

Experiment 3: Baking powder

Method:

2 different experiments are done with baking powder. The baking powder is add after the dough has raised. In one experiment the dough will not raise again after adding baking powder. In the other experiment the dough will raise a second time after baking powder is add. The ingredients and baking process is the same as described in [the standard experiment protocol](#) only the baking powder will be add later.

Results

Experiment 3.1: Not raised a second time

Mandazi	Weight before baking (grams)	Weight after baking (grams)	After desiccating in the oven for 1,5 hours (grams)
1	40	42	29
2	40	42	29
3	40	43	30
4	40	44	31
5	40	40	26

Experiment 3.2: Raised a second time

Mandazi	Weight before baking	Weight after baking	After desiccating in the oven for 1,5 hours (grams)
1	40	41	27
2	40	40	27
3	40	41	28
4	40	38	26
5	40	38	26
6	40	39	26

Calculation amount of fat

Experiment 3.1

Dry weight:

X1 average = 40 grams/mandazi

X2 average = 22,4 grams/mandazi

Water in a mandazi before frying = $X1 - X2 = 40 - 22,4 = 17,6$ grams water/mandazi

After frying

Y1 (weight after frying) average = 42,2 grams/mandazi

Y2 (weight after drying) average = 29 grams/mandazi

Water in a mandazi after frying = $Y1 - Y2 = 42,2 - 29 = 13,2$ grams water/mandazi

Water that evaporates during frying = $17,6 - 13,2 = 4,4$ grams water/mandazi

Amount of fat = $Y2 - X2 = 29 - 22,4 = 6,6$ grams vet/mandazi

$$\frac{\text{Amount of fat}}{\text{Total weight mandazi}} \times 100\% = \frac{6,6}{40} \times 100\% = 16,5\% \text{ fat}$$

Experiment 3.2

Dry weight:

X1 average = 40 grams/mandazi

X2 average = 22,4 grams/mandazi

Water in a mandazi before frying = $X1 - X2 = 40 - 22,4 = 17,6$ grams water/mandazi

After frying

Y1 (weight after frying) average = 39,5 grams/mandazi

Y2 (weight after drying) average = 26,7 grams/mandazi

Water in a mandazi after frying = $Y1 - Y2 = 39,5 - 26,7 = 12,8$ grams water/mandazi

Water that evaporates during frying = $17,6 - 12,8 = 4,8$ grams water/mandazi

Amount of fat = $Y2 - X2 = 26,7 - 22,4 = 4,3$ grams fat/mandazi

$$\frac{\text{Amount of fat}}{\text{Total weight mandazi}} \times 100\% = \frac{4,3}{40} \times 100\% = 10,75\% \text{ fat}$$