CLAIMS

1. A multilayer medical packaging film comprising:

a first layer, and

a chlorine dioxide-producing layer comprising a polymer composition and

a source of a plurality of chlorite ions;

wherein the chlorine dioxide-producing layer comprises less than 2% by weight of an energy-activated catalyst and comprises no acid-releasing compound, wherein the weight ratio of the energy-activated catalyst to the source of the plurality of chlorite ions is 1:20 or less, and

wherein the chlorine dioxide-producing layer produces a sufficient amount of chlorine dioxide when exposed to UV light and moisture to disinfect or sterilize a medical device packaged in the film.

2. The multilayer medical packaging film according to claim 1, wherein the source of the plurality of chlorite ions comprises a salt selected from the group consisting of sodium chlorite, potassium chlorite, and mixtures thereof.

3. The multilayer medical packaging film according to claim 1, wherein the first layer is an oxygen barrier layer; wherein the oxygen barrier layer comprises aluminum foil, metal coated polymer, metal oxide coated polymer, or an aromatic polyamide polymer.

4. The multilayer medical packaging film according to claim 1, wherein the first layer is an oxygen barrier layer; wherein the oxygen barrier layer comprises ethylene vinyl alcohol copolymer, polyvinylidene chloride copolymer, or an aliphatic polyamide.

5. The multilayer medical packaging film according to claim 1, wherein the chlorine-dioxide-producing layer is a coating having a thickness less than 15 μm.

6. The multilayer medical packaging film according to claim 5, wherein the polymer composition comprises at least one of polyethylene, ethylene vinyl acetate, ethylene alpha-olefins, or polypropylene.

7. The multilayer medical packaging film according to claim 5, wherein the source of the plurality of chlorite ions comprises a salt, and the salt is present in an amount within a range from 0.1 weight percent to 30 weight percent relative to the total weight of the chlorine dioxide-producing layer.

8. The multilayer medical packaging film according to claim 5, wherein the source of the plurality of chlorite ions comprises a salt, and the salt is present in an amount within a range from 10 weight percent to 20 weight percent relative to the total weight of the chlorine dioxide-producing layer.

9. The multilayer medical packaging film according to claim 1, wherein the chlorine dioxide-producing layer has a thickness of at least 25μm.

10. The multilayer medical packaging film according to claim 9, wherein the polymer composition comprises at least one of polyethylene, ethylene vinyl acetate, ethylene alpha-olefins, or polypropylene.

11. The multilayer medical packaging film according to claim 9, wherein the source of the plurality of chlorite ions comprises a salt, wherein the salt is present in an amount within a range from 0.1 weight percent to 25 weight percent relative to the total weight of the chlorine dioxide-producing layer.

12. The multilayer medical packaging film according to claim 9, wherein the source of the plurality of chlorite ions comprises a salt, wherein the salt is present in an amount within a range from 5 weight percent to 20 weight percent relative to the total weight of the chlorine dioxide-producing layer.

13. The multilayer medical packaging film according to claim 1, wherein the first layer is an outer layer proximate the chlorine dioxide-producing layer, wherein the outer layer comprises at least one of polyethylene or polypropylene.

14. The multilayer medical packaging film according to claim 1, wherein the first layer is an abuse-resistant layer, wherein the abuse-resistant layer is UV-light transparent.

15. The multilayer medical packaging film according to claim 1, wherein the film has a layer composition in the following sequence:

a layer of polyethylene;
the chlorine dioxide-producing layer;
a tie layer;
the first layer comprising an oxygen barrier layer;
a tie layer; and
an abuse layer,

wherein optional additional layers may be dispersed within said sequence.

16. A medical package comprising a sidewall comprising the multilayer medical packaging film according to claim 1, wherein the medical package comprises an interior volume defined by an inside surface of the sidewall.

17. The medical package according to claim 16, wherein the chlorine dioxide-producing layer is proximate the inside surface of the sidewall.

18. The medical package according to claim 16, wherein the chlorine dioxide-producing layer has a surface area smaller than the inside surface of the sidewall.

19. The multilayer medical packaging film of claim 1, wherein the chlorine dioxide-producing layer comprises no energy-activated catalyst.