The powder had a homogeneous appearance. When redissolved, even in boiling water, the beverage showed no perceptible flocculation of the milk proteins and had a clear coffee flavour.

Example 8

The method of Example 2 was used, except that after preheating of the concentrated mixture of milk and coffee, it was homogenised in two stages, at 200 bar at the first stage then at 50 bar at the second stage, and the whole of the coffee was added to the line prior to homogenisation and drying, i.e., without dry mixing of the remaining coffee powder.

The powder had a homogeneous appearance. When redissolved, even in boiling water, the beverage showed no perceptible flocculation of the milk proteins and had a clear coffee flavour.

Example 9

The method of Example 2 was used, except that the first UHT heat treatment took place at 105° C. for 10 seconds, the second heat treatment took place at 115° C. for 10 seconds and the spray pressure at the nozzle was 250 bar.

The powder had a homogeneous appearance. When redissolved, even in boiling water, the beverage showed no perceptible flocculation of the milk proteins and had a clear coffee flavour.

Example 10

The method of Example 3 was used, except that the homogenisation took place at 50 bar at the first stage, then at 110 bar at the second stage and pressurised nitrogen was injected into the concentrated mixture of coffee and milk slightly before spray drying at the top of the drying tower.

When redissolved, even in boiling water, the beverage showed no perceptible flocculation of the milk proteins and had a clear coffee flavour.

Example 11

The method of Example 3 was used, except that nitrogen at a pressure of 7 bar was injected into the concentrated mixture of coffee and milk whose pressure was 6 bar, just before a high pressure pump which took up the gasified mixture and supplied it to a spray nozzle at the top of the drying tower, and a 50% aqueous solution of lactose at 80° C. was sprayed onto the powder in the drying tower in order to obtain a final concentration of lactose of 0.3% in the final product.

The gasification provided the powder with a specific weight of approximately 280 g/l with a nitrogen injection flow of 1 l/min and a flow of concentrate with 52% of dry matter of 510 l/h.

When redissolved, even in boiling water, the beverage showed no perceptible flocculation of the milk proteins and had a clear coffee flavour.

Example 12

The method of Example 1 as above was used, except that the coffee was replaced by a mixture of coffee and chicory in equal weights.

Example 13

The method of Example 1 as above was used, except that the demineralised whey powder, after reconstitution in water, was subject to a preliminary treatment to pre-denature the whey proteins as follows:

287 kg of demineralised whey powder was diluted to 50% in 1100 l of water, then the pH of the mass was adjusted to 5.9 by means of lactic acid. It was then ensured in a known manner by means of a specific electrode that the free calcium content was between 3 and 5 mmoles/l. If the value was lower than 3 mmoles/l, it was supplemented by adding calcium chloride. The whey mass was then heated by direct injection of vapour at 105° C. with a standby time of 15 seconds. The demineralised whey treated in this way was then mixed with 4140 kg of skimmed milk, then the mixture was subject to the operations described in Example 1.

We claim:

1. In a process for preparing a product for preparation of a beverage wherein a milk product comprising a substance selected from the group consisting of a milk and a milk derivative and combinations thereof is heat treated and concentrated to obtain a lactic concentrate and the lactic concentrate is heat treated and then spray dried, the improvements comprising:

adding a liquid coffee extract to the lactic concentrate to obtain a mixture and heat treating the mixture to flocculate whey protein and obtaining thereby a heat-treated mixture; and

spray drying the heat-treated mixture to obtain a spray-dried product.

2. A process according to claim **1** wherein the milk product comprises a solution of whey proteins.

3. A process according to claim **2** wherein the whey proteins are demineralized whey proteins.

4. A process according to claim **2** or **3** further comprising, prior to heat treating the milk product, heating the solution of whey proteins to denature the whey proteins so that the solution contains denatured whey proteins.

5. A process according to claim **4** further comprising adding milk to the solution containing the denatured whey proteins to obtain the milk product for heat treating.

6. A process according to claim **1** or **2** wherein the liquid coffee extract is added in an amount so that the mixture has a pH between 5.8 and 6.3.

7. A process according to claim **1** or **2** wherein the liquid coffee extract is added to the lactic concentrate in an amount so that the mixture has a pH between 5.8 and 6.3 and further comprising, prior to heat treatment, adding calcium to at least one of the milk product, lactic concentrate and mixture in a form so that during heat treatment, the mixture has a free calcium content of between 3 mmoles and 5 mmoles.

8. A process according to claim **1** further comprising, prior to spray drying the heat-treated mixture, homogenizing the heat-treated mixture.

9. A process according to claim **8** wherein the heat-treated mixture is homogenized in two stages under a pressure of from 20 bar to 200 bar.

10. A process according to claim **1** or **2** further comprising adding soluble coffee to the spray-dried product to obtain a second product.

11. A process according to claim **10** wherein the liquid coffee extract is added to the lactic concentrate in an amount so that upon obtaining the second product, the extract added has a dry matter content in an amount of up to 25% by weight dry matter of the second product.

12. A process according to claim **2** wherein the mixture is heat treated at a temperature of from 95° C. to 115° C. for from 5 seconds to 20 seconds.

13. A process according to claim **12** wherein the milk product is heat treated at a temperature of from 90° C. to 120° C. for from 1 second to 1200 seconds.

14. A process according to claim **1** further comprising introducing a gas into the heat-treated mixture.

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