CLAIMS

1. A method of stabilizing virgin ion exchange resin material, the method comprising:

cleansing the virgin ion exchange resin material with a preparation comprising a non-ionic detergent at a concentration below the non-ionic detergent's critical micelle concentration to produce a cleansed virgin ion exchange resin material;

introducing the cleansed virgin ion exchange resin material into a gas impermeable vessel; and

hermetically sealing the vessel.

2. The method of claim 1, further comprising rinsing the cleansed virgin ion exchange resin material with deoxygenated water.

3. The method of claim 1, wherein the non-ionic detergent comprises at least one of ethoxylated octyl phenol, polysorbate, polyoxyethylene and a metabolite thereof.

4. The method of claim 3, wherein the preparation comprises less than about 0.125 g/L ethoxylated octyl phenol.

5. The method of claim 1, comprising introducing the cleansed virgin ion exchange resin material into a liquid impermeable container of the gas impermeable vessel.

6. A method of stabilizing virgin ion exchange resin material, the method comprising:

cleansing the virgin ion exchange resin material with a preparation comprising an alcohol solvent to produce a cleansed virgin ion exchange resin material;

introducing the cleansed virgin ion exchange resin material into a gas impermeable vessel; and

hermetically sealing the vessel.

7. The method of claim 6, further comprising rinsing the cleansed virgin ion exchange resin material with deoxygenated water.

8. The method of claim 6, wherein the alcohol solvent comprises at least one of isopropanol, methanol, ethanol, n-butanol, isooctanol, methyl isobutyl carbinol, isoamyl alcohol, isobutyl alcohol, cyclohexanol, methyl cyclohexanol, and aqueous ammonia.

9. The method of claim 8, wherein the preparation comprises less than about 0.5% isopropanol.

10. The method of claim 5, comprising introducing the cleansed virgin ion exchange resin into a liquid impermeable container of the gas impermeable vessel.

11. A method of stabilizing virgin ion exchange resin material, the method comprising:

cleansing the virgin ion exchange resin material with a preparation comprising a non-ionic detergent at a concentration below the non-ionic detergent's critical micelle concentration to produce a cleansed virgin ion exchange resin material; and

rinsing the cleansed virgin ion exchange resin material with deoxygenated water to produce a rinsed virgin ion exchange resin material.

12. The method of claim 11, comprising rinsing the cleansed ion exchange resin material with deoxygenated water having a concentration of dissolved oxygen of less than about 10 ppb.

13. The method of claim 11, wherein the non-ionic detergent comprises at least one of ethoxylated octyl phenol, polysorbate, polyoxyethylene and a metabolite thereof.

14. The method of claim 11, further comprising introducing the rinsed virgin ion exchange resin material into a gas impermeable vessel and hermetically sealing the vessel.

15. A method of stabilizing virgin ion exchange resin material, the method comprising:

cleansing the virgin ion exchange resin material with a preparation comprising an alcohol solvent to produce a cleansed virgin ion exchange resin material; and

rinsing the cleansed virgin ion exchange resin material with deoxygenated water to produce a rinsed virgin ion exchange resin material.

~~16. The method of claim 15, comprising rinsing the cleansed ion exchange resin material with deoxygenated water having a concentration of dissolved oxygen of less than about 10 ppb.~~

~~17. The method of claim 15, wherein the alcohol solvent comprises at least one of isopropanol, methanol, ethanol, n-butanol, isooctanol, methyl isobutyl carbinol, isoamyl alcohol, isobutyl alcohol, cyclohexanol, methyl cyclohexanol, and aqueous ammonia.~~

~~18. The method of claim 15, further comprising introducing the rinsed virgin ion exchange resin material into a gas impermeable vessel and hermetically sealing the vessel.~~

1~~9~~. A method of facilitating water treatment at a site in need thereof, the method comprising:

providing a cleansed virgin ion exchange resin material in deoxygenated water,

the cleansed virgin ion exchange resin material being a polystyrene-based ion exchange resin material and having less than about 25 ppb oxygenated total organic carbon species~~.~~

~~20. The method of claim 19, further comprising providing the cleansed virgin ion exchange resin material and deoxygenated water in a liquid impermeable compartment of a hermetically sealed gas impermeable vessel.~~

~~21. The method of claim 20, further comprising providing an oxygen scavenging material positioned between an exterior wall of the liquid impermeable compartment and an interior wall of the gas impermeable vessel.~~

~~22. The method of claim 21, further comprising providing an indicator of oxygen contamination.~~

~~23. The method of claim 19, comprising providing the deoxygenated water in an amount between about 40% and about 50% of the cleansed virgin ion exchange resin material.~~

~~24. The method of claim 19~~, comprising providing the deoxygenated water having less than about 10 ppb dissolved oxygen.