described above.

[0011] Another aspect of the present invention provides a food product including breadcrumbs having the characteristics described above.

TECHNICAL SOLUTION

[0012] To achieve the purposes described above,

[0013] According to an aspect of the present invention, provided are breadcrumbs in the form of powder containing bread grains, wherein the bread grains include flour and starch, and the breadcrumbs have a grain size distribution in which a proportion of bread grains having a size of 2 mm or greater is 60 to 70 wt%.

[0014] According to another aspect of the present invention, provided is a method for preparing breadcrumbs, the method including the steps of:

[0015] (a) preparing a premix including flour, starch, sugar, refined salt, a leavening agent, an emulsifier, and a sweetener;

[0016] (b) adding a liquid raw material to the premix and mixing to form a dough;

[0017] (c) heating the dough; and

[0018] (d) cooling and pulverizing the dough subjected to heating to prepare bread grains.

[0019] Another aspect of the present invention provides a food product including the breadcrumbs described above.

[0020]

[0021] Hereinafter, the present application will be described in detail.

[0022] According to an aspect, the present application provides breadcrumbs in the form of powder containing bread

starch in the bread grains may be 5 wt%, 6 wt%, 7 wt%, 8 wt%, 9 wt%, or 10 wt%, and an upper limit of an amount of the starch may be 35 wt%, 34 wt%, 33 wt%, 32 wt%, 31 wt%, or 30 wt%. Specifically, the starch in the bread grains may be in an amount of 5 to 35 wt%, 6 to 34 wt%, 7 to 33 wt%, 8 to 32 wt%, 9 to 31 wt%, or 10 to 30 wt%.

[0037] As the flour and the starch are regulated in the amount ranges as described above, the breadcrumbs obtain a crispy and rich texture, and the texture is kept even after cooking.

[0038] The starch included in the bread grains of the breadcrumbs of the present application may be, for example, corn starch, potato starch, tapioca starch, sweet potato starch, or arrowroot starch, and specifically may be corn starch. When the corn starch is included, breadcrumbs having a crispy texture and being hard enough not to easily crumble may be prepared.

[0039] The bread grains of the breadcrumbs in the present application may further include a leavening agent. When the leavening agent is included, a fermentation process before heating in an oven and an aging process after heating in an oven may not be needed for preparing breadcrumbs, and accordingly, the preparation of breadcrumbs may become efficient and economical. In addition, breadcrumbs having a crispier texture than typical breadcrumbs.

[0040] The leavening agent may be in an amount of greater than 0 wt% and 10 wt% or less. Specifically, the amount may be greater than 0 wt% and 9.5 wt% or less, greater than 0 wt% and 9 wt% or less, greater than 0 wt% and 8.5 wt% or less, greater than 0 wt% and 8 wt% or less, greater than 0 wt% and 7.5 wt% or less, greater than 0 wt% and 7 wt% or less, greater than 0 wt% and 7.5 wt% or less, greater than 0 wt% and 7 wt%

method for preparing breadcrumbs, the method including the steps of:

[0066] (a) preparing a premix comprising flour, starch, sugar, refined salt, a leavening agent, an emulsifier, and a sweetener;

[0067] (b) adding a liquid raw material to the premix and mixing to form a dough;

[0068] (c) heating the dough; and

[0069] (d) cooling and pulverizing the dough subjected to heating to prepare bread grains.

[0070] The premix may also be referred to as a solid raw material in contrast to a liquid raw material, which will be described later.

[0071] In an embodiment, the method may further include panning the dough after the step (b) and before the step (c).

[0072] In an embodiment, the heating of step (c) may be performed in an oven preheated to 100 to 200 °C for 30 to 120 minutes. More specifically, the temperature of the preheated oven upon the heating may be 100 to 200 °C, 100 to 190 °C, 100 to 180 °C, 100 to 170 °C, 100 to 160 °C, or 100 to 150 °C, and the heating may be performed in the preheated oven described above for 30 to 120 minutes, 30 to 110 minutes, 30 to 100 minutes, 30 to 90 minutes, or 30 to 80 minutes.

[0073] In an embodiment, the pulverizing of the cooled dough of step (d) may include pulverizing the dough at a rate of 3.5 to 30 Hz, using a 1 to 20 mm mesh sieve.

[0074] In an embodiment, after the step (d) above, a step (e) of drying the pulverized bread grains may be further included.

[0075] In an embodiment, the drying in the step (e) may be performed at a temperature of 50 to 150 °C.

[0076] In the step (a), a lower limit of an amount of flour

than 0 to 2 parts by weight], white sugar (CJ CheilJedang, Korea) in an amount of 1 to 10 parts by weight, refined salt (Hanjusalt, Korea) in an amount of greater than 0 to 5 parts by weight, an emulsifier (Yee Yon Chemical, Malaysia) in an amount of greater than 0 to 2 parts by weight, and a sweetener (Macrocare, Korea) in an amount of greater than 0 to 2 parts by weight were each weighed. The weighed raw materials were mixed to prepare a premix.

