices bacon	1 large apple
1 medium banana	2 1-ounce Slim Jims	½ avocado
12 ounces coffee	6 ounces lean ground beef	½ cup sweet green peppers
6 ounces 6-grain yogurt	2 ounces provolone cheese	½ cup sweet red peppers
½ cup blueberries	¼ cup blue cheese dressing	¼ cup black olives
¾ cup raspberries	12 ounces water	1 medium orange
2 Mushroom Lover's veggie burgers	2 ounces cheddar cheese cubes	1 medium banana
1 cup roasted carrot soup	6 ounces grilled chicken breasts	1 cup boiled green beans
½ cup sweet green peppers	1 scrambled egg	10 cooked asparagus spears
6 carrot sticks	1 cup lettuce	1 cup sautéed mushrooms
	½ cup blue cheese dressing	1 cup kidney beans
		¼ cup dried apricots
		¼ cup dried Craisins

2 whole-wheat wasa crackers 8 ounces fruit juice 8 ounces soy milk 1 peanut butter Fiber One bar 6 ounces grilled salmon 10 cooked asparagus spears 6 ounces white wine ½ cup olives ½ cup sun-dried tomatoes ½ cup whole-wheat angel hair pasta ¼ cup mixed nuts	2 ounces pork rinds 12 ounces water	5 dried, pitted dates
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Instructions: Look at Eating Plans E, F, and G and answer the following questions:

1.
 - a. What type of diet is represented by each of these eating plans?
Following are the types of diet represented by each of these eating plans:
E: Balanced diet with adequate fiber; F: Low-carbohydrate diet; and G: Vegan diet
 - b. Which of these diets may exceed the recommended amount of protein?
Following diets may exceed the recommended amount of protein:
Balanced diet (E): 127.02 grams; low-carbohydrate diet (F): 204.4 grams
2. How can Eating Plan F be modified to reduce the amount of saturated fat and protein?
Reduce the sizes of the meat portions or replace one or two of the meat portions with whole grains, fruits, or vegetables; use skim milk instead of whole milk; use cottage cheese instead of full-fat cheese; and replace the blue cheese salad dressing with vinaigrette dressing or another low-fat alternative.
3.
 - a. Does Eating Plan G provide enough protein? No; it only provides 30.7 grams.
 - b. Why or why not? It contains no meat or dairy products, which are high in protein.
 - c. What other nutrients are lacking from this eating plan?
The other nutrients that are lacking from this eating plan are calories, fat, vitamin B₁₂, thiamin, vitamin E, iron, and zinc.
 - d. How could Eating Plan G be modified (without changing the overall type of diet) to provide the nutrients that are lacking?
The following Eating Plan G is modified (without changing the overall type of diet) to provide the nutrients that are lacking: Add whole grains for calories and thiamin, more green leafy vegetables and orange juice for iron, nuts for vitamin E and zinc, and polyunsaturated and monounsaturated fats.