



FORMULATION AND DEVELOPMENT OF DRY DATES POWDER INCORPORATED COOKIE

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Abstract:

Bakery is a fast moving food industry. It is a establishment that produces and sells flour based food baked in an oven such as bread, cookies, cakes, donuts, pastries and pies. A cookie is a baked or cooked snack which is typically small, falt and sweet. The common ingredients present in cookie are flour, sugar, egg, fat and butter. The product that is formulated is Dry dates powder incorporated cookie. Dry dates powder which is rich in iron, protein and potassium. The project is carried out to standardize the dry dates powder cookie. To formulate the cookie with wheat flour, jiggery, butter, vanilla essence, dry dates powder. To evaluate its sensory attributes with 5 point hedonic scale. To calculate yield of the formulated dry dates cookie. The article is concluded with the selected variation of cookie which was done by semi trained panel members.

Index Term- Cookie, Wheat flour, Dry dates, sensory evaluation, yield.

I. INTRODUCTION

Bakery products are gaining popularity as processed foods because of their availability, ready to eat convenience and reasonably good shelf life. Baking developed into a commercial industry using automated machinery which enabled more goods to be produced for widespread distribution. The aroma and texture of baked goods as they come out of the oven are strongly appealing but is a quality that is quickly lost. Since the flavor and appeal largely depend on freshness, commercial producers have to compensate by using food additives as well as imaginative labeling.

Cookies are more popular as a convenient food, and a variety of cookies are used as one of the tasty and nutritious snacks. The word cookie refers to a small cake which are derived from the word “koekje or koekie”. Cookies are important snack foods for children and adults. At present these are prepared from refined wheat flour, which is also known as white flour is high in quality and low in fibre content.

Dates fruit (*Phoenix dactylifera*) is a flowering plant species in the palm family, Arecaceae, cultivated for its edible sweet fruit. Dates have been a stable food of the Middle East and the Indus valley for thousands of years. Dates are rich in nutrients such as protein, iron, and calcium and phosphorous. They provide a good source of rapid energy due to their high carbohydrate content of approximately 70-80%. Most of the carbohydrates in dates are in the form of fructose and glucose.

Date fruit are used as nutrient while the pollen grains used in the treatment of infertility. It is produced largely in the hot arid regions of the world particularly in Gulf Cooperation Council (GCC) countries, and Saudi Arabia is considered as one of the world's major producer of dates.

II. OBJECTIVES

To formulate dry dates powder incorporated cookie

To calculate the yield of dry dates incorporated cookie

To determine the sensory characteristics of the dry dates powder incorporated cookies.

III. METHODOLOGY

The methodology for the research study entitled “Quality Evaluation of dry dates powder incorporated cookie” is presented.

Sundry the dry dates (Kajur) for about two days. Cut into small pieces and grind it to powder and sieve it. Dry ingredients such as wheat flour, milk powder, jaggery and a pinch of salt is sieved thrice. Then the fat is creamed with sieved jaggery and the essence is gradually added to the cream.

Add the sieved flour mixture to the cream and make soft dough. Fold the flour and mix to soft dough. Sheet the dough on a floured table into a desired thickness and cut into desired shape using cookie cutter. Prick the cookie pieces with fork. Arrange it on a clean tray and leave 1 inch space between the pieces for spreading and finally bake the cookie at 160-170 degree C for about 10 minutes.

Yield calculation for dry dates powder incorporated cookies

The yield of the developed production was calculated using the formula

Weight of the formulated product

Yield (%) = ----- *100

Weight of the raw materials used for the formulation of product

IV. FIGURES AND TABLES

Table 1: Standardization of Dates cookie

Ingredients	Control	Variation 1	Variation 2	Variation 3
Wheat flour	100g	75g	50g	25g
Dates powder	----	25g	50g	75g
Jaggery	30g	30g	30g	30g
Butter	40g	40g	40g	40g
Milk powder	10g	10g	10g	10g
Essence	1ml	1ml	1ml	1ml

The formulated products were standardized in terms of amount of ingredients used, procedure and serving size. For the purpose of standardized products, a number of preliminary trials were conducted. It was formulated into three different variations along with control sample. Different variations of Dry dates powder incorporated cookies were prepared by altering the proportion of all the ingredients for standardization.



