Effects of Angel Food Cake on Oil

My grandma once told me to never put a drop of oil into an angel food cake, or else it will not rise. So we decided to test her theory to see “How does the amount of oil affect the height and appearance of an angel food cake?” We want to know the effect the oil will have on it in case of accidental addition to the batter. It will also be interesting to see if maybe the oil made the cake moister and have a greater height. To do so we will use 0 cups, ½ cup, and 1 whole cup of oil added to the cake batter.

The angel food cake otherwise known as the Pennsylvania Dutch Wedding Cake, was thought have originated in southern Pennsylvania in the early 1800’s (5). Other historians believe that the first angel food cakes were baked by African American slaves from the south, because they had a strong beating arm to whip the air into the egg whites. Also these cakes are a traditional African American favorite for an after funeral food. Angel food cake is made with a large quantity of egg whites, but has no shortening or
leavening. Some say that it is a take off of sponge cake, corn starch cake, silver cake, or snow drift cake (5).

People all over the world have begun to process vegetable oil thousands of years ago. They did this using the sun, a fire, or an oven to heat up oily plant products until the plants exuded oil that could then be collected. Cooking oil consists of edible vegetable oils taken from olives, as well as peanuts, and many other plants. Vegetable oils are often added during the preparation of processed foods. They are also used to fry foods, and are added to many baking products such as many cakes and brownies (4).

You all know that Betty Crocker is a famous maker of cake, but who exactly is Betty Crocker? To be truthful she really never existed. In 1921 the manager of General Mills decided to sign all the answers to baking questions with Betty Crocker, and the name has stuck ever since (3). Betty Crocker first started symbolizing General Mills in 1921. A few years later, in 1924 the company launched a radio show called, "The Betty Crocker Cooking School of the Air." The broadcast became one of the longest running shows in radio history (1).
At Iowa State University, Anne M. Oldham, Diane R. Mccomber, and David F. Cox tested "How does the amount of cream of tartar in an angel food cake affect it?" They made the angel food cakes with 1/12 tsp, 1/8 tsp, or 1/4 tsp of cream of tartar. They found that when the amount of cream of tartar increased the pH level decreased, but it increased specific gravity, cake slice area, and tenderness, and caused whiter interior crumb and darker exterior crust (2).

Researchers listed

Anne M. Oldham, Diane R. Mccomber, and David F. Cox also tested "How does the egg white temperature affect an angel food cake?" They set the egg whites at either 2 degrees Celsius or 22 degrees Celsius. The cakes that were made with 22°C egg whites had increased exterior yellow color, decreased specific gravity after flour addition, and increased preference. However, cold egg whites did not decrease cake quality in any form (2).

In conclusion, Betty Crocker angel food cakes have been around for quite some time and so has oil. Our research has not informed us that oil will have any effect on it. From what my grandma has told me though, it should have an affect on the height. As for the appearance we will just have to wait for our test results.
Bibliography


