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## Product Evaluation Report: Mushroom Spaghetti Sauce

### Intro-purpose

A new cycle menu was recently created and reviewed by the Food Service Director. With the vast amount brands and vendors providing the same product, the Director requested that a blind product-sampling analysis be completed on particular items to ensure the best buy/value is being provided. This report provides an evaluation on Mushroom Spaghetti Sauce from three different vendors. The vendors selected included Hunts Premium Mushroom Pasta Sauce, Bertolli Portobello Mushroom Sauce, and Trader Giotto's Organic Spaghetti Sauce with Mushrooms. The following report evaluates each sauce and provides recommendations based on the sampling results, nutritional value, cost per serving, packaging, and cooking instructions.

### Method

A blind taste test was conducted over the three different mushroom spaghetti sauces. A product sensory evaluation form was created to explore the different characteristics of spaghetti sauce including appearance/appeal, texture, taste, food pairing, and an overall rating. The form consisted of seven questions, six multiple choice and one overall evaluation number answer format. Four random volunteers were selected and performed the blind taste-test on 6/18/12. The volunteers ranged in age from 27-64, two males and two females. Each sauce to be sampled was prepared and organized in sample order prior to their arrival. Volunteers were not informed of any of the brands that were being sampled. They were provided a separate evaluation form for each sauce upon arrival and instructions on how the activity would be conducted. They were also informed to refrain from conversation during study to avoid persuasion towards one sauce or the other. To begin, one tablespoon of each sauce was provided, but the volunteers were instructed that they must complete the survey for the current sauce before moving onto the next. They were also given the opportunity observe the sauce in the pan for analysis of the appearance, texture, and appeal. Upon completion of the survey a pasta dinner was served were the volunteers could choose from the three sauces. This provided more information as to which sauce the consumer enjoyed overall.

## Results

Below is a summary of the six questions on the sensory evaluation tool used during the blind taste sampling activity.

<b>Results</b>			
Sample:	Sample 1	Sample 2	Sample 3
Appearance			
Appealing (yes/no)	50/50	50/50	50/50
Description (Oily, Bright, Dull)	Bright/Dark	Bright	Bright/Oily
Texture (watery, chunky, thick, oily)	Thick/Chunky	Thick/Chunky	Thick/Chunky
Enjoy Texture (yes/no)	$\frac{3}{4}$ - Yes	0 - Yes	$\frac{3}{4}$ - Yes
Taste Description (sweet, spicy, salty, garlicky, bland)	Sweet	Salty/Sweet	Sweet/Bland
Food paired with (pasta, meat, dipping sauce)	Pasta	Meat/Dipping	Pasta
Average Overall Rating (1-5, 5 highest)	3	2.25	3

Considering an individual's first analysis of food is based on the appearance, the taste-sampling activity began with questions involving the appearance of each sauce. Two out of the four volunteers rated each sauce as having an appealing appearance. Therefore no determination could be based on appearance alone. The following question asked the volunteers to describe the appearance of the sauce being sampled. Each was associated with being a bright red, yet one volunteer noted sample one as being dark red and sample three as oily.

The next observation considered was the texture of the sauce. All three sauces were described as being thick and chunky evenly. Three out of the four volunteers answered that they enjoyed the texture of samples one and three, yet not one said they enjoyed sauce two.

Actually tasting the sauce was next analyzed where all three sauces were noted for being sweet yet one volunteer noted sauce sample two as being salty and another noted sauce sample three as bland.

The remaining two questions involved the food pairing and overall rating. Volunteers were provided with an option for sauce pairing with either pasta, meat, or as a dipping marinara. Volunteers paired samples one and three with pasta and sample two as a dipping marinara or company to a meat dish. The average overall ranking between all four volunteers for sauce samples one and three was a three. Sauce sample two however was received an average of 2.25 overall being ranked the lowest of all three sauces.

At the conclusion of the sampling activity, volunteers were provided with a spaghetti dinner allowing them to choose between the three sauces to top their pasta with. Volunteer one, two, and four, ages 28, 27, and 64 selected sauce one.

#### Conclusion/recommendations

Based on the results above of the blind sampling activity it appears consumers prefer sauce one or three that was bright in color, thick and/or chunky, and sweet. You can also note from the results that the volunteers ranked the sauce they described as salty much lower than the other two therefore the sodium level should be considered when selecting a sauce. Sauces one and three were the Bertolli Portobello Mushroom Sauce, and Trader Giotto's Organic Spaghetti Sauce with Mushrooms, consecutively, which were preferred by volunteers. They both received an average overall ranking of 3 over sauce two which received an average ranking of 2.3. One volunteer chose Bertolli and the two others choose Trader Giotto's sauce for their sauce during the concluding pasta dinner. Analyzing all characteristics in the sampling study it appears that sauce three, Trader Giotto's Spaghetti Sauce with Mushrooms, was the preferred sauce of choice. Additional facts, including nutritional facts and cost per serving, are summarized below to support this recommendation of the Trader Giotto's sauce.

Nutritional Facts & Cost Per Serving			
	Bertolli	Hunt's	Trader Giotto's
Serving Size	1/2 cup	1/2 cup	1/2 cup
Calories	80	50	45
Total Fat	2.5g	0.5g	0g
Saturated Fat	0g	0g	0g
Trans Fat	0g	0g	0g
Cholesterol	0mg	0mg	0mg
Sodium	450g	590g	350g
Total CHO	12g	10g	10g
Fiber	1g	3g	2
Sugar	11g	6g	4g
Protein	2g	1g	1g
Cost Per Serving	\$0.67	\$0.20	\$0.67

On the Nutritional aspect, Trader Giotto's sauce is the lowest in sodium as preferred by our volunteers, in calories, and total fat. It is has the same amount of carbohydrates as Hunt's and but is lower in sugar. On a protein basis Bertolli provides the most per serving but it is also the highest in calories, fat, and sugar. Additional values that may be valued to the consumer are the organic products used to produce the Trader Giotto's. Trader Giotto's sauce is organic, free of artificial colors, flavors, and also preservatives. It also has a much high percent of daily Vitamin C at 20%, where the other two sauces are both below 10%.

There is a large gap in the cost per serving as the Hunt's sauce is only \$0.20 per serving where both Bertolli and Trader Giotto's are \$0.67 per serving. Although the Hunt's is the cheapest per serving, volunteers' preferences and nutritional facts above support the extra cost provides a great deal of value.

The final best buy value considered in this report is based on the sauce packaging. Both Trader Giotto's and Bertolli were packaged in approx 25oz glass container that could be resealed and refrigerator after opening. The Hunt's sauce comes in a 24oz can that once opened must be transferred to a storage container for later use before refrigeration.

All facts considered, consumer preferences sauce characteristics, nutritional value, cost per serving and packaging, the Trader Giotto's Spaghetti Sauce with Mushrooms appears to be the best buy/value sauce.

Name Danielle Sanislow

**Food Specification**

<b>Food Specification Form</b>
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For Menu Item: Spaghetti Sauce

Menu Day: N/A

NAME OF PRODUCT: Spaghetti Sauce with Mushrooms

UNIT OF PRICING: \$3.99/25fl oz

PACKAGING, SIZE, PORTION: re-sealable glass container, 25fl oz,  
6-½ cup servings

QUANTITY TO ORDER: N/A

QUALITY, BRAND, OR GRADE: USDA Organic, Trader Giotto's Spaghetti Sauce  
with Mushrooms

MISCELLANEOUS: bright red color, below 400mg sodium, thick and/or chunky  
texture, non-oily, fat free, organic ingredients

Source: Product Evaluation Report 6/22/12

***Note:*** Type or Print Clearly (Duplicate as necessary)

Product Evaluation form: Mushroom Spaghetti Sauce

Directions: Sample one teaspoon full of all three sauces (A, B, and C), if needed, notes may be taken on reverse side of survey for memory. Additional samples may be taken throughout completion of the evaluation form. Circle only one answer unless otherwise noted in question.

Participant Information - Age \_\_\_\_\_ Sex - M/F

Sample \_\_\_\_\_

1. Is the appearance of the Mushroom Spaghetti Sauce appealing?
  - a. Yes
  - b. No
2. How would you describe the appearance?
  - a. Oily
  - b. Bright Red
  - c. Dark Red
3. How would you describe the texture?
  - a. Watery
  - b. Chunky
  - c. Thick
  - d. Oily
4. Do enjoy the texture of the mushrooms in the sauce?
  - a. Yes
  - b. No
5. How would you describe the taste?
  - a. Sweet
  - b. Spicy
  - c. Salty
  - d. Garlicky
  - e. Bland
6. Which food would you most likely pair this sauce with?
  - a. Pasta
  - b. Meat
  - c. Dipping/Marinara
7. How would you rate this sauce overall? (Between 1-5, 5 being the highest)  
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