CLAIMS

1. A method for the preparation of microparticulated rBLG comprising the steps:

a) Providing an aqueous solution of rBLG, said aqueous solution comprising from 3 to 20% w/w of rBLG and having a pH between 3 and 8, preferably between 4 and 8,

b) Heating the aqueous solution of rBLG at a temperature comprised between 75 and 99 °C, and

c) Applying a high shear rate treatment to the aqueous solution of rBLG

to afford a microparticulated rBLG aqueous solution, the percentage being expressed in weight in relation to the total weight of the aqueous solution.

2. The method according to claim 1, wherein the temperature of the heating step (step b) is comprised between 80 and 99 °C, preferably between 82 and 98 °C.

3. The method according to claim 1 or 2, wherein the rBLG concentration in the aqueous solution of step a is comprised between 5 and 20% w/w, preferably between 8 and 20% w/w, the percentage being expressed in weight in relation to the total weight of the aqueous solution.

4. The method according to any one of claims 1 to 3, wherein the pH of the aqueous solution of step a is comprised between 4.5 and 7, preferably 5.5 and 6.5.

5. The method according to any one of claims 1 to 4, wherein the heating step (step b) and the high shear treatment (step c) are performed simultaneously.

6. The method according to any one of claims 1 to 5, wherein the high shear treatment (step c) is performed after the heating step (step b).

7. The method according to any one of claims 1 to 6, wherein the high shear rate treatment is performed in a stirred vessels, an agitators, a static mixer, a rotor-stator mixer, an homogenizer or an hydrodynamic cavitation reactor, preferably in a hydrodynamic cavitation reactors.

8. The method according to any one of claims 1 to 7, characterized in that the high shear treatment (step c) is performed by applying a high shear rate treatment of at least 70 s^{-1}, preferably at least 100 s^{-1}, to the aqueous solution of rBLG.

9. The method according to any one of claims 1 to 8, wherein the method comprises one or more steps selected among: a step of cooling the aqueous solution to a temperature lower than 65 °C (step d), a step of concentrating the aqueous solution (step e), and a step of drying the aqueous solution (step f).

10. The method according to any one of claims 1 to 9, wherein the aqueous solution of step a further comprises at least one polysaccharide.

11. The method according to claim 10, wherein the polysaccharide/rBLG ratio is comprised between 1/3 and 1/30.

12. The method according to any one of claims 1 to 11, wherein the rBLG is obtained from fungi, preferably from fungi of the genus Aspergillus.

13. A microparticulated rBLG obtained from the process according to any one of claims 1 to 12.

14. The microparticulated rBLG according to claim 11, wherein the rBLG is in the form of aggregates, said aggregates having an average particle size comprised between 0.1 and 15 μm, preferably between 1 and 10 μm, more preferably between 1 and 6 μm.

15. A dry composition comprising rBLG comprising 45-95% w/w of microparticulated rBLG and at least one polysaccharide, the percentage being expressed in weight in relation to the total weight of the dry composition.

16. The dry composition according to claim 15, wherein the microparticulated rBLG is in the form of aggregates, said aggregates having an average particle size comprised between 0.1 and 15 μm, preferably between 1 and 10 μm, more preferably between 1 and 6 μm.

17. An aqueous solution of microparticulated rBLG, wherein the solution comprises from 2 to 20% w/w of microparticulated rBLG, 0.1 to 5% w/w of polysaccharide and water, the percentage being expressed in weight in relation to the total weight of the aqueous solution.

18. Use of a microparticulated rBLG according to any one of claims 13 or 14 or of a dry microparticulated rBLG composition according to any one of claims 15 or 16 or of an aqueous solution of microparticulated rBLG according to claim 17, for making animal and non-animal dairy products.