WHAT IS CLAIMED IS:

1. An oxygen-enriched water composition comprising water and oxygen, wherein:

(a) the oxygen-enriched water composition comprises an oxygen content of no less than 20 ppm when the oxygen content of the oxygen-enriched water composition is measured at a temperature ranging from 4 ^{o}C to 50 ^{o}C;

(b) the oxygen content of the oxygen-enriched water composition has a temporal stability and a temperature stability that are characterized by the following features:

(b1) provided that the oxygen content measured at a given time point $\mathbf{t_0}$ is 100%, the oxygen content measured at 30 minutes from the given time point $\mathbf{t_0}$ is A%, and the oxygen content measured at 180 minutes from the given time point $\mathbf{t_0}$ is B%, then a difference between A% and B% is less than 24%;

(b2) a decrease in the oxygen content is less than 30% when the oxygen-enriched water composition is placed under a temperature ranging from 30 ^{o}C to 40 ^{o}C for at least 120 minutes; and

(b3) the oxygen content is maintained at no less than 20 ppm when the oxygen-enriched water composition is placed under a temperature ranging from 30 ^{o}C to 40 ^{o}C for at least 60 minutes; and

(c) the oxygen-enriched water composition has a full width at half maximum between 50 Hz and 70 Hz when the oxygen-enriched water composition is measured with ^{17}O NMR.

2. The oxygen-enriched water composition of claim 1, wherein the oxygen content measured at 180 minutes from the given time point $\mathbf{t_0}$ is no less than 25 ppm.

3. The oxygen-enriched water composition of claim 1, wherein the oxygen content of the oxygen-enriched water composition has a temperature stability that is characterized by the following feature:

a decrease in the oxygen content is less than 20% when the oxygen-enriched water composition is heated from a temperature of 10 ^{o}C to a temperature of 40 ^{o}C.

4. The oxygen-enriched water composition of claim 1, wherein the oxygen content of the oxygen-enriched water composition has a temperature stability that is characterized by the following feature:

the oxygen content is no less than 25 ppm when the oxygen-enriched water composition is heated from a temperature of 10 ^{o}C to a temperature of 40 ^{o}C.

5. The oxygen-enriched water composition of claim 1, wherein the oxygen content of the oxygen-enriched water composition has a temperature stability that is characterized by the following feature:

a decrease in the oxygen content is less than 20% when the oxygen-enriched water composition is heated from a temperature ranging from 5 ^{o}C to 10 ^{o}C to a temperature ranging from 40 ^{o}C to 50 ^{o}C.

6. The oxygen-enriched water composition of claim 1, wherein the oxygen content of the oxygen-enriched water composition has a temperature stability that is characterized by the following feature:

the oxygen content is maintained at no less than 30 ppm during the process of heating the oxygen-enriched water composition from a temperature ranging from 5 ^{o}C to 10 ^{o}C to a temperature ranging from 40 ^{o}C to 50 ^{o}C.

7. A biocompatible composition comprising the oxygen-enriched water composition of claim 1 and at least one biocompatible ingredient.

8. The biocompatible composition of claim 7, wherein the biocompatible ingredient is a therapeutic agent for treating and/or preventing hyperuricemia, or a parenteral nutrition selected from the group consisting of an amino acid, fat, a saccharide, an electrolyte, a vitamin, a mineral, and any combination thereof.

9. A method of preparing the oxygen-enriched water composition of claim 1, comprising:

supplying oxygen to a volume of water, which is maintained at a temperature ranging from 0 ^{o}C to 12 ^{o}C, for a period of no less than 30 minutes at a flow rate

ranging from 50 cc/min to 1000 cc/min to obtain the oxygen-enriched water composition of claim 1.

10. The method of claim 9, wherein the supplying step comprises:

(i) supplying oxygen to the volume of water at a first flow rate until an oxygen content of the volume of water ranges from 20 ppm to 25 ppm; and

(ii) supplying oxygen to the volume of water at a second flow rate that is less than the first flow rate.

11. An oxygen-enriched water composition that is prepared by the method of claim 9.