CLAIMS

WHAT IS CLAIMED IS:

1. An apparatus configured to produce a disinfectant solution for use with disinfecting a medical device, the apparatus comprising:

a first container configured to receive water, sodium percarbonate, and tetraacetylethylenediamine, wherein the water, the sodium percarbonate and the tetraacetylethylenediamine react within the first container to produce a mixture comprising peroxyacetic acid and having a pH between 9.0 and 14.0; and

a second container in fluid communication with the first container, the second container configured to receive an acid and the mixture from the first container, wherein the mixture and the acid mix in the second container to produce a disinfectant solution having a pH between 5.0 and 7.0.

2. The apparatus of claim 1, wherein at least one of: the first container and the second container comprise a mixer configured to facilitate at least one of: dissolving of the sodium percarbonate in the water to produce hydrogen peroxide and mixing the hydrogen peroxide and the tetraacetylethylenediamine to produce the mixture comprising peroxyacetic acid.

3. The apparatus of claim 1, further comprising a pump coupled to at least one of: the first container and the second container, wherein the pump is configured to provide at least one of: the water to the first container at a first flow rate of at least 1 gallon per minute and the mixture to the second container at a second flow rate of at least 1 gallon per minute.

4. The apparatus of claim 3, wherein the first flow rate facilitates the dissolving of the sodium percarbonate in the water to produce hydrogen peroxide and the reaction of the hydrogen peroxide and the tetraacetylethylenediamine, and wherein the second flow rate facilitates the mixing of the mixture and the acid.

5. The apparatus of claim 1, further comprising a filter, wherein the filter is configured to at least partially remove undissolved solid from the mixture comprising peroxyacetic acid.

6. The apparatus of claim 5, wherein the first container functions as the filter.

7. The apparatus of claim 1, further comprising a filter configured to at least partially remove undissolved solid from the disinfectant solution.

8. The apparatus of claim 1, wherein the acid is citric acid and wherein the water has a temperature of at least 30° C.

9. The apparatus of claim 1, wherein amounts of the water, the sodium percarbonate and the tetraacetylethylenediamine are combined in the first container to produce at least one of: hydrogen peroxide in concentrations between 0 parts per million and 1000 parts per million and peroxyacetic acid in concentrations between 500 parts per million and 2200 parts per million.

10. An apparatus configured to produce a disinfectant solution for use with disinfecting a medical device, the apparatus comprising:

a first container including sodium percarbonate and tetraacetylethylenediamine, the first container comprising a first aperture configured to receive water, wherein the water, the sodium percarbonate and the tetraacetylethylenediamine react within the first container to produce a mixture comprising peroxyacetic acid, wherein the first container is configured to filter undissolved portions of the sodium percarbonate and the tetraacetylethylenediamine and wherein the first container comprises a second aperture that the mixture exits through; and

a second container configured to receive the mixture from the first container via the second aperture, the second container comprising an acid, wherein the mixture and the acid mix in the second container to produce a disinfectant solution having a pH between 5.0 and 7.0.

11. A method comprising:

providing, to a user, sodium percarbonate and tetraacetylethylenediamine in a first compartment of a package and an acid in a second compartment of the package;

providing instructions to the user to combine the sodium percarbonate and the tetraacetylethylenediamine with water, wherein the water, sodium percarbonate,

tetraacetylethylenediamine react within the first container to produce a mixture comprising peroxyacetic acid; and

providing instructions to the user to combine the mixture with the acid, wherein the mixture and the acid to produce a disinfectant solution for use with disinfecting a medical device, wherein the disinfectant solution has a pH between 5.0 and 7.0.