Process for Producing Monggo *(Vigna radiata)*, Rice *(Oryza sativa)*, and Tomato *(Solanum lycopersicum)* Cookies

Technical Field of the Utility Model

The present utility model relates generally to food products and, more particularly, to a process for producing cookies made from monggo *(Vigna radiata)*, rice *(Oryza sativa)*, and tomato *(Solanum lycopersicum)*.

Background of the Utility Model

According to the National Nutrition Council, the Province of Antique has the highest prevalence of malnutrition in Western Visayas in 2020 with 10.76 percent. In order to achieve the sustainable development goals of Zero Hunger, and Good Health and Well-being, the makers developed cookies that are both nutritious and appealing, offering a potential solution to malnutrition in the province.

The invention with patent number RU2440773C1 discloses Grain-based composition and method for production of such grain-based cookie composition. This composes a cereal part and a part representing a binder component. Over the existing prior art, the present utility model offers a healthier alternative by using tomato *(Solanum lycopersicum)* as supplementation which has been linked to many health benefits that helps the body eliminate the toxins and carcinogens in our food intake. Nearly all variations of cookies are made using refined white sugar. Refine white sugar is pure carbohydrate, 99.5% sucrose. It is considered empty calories, absolutely no nutritional benefit and can heighten tumor growth. Aside from the use of muscovado sugar, the monggo *(Vigna radiata)* - rice *(Oryza sativa)* - tomato *(Solanum lycopersicum)* cookies use milled rice *(Oryza sativa)* and monggo *(Vigna radiata)* as flour substitutes.

It is the objective of the present utility model to produce a food product using monggo *(Vigna radiata)*, rice *(Oryza sativa)*, and tomato *(Solanum lycopersicum)* that is abundant in the locality, readily available any time of the year, healthier, and has more appeal.

Another objective of this utility model is to provide a food product that is in line with the program/policy of the government, especially the Department of Environmental and Natural Resources (DENR), to use our natural resources or indigenous raw products for the manufacturing of food and medicine. It will also help the Department of Agriculture in their five-pronged program to sustain and accelerate farm growth and raise rural income by making farming more profitable for its small stakeholders.

Other objective of the present utility model is to provide a food product that is in line with the Bureau of Foods and Drugs (BFAD)'s thrust to 'go natural' when it comes to food and medicine production without the use of preservatives. Nowadays most of the people are health conscious and wants to eat food which is "good for our health lifestyle". This product is made to suit the palate of our target consumers while at the same time providing them with proper nourishment.

Summary of the Utility Model

The present utility model provides a process for producing cookies made from monggo *(Vigna radiata)*, rice *(Oryza sativa)*, and tomato *(Solanum lycopersicum)* as a nutritious alternative to conventional cookies made from wheat flour and refined sugar. The technical solution addresses malnutrition by utilizing locally available natural ingredients that are rich in fiber, protein, minerals, and antioxidants. The process employs monggo *(Vigna radiata)* and rice *(Oryza sativa)* as gluten-free flour substitutes, incorporates tomato *(Solanum lycopersicum)* as a natural source of antioxidants, uses muscovado sugar as a healthier sweetener, and eliminates the use of artificial preservatives. These technical features make the proposed cookies healthier

and more suitable for promoting improved nutrition compared to existing commercial cookie products.

Detailed Description

The cookies made from monggo *(Vigna radiata)*, rice *(Oryza sativa)*, and tomato *(Solanum lycopersicum)* consist of the following ingredients:

Components	Quantity
monggo *(Vigna radiata)* - rice *(Oryza sativa)* flour	340 grams
muscovado sugar	136 grams
butter	136 grams
baking powder	4.2 grams
vanilla	17.1 grams
eggs	57 grams
dried tomato *(Solanum lycopersicum)*	4.2 grams

The composition is needed for the following steps of producing cookies made from monggo *(Vigna radiata)*, rice *(Oryza sativa)*, and tomato *(Solanum lycopersicum)*:

a. washing monggo *(Vigna radiata)*, rice *(Oryza sativa)* and tomato *(Solanum lycopersicum)* with fresh water;
b. roasting the washed monggo *(Vigna radiata)* and rice *(Oryza sativa)*;
c. milling the roasted monggo *(Vigna radiata)* and rice *(Oryza sativa)* forming monggo *(Vigna radiata)* - rice *(Oryza sativa)* flour, set aside;
d. drying tomato *(Solanum lycopersicum)* using an oven dryer for 45 minutes, then cut into strips, set aside;
e. weighing 340 grams of monggo *(Vigna radiata)* - rice *(Oryza sativa)* flour, 136 grams of muscovado sugar, 136 grams of butter, 4.2

grams of baking powder, 17.1 grams of vanilla, 57 grams of eggs, and 4.2 grams of dried tomato *(Solanum lycopersicum)*;

f. whisking together monggo *(Vigna radiata)* - rice *(Oryza sativa)* flour and baking powder in a small bowl;

g. beating together butter, sugar, egg and vanilla in a large bowl using a standing mixer at medium-high speed for 3 minutes showing a mixture becoming pale and fluffy;

h. mixing flour mixture and dried tomato *(Solanum lycopersicum)* to the mixture of butter, sugar, egg and vanilla producing a dough;

i. forming the dough into a 12-inch roll (2 inches in diameter) on a sheet of plastic;

j. wrapping and rolling the formed dough with plastic;

k. chilling the wrapped dough for 4 hours;

l. preheating oven to 375 degrees Fahrenheit (190 degrees Celsius);

m. cutting the chilled dough into ¼-inch thick slices and placing 1-inch apart on baking sheets;

n. baking the dough for 11 minutes, showing a golden-brown color; and

o. cooling the baked dough on baking sheets for 3 minutes.