CLAIMS

1. A method of evaluating a post-heat-treated yogurt, characterized in that the method comprises a step of obtaining a volume-weighted average diameter $D_{[4,3]}$ of the post-heat-treated yogurt.

2. The method according to claim 1, characterized in that the method comprises: evaluating a microgel structure in the post-heat-treated yogurt by using the volume-weighted average diameter $D_{[4,3]}$.

3. The method according to claim 1 or 2, characterized in that the method comprises:

centrifuging a sample of the post-heat-treated yogurt to be tested to obtain a whey;

filtering the whey through an ultrafiltration membrane to obtain a filtered whey serving as a dispersant;

performing a particle size distribution test on the sample of the post-heat-treated yogurt to be tested by using the dispersant, so as to obtain the volume-weighted average diameter $D_{[4,3]}$.

4. The method according to claim 3, characterized in that the viscosity of the sample of the post-heat-treated yogurt is 100-500 mPa·s.

5. The method according to any one of claims 3 to 4, characterized in that components of the sample of the post-heat-treated yogurt mainly comprise:

0.1-0.4% of low-ester pectin, 4-8% of white granulated sugar, 2.8-3.2% of protein, and 3.0-4.0% of fat.

6. The method according to any one of claims 1 to 5, characterized in that the method comprises: performing an oral graininess sensitivity test of the post-heat-treated yogurt by using the volume-weighted average diameter $D_{[4,3]}$.

7. The method according to claim 6, characterized in that the oral graininess sensitivity test comprises: a step of identifying sensory panelists having different oral tactile sensitivities;

the identifying step comprises:

when the volume-weighted average diameter $D_{[4,3]}$ of the sample of the post-heat-treated yogurt falls within a range of 14-65 μm, determining a sensory panelist for whom a graininess score increases with the value of the volume-weighted average diameter $D_{[4,3]}$ of the sample of the post-heat-treated yogurt.

8. The method according to claim 7, characterized in that the oral graininess sensitivity test comprises the following steps:

determining all sensory panelists, optionally, wherein the number of the sensory panelists is 50 or more;

individually evaluating, by each of all sensory panelists, graininess scores, wherein in the graininess score, the description of graininess is based on the intensity levels corresponding to a generalized labeled magnitude scale: defining a score of 0-3 as a weak level, 3-6 as a medium level, and 6-9 as a strong level;

identifying sensory panelists with different oral tactile sensitivities;

the identifying step comprises:

performing a power-law fitting on each sensory panelist's graininess score against the volume-weighted average diameter $D_{[4,3]}$ of the sample of the post-heat-treated yogurt following a power-law fitting model of $Y = mX^n + k$; wherein Y represents the graininess score of the sensory panelist, X represents the volume-weighted average diameter $D_{[4,3]}$, n represents a power-law fitting exponent, m and k are constants, and R^2 represents the goodness-of-fit of the power-law fitting model; and

determining the sensitivity level of each sensory panelist based on the power-law fitting exponent n and the goodness-of-fit R^2 of the power-law fitting model.

9. The method according to claim 8, characterized in that the determination of the sensitivity level of each sensory panelist comprises:

arranging the power-law fitting exponent n and the goodness-of-fit R^2 of the power-law fitting model in ascending order to determine a first percentile, a second percentile, and a third percentile of all clustering parameters;

performing the identification for each sensory panelist based on the first percentile, the second percentile, and the third percentile, so as to determine sensory panelists belonging to a high-sensitivity group, a low-sensitivity group, and a medium-sensitivity group.

10. The method according to any one of claims 7 to 9, characterized in that the oral sensitivity test is used for a graininess sensory evaluation test.

11. The method according to any one of claims 1 to 10, characterized in that the method comprises: using the volume-weighted average diameter $D_{[4,3]}$ to guide reduction of the graininess of post-heat-treated yogurt;

mixing a post-heat-treated yogurt A with a yogurt B having a volume-weighted average diameter $D_{[4,3]}$ of ≤ 46 μm, wherein the post-heat-treated yogurt A is obtained by subjecting the yogurt B to a post-heat treatment for sterilization;

wherein the volume ratio of the yogurt B to the post-heat-treated yogurt A is $\geq 3:7$.

12. The method according to claim 11, characterized in that the volume-weighted average diameter $D_{[4,3]}$ of the yogurt is ≤ 15 μm.

13. The method according to any one of claims 1 to 10, characterized in that it comprises a step of mixing a post-heat-treated yogurt A with a post-heat-treated yogurt C having a volume-weighted average diameter $D_{[4,3]}$ of ≤ 46 μm, wherein the post-heat-treated yogurt A and the post-heat-treated yogurt C are obtained by sterilizing the same yogurt at different post-heat treatment temperatures.

14. The method according to claim 13, characterized in that the post-heat sterilization temperature for the post-heat-treated yogurt A is from 65 °C to 85 °C; the post-heat sterilization temperature for the post-heat-treated yogurt C is 65 °C or below, and a volume ratio of the post-heat-treated yogurt C to the post-heat-treated yogurt A in the mixing step is $\geq 7:3$.