

saturated sodium chloride solution 5 g were first added in a 20 ml-vial and kept at 60°C for 40 minutes. The odor components vaporized in a headspace during the keeping were collected by SPME fiber (manufactured by Supelco; DVB/Carboxen/PDMS, 5 50/30 µm; 2 cm) and introduced into GC/MS.

Equipment and condition used in the analysis of the odor components were as follows:

[0097]

Equipment and condition

10 GC/MS: 6890GC/5975MS (manufactured by Agilent Technologies);

Column: DB-WAX (manufactured by Agilent Technologies); 30 m × 0.25 mm, 0.25 µm

Flow rate: 1 ml/min

15 Injection temperature: 250°C

Temperature rising condition: 40°C to 250°C

(The temperature was kept at 40°C for 5 minutes, increased at 15°C/min until reaching at 250°C and then kept for 10 minutes.)

20 Ionization method: EI (electron impact ionization method), ionization voltage: 70 eV

Analysis mode: Scan

[0098]

25 Hexanal and 2-heptenal were detected from the obtained total ion chromatogram, and the peak area of ions of a mass charge ratio (m/z) of 44 and 55, respectively, was considered to represent a detection amount. The detection amount for each was shown in Table 10.

[0099]

Table 10

Flavor component	Milk fat-no light irradiation	Milk fat -light irradiation	Coconut oil-no light irradiation	Coconut oil- light irradiation
Hexanal	299711	1097380	418595	503734
2-heptenal	0	96705	0	0

[0100]

Further, the result for hexanal is shown in a graph in Figure 1.

5 The amount of hexanal in the milk fat-light irradiation sample was about 3.7 times as much as that in the milk fat-no light irradiation sample. In contrast, the amount of hexanal in the coconut oil-light irradiation sample was suppressed to about 1.2 times, as compared with the coconut oil-no light irradiation.

[0101]

10 Further, the result for 2-heptenal is shown in a graph in Figure 2.

In the milk fat-light irradiation sample, 2-heptenal was produced whereas 2-heptenal was not detected in the coconut oil-light irradiation sample.

15 [0102]

Further, among odor components other than hexanal and 2-heptenal, with regard to 1-octene-3-ol whose amount is represented by the peak area detected as an ion having a mass charge ratio of 57, the amount of 1-octene-3-ol in the milk fat fat-light irradiation sample (487,992) increased about 11.6 times, as compared with that in the milk fat-no light irradiation sample (42,190). In contrast, 1-octene-3-ol was not detected either the coconut oil-light irradiation sample or coconut oil-no light irradiation.

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CLAIMS

1. A photodegradation resistant beverage which is filled in a transparent container, comprising a fat-free milk solid content and a fat content,
said fat content comprising not less than 70 % by mass of a vegetable fat and oil,
said vegetable fat and oil being selected from the group consisting of coconut oil, a mixture of coconut oil and sunflower oil, and sunflower oil in which the amount of oleic acid is not less than 60% by mass in the constituent fatty acid.
2. The beverage according to claim 1, wherein an amount of said fat content is 1.5 to 5 % by mass of said beverage.
3. The beverage according to claim 1 or 2, wherein said fat content comprises milk fat.
4. The beverage according to any one of claims 1 to 3, wherein an amount of said fat-free milk solid content is 4 to 10 % by mass of said beverage.
5. The beverage according to any one of claims 1 to 4, wherein said fat-free milk solid content is derived from at least one raw material selected from the group consisting of raw milk, milk, whole powdered milk, powdered fat-free milk, milk whey, defatted milk, concentrated milk, defatted concentrated milk, butter, cream, unsalted butter and casein.
6. The beverage according to any one of claims 1 to 5, wherein a total amount of lauric acid and myristic acid in the constituent fatty acid of said coconut oil is not less than 50 % by mass.
7. The beverage according to any one of claims 1 to 6, wherein the amount of said oleic acid in the constituent fatty

acid of said sunflower oil is not less than 80 % by mass.

8. The beverage according to any one of claims 1 to 7, further comprising coffee or fruit juice.

9. The beverage according to any one of claims 1 to 8 which does not substantially contain an antioxidant.

10. The beverage according to any one of claims 1 to 9, wherein production of an unpleasant flavor or unpleasant odor is suppressed.

11. A method of producing a photodegradation resistant beverage which is filled in a transparent container,
comprising the step of making an adjustment to said beverage so that the beverage comprises a fat-free milk solid content and a fat content and that the amount of a vegetable fat and oil is not less than 70 % by mass of said fat content of said beverage; and
said vegetable fat and oil selected from the group consisting of: coconut oil, a mixture of coconut oil and sunflower oil, and sunflower oil in which the amount of oleic acid is not less than 60 % by mass in the constituent fatty acid.

12. A method of imparting photodegradation resistance to a beverage which is filled in a transparent container,
comprising the step of making an adjustment to said beverage so that said beverage comprises a fat-free milk solid content and a fat content and that the amount of a vegetable fat and oil is not less than 70 % by mass of said fat content of said beverage; and
said vegetable fat and oil being selected from the group consisting of: coconut oil, a mixture of coconut oil and sunflower oil, and sunflower oil in which the amount of oleic acid is not less than 60 % by mass in the constituent fatty acid.

13. A use of a vegetable fat and oil selected from the group

consisting of: coconut oil, a mixture of coconut oil and sunflower oil, and sunflower oil in which the amount of oleic acid is not less than 60% by mass in the constituent fatty acid as a photodegradation resistance imparting agent of a beverage filled in a transparent container,,

wherein said beverage is adjusted so that the beverage comprises a fat-free milk solid content and a fat content and that the amount of a vegetable fat and oil is not less than 70 % by mass of said fat content in said beverage.