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SHORT COMMUNICATION **OPEN ACCESS**

Process Optimization and Standardization of fasting cookies developed by Sago, Sweet potato, Proso millet and Amaranth Flour.

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ABSTRACT:
People today are more concerned about their health, and they enjoy eating foods with additional vale as part of their reg ular meals or in addition to other foods. The components of the composite flour we intended for fasting. In this experimen t, three blended flour samples were made using different ratis of T1, T2, and T3 flour to make fasting cookies. Using estab lished techniques, the approximate composition of the several flour mixtures used to make the fasting cookies was ascert ained. To determine the acceptability of fasting cookies, physicochemical analysis and sensory evaluation overall T2 coo kies percentage received a high score for overall acceptability in sensory examination. As a result, T2 cookies made from a blend of Sago, Sweet Potato, Proso Millet, and Amaranth flour are chosen based on quality evaluation and sensory eval uation.
Key words: *Fasting cookies, Sago, sweet potatoes, and amaranth*
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INTRODUCTION

In all the largest food industry branches, the bread business in India is the most populated. A longstanding endeavour, baking plays a significant role in the food processing business. 96% of people in the United Kingdom consume bakery products such as breads, cookies, muffins, and cakes[1].Since ancient times, India has produced bakery goods. Cookies are by far the most widely used category of bakery goods. For Nelson's Navy, cookies were first created as a food item in 1980. Cookies are baked goods that are artificially leavened and have a high fat and sugar content.

The second-largest producer of cookies, after the United States, is reported to be India[1]. 70% of the entire production is made up of cookies[1]. In the latter half of the 20th century, when an urbanised culture demanded ready-made food goods at a tenable price, the Indian cookie industry came to prominence and began acquiring a solid reputation in the bakery industry[1]. Additionally, fasting is said to be a good way to give the body the much-needed rest it needs from a regular diet. This justifies choosing foods that are nutrient-dense but also light on the stomach and easy to digest. making cookies while.

Therefore, a few ingredients—such as sweet potatoes, Proso, amaranth, and sago—are added to a variety of flours, which may readily fill the void left by the absence of cookies made with refined flour or wheat flour. Sago is a great source of fiber, and vital vitamins and minerals like selenium and vitamin B6 are also found in them[1]. The nutritionally rich amaranth and sweet potatoes, which are also included in this composite flour recipe, provide the best energy for your body during the fasting days when you have a busy work schedule and little time to prepare fasting food. On those days, you can make these cookies and store them for at least a month[1].

Sago(Cycas revoluta, commonly known as Sago palm or King Sago palm) is a slow growing wild or ornamental plant[2].

The starch known as sago (/seo/) is taken out of the pith, or spongy core tissue, of the stems of several tro pical palm trees, particularly Metroxylon sago[2]. It is known by the names saksak, rabia, and sagu among the lowland populations of New Guinea and the Maluku Islands. Sago is mostly produced in Southeast Asi a, mainly in Malaysia and Indonesia[2].

Whole products made from the Amaranth species (Amaranth's cruentus, A. hypochondriacus and A.caudatus)that are produced in the Czech Republic are consumed by people [3].Brown breed crackers, eggless pasta and amaranth flour cookies[3]. Amaranth grain has the avablityof abundant mount of high quality protein, gluten free ingredients and other appealing quality minerals like calcium iron, and as well as fibber's[3]. This grain is more ever,a sour of numerous bioactive substance with positive effects on

health, including phytosterols, polyphenols, lysine and iron are abundant in amaranth grans [4]. The nutritional values of cookies is increased by made with flour that has been enriched or combined.
The sweet potato (Ipomoea batatas L. Lam.), more commonly known as kumara, has been cultivated for domestic consumption in many countries throughout the Asia Pacific region and beyond suggested that, however, currently dried chips and flour made from sweet potatoes are limited in their use for household consumption and for sale by small businesses on local markets in Uganda and other sub-Saharan African countries [5]. No industrial scale production of sweet potato flour or starch has been reported in Africa, where this does occur for other starchy staple crops, such as cassava.
One of the rare varieties of millet that is not grown in Africa is proso millet. It is mostly grown for cattle fe ed in the United States, the former Soviet Union, and several South American nations. It require supplementation since it is severely lacking in lysine as grain feed. Due to its low leaf to stem ration and potential irritatung impact from its hairy stem, proso millet makes poor feed as well. The variant known as " moha" which is high quality fodder, is preferred because it has a better leaf-to-stem ratio and less hairy stems.

MATERIAL AND METHODS

Procurement of raw materials:

The best possible care should be used when selecting the ingredients for the creation of the cookies, with quality being the primaries consideration purchased from the satara local market.

