Composition for Noodles with Smoked Fish (Tinapa) and Malunggay *(Moringa oleifera)*

Technical Field

This model relates generally to food products but more specifically to the production of Smoked Fish (Tinapa) and Malunggay (*Moringa Oliefera)* Noodles.

Background of the Utility Model

Today, there are a lot of risks of many diseases around the world, such as diabetes, high cholesterol, high blood pressure, and cardiovascular diseases. These diseases are often attributed to a diet that lacks essential nutrients, such as dietary fiber, protein, carbohydrates, vitamins, minerals, fats, and antioxidants. Functional foods contain health benefits and help avoid diseases by incorporating ingredients that can provide optimum nutrients that can improve the nutrient value of the product. In modern times, many products undergo food processing and preservation.

An increasingly significant part of the human diet is noodles. However, based on customer preferences, they are provided in a variety of shapes and forms. Additionally, there are several variations, particularly about the components, methods of processing, and quality of end-use. The nutrients most present in noodles are high in carbohydrates, vitamin $B_{1,}$ vitamin $B_{2,}$ and vitamin $B_{3,}$ minerals, dietary fiber, and amino acids which can promote good health to the consumers. In the Bicol Region, Pancit Bato is a popular noodle that originated in one of the municipalities of Camarines Sur, known as Bato. The name of the noodles was taken from the name of the town. It has significant characteristics that have become its identity and popularity

Known prior art disclosed in publication number CN102742857A, Technology for processing formaldehyde-free. The invention belongs to the field of food processing and discloses technology for processing a formaldehyde-free and benzo(alpha)pyrene-free smoked meat product. The technology comprises the following steps of 1, raw material selection and pretreatment; 2, pickling liquid preparation and pickling; 3, washing and drying in air; 4, pre-heating, drying, and smoking; and 5, heat dissipation, vacuum packaging, labeling, and warehousing. Technology employs a sectional-type baking method, enhancing product quality and resolving issues such as scabbing, drying, and hardening on meat product surfaces commonly caused by traditional methods. Due to these observations, it shows the use of meat but does not disclose smoked fish and malunggay powder as ingredients in noodles, nor the substitution.

Another known prior art disclosed in publication number CN107692029A , Moringa oleifera noodles and preparation method. The invention provides moringa oleifera noodles and a preparation method thereof. The method solves the problem that noodle varieties in the prior art have low nutritional value, and cannot improve the immunity of the human body. The moringa oleifera noodles comprise the following raw materials in parts by weight: 20-30 parts of moringa oleifera, 45-55 parts of wheat flour, 6-12 parts of eggs, 0.1-0.3part of edible alkali, 1-3 parts of alanine aminotransferase, 2-3 parts of edible salt, 4-6 parts of white sugar and 20-30 parts of water. A raw material of the moringa oleifera with high nutritive value can strengthen the physique and has the efficacy of regulating the immunity of human bodies. In the preparation process of the invention, a double-shaft horizontal dough kneading machine is adopted in the dough kneading process, and dough kneading is carried out under a vacuum condition. The prior presents moringa oleifera noodles. The method solves the problem that noodle varieties in the prior art have low nutritional value. It shows the process of making the moringa oleifera noodles, but does not include making the smoked fish powder to extend the shelf life of the smoked fish and moringa oleifera powder as a substitute.

Through this initiative, the utility model considered creating and innovating new value-added noodles with a distinct feature by incorporating the tinapa and malunggay powder. The concept of the utility model is to develop unique and nutritious noodles that can be prepared without the addition of meat because it already have a source of protein incorporated in the processing of the noodles. Since the noodles are mixed with smoked fish or tinapa, it can already be accepted by young people and adults. The finished product is assured to be nutritious and affordable for every Filipino, especially those who belong to the marginalized group.

Summary of the Utility Model

The primary object of the present utility model is to provide a noodle enhanced with smoked fish (tinapa) and Malunggay *(Moringa oleifera)* as one of its ingredients. These smoked fish (tinapa) and malunggay *(Moringa oleifera)* noodles are another variation of commercial noodles existing in the market, which can be cooked and served.

Another object of the present utility model is to provide a new fortified noodle made from smoked fish (tinapa), which contains nutrients such as protein, fat, vitamins and minerals, and sodium.

Still, an object of the present utility model is to provide nutritious and affordable smoked fish(Tinapa)-Malunggay *(Moringa Oleifera)* noodles.

Detailed Description

Having known the different products that can be derived from Smoked Fish, locally known as Tinapa, the following are the method and composition of Tinapa-Malunggay Noodles.

The process of producing smoked fish (Tinapa) and malunggay (*Moringa oliefera)* noodles is as easy as described. Deboning and flaking

smoked fish (Tinapa), and sun drying the smoked fish (Tinapa), powdering the smoked fish (Tinapa) using food processors, removing the Malunggay (*Moringa Oliefera)* from the steam and spreading it out in a tray, sun drying the malunggay to become powderized. It also includes sifting both the smoked fish (Tinapa) and malunggay to produce a fine texture comparable to flour, measuring and combining the smoked fish(tinapa), malunggay, all-purpose flour, water, oil, egg, garlic powder, onion powder, and black pepper to form a dough, kneading the dough for 10-15 minutes, flattening the dough by using a noodle maker machine, cutting the flattened dough into strands of preferred shapes and sizes, Boiling water for 10 minutes and draining in a colander, and Oven-drying the dough for an hour to form noodle strands.

The composition of noodles enhanced smoked fish (Tinapa) and moringa oleifera, comprising the following ingredients:

10% smoked fish (tinapa), 10% Malunggay *(Moringa oliefera),* 73.33% all-purpose flour, 40% water, 7.3%oil, 16.66% egg, 3.66% garlic powder, 3.66% onion powder and 2% black pepper.

Ingredients	**Formulation in Grams**	**Formulation in % by weight**
Smoked Fish (Tinapa)	30 g	6%
Moringa oleifera powder	30 g	6%
All-purpose flour	220 g	44%
Water	120 g	24%
Oil	22 g	4.4%
Egg	50 g	10%

Garlic powder	11 g	2.2%
Onion powder	11 g	2.2%
Black pepper	6 g	1.2%

The process of producing noodles enhanced with smoked fish(Tinapa) comprises the steps of preparing the tinapa into powder, which starts from deboning, flaking, drying, and powdering. Likewise, the malunggay was removed from the stem and spread out in a tray, then dried. After it had dried, it was pounded using the mortar and pestle. Both the tinapa and malunggay were sifted through a fine mesh to produce a fine texture comparable to flour.

After all the ingredients had been measured, the set of ingredients was mixed and formed into a dough, and it was kneaded for 10 minutes, and it passed through the noodle maker to be furtherly kneaded, then cut into the desired shapes of strands. The shaped noodles were blanched in boiling water for 10 minutes, drained in a colander, then put in a tray, and then dried in an oven for an hour.

Proximate Composition of Tinapa- Malunggay Noodles (300 grams)

Parameters	**Results**
Protein	12.97%
Total Fat	1.65%
Ash	1.06%

Parameters	Results
Total Carbohydrate	71.11%
Moisture	13.21%
Crude Fiber	0.7%

Smoked fish (Tinapa) enhances its flavor and provides a nutritious, protein-rich food source. The present utility model has undergone the proximate compositions of Tinapa Malunggay Noodles. The present utility model has a proximate composition of 12.97% Protein, 1.65% Total Fat, 1.06% Ash, 71.11% Carbohydrate, 13.21% Moisture, 0.7% Crude Fiber per 300 grams.