

CLAIMS:

1. A working disinfectant solution for the sterilisation or disinfection of a medical device comprising an aqueous dilution of a disinfectant concentrate comprising:
 - a. peracetic acid and
 - b. At least one surfactantwherein said working disinfectant solution exhibits a dynamic surface tension less than about 50 mN/m at a surface age of 250ms, and less than about 46 mN/m at a surface age of 500ms, when measured by the Maximum Bubble Pressure method at 20-25°C.
2. A working disinfectant solution according to claim 1 wherein said working disinfectant solution exhibits a dynamic surface tension less than about 42.5 mN/m at a surface age of 250ms, and less than about 41.0 mN/m at a surface age of 500ms at 20-25°C, when measured by the Maximum Bubble Pressure method.
3. A working disinfectant solution according to claim 2 wherein the working disinfectant solution exhibits a dynamic surface tension less than about 42.5 mN/m at a surface age of 250ms, less than about 41 mN/m at a surface age of 500ms at 20-25°C and less than about 40mN/m at a surface age of 5000nm, when measured by the Maximum Bubble Pressure method.
4. A working disinfectant solution according to any one of claims 1 to 3 wherein the peracetic acid concentration is between 0.01% w/v to about 1.0% w/v (about 100ppm to about 10,000ppm) of the working disinfectant solution.
5. A working disinfectant solution according to any one of claim 1 to 3 wherein the peracetic acid concentration is between about 0.02%w/v to about 0.5%w/v (about 200ppm to about 5000ppm) of the working disinfectant solution.
6. A working disinfectant solution according to claim 5 wherein the concentration of the surfactant is about 0.05% w/v to about 0.5% w/v of the working disinfectant solution.

7. A working disinfectant solution according to any one of claims 1 to 3 wherein the disinfectant concentrate is provided as a single-part disinfectant concentrate.
8. A working disinfectant solution according to any one of claims 1 to 3 wherein the disinfectant concentrate is provided as a two-part disinfectant concentrate having a first part and a second part.
9. A working disinfectant solution according to claim 7 wherein the single-part disinfectant concentrate comprises between about 0.1% w/w and about 20% w/w peracetic acid of the disinfectant concentrate.
10. A working disinfectant solution according to claim 9 wherein the single-part disinfectant concentrate comprises between about 1% w/w and about 15% w/w peracetic acid of the disinfectant concentrate.
11. A working disinfectant solution according to claim 10 wherein the single-part disinfectant concentrate comprises between about 4% w/w and about 6% w/w peracetic acid of the disinfectant concentrate.
12. A working disinfectant solution according to any one of claims 1 to claim 11 wherein the at least one surfactant is selected from the group consisting of ionic, non-ionic, zwitterionic and amphoteric surfactants, and mixtures thereof.
13. A working disinfectant solution according to claim 12 wherein the surfactant is selected from the group consisting of block copolymers of polyethylene oxide and polypropylene oxide, fatty alcohol alkoxylates, long chain alkyl alkoxylates, N-alkyl pyrrolidones, branched short chain perfluoro surfactants, branched short chain polysiloxane functionalised polyglycols and combinations thereof.
14. A working disinfectant solution according to claim 7 wherein the single-part disinfectant concentrate comprises between about 0.05%w/w and about 15%w/w surfactant of the disinfectant concentrate.

15. A working disinfectant solution according to claim 14 wherein the single-part disinfectant concentrate comprises between about 0.1%w/w and about 10%w/w surfactant of the disinfectant concentrate.
16. A working disinfectant solution according to claim 15 wherein the single-part disinfectant concentrate comprises between about 1% and about 9% w/w surfactant of the disinfectant concentrate.
17. A working disinfectant solution according to claim 7 wherein said single-part disinfectant concentrate in addition comprises a corrosion inhibitor and/or hydrotrope.
18. A working disinfectant solution according to claim 17 wherein the corrosion inhibitor is selected from the group consisting of benzotriazole, alkali metal phosphates, alkali metal nitrate salts, alkali metal nitrite salts, 2-phosphonobutane-1,2,4-tricarboxylic acid salts, metal molybdate salts and combinations thereof.
19. A working disinfectant solution according to claim 17 or claim 18 wherein the single-part disinfectant concentrate comprises about 0.1%w/v to about 2%w/v corrosion inhibitor of the disinfectant concentrate.
20. A working disinfectant solution according to claim 17 wherein the hydrotrope is selected from the group consisting of potassium xylene sulfonate, potassium naphthalene sulfonate, potassium cumenesulfonic acid, potassium cresylphosphate, potassium octyliminodipropionate, sodium xylene sulfonate, sodium naphthalene sulfonate, sodium cumenesulfonic acid, sodium cresyl phosphate, sodium octyliminodipropionate, pentyl glucoside, hexyl glucoside, octyl glucoside, isooctyl glucoside, and mixtures thereof.
21. A working disinfectant solution according to claim 20 wherein the single-part disinfectant concentrate comprises about 0.1% to about 15% w/w hydrotrope of the disinfectant concentrate.

