[DESCRIPTION]

[TITLE OF INVENTION]

PLASTIC OIL AND FAT AND ROLL-IN OIL AND FAT COMPOSITION USING SAME

[Technical Field]

[0001]

The present invention relates to an oil and fat having plasticity and excellent meltability in the mouth in a wide range of temperatures and a roll-in oil and fat composition using the plastic oil and fat having excellent extensibility and excellent meltability in the mouth in a wide range of temperatures.

[Background Art]

[0002]

When layered bakery food products such as pies or Danish pastries are produced, in order to form a layered structure, a roll-in oil and fat composition is folded into layers in a dough. Then, when baking is performed, a layered bakery food product having a unique favorable crispy texture and having a crunchy texture is obtained, but such a roll-in oil and fat composition is required to have extensibility in a wide range of temperatures (for example, 5 to 25 °C) during folding into the doughand an excellent crispy texture and meltability in the mouth after baking.

[0003]

In response to the above requirements, in the related art, hydrogenated oil of animal and plant oils and fats is blended into a roll-in oil and fat composition as liquid oils and fats together with high-melting point oils and fats or medium-melting point oils and fats, and thus a roll-in oil and fat composition that has satisfactory properties of extensibility, an excellent crispy texture and meltability in the mouth after baking is obtained.

is 0.6 or more (S: C16 to C22 saturated fatty acid, U; C16 to C22 unsaturated fatty acid, O: oleic acid, P: palmitic acid). Specifically, the roll-in margarine is obtained by blending in a fractionated liquid part of a palm oil and fat-transesterified oil, and using this, favorable formability is obtained during roll-in production, favorable extensibility is obtained during bread making, and a texture having appropriate fluffiness and softness and favorable meltability in the mouth after baking is obtained.

[Reference List]

[Patent Literature]

[0009]

[Patent Literature 1]

Japanese Patent Application Laid-Open (JP-A) No. 2008-99603

[Patent Literature 2]

Japanese Patent Application Laid-Open (JP-A) No. 2012-55268

[Patent Literature 3]

Japanese Patent Application Laid-Open (JP-A) No. 2012-105583

[Patent Literature 4]

PCT International Publication No. WO 2013/133138

[Summary of Invention]

[Technical Problem]

[0010]

An aspect of the present invention is to provide an oil and fat which is of a low trans type with a trans fatty acid content of less than 5 wt% and which has extensibility, excellent plasticity and excellent meltability in the mouth in a wide range of temperatures, and to obtain a roll-in oil and fat composition having strong stiffness and excellent extensibility in a wide range of temperatures by using the plastic oil and fat, and also to

thereon and folding it, and thinly spreading it again, which are repeated to form layered dough, and performing fermentation, molding, and baking as necessary. Specific examples of a layered swollen wheat flour product obtained in this manner include Danish pastries, croissants, and pies. In addition, since quality degradation over time is effectively minimized, the present invention is particularly suitable for products that are displayed and sold within several days.

Examples

[0038]

The present invention will be described below in more detail with reference to examples. Here, in the example, "%" and "parts" refer to a value based on weight unless otherwise specified. Here, a fatty acid composition, a rising melting point and an SFC of an oil and fat were measured by the following methods.

Fatty acid composition: measured according to a method described in Japanese Oil Chemistry Association Standard Oil Analysis Test Method (1996 edition) 2.4.1.2 Methyl esterification method (boron trifluoride methanol method)

Rising melting point: measured according to a method described in Japanese Oil Chemistry Association Standard Oil Analysis Test Method (1996 edition) 2.2.4.2 (rising melting point)

SFC: measured according to IUPAC.2 150 SOLID CONTENT DETERMINATION IN FATS BY NMR

[0039]

(Preparation of transesterified oil and fat)

Example 1

44 parts of a palm oil-fractionated low-melting point fraction (with an iodine value of 67), 40 parts of a palm kernel oil-fractionated low-melting point fraction (with

[0042]

Example 4

40 parts of a palm kernel oil-fractionated low-melting point fraction (with an iodine value of 26), 30 parts of rapeseed extremely hardened oil (with an iodine value of 1.2) and 30 parts of rapeseed oil were mixed together, and a random transesterification reaction was caused using sodium methylate as a catalyst. Then, decolorization and deodorization were performed by a general method, and a transesterified oil and fat 4 was obtained as a refined oil. The composition of the obtained oil and fat 4 is shown in Table 1.

[0043]

Comparative Example 1

50 parts of palm oil (with an iodine value of 52), 40 parts of a palm kernel oil-fractionated low-melting point fraction (with an iodine value of 26) and 10 parts of a palm kernel oil-fractionated high-melting point fraction (with an iodine value of 42) were mixed together and a random transesterification reaction was caused using sodium methylate as a catalyst. Then, decolorization and deodorization were performed by a general method, and a transesterified oil and fat 5 was obtained as a refined oil. The composition of the obtained oil and fat 5 is shown in Table 1.

[0044]

Comparative Example 2

55 parts of palm oil (with an iodine value of 52), 40 parts of a palm kernel oil-fractionated low-melting point fraction (with an iodine value of 26) and 5 parts of rapeseed extremely hardened oil (with an iodine value of 1.2) were mixed together and a random transesterification reaction was caused using sodium methylate as a catalyst. Then, decolorization and deodorization were performed by a general method, and a

reverse-seater was performed twice, the compositions were retarded in a freezer at −7 °C for 60 minutes, folding three times was performed once in the reverse-seater, and then retarding in a freezer was performed at −7 °C for 45 minutes. Next, the compositions were finally spread and molded until the dough thickness reached 4 mm in the reverse-seater. After molding, the compositions were fermented in a container at 32 °C and a humidity of 75% for 60 minutes, and then baked in an oven at a temperature of 210 °C in the container for 16 minutes, and thereby croissants 1 to 6 were obtained.

[0056]

(Evaluation of stiffness and extensibility of roll-in oil and fat composition)

The roll-in oil and fat compositions of which a temperature was controlled in a thermostatic chamber at 10 °C and 20 °C were wrapped in doughs and folded (50% versus the flour), folding three times in a reverse-seater was performed twice, and the extensibility of the roll-in oil and fat compositions was evaluated according to the following criteria. In addition, the stiffness of the roll-in oil and fat composition was evaluated from dough states during final spreading according to the following criteria. The evaluation results are shown in Table 3. O or higher was determined to be satisfactory in all evaluations.

(Evaluation of roll-in (extensibility) when a temperature was controlled to be 10 °C)

◎: The oil and fat finely extended to the edge without breaking in the roll-in oil and fat composition

O: Dough remained on the edge although the roll-in oil and fat composition did not break

Δ: Slight breaking was observed in the roll-in oil and fat composition but the dough remained on the edge

X: The roll-in oil and fat composition broke and was difficult to extend

(Evaluation of roll-in (extensibility) when a temperature was controlled to be 20 °C)