Claims

1. An extraction method comprising bringing materials to be extracted into contact with water containing ultra fine bubbles for extraction treatment and obtaining liquid extract by removing extraction residue after the extraction treatment.

2. The extraction method according to claim 1,
wherein the ultra fine bubbles have a mode diameter of 500 nm or smaller.

3. The extraction method according to claim 1 or 2,
wherein 1 mL of the water contains 1,000,000 or more of the ultra fine bubbles.

4. The extraction method according to any one of claims 1 to 3,
wherein the ultra fine bubbles have an electrically charged surface and the ultra fine bubbles have an absolute value of zeta potential of 5 mV or more.

5. The extraction method according to any one of claims 1 to 4,
wherein the ultra fine bubbles substantially include one or more gases selected from air, oxygen, hydrogen, nitrogen, carbon dioxide, ozone, and inert gases.

6. The extraction method according to any one of claims 1 to 5,
wherein the water contains water-soluble solvents in an amount of 8% by weight or less.

7. The extraction method according to any one of claims 1 to 6,
wherein the materials to be extracted are at least one selected from animal materials, plant materials, soils, and ores.

8. The extraction method according to any one of claims 1 to 7, further comprising applying one or more waves selected from electromagnetic waves, sound waves, and ultrasonic waves as the extraction treatment.

9. The extraction method according to any one of claims 1 to 8,
wherein the ultra fine bubbles are generated using a ultra fine bubbles generating apparatus equipped with a gas-liquid shearing mixer.

10. The extraction method according to claim 9,
wherein the materials to be extracted are immersed in water and the ultra fine bubbles are generated in a liquid containing the water by the ultra fine bubbles generating apparatus.

11. The extraction method according to any one of claims 1 to 10, wherein the liquid extract is dried to form a powder extract.

12. A liquid extract obtained by the extraction method as claimed in any one of claims 1 to 10.

13. An extract powder obtained by drying the liquid extract as claimed in claim 12.

14. A composition comprising the liquid extract as claimed in claim 12 or the extract powder as claimed in claim 13.

CLAIMS

1. An extraction method comprising bringing materials to be extracted into contact with water containing ultra fine bubbles for extraction treatment and obtaining liquid extract by removing extraction residue after the extraction treatment

wherein the materials to be extracted are at least one selected from plant materials, soils, and ores.

2. The extraction method according to claim 1, wherein the ultra fine bubbles have a mode diameter of 500 nm or smaller.

3. The extraction method according to claim 1 or 2, wherein 1 mL of the water contains 1,000,000 or more of the ultra fine bubbles.

4. The extraction method according to any one of claims 1 to 3, wherein the ultra fine bubbles have an electrically charged surface and the ultra fine bubbles have an absolute value of zeta potential of 5 mV or more.

5. The extraction method according to any one of claims 1 to 4, wherein the ultra fine bubbles substantially include one or more gases selected from air, oxygen, hydrogen, nitrogen, carbon dioxide, ozone, and inert gases.

6. The extraction method according to any one of claims 1 to 5, wherein the water contains water-soluble solvents in an amount of 8% by weight or less.

7. The extraction method according to any one of claims 1 to 6, further comprising applying one or more waves selected from electromagnetic waves, sound waves, and ultrasonic waves as the extraction treatment.

8. The extraction method according to any one of claims 1 to 7, wherein the ultra fine bubbles are generated using a ultra fine bubbles generating apparatus equipped with a gas-liquid shearing mixer.

9. The extraction method according to claim 8, wherein the materials to be extracted are immersed in water and the ultra fine bubbles are generated in a liquid containing the water by the ultra fine bubbles generating apparatus.

10. The extraction method according to any one of claims 1 to 9, wherein the liquid extract is dried to form a powder extract.

11. A liquid extract obtained by the extraction method as claimed in any one of claims 1 to 9.

12. An extract powder obtained by drying the liquid extract as claimed in claim 11.

13. A composition comprising the liquid extract as claimed in claim 11 or the extract powder as claimed in claim 12.