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 ~~at least one selected from the group consisting of trehalose, maltodextrin, and~~ soy peptone.

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

~~6. A culture medium for cryoprotecting lactic acid bacteria, comprising cysteine or a salt thereof as an active ingredient.~~

~~7. The culture medium for cryoprotecting lactic acid bacteria of claim 6, wherein the cysteine or a salt thereof is contained in an amount of 0.01 wt% to 10 wt%.~~

~~8. The culture medium for cryoprotecting lactic acid bacteria of claim 6, further comprising at least one selected from the group consisting of coenzyme Q10, vitamin C, vitamin E, and vitamin B2.~~

~~9. The culture medium for cryoprotecting lactic acid bacteria of claim 6, which further has at least one efficacy of the growth acceleration or increase in thermal stability of lactic acid bacteria.~~

~~10~~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.

~~11~~7. The method for producing a lactic acid bacteria preparation of claim ~~10~~6, further comprising culturing bacterial cells of the lactic acid bacteria ~~using the mixture~~in a culture medium comprising cysteine or a salt thereof before freeze-drying the mixture.

~~12~~8. A lactic acid bacteria preparation having thermal stability, comprising:

(i) lactic acid bacteria; ~~and~~

(ii) cysteine or a salt thereof;

(iii) trehalose; and

(iv) maltodextrin.

~~13~~9. The lactic acid bacteria preparation of claim ~~12~~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.

~~14~~10. The lactic acid bacteria preparation of claim ~~12~~8, wherein the lactic acid bacteria preparation is in the form of a freeze-dried powder.

~~15. The lactic acid bacteria preparation of any one of claims 12 to 14, wherein the survival rate of the lactic acid bacteria after the lactic acid bacteria preparation is preserved at 40°C for 4 weeks is 45% or more.~~

~~16. A method for accelerating the growth of lactic acid bacteria, comprising culturing lactic acid bacteria in the culture medium according to any one of claims 6 to 9.~~

~~17~~11. A method for increasing ~~the~~ thermal stability of lactic acid bacteria, comprising culturing lactic acid bacteria in ~~the~~a culture medium ~~according to any one of claims 6 to 9~~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.