Control



Variation I



Variation II



Variation III

V. RESULTS AND DISCUSSION

Table 2: Organoleptic evaluation of Dry dates cookies

	Control	Variation 1	Variation 2	Variation 3
Colour	4.1±0.33	3.8±0.60	3.7±0.44	4.5±0.52
Appearance	3.8±0.33	4.1±0.33	4.1±0.33	4.1±0.33
Taste	4.3±0.5	3.3±0.70	3.6±0.5	4.8±0.5
Texture	3.8±0.60	3.8±0.33	4±0	4.3±0.5
Flavour	4±0	3.7±0.44	3.8±0.33	4.5±0.52
Overall acceptability	4.3±0.5	4±0	4.3±0.5	5±0

Palatability of a newly formulated product is essential for the consumption and popularization. Generally the acceptability of any formulated product is checked by the standard organoleptic evaluation with criteria namely colour and appearance, taste, flavour, texture and overall acceptability.

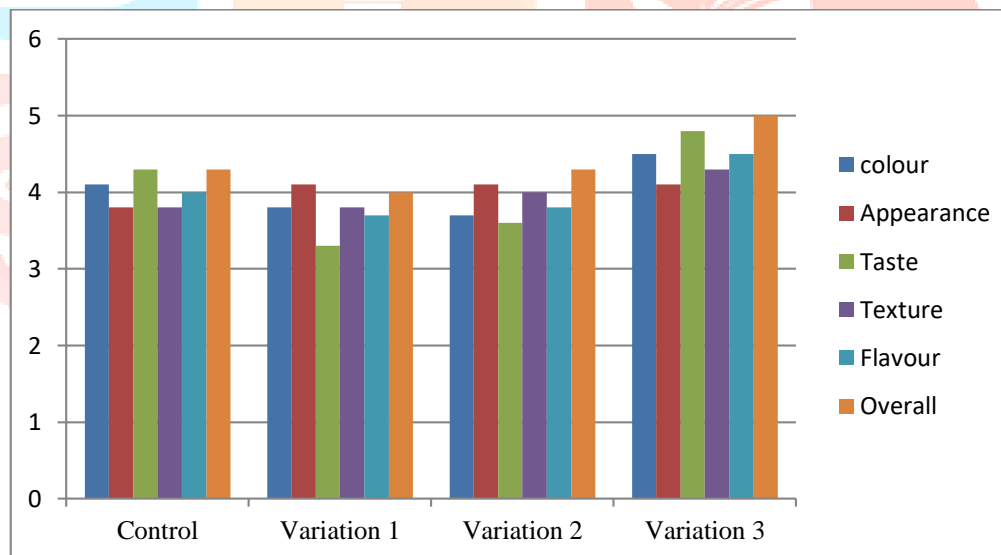


Figure 1: Organoleptic evaluation of Dry dates cookies

The organoleptic evaluation was carried out by 50 panel members based on 5 point hedonic scale. From this table, it is shown that the variation III has been highly acceptable in terms of its overall acceptability and its organoleptic properties. So the variation III was highly acceptable by the panel members.

Dates cookie	Control	Variation 1	Variation 2	Variation 3
Weight of prepared cookie	70g	56.9g	74.63g	70.84g
Weight of raw materials	91g	91g	91g	91g
Yield (%)	76.9%	62.5%	82%	77.8%

Calculation of yield for the formulated dry dates powder incorporated cookies

Table 3: Yield Calculation of dry dates cookie

From the table, it is shown that the yield of control sample (50g wheat flour) is 76.9%, variation 1 (37.5g flour and 12.5g dates powder) is 62.5%, variation 2 (25g flour and 25g dates powder) is 82%, variation 3 (12.5g flour and 37.5g dates powder) is 77.8%. Among all variation 2 gave the highest yield.

CONCLUSION

From the findings of this study it was concluded that the variation III was highly acceptable in terms of its sensory attributes such as colour, appearance, taste, texture, flavour and its overall acceptability. The Cookie was developed with the ingredients such as Dry dates powder, Jaggery, Wheat flour, Butter, Milk powder and essence due to their valuable nutrient content and its health benefits. It is concluded that the dry date's powder is a good source of bioactive compounds and natural sugar. It also reduces night blindness, helps in digestion, it controls diarrhoea, it prevents abdominal cancer and it cures intestinal disorders.

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