

What is claimed is:

1. A process of producing an antimicrobial powder, the process comprising the steps of combining a hygroscopic ingredient and a low molecular weight antimicrobial organic acid in an aqueous solution to obtain a liquid slurry composition and drying the liquid slurry composition to produce an antimicrobial powder.
2. The process of claim 1, wherein the hygroscopic ingredient and the low molecular weight antimicrobial organic acid are combined in a weight ratio of 1:100 to 100:100 w/w hygroscopic ingredient solids to organic acid solids.
3. The process of claim 1, wherein the antimicrobial powder comprises less than about 91% of a carrier.
4. The process of claim 1, wherein prior to the step of drying the liquid slurry composition, the process comprises the steps of adjusting the pH of the liquid slurry composition to between about 4.0 and 10.0, and heating the liquid slurry composition at a temperature between about 40°F and about 180°F, wherein during the heating step the temperature is maintained until the liquid slurry composition has a dissolved percent organic acid solids in the range of about 5% to 70%.
5. The process of claim 1, wherein the low molecular weight antimicrobial organic acid is a neutralized vinegar.

6. The process of claim 5, wherein the neutralized vinegar is selected from the group consisting of sodium acetate, magnesium acetate, potassium acetate, calcium acetate, and combinations thereof.

7. The process of claim 1, wherein the hygroscopic ingredient is selected from the group consisting of celery, beet, cabbage, cucumber, eggplant, mushroom, lettuce, squash, zucchini, mixed salad greens, carrot, artichoke, green beans, lima beans, broccoli, cauliflower, collard greens, corn, mustard, okra, onion, chinese pea pods, black eyed peas, green peas, potatoes, turnips, radishes, spinach, swiss chard, apple, apricot, banana, bilberry, blackberry, blackcurrant, blueberry, coconut, currant, cherry, cherimoya, clementine, cloudberry, date, damson, durian, elderberry, fig, feijoa, gooseberry, grape, grapefruit, huckleberry, jackfruit, jambul, jujube, kiwifruit, kumquat, lemon, lime, loquat, lychee, mango, melon, cantaloupe, honeydew, watermelon, rock melon, nectarine, orange, passionