

CLAIMS

1. A method for the treatment of a plant-based protein-containing composition, the method comprising the steps of:
 - 5 a) subjecting the plant-based protein-containing composition to a protein-deamidase treatment; and
 - b) subjecting the composition obtained in step a) to high-pressure homogenization.
2. The method according to claim 1, wherein the plant-based protein-containing
10 composition is also subjected to a carbohydrate-hydrolyzing enzyme in step a).
3. The method according to claim 1 or 2, wherein enzymes in step a) are added simultaneously or sequentially.
- 15 4. The method according to any of the preceding claims, wherein the protein-deamidase is protein-glutaminase.
5. The method according to any of the preceding claims, wherein the ratio of protein-containing composition to protein-deamidase is from 50:1 to 2000:1 (w/w), preferably from
20 100:1 to 1000:1 (w/w), more preferably the ratio is 100:1 (w/w).
6. The method according to any of the preceding claims, wherein the protein-containing composition is soy flour or press cake, preferably peanut press cake.
- 25 7. The method according to any of the preceding claims, wherein high-pressure homogenization is performed at a pressure of from 100 bar to 600 bar, preferably from 200 to 500 bar, more preferably from 270 to 330 bar.
8. The method according to any of the preceding claims, wherein the method comprises
30 a further enzymatic treatment including the treatment with a carbohydrate-hydrolyzing enzyme, preferably wherein the carbohydrate-hydrolyzing enzyme is a cellulase.
9. The method according to claim 8, wherein the further enzymatic treatment with a carbohydrate-hydrolyzing enzyme is carried out before the enzymatic treatment in step a).

10. The method according to claim 8, wherein the further enzymatic treatment with a carbohydrate-hydrolyzing enzyme is carried out simultaneously with the protein-deamidase treatment in step a).
- 5 11. The method according to any of the preceding claims, wherein the protein in the plant-based protein-containing composition has a solubility of less than 41 %.
12. The method according to any of the preceding claims, wherein the method comprises the following steps:
- 10 a) Mixing the plant-based protein-containing composition with an aqueous medium;
b) Subjecting the plant-based protein-containing composition obtained in step a) to a protein-deamidase treatment;
c) Subjecting the composition obtained in step b) to high-pressure homogenization.
- 15 13. A plant-based protein-containing composition obtained by the method according to any of claims 1 to 12.
14. The protein-containing composition according to claim 13, wherein the plant-based protein-containing composition is a milk analogue.
- 20 15. The protein-containing composition according to claim 13 or 14, wherein the protein in the plant-based protein-containing composition has a solubility of at least 42 %.
16. The plant-based protein-containing composition according to any of claims 13 to 15,
25 wherein the protein-containing composition has a shear viscosity of from 50 mPas to 70 mPas, preferably from 55 mPas to 65 mPas, when measured at a shear rate of 100 s⁻¹ and at a temperature of 25 °C.
17. Use of a plant-based protein-containing composition according to any of claims 13 to
30 16 as a food, a food additive, or a starting material for the production of food.
18. A method of manufacturing a food product comprising
- (1) Manufacturing the plant-based protein-containing composition according to any of claims 13 to 16;
- 35 (2) Spray drying the composition obtained in step (1);
(3) Dry mixing the composition obtained in step (2) with dry powder ingredient(s).