CLAIMS

1. A composition comprising hypochlorous acid or free available chlorine, the amount of hypochlorous acid or free available chlorine being in an amount that restrains, prohibits, or otherwise prevents microbial population growth.

2. The composition according to Claim 1, wherein the hypochlorous acid or free available chlorine is in an amount that does not eradicate the microbial population to a degree that achieves disinfection or sterilization.

3. The composition according to Claim 1 or 2, wherein the hypochlorous acid or free available chlorine is in an amount of about 0.01 ppm to about 5 ppm.

4. The composition according to any one of Claims 1-3, wherein the hypochlorous acid or free available chlorine is in an amount of about 0.025 ppm to about 2 ppm.

5. The composition according to any one of Claims 1-4, wherein the hypochlorous acid or free available chlorine is in an amount of about 0.05 ppm to about 0.5 ppm.

6. The composition of any one of Claims 1-5, wherein the hypochlorous acid or free available chlorine is in an amount of about 0.1 ppm to about 0.4 ppm.

7. The composition according to any one of Claims 1-6, wherein the hypochlorous acid or free available chlorine is in an amount of less than 0.5 ppm.

~~8. The composition according to any one of Claims 1-3 or 7, wherein the hypochlorous acid or free available chlorine is in an amount of about 0.01 ppm to about 0.1 ppm, about 0.01 ppm to about 0.2 ppm, about 0.01 ppm to about 0.25 ppm, about 0.01 ppm to about 0.3 ppm, about 0.01 ppm to about 0.4 ppm, about 0.01 ppm to about 0.5 ppm, about 0.05 ppm to about 0.1 ppm, about 0.05 ppm to about 0.2 ppm, about 0.05 ppm to about 0.25 ppm, about 0.05 ppm to about 0.3 ppm, about 0.05 ppm to about 0.4 ppm, or about 0.05 ppm to about 0.5 ppm.~~

~~9~~8. The composition according to any one of Claims 1-~~8~~7, further comprising one or more metallic particles and/or one or more metal salts.

~~10~~9. The composition according to Claim ~~9~~8, wherein the one or more metal salts include a metal chloride, a metal oxide, or any combination thereof.

~~11~~10. The composition according to Claim ~~10~~9, wherein the one or more metal salts comprise calcium, copper, zinc or any mixture thereof.

~~12~~11. The composition according to Claim ~~10~~9, wherein the metal chloride includes copper chloride and zinc chloride.

~~13~~12. The composition according to Claim ~~10~~9, wherein the metal oxide includes calcium oxide.

~~14~~13. The composition according to any one of Claims 1-~~13~~12, further comprising a phosphate buffer.

~~15~~14. The composition according to Claim ~~14~~13, wherein the phosphate buffer is a calcium phosphate or sodium phosphate.

~~16. The composition according to any one of Claims 1-15, wherein the amount restrains, prohibits, or otherwise prevents microbial population growth for at least 7 days, at least 14 days, at least 21 days, or at least 28 days.~~

~~17. The composition according to any one of Claims 1-16, having an effective-use stability of about 1 hour to about 24 hours.~~

~~18. The composition according to any one of Claims 1-16, having an effective-use stability of about 1 day to about 30 days.~~

~~19. The composition according to any one of Claims 1-18, having an shelf-life stability of about 3 months to about 24 months.~~

~~20. The composition according to Claim 19, having at most 25% degradation of the hypochlorous acid or free available chlorine~~

~~21~~15. A method of making a microbiostatic water or other liquid, the method comprising applying a composition as defined in any one of Claims 1-14 ~~comprising hypochlorous acid or free available chlorine~~ to water or other liquid, manufactured as sterile or non-sterile, in a microbiostatic effective amount.

~~22~~16. A method of making a microbiostatic water or other liquid, the method comprising applying a composition as defined in any one of Claims 1-14 ~~comprising hypochlorous acid or free available~~

~~chlorine~~ to water or other liquid in an amount that restrains, prohibits, or otherwise prevents microbial population growth.

~~23~~17. A method of making a microbiostatic water or other liquid, the method comprising applying a composition as defined in any one of Claims 1-14 ~~comprising hypochlorous acid or free available chlorine~~ to water or other liquid in an amount that restrains, prohibits, or otherwise prevents microbial population growth without eradicating the microbial population to a degree that achieves disinfection or sterilization.

~~24~~18. A method of reducing or inhibiting microbial growth in water or other liquid, the method comprising applying a composition as defined in any one of Claims 1-14 ~~comprising hypochlorous acid or free available chlorine~~ to water or other liquid in a microbiostatic effective amount, wherein application of the composition application of the composition reduces or inhibits microbial population growth.

~~25~~19. A method of reducing or inhibiting microbial growth in water or other liquid, the method comprising applying a composition as defined in any one of Claims 1-14 ~~comprising hypochlorous acid or free available chlorine~~ to water or other liquid in an amount that restrains, prohibits, or otherwise prevents microbial population growth, wherein application of the composition application of the composition reduces or inhibits microbial population growth.