[00107] (2) Preparation of dough

[00108] In the prepared premix (solid raw material), a liquid raw material including soybean oil, water, and vegetable oil (CJ CheilJedang) in an amount of 1 to 35 parts by weight was weighed with respect to 100 parts by weight of dough, and added to the premix, and then evenly mixing at a low rate for 1 to 10 minutes to prepare a dough.

[00109] (3) Panning and Heating

[00110] The dough prepared by mixing was subjected to panning in an amount of 1 to 3 kg with respect to a flat iron plate. The dough subjected to panning was subjected to heating in an oven preheated to 100 to 200 °C for 30 to 120 minutes and then sufficiently cooled.

[00111] (4) Pulverizing

[00112] The cooled dough after the heating in an oven was pulverized at a rate of 3.5 to 30 Hz, using a 1 to 20 mm mesh net. The pulverized breadcrumbs were used as without further treatment or were additionally dried at 50 to 150 °C.

[00113]

[00114] Experimental Example 1: Evaluation on characteristics of breadcrumbs

[00115] For comparison with the breadcrumbs of the present

invention, commercially available breadcrumbs, frying mix, and soboru products were selected. In addition, for comparison in regard to quality inspection and characteristics, grain size distribution, moisture content, water activity, color, and TA analysis were performed on the breadcrumbs of the present invention and the selected products.

[00116]

[00117] Experimental Example 1-1. Raw materials of commercially available breadcrumbs, frying mix, and soboru, and a preparation method

[00118] (1) Breadcrumbs

[00119] The product name is Beksul breadcrumbs (producer: BK), distributed at room temperature, a food type of processed grain products, and used as breader. Raw materials such as flour in an amount of 90 wt% or greater, glucose in an amount of 1 to 2 wt%, food shortening in an amount of 1 to 2 wt%, refined salt in an amount of 1 to 2 wt%, yeast (yeast, sorbitan monostearate, vitamin C), and a mixed agent (starch, calcium sulfate, refined salt, ammonium chloride, vitamin C) are used for preparation. Preparation processes include weighing, mixing, panning, fermenting, heating, cooling, aging, pulverizing, and packaging.

[00120] (2) Frying mix

[00121] The product name is Beksul Frying mix (producer: CJ CheilJedang Yeongdeungpo Factory), distributed at room temperature, a food type of processed grain products, and used as dough. Raw materials such as powder materials (flour and starch) in an amount of 90 wt% or greater, corn flour, synthetic leavening agent (sodium hydrogen carbonate, sodium acid pyrophosphate, starch, monobasic calcium phosphate,

CLAIMS

1. Breadcrumbs in the form of powder having a bread grain size distribution in which a proportion of bread grains having a size of 2 mm or greater is 60 to 70 wt% and a proportion of bread grains having a size of 3.35 mm or greater is 25 to 35 wt%, wherein the bread grains comprise flour and starch.

2. The breadcrumbs of claim 1, wherein the bread grains comprise the flour in an amount of 35 to 55 wt%, and the starch in an amount of 10 to 30 wt%.

3. The breadcrumbs of claim 1, wherein the bread grains further comprise one or more components selected from the group consisting of an emulsifier and a sweetener.

4. The breadcrumbs of claim 3, wherein the bread grains comprise the emulsifier in an amount of greater than 0 wt% and 2 wt% or less, and the sweetener in an amount of greater than 0 wt% and 2 wt% or less.

5. The breadcrumbs of claim 1, wherein a liquid raw material is further added to a premix comprising flour and starch to prepare the bread grains, and the liquid raw material is one or a mixture of two or more selected from the group consisting of water, dairy products, eggs, honey, syrup, and vegetable oil.

6. The breadcrumbs of claim 1, wherein the breadcrumbs

have a moisture content of less than 8%.

7. The breadcrumbs of claim 1, wherein the breadcrumbs have a water activity of less than 0.55 aw.

8. The breadcrumbs of claim 1, wherein the colorimetric analysis of the bread grains shows an L value of 70 to 80, an a value of 1 to 2, and a b value of 20 to 30.

9. A method for preparing breadcrumbs of claim 1, the method comprising the steps of:

(a) preparing a premix comprising flour, starch, sugar, refined salt, a leavening agent, an emulsifier and a sweetener;

(b) adding a liquid raw material to the premix and mixing to form a dough;

(c) heating the dough; and

(d) cooling and pulverizing the dough subjected to heating to prepare bread grains.

10. The method of claim 9, further comprising a step (e) of drying the bread grains after the step (d).

11. The method of claim 9, wherein the liquid raw material is one or a mixture of two or more selected from the group consisting of water, dairy products, eggs, honey, syrup, and vegetable oil.

12. Use of the breadcrumbs of claim 1 in a food product.