



GREASE SPOT TEST

STUDENT PROCEDURE

Test for the presence of fats: Grease Spot Test.

1. Review the food samples to be tested. Can your team predict which of the samples contain fat? Each team should choose one food sample to test; one group should test the pretzels (crushed into crumbs). Record the sample to be tested and the prediction on your worksheets.
2. Follow this procedure for the test:
 - a. Draw a circle that is 2.5" in diameter on 3 separate pieces of graph paper.
 - b. Measure 1/4 teaspoonful of butter and spread within one circle on the paper. Repeat this with a water sample, spreading it on a separate circle. These are the controls for the tests. *Why is it important to have controls in your experiment?*
 - c. Write the name of the food sample being tested on a clean, 5" x 5" square.
 - d. Measure 1/4 teaspoonful of the food sample.
 - e. Place the sample in the circle (filling the circle), and if solid, spread with the back of the spoon or craft stick.
 - f. Let sit for 2 minutes to allow the square to absorb the fat (if any). If necessary, scrape the food sample from the square. (Once dry, the fat will leave a translucent spot behind. If water spots are present, they will evaporate.)
 - g. Dispose of unused food and place each team's squares on a table; don't touch the grease spot!
3. Discuss which of the samples tested contained fat.
4. For each of the foods containing fat, determine the area of the graph paper covered by the grease spot by counting the number of squares. Record this information on the worksheet.

Can we determine which foods have fats based on the tests?
5. Examine and share the fat test results and record all test results on your worksheets. Take about 10 minutes to analyze and rank the foods from those with the most fat present to least fat present.
6. As a class, compare the rankings. Chart a class average of the food samples to reflect those with fat, no fat, and

amount of fat present (as represented by the number of squares covered by the grease spot).

- *Are all fats the same? Can you tell if the fats are healthy or unhealthy from the grease spots?*
7. Watch the *Good Fats vs. Bad Fats* video www.youtube.com/watch?v=Foh4DyqMc1A
As you watch the video, check your answers on your **Interactive Label Research** worksheets.
 8. Look at your grease spots and both of your worksheets as you discuss these questions with your team:
 - *How can we tell if we are eating saturated or unsaturated fats?*
 - *Try to group the food samples according to origins. Which ones came from plants? Which ones from animals? What would we call the animal-based fats? How about the plant-based?*
 - *Do we need any more information to make healthier food choices? How can we use the percentage of fat present in the foods to make healthier food choices?*
 9. Check the Nutrition Facts labels for the food samples tested to compare the foods. Complete the table called **Comparison of Food Samples Tested Using the Nutrition Facts Label** for Activity 2 and then answer the questions.
 10. If you tested a food that didn't show fats visually, but the Nutrition Facts label states that it *does* contain fat. Why do you think this occurred?

Making healthy choices is not always possible just by looking at a product. An example is the pretzels that were just tested – they will usually test negative for fat. This is because the amount of fat in the pretzel is insufficient to test positive. However, when you look at the Nutrition Facts label, you will see that fat *is* present.

TEACHER NOTE

Although pretzels in the grease spot test do not test positive for fat because there is so little, the Nutrition Facts label shows that fat is present.