~~26~~20. A method of reducing or inhibiting microbial growth in water or other liquid, the method comprising applying a composition as defined in any one of Claims 1-14 ~~comprising hypochlorous acid or free available chlorine~~ to water or other liquid in an amount that restrains, prohibits, or otherwise prevents microbial population growth without eradicating the microbial population to a degree that achieves disinfection or sterilization, wherein application of the composition application of the composition reduces or inhibits microbial population growth.

~~27~~21. A method of reducing or inhibiting microbial growth in a device, the method comprising applying a composition comprising as defined in any one of Claims 1-14 ~~hypochlorous acid or free available chlorine~~ to water or other liquid present in the device in a microbiostatic effective amount, wherein application of the composition reduces or inhibits microbial population growth during use or storage of the device.

~~28~~22. A method of reducing or inhibiting microbial growth in a device, the method comprising applying a composition as defined in any one of Claims 1-14 ~~comprising hypochlorous acid or free available chlorine~~ to water or other liquid present in the device in an amount that restrains, prohibits, or otherwise

prevents microbial population growth, wherein application of the composition reduces or inhibits microbial population growth during use or storage of the device.

~~29~~23. A method of reducing or inhibiting microbial growth in a device, the method comprising applying a composition as defined in any one of Claims 1-14 ~~comprising hypochlorous acid or free available chlorine~~ to water or other liquid present in the device in an amount that restrains, prohibits, or otherwise prevents microbial population growth without eradicating the microbial population to a degree that achieves disinfection or sterilization, wherein application of the composition reduces or inhibits microbial population growth during use or storage of the device.

~~30~~24. A method according to any one of Claims ~~27-29~~21-23, wherein the device is a medical device, a residential device, a commercial device or an industrial device.

~~31~~25. A method to wash or irrigate a surface area, the method comprising applying a composition as defined in any one of Claims 1-14 ~~comprising hypochlorous acid or free available chlorine~~ to the surface area, wherein application of the composition washes or irrigates the surface area.

~~32. The method according to Claim 31, wherein the surface area is a hard surface area or a biological surface area.~~

~~33. A method to treat or provide relief from an itch, an irritation, an inflammation, a wound, an ache, and/or a pain, the method comprising applying a composition comprising hypochlorous acid or free available chlorine to a biological surface area, wherein application of the composition washes or irrigates the surface area.~~

~~34. The method according to Claim 32 or 33, wherein the biological surface area is a tissue, a skin, a body cavity.~~

~~35. The method according to any one of Claims 32-34, wherein the biological surface area has a wound, an infection or an inflammation.~~

~~36. The method according to any one of Claims 21-35, wherein the composition is any one of Claims 1-20.~~

~~37. The method according to any one of claims 21-35, wherein the hypochlorous acid or free available chlorine is in an amount of about 0.01 ppm to about 5 ppm.~~

38. The method according to any one of claims 21-35, wherein the hypochlorous acid or free available chlorine is in an amount less than 0.5 ppm.

39. The method according to claim 37 or 38, wherein the hypochlorous acid or free available chlorine is in an amount of about 0.01 ppm to about 0.1 ppm, about 0.01 ppm to about 0.2 ppm, about 0.01 ppm to about 0.25 ppm, about 0.01 ppm to about 0.3 ppm, about 0.01 ppm to about 0.4 ppm, about 0.01 ppm to about 0.5 ppm, about 0.05 ppm to about 0.1 ppm, about 0.05 ppm to about 0.2 ppm, about 0.05 ppm to about 0.25 ppm, about 0.05 ppm to about 0.3 ppm, about 0.05 ppm to about 0.4 ppm, or about 0.05 ppm to about 0.5 ppm.

40. The method according to any one of Claims 21-39, further comprising one or more metallic particles and/or one or more metal salts.

41. The method according to Claim 40, wherein the one or more metal salts include a metal chloride, a metal oxide, or any combination thereof.

42. The method according to Claim 41, wherein the one or more metal salts comprise calcium, copper, zinc or any mixture thereof.

43. The method according to Claim 41 or 42, wherein the metal chloride includes copper chloride and zinc chloride.

44. The method according to any one of Claims 41-43, wherein the metal oxide includes calcium oxide.

45. The method according to any one of Claims 21-44, further comprising a phosphate buffer.

46. The method according to Claim 45, wherein the phosphate buffer is a calcium phosphate or sodium phosphate.

47. The method according to any one of Claims 21-46, wherein the amount restrains, prohibits, or otherwise prevents microbial population growth for at least 7 days, at least 14 days, at least 21 days, or at least 28 days.

48. The method according to any one of Claims 21-47, having an effective-use stability of about 1 hour to about 24 hours.

49. The method according to any one of Claims 21-47, having an effective-use stability of about 1 day to about 30 days.

50. The method according to any one of Claims 21-49, having an shelf-life stability of about 3 months to about 24 months.

51. The method according to Claim 50, having at most 25% degradation of the hypochlorous acid or free available chlorine.