Experiment 6: Rice flour

Method:

The flour in the mandazi will be rice flour instead of wheat flour. The other ingredients and baking process will be the same as described in the standard experiment protocol.

Results

20% rice flour, 80% wheat flour

	Before frying (grams)	After frying (grams)	After desiccating (grams)
1	41	40	36
2	41	40	30
3	40	39	29
4	40	41	30
5	40	40	30
6	40	38	31
7	40	40	33

Small

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 = 39,714 grams/mandazi

Y2 (weight after drying) average = 31,2857 grams/mandazi

Water in a mandazi after frying = Y1 - Y2 = 39,714 - 31,2857 = 8,428 grams water/mandazi

Water that evaporates during frying = 17,6 - 8,428 = 9,172 grams water/mandazi

Amount of fat = Y2 - X2 = 31,2857 - 22,4 = 8,89 grams fat/mandazi

$\frac{Amount\ of\ fat}{Total\ weight\ mandazi} \times 100\% = \frac{3,9}{40} \times 100\% = 22,38\ \%$ fat

154 grams

100% rice flour

	Before frying (grams)	**After frying (grams)**	**After desiccating (grams)**
1	40	39	28
2	40	40	28
3	40	38	28
4	34	32	25

<u>Small</u>

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 grams/mandazi

Y2 (weight after drying) average = 28 grams/mandazi

Water in a mandazi after frying = Y1 - Y2 = 39 - 28 = 11 grams water/mandazi

Water that evaporates during frying = 17,6 - 11 = 6,6 grams water/mandazi

Amount of fat = Y2 - X2 = 28 - 22,4 = 6,4 grams fat/mandazi

$\frac{Amount\ of\ fat}{Total\ weight\ mandazi} \times 100\% = \frac{6,4}{40} \times 100\%$ = 16,4 % fat