22. A working disinfectant solution according to claim 8 wherein the first part of the two-part disinfectant concentrate comprises an equilibrium solution of peracetic acid, hydrogen peroxide, acetic acid and water.
23. A working disinfectant solution according to claim 22 wherein the first part comprises between about 0.1% w/w and about 20% w/w peracetic acid of the first part.
24. A working disinfectant solution according to claim 23 wherein the first part comprises between about 1% w/w and about 15% w/w peracetic acid of the first part.
25. A working disinfectant solution according to claim 24 wherein the first part comprises between about 4% w/w and about 6% w/w peracetic acid of the first part.
26. A working disinfectant solution according to any one of claims 22 to 25 wherein the second part of the two-part disinfectant concentrate comprises the at least one surfactant.
27. A working disinfectant solution according to claim 26 wherein the surfactant is selected from the group consisting of ionic, non-ionic, zwitterionic and amphoteric surfactants, and mixtures thereof.
28. A working disinfectant solution according to claim 27 wherein the surfactant is selected from the group consisting of block copolymers of polyethylene oxide and polypropylene oxide, fatty alcohol alkoxylates, long chain alkyl alkoxylates, N-alkyl pyrrolidones, branched short chain perfluoro surfactants, branched short chain polysiloxane functionalised polyglycols and combinations thereof.
29. A working disinfectant solution according to any one of claims 26 to 28 wherein the surfactant comprises between about 0.05% w/w and about 15% w/w of the second part.
30. A working disinfectant solution according to claim 29 wherein the surfactant comprises between about 0.1% w/w and about 10% w/w of the second part.

31. A working disinfectant solution according to claim 30 wherein the surfactant comprises between about 1% and about 9% w/w of the second part.
32. A working disinfectant solution according to claim 26 wherein the second part of the two-part disinfectant concentrate in addition comprises a corrosion inhibitor and/or hydrotrope.
33. A working disinfectant solution according to claim 32 wherein the corrosion inhibitor is selected from the group consisting of benzotriazole, alkali metal phosphates, alkali metal nitrate salts, alkali metal nitrite salts, 2-phosphonobutane-1,2,4-tricarboxylic acid salts, metal molybdate salts and combinations thereof.
34. A working disinfectant solution according to claim 32 or 33 wherein the corrosion inhibitor is present in a concentration of about 0.1% w/v to about 2% w/v of the two-part disinfectant concentrate.
35. A working disinfectant solution according to claim 32 wherein the hydrotrope is selected from the group consisting of potassium xylene sulfonate, potassium naphthalene sulfonate, potassium cumenesulfonic acid, potassium cresylphosphate, potassium octyliminodipropionate, sodium xylene sulfonate, sodium naphthalene sulfonate, sodium cumenesulfonic acid, sodium cresylphosphate, sodium octyliminodipropionate, pentyl glucoside, hexyl glucoside, octyl glucoside, isooctyl glucoside, and mixtures thereof.
36. A working disinfectant solution according to claim 35 wherein the hydrotrope is present in an amount of about 0.1% to about 15% w/w of the second part of the two-part disinfectant concentrate.
37. A method of disinfecting or sterilizing a medical device, which method comprises contacting said medical device with a working disinfectant solution comprising an aqueous dilution of a disinfectant concentrate comprising:
- peracetic acid and
 - At least one surfactant

wherein said working disinfectant solution exhibits a dynamic surface tension less than about 50 mN/m at a surface age of 250ms, and less than about 46 mN/m at a surface age of 500ms when measured by the Maximum Bubble Pressure method at 20-25°C.

38. A method of disinfecting or sterilizing a medical device, which method comprises contacting said medical device with a working disinfectant solution according to any one of claims 1 to 36.