CLAIMS

1. A process for producing a fat composition containing USU, comprising:

(1) a step of mixing (a) raw material fat containing 80% by weight or more of (S) saturated fatty acid with C16 to C24, wherein the (a) raw material fat contains 10 to 70% by weight of saturated fatty acid with C20 to C24 or 10 to 70% by weight of palmitic acid, and (b) raw material fatty acid or lower alcohol ester thereof containing (U) unsaturated fatty acid with C18 as major component;

(2) a step of subjecting the mixture obtained in step (1) to an interesterification reaction using a 1,3-position-specific lipase;

(3) a step of separating the fat composition containing 30% by weight or more of USU as a triglyceride fraction, and a fraction of fatty acid or lower alcohol ester thereof; and

(4) a step of separating the unreacted (b) raw material fatty acid or lower alcohol ester thereof by a distillation, to circulate a part or all of the recovered unreacted (b) raw material fatty acid or lower alcohol ester thereof as the (b) in step (1) for reuse,

wherein USU is a triglyceride whose fatty acids at 1, 3-positions are U and fatty acid at 2-position is S.

2. The process for producing the fat composition according to claim 1, wherein the separation at step (3) is performed by a distillation.

3. The process for producing the fat composition according to claim 1, wherein the (a) raw material fat contains 80% by weight or more of S and 10 to 70% by weight of the saturated fatty acid with C20 to 24 in the constituent fatty acid.

4. The process for producing the fat composition according to claim 3, wherein a part or all of the (a) raw material fat in step (1) is a fully hydrogenated oil of high erucic rapeseed oil, and

wherein the (b) raw material fatty acid or lower alcohol ester thereof contains 70% by weight or more of oleic acid.

5. The process for producing the fat composition according to claim 1, wherein the (a) raw material fat contains 80% by weight or more of S and 10 to 70% by weight of palmitic acid in the constituent fatty acid.

6. The process for producing the fat composition according to claim 5, wherein a part or all of the (a) raw material fat in step (1) is a fully hydrogenated oil of palm mid fraction, and wherein the (b) raw material fatty acid or lower alcohol ester thereof contains 70% by weight or more of oleic acid.

7. The process for producing the fat composition according to claim 1, wherein the triglyceride fraction separated in step (3) is fractionated, and a part or all of the obtained high-melting point fraction is circulated for reuse as the (a) in step (1).

8. The process for producing the fat composition according to claim 1, wherein the triglyceride fraction separated in step (3) is fractionated to obtain the fat composition containing 40% by weight or more of USU as a low-melting point fraction or a mid-melting point fraction.

9. The process for producing the fat composition according to claim 1, wherein the reacted mixture obtained in step (2) is subjected to the separation in step (3), and then the fraction of fatty acid or lower alcohol ester thereof obtained in step (3) is subjected to the separation in step (4).

10. The process for producing the fat composition according to claim 2, wherein step (3) and step (4) are performed simultaneously.

11. The process for producing the fat composition according to claim 1, wherein the (b) raw material fatty acid or lower alcohol ester thereof contains 70% by weight or more of oleic acid.

12. The process for producing the fat composition according to claim 2, wherein the (b) raw material fatty acid or lower alcohol ester thereof contains 70% by weight or more of oleic acid.

13. The process for producing the fat composition according to claim 9, wherein the (b) raw material fatty acid or lower alcohol ester thereof contains 70% by weight or more of oleic acid.

14. The process for producing the fat composition according to claim 1, wherein the (b) raw material fatty acid or lower alcohol ester thereof contains 75% by weight or more of oleic acid.

15. The process for producing the fat composition according to claim 2, wherein the (b) raw material fatty acid or lower alcohol ester thereof contains 75% by weight or more of oleic acid.

16. The process for producing the fat composition according to claim 9, wherein the (b) raw material fatty acid or lower alcohol ester thereof contains 75% by weight or more of oleic acid.

17. The process for producing the fat composition according to claim 1, wherein the (b) raw material fatty acid or lower alcohol ester thereof contains oleic acid or lower alcohol ester thereof, and an oleic acid content of the recovered unreacted (b) raw material fatty acid or lower alcohol ester thereof in step (4) is higher than an oleic acid content of the (b) raw material fatty acid or lower alcohol ester thereof in step (1).

18. The process for producing the fat composition according to claim 11, wherein the (b) raw material fatty acid or lower alcohol ester thereof contains oleic acid or lower alcohol ester thereof, and an oleic acid content of the recovered unreacted (b) raw material fatty acid or lower alcohol ester thereof in step (4) is same as or higher than an oleic acid content of the (b) raw material fatty acid or lower alcohol ester thereof in step (1).

19. The process for producing the fat composition according to claim 14, wherein the (b) raw material fatty acid or lower alcohol ester thereof contains oleic acid or lower alcohol ester thereof, and an oleic acid content of the recovered unreacted (b) raw material fatty acid or lower alcohol ester thereof in step (4) is higher than an oleic acid content of the (b) raw material fatty acid or lower alcohol ester thereof in step (1).