CLAIMS

1. A method for preparing citrulline, comprising the steps of inoculating a microorganism having a citrulline producing ability into a culture medium and culturing the microorganism at a temperature from 40°C to 70°C

wherein the microorganism is lactic acid bacterium which is one or more members selected from the group consisting of Lactococcus lactis, Lactobacillus fermentum, and Lactobacillus buchneri.

2. The method for preparing citrulline according to claim 1, wherein the lactic acid bacterium is one or more members selected from the group consisting of Lactococcus lactis spp. lactis strain OLS3789, strain OLS3797, and strain OLS3818.

3. A method for preparing a citrulline-containing composition, comprising the steps of adding a microorganism having a citrulline producing ability to a starting material and culturing the microorganism at a temperature from 40°C to 70°C

wherein the microorganism is lactic acid bacterium which is one or more members selected from the group consisting of Lactococcus lactis, Lactobacillus fermentum, and Lactobacillus buchneri.

4. The method for preparing a citrulline-containing composition according to claim 3, wherein the lactic acid bacterium is one or more members selected from the group consisting of Lactococcus lactis spp. lactis strain OLS3789, strain OLS3797, and strain OLS3818.

5. The method for preparing a citrulline-containing composition according to claim 3 or 4, wherein the starting material is a raw milk.

6. The method for preparing a citrulline-containing composition according to any one of claims 3 to 5, wherein the citrulline-containing composition is food and drink.

7. A method for preparing a culture solution containing a microorganism that has a citrulline producing ability wherein a conversion efficiency from arginine into citrulline at a temperature from 40°C to 70°C, the method

comprising the step of culturing a microorganism having a citrulline producing ability in a culture medium to which arginine is added

wherein the microorganism is lactic acid bacterium which is one or more members selected from the group consisting of Lactococcus lactis, Lactobacillus fermentum, and Lactobacillus buchneri.

8. The method for preparing a culture solution according to claim 7, wherein arginine is added to the medium before the culturing and/or is intermittently added during culturing, or is continuously added during culturing.

9. A method for preparing a culture solution containing a microorganism having a citrulline producing ability and having an increased concentration of the microorganism contained, the method comprising the step of culturing a microorganism having a citrulline producing ability in a culture medium of which pH is adjusted between 5 to 7 thereby increasing a concentration of the microorganism

wherein the microorganism is lactic acid bacterium which is one or more members selected from the group consisting of Lactococcus lactis, Lactobacillus fermentum, and Lactobacillus buchneri.

10. The method for preparing a culture solution according to claim 9, wherein pH of the medium is adjusted by the addition of an alkali.

11. A method for preparing a culture solution containing a microorganism having a citrulline producing ability wherein a conversion efficiency from arginine into citrulline at a temperature from 35°C to 70°C and a concentration of the microorganism contained therein being increased, the method comprising the step of culturing a microorganism having a citrulline producing ability in a culture medium to which arginine is added and of which pH is set between 5 to 7 thereby increasing a concentration of the microorganism

wherein the microorganism is lactic acid bacterium which is one or more members selected from the group consisting of Lactococcus lactis, Lactobacillus fermentum, and Lactobacillus buchneri.

12. The method for preparing a culture solution according to claim 11, wherein arginine is added to the medium before the culturing and/or is

intermittently added during culturing, or is continuously added during culturing.

13. A method for preparing a microorganism having a citrulline producing ability wherein conversion efficiency from arginine into citrulline, the method comprising the step of subjecting a culture solution obtained by a method according to any one of claims 7 to 12 to centrifugation and/or membrane separation.

14. A method for preparing citrulline according to claim 1 or 2, comprising the steps of inoculating into a medium a culture solution obtained by a method for preparing a culture solution according to any one of claims 7 to 12 or a microorganism obtained by a method for preparing a microorganism according to claim 13, and culturing the culture solution or the microorganism, or a method for preparing a citrulline-containing composition according to any one of claims 3 to 6, the method comprising adding the culture solution or the microorganism to a starting material and fermenting the mixture.