

<b>Thesis Title</b>	Development of High Dietary Fiber and Low Calorie Cookies
<b>Student</b>	Mrs. Malee Thongkum
<b>Thesis Advisor</b>	Dr. Yuporn Puechkamut
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## ABSTRACT

Development of high dietary fiber and low calorie cookies is aimed to enhanced the nutritional value of cookie. In the present study, increasing of dietary fiber content in butter cookie was done by replacing 50 % of all-purpose flour by whole wheat flour. Various sources of dietary fibers as soy bean residue , pineapple core , red kidney bean , jew's ear , sweet white egg plant and raisin were used. Those of dietary fibers were added to cookies at 70 % of wheat flour weight. The resulting cookies have the overall sensory score of 7.80 while the maximum score of sensory test was 9.00. However, the spreading ratio of high dietary fiber cookie was significantly decreased compared to that of control. In this study , therefore , white egg were increased three times to make good shape of cookies.

A study on reduction of cookie calorie was done by using cellulose powder. Cellulose powder at 6 concentration ( 0, 1, 2, 3, 4 and 5 % ) were replaced 50 % of butter in the cookie butter. The result from texture analyzer shows that the maximum compression force of the batter using 2 % cellulose powder were similar to that of control containing full fat. In addition , the calorie of cookie was reduced by using polydextrose instread of sugar. Polydextrose was replaced 0 , 50 , and 75 % of sugar in

the batter. The result from sensory test shows that cookies using polydextrose and sugar at the ratio of 1:1 was more acceptable than other cookies.

The sensory test for high dietary fiber and low calorie cookies from the present study was done by using 100 panelist living in Bangkok (23 men and 77 woman). The average sensory scores from those panelist were like to extremely like. The spread ratio, direct density and water absorption index of the resulting cookies were 4.46, 0.55 gm / ml and 9.21 respectively. The chemical composition of high dietary fiber and low calorie cookie was analyzed. Total dietary fiber content and the calorie of cookies were 8.62 gm and 355.9 cal per 100 gm of sample, respectively. When compared to that of control butter cookie, total dietary fiber content increase 125 times and the calorie decreased 27 times.