Preparation of cookies:

Cookies were prepared by the standard method for the preparation of, Prosoflour, Amaranth flour, Sago flour and Sweet potato flour percentage were 40 , 40 , 30 and 70 % .Butter ,sugar, baking powder, milk powder etc.

Flow diagram for preparation of cookies:

Take Proso, Sweet potato and Amaranth, Sago flour
↓
Sieving
↓
Weighing
↓
Blend of sugar and butter (40% & 50%)
↓
Addition of proso, sweet potato and amaranth, Sago flour
↓
Mixing
↓
Proffing for 15-20 min.
↓
Molding
↓
Cuttering
↓
Backing at 120 degreecelcius for 30 min
↓
Storage in cool and dry place

METHODS:

Sweet flour making Step :

1) Wash the sweet potatoes and then dry with paper towel .
2) Use peeler to remove skin .
3) Slice the sweet potatoes as thin as possible.
4) Lay the sweet potato slices out on the dehydrator trays ,spaced out so they don't overcrowd.
5) Remove all moisture from sweet potatoes .
6) Grind it properly in mixer .

Sago ,Proso , Amaranth flour making step :

1) Weigh the sago ,proso , amaranth properly.
2) Rost it in 80 degree Celsius .
3) Cool it .
4) Grind in mixer .

Procedure:

1) Take the sugar and butter blend it properly .
2) Seive the sweet potato , sago , proso , amaranth flour .
3) Mix the flour in sugar and butter .
4) Make the dough .
5) Make the cookies shapes.
6) Backing in oven at the temperature 120 degree celcius for 30 min .
7) Remove it and cool it .
8) Store it in cool and dry place .

CHEMICAL ANALYSIS:

1.Determination of Carbohydrate:

This was estimated by "100-moisture + ash + fat + protein %

2.Determination of Protein:

This was estimated by the Kjeldhal apparatus by the AOAC 1999method.

3.Determination of Fat:

The fat content of the sample sweet potato's cookies is determined quantitatively using extraction of lipophilic solvent .This was estimated by the Soxhlet apparatus by the AOAC 1999 method.

Fat % = weight of fat ÷ weight of sample ×100.

4.Determination of Ash:

This was estimated by the muffle furnace as per the procedure given by Ranganna in 2007. TS: This was estimated by

Ash % = weigh of ash ÷weight of sample ×100

5. Determination of Moisture:

Moisture content is , how much water is in a product . It influences the physical properties of a substance, including weight ,density ,viscosity , conductivity etc. It is generally determined by weight loss after drying .This was estimated by hot air oven method as per the procedure given by then AO in ,1999.

Moisture % = W1 - W2 ÷ W1 ×100

Where ,W1 = weight of sample before drying

W2= weight of sample after drying

RESULT AND DISCUSSION:

Sensory attributes (9 point Hedonic scale) :

Colour and appearance ,Flavour and taste ,Body and overall acceptability .Sweet potato cookies is prepared with different combinations of Indian fasting ingredient's like Proso, Sago flour , Sweet potato's flour and Amaranth flour ,sugar , backing powder, Butter mix it and make it dough I.e. the sample T1 and In this T1 is the sample in which change the percentage of sweet potato's flour and in T2 sample Sago flour and Proso flour percentage increase . T3 sample contain same amount of flour. These 4 samples T1 , T2 ,T3 are analyzed by sensory analysis. Based on the sensory evaluation sample, T2 is selected , as compared to T1 and T3.

Table no.1:Sensory Evaluation chart

Parameters	**T1**	**T2**	**T3**
Taste	6.7	8.2	7.6
Mouthfeel	6.9	7.3	6.2
Odour	6.1	7.9	7.2
Colour	7.5	6.3	6.8
Texture	7.5	7.8	7.1
Overall acceptability	6.0	9.0	6.0

Table no.2:: nutritional analysis of Sweet potato cookies.

Parameters	**Sample T2**
Fat	24.2
Moisture	4.9
Protein	10.56
Carbohydrates	50.30

The given sample (T2) the percentage of carbohydrate is 50.30 , Protein content is 10.56,

So the product rich in carbohydrates. Carbohydrates are the body fuel . During digestion , sugars and starches are broken down into simple sugar .

CONCLUSION-

The Sweet potato's cookies is prepared with acceptable physicochemical and sensory characteristics. T2sample is more acceptable sample. It is rich source in food energy. It is a snack food. It is a nutrional rich snack product for all group people. These ingredients are easily available at low prices at the local market in all area.

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