CLAIMS

What is claimed is:

1. An antimicrobial releasing agent comprising:

i. a carrier material comprising an acidified silica gel, the carrier material having a pH of from 1.4 to 3.1 and being 50 to 90% by weight with respect to the total weight of the antimicrobial releasing agent;

ii. an active compound comprising a metal chlorite the active compound being 5 to 30% by weight with respect to the total weight of the antimicrobial releasing agent; and

iii. a trigger comprising a hygroscopic compound, the trigger being 2 to 20% by weight with respect to the total weight of the antimicrobial releasing agent.

2. The antimicrobial releasing agent of claim 1, wherein the carrier material has been treated with one or more acids and is a dry solid when part of the antimicrobial releasing agent.

3. The antimicrobial releasing agent of claim 1 or 2, wherein the carrier material is a hydrophilic material.

4. The antimicrobial releasing agent of any previous claim, wherein the metal chlorite is an alkali metal chlorite, an alkaline earth metal chlorite or a transition metal chlorite.

5. The antimicrobial releasing agent of claim 4, wherein the metal chlorite is one or more members selected from the group consisting of: sodium chlorite, potassium chlorite, barium chlorite, calcium chlorite and magnesium chlorite.

6. The antimicrobial releasing agent of any previous claim, wherein the trigger is one or more members selected from the group consisting of: sodium chloride, calcium chloride,

magnesium chloride, lithium chloride, magnesium nitrate, copper sulfate, aluminum sulfate, magnesium sulfate, calcium carbonate, phosphorus pentoxide and lithium bromide.

7. The antimicrobial releasing agent of any previous claim, wherein the metal chlorite is sodium chlorite and the trigger is calcium chloride.

8. A method of preparing an antimicrobial releasing agent, the method comprising the steps of:

i. providing a carrier material comprising an acidified silica gel; and

ii. mixing the carrier material with a trigger and an active compound,

wherein the trigger comprises a hygroscopic compound and the active compound comprises a metal chlorite, wherein the method generates the antimicrobial releasing agent.

9. The method of claim 8, wherein the carrier material is provided by treating the silica gel with a mineral acid followed by drying.

10. The method of claim 9, wherein the mineral acid is sulfuric acid, hydrochloric acid or nitric acid.

11. An entrained polymer comprising:

i. a base polymer;

ii. a channeling agent present in a range of from 1% to 20% by weight with respect to the total weight of the entrained polymer; and

iii. an antimicrobial releasing agent according to any of claims 1-7 or made according to the method of any of claims 8 to 10;

wherein the entrained polymer is a monolithic material.

12. The entrained polymer of claim 11 in a form of a film having a thickness of from 0.1 mm to 1.0 mm.

13. A package for inhibiting or preventing growth of microbes and/or for killing microbes in a closed container having a product located therein, the package comprising:

a container, comprising: a base;

a top opening;

one or more sidewalls extending in a vertical direction from the base to the top opening; an interior space formed by the one or more sidewalls; and

a cover to close and/or seal the opening;

the package further comprising at least one article made from the entrained polymer of claim 11 or 12 disposed within the container.

14. The package of claim 13, wherein

i. the article is an entrained polymer film that is secured to at least one sidewall, the at least one sidewall having a sidewall midline that is equidistant from the base and the opening, the film having a film midline that is equidistant from a top edge and a bottom edge of the film, wherein the film midline is located at least as high as the sidewall midline; or

ii. the article is disposed onto or integral with an underside of the cover.

15. The package of claim 13, wherein the article is a film and the cover is a lidding film, the film being heat staked to the underside of the lidding film.

16. Use of the package of any of claims 13 to 15 for storing fresh meat, fresh seafood, fresh poultry or fresh produce.