CLAIMS

1. A composition for cryoprotecting lactic acid bacteria, comprising (i) cysteine or a salt thereof, (ii) trehalose and (iii) maltodextrin as an active ingredient.

2. The composition for cryoprotecting lactic acid bacteria of claim 1, wherein the salt of the cysteine is a hydrochloride.

3. The composition for cryoprotecting lactic acid bacteria of claim 1, wherein the cysteine or a salt thereof is contained in an amount of 0.01 wt% to 10 wt%.

4. The composition for cryoprotecting lactic acid bacteria of claim 1, further comprising soy peptone.

5. The composition for cryoprotecting lactic acid bacteria of any one of claims 1 to 4, which has thermal stability of lactic acid bacteria.

6. A method for producing a lactic acid bacteria preparation, comprising:

mixing lactic acid bacteria with a composition containing (i) cysteine or a salt thereof (ii) trehalose and (iii) maltodextrin to prepare a mixture; and

freeze-drying the mixture to be powdered.

7. The method for producing a lactic acid bacteria preparation of claim 6, further comprising culturing bacterial cells of the lactic acid bacteria in a culture

medium comprising cysteine or a salt thereof before freeze-drying the mixture.

8. A lactic acid bacteria preparation having thermal stability, comprising:

(i) lactic acid bacteria;

(ii) cysteine or a salt thereof;

(iii) trehalose; and

(iv) maltodextrin.

9. The lactic acid bacteria preparation of claim 8, wherein the lactic acid bacteria preparation is in the form of a granule, a powder, a powdered drug, a pellet, an infusum, an emulsion, a flow agent, a tablet, a pill, a capsule, an ointment, a suppository, an injection, an inhalant, an aerosol, a suspension, a syrup, an emulsion, a soft capsule, a hard capsule, an elixir, a troche, or a lozenge.

10. The lactic acid bacteria preparation of claim 8, wherein the lactic acid bacteria preparation is in the form of a freeze-dried powder.

11. A method for increasing thermal stability of lactic acid bacteria, comprising culturing lactic acid bacteria in a culture medium comprising cysteine or a salt thereof; and freeze-drying the cultured lactic acid bacteria using a composition comprising (i) cysteine or a salt thereof, (ii) trehalose and (iii) maltodextrin.