

## 2014 FFA Food Science Product Development Career Development Event Developing a High Fiber Sports Energy Bar

### **BACKGROUND**

Americans are becoming increasingly more interested in their health through improved diet and exercise. Sports energy bars are gaining popularity as a means to provide important nutrition prior to and during work outs. These bars are generally high in protein, vitamins, and minerals, but can also be high in calories and low in fiber. On the other hand, granola bars and trail mixes are generally good sources of fiber, but may be limited in some of the nutrients found in the sports energy bars.

### **OBJECTIVE**

Your task is to develop a high fiber sports energy bar with the desirable characteristics of a sports energy bar (high in protein and carbohydrates) and a granola bar (good source of fiber). Your product should be nutritious, easy to eat, require minimal time for preparation, be easy to prepare, and have satisfactory sensory characteristics. In addition, you will attempt to commercialize the product for grocery store use.

Your target nutrient guidelines are:

Serving size: 90 g (1 bar)

Fat: Less than 4 g

Protein: At least 5 g

Carbohydrates (total): At least 25 g

Calories: Less than 300 calories

### **METHOD**

With your team, create a food product from the ingredients supplied in the following table. Your team should develop a product name, consider the potential use by athletes, determine the nutritional value, and evaluate the appearance, texture, and flavor of the final product.

Your team will present an oral report (15 minutes – 10 to present and 5 for questions) to a group of trained judges. The evaluation form attached is how your group presentation will be evaluated. It is important that you have graphics to clearly show your product.

## RULES

**Your team will need to develop but not prepare your product.** The following table includes suggestions for ingredients you may use. You may also use related ingredients (not listed) as alternates. You will need to include at least one source of fiber, one source of protein, and a binder which will hold the ingredients together so a bar can be formed. The use of dried fruits and flavorings is optional. A maximum of 8 ingredients can be used in your product. Select items from the following categories:

<b>Fiber</b>	<b>Proteins</b>	<b>Binder</b>	<b>Dried Fruits</b>	<b>Flavorings</b>
Oatmeal	Peanuts	Corn syrup	Raisins	Cinnamon
Wheat Germ	Almonds	Peanut butter	Dried apples	Vanilla
Oat bran	Walnuts	Soynut butter	Dates	Chocolate
	Sunflower seeds	Honey	Coconut	Chocolate chips
	Non-fat dried milk	Oil		
	Sesame seeds			

## EVALUATION

Product name \_\_\_\_\_

Ingredients \_\_\_\_\_

Preparation time \_\_\_\_\_

## MARKETING PRESENTATION

Each team member should present at least one of the following aspects of food product development: selection of ingredients, nutritional value, ease of preparation, sensory characteristics.

## COMMERCIALIZATION

The product that you develop will need to meet all aspects of labeling requirements including principal display panel, nutritional label, and ingredient listing. Your team will be evaluated on this being done correctly. **Information about labeling can be found at:**

**<http://www.fda.gov/food/ingredientspackaginglabeling/default.htm>**

## **RESOURCES FOR DETERMINING NUTRIENT INFORMATION**

### 1. Nutrient Data Laboratory

Downloadable data sets prepared by the **USDA** Nutrient Data Laboratory with nutrient values of foods.

[http://www.ars.usda.gov/main/site\\_main.htm?modecode=12-35-45-00](http://www.ars.usda.gov/main/site_main.htm?modecode=12-35-45-00)

## **SPECIFIC REQUIREMENTS**

- Suitability of product as a high fiber sports energy bar
- Ingredients should be listed in order of amounts used in product.
- All required parts of the principle display panel should be there.
- All required elements on the Information Panel
- Correct relative placement of PDP and Information Panel
- Appealing PDP and Creative Character
- Reasonably close nutritional panel
- Ability to answer questions about the product.
- All members participate in presentation.

CHAPTER NAME \_\_\_\_\_

<b>CRITERION for 2014 CDE</b>	<b>POSSIBLE POINTS</b>	<b>POINTS EARNED</b>
Objective met – to develop a <u>high fiber sports energy bar</u> .	50	
All required parts of the principal display panel (PDP).	50	
All required elements on the Information Panel	50	
Correct relative placement of PDP and Information Panel	50	
Reasonably close nutritional panel	50	
Communication skills/oral presentation (clear, logical, easy to understand, confidence in presentation and the information presented.	50	
Ability to answer questions about the product.	50	
Did all team members contribute?	50	
<b>OVERALL</b>	400	