CLAIMS

1. A high-calcium milk, characterized in that it comprises raw milk, a milk mineral salt, a stabilizer and a phosphate salt at a mass ratio of (992-995):(4-5):(0.26-1.7):(0.5-1); and the stabilizer comprises carrageenan, gellan gum and citrus fiber at a mass ratio of (0-0.3):(0.23-0.4):(0-1).

2. The high-calcium milk according to claim 1, characterized in that the phosphate salt in the high-calcium milk comprises one or both of sodium tripolyphosphate and sodium hexametaphosphate.

3. The high-calcium milk according to any one of claims 1 to 2, characterized in that the fat content of the raw milk is 3.5-4.0 g/100g.

4. The high-calcium milk according to any one of claims 1 to 3, characterized in that it further comprises lactase.

5. The high-calcium milk according to any one of claims 1 to 4, characterized in that the high-calcium milk comprises 992-995 parts by weight of raw milk, 3-5 parts by weight of milk mineral salt, 0.1-0.3 parts by weight of carrageenan, 0.23-0.40 parts by weight of gellan gum, 0.2-1.0 parts by weight of citrus fiber, 0.1-0.5 parts by weight of sodium tripolyphosphate, 0.1-0.5 parts by weight of sodium hexametaphosphate, 0.3 parts by weight of lactase, and 0.010-0.035 parts by weight of vitamin D3.

6. The high-calcium milk according to any one of claims 1 to 5, characterized in that the high-calcium milk comprises 992-995 parts by weight of raw milk, 4.0-4.6 parts by weight of milk mineral salt, 0.1-0.3 parts by weight of carrageenan, 0.23-0.35 parts by weight of gellan gum, 0.2-0.8 parts by weight of citrus fiber, 0.1-0.5 parts by weight of sodium tripolyphosphate, 0.1-0.5 parts by weight of sodium hexametaphosphate, 0.3 parts by weight of lactase, and 0.010-0.035 parts by weight of vitamin D3.

7. A method for preparing the high-calcium milk according to any one of claims 1 to 6, characterized in that the method comprises: stirring the milk mineral salt and the stabilizer in raw milk at 35-55°C for 3-10 min, then adding the phosphate salt and vitamin D3, stirring for 3-10 min, then heating to 70-90°C, and continuously stirring for 10-30 min to complete the material dissolving process.

8. The method for preparing the high-calcium milk according to claim 7, characterized in that it comprises: premixing, material dissolving, volume adjustment, sterilization and

homogenization, secondary sterilization and homogenization, enzymatic hydrolysis, and enzyme inactivation.

9. The method for preparing the high-calcium milk according to claim 8, characterized in that during the material dissolving step, the weight of raw milk is 30-160 times the total mass of the milk mineral salt, the stabilizer, the phosphate salt and vitamin D3;

and the total pressure of the secondary sterilization and homogenization is 230-260 bar, with a secondary pressure of 25-60 bar.

10. The method for preparing the high-calcium milk according to any one of claims 7 to 9, characterized in that it comprises:

(1) pretreating a milk raw material to obtain a raw milk;

(2) premixing the milk mineral salt and the stabilizer; premixing the phosphate salt and vitamin D3;

(3) heating the raw milk obtained in step (1), then adding the heated raw milk to the premixed milk mineral salt and stabilizer and the premixed phosphate salt and vitamin D3 from step (2) to perform the material dissolving process, thereby obtaining a mixed slurry;

(4) adding the remaining raw milk to the mixed slurry obtained in step (3), subjecting it to sterilization and homogenization, followed by secondary sterilization and homogenization, thereby obtaining a high-calcium milk semi-finished product;

(5) adding lactase to the high-calcium milk semi-finished product obtained in step (4) to perform enzymatic hydrolysis, and then inactivating the lactase to obtain the high-calcium milk.