

Fat Analogs: Ranch Dressing Sensory Evaluation

Food Science

Safety

- Follow all lab protocols as outlined in the [Food Science Safety and Sanitation Contract](#).

Purpose

Food analogs are natural or manufactured substances used in place of traditional food products or ingredients, designed to save money, change the nutritive value of food, improve the performance of foods and compounds, and/or replace foods that are restricted for health reasons. In this experiment, you will identify differing sensory characteristics between original products versus those using analogs to replace original ingredients.

Materials per student:

- 1 paper plate or paper boat divided into 3 sections, **labeled 125, 362, 254**
- 1 teaspoon dressing per sample (3 total)
- 6 carrots (allowing 2 per sample)

Procedure:

1. Without any discussion with classmates, circulate through the tasting stations set up by your instructor.
2. Using a small carrot, taste each sample of ranch dressing and allow it to sit in your mouth for at least 10 seconds.
3. Evaluate the aroma, color, texture, flavor, and overall quality of the samples. Record your evaluations in the data table, using a ranking of **1 (worst) to 4 (best) for each characteristic**. Retry samples, as necessary. Also note any observations for each characteristic, noting any particular characteristic.
4. Take a small swallow of warm water to clear flavor compounds from your mouth.
5. Repeat steps 2 through 4 until you have tasted all samples.

Name:

20 points

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Pre-Lab

Purpose: 1 pt

Procedure Summary: 1 pt

Lab

Record your evaluations in the data table, using a ranking of **1 (worst) to 4 (best)** for each characteristic. Retry samples, as necessary. Use descriptive terminology to note any particular differences or similarities between the sample in the observations. (5 pt)

Sample Number				Observations (Write NA in any box, if absent)
Characteristic	125	362	254	
Aroma				
Color				
Texture				
Flavor				
Overall Quality				

Post-Lab

Questions to complete **BEFORE ACCESSING NUTRITIONAL FACTS OF EACH PRODUCT:**

1. Did you prefer any sample # much more than the others? What qualities did it have that you enjoyed? (1 pt)
(Write NA if absent)
2. Which sample # did you least enjoy? What aspects of the sample did you not like? (1 pt)
(Write NA if absent)
3. What variables may have influenced your results? (1 pt)
(Write NA if absent)

Questions (**AFTER** using the link to [NUTRITIONAL FACTS OF PRODUCTS](#))

4. What was the actual product you preferred (matching to question #1 with product name) ? (**1/2 pt**)

(Write NA if absent)

5. What was the actual product you least enjoyed? ? (**1/2 pt**)

(Write NA if absent)

6. Compare your personally collected data with your table members. Include any clear favorites and/or least favorites and explain what could affect different results among your team members. (1.5 pt)

(Write NA if absent)

7. Using this link to the [NUTRITIONAL FACTS OF PRODUCTS](#), complete the chart below: (5 pt)

	Fat-Free	Light	Original
Calories			
Total Fat (grams)			
Sugars (grams)			
First ingredient			
Second ingredient			

8. In 3-5 complete sentences, use the chart above to make observations about changes that occur between fat, light, and original products. This may include nutritional value changes, ingredient changes, the impact these changes can affect the product and/or the body's health, or any other relevant observations that could impact your food choices. (3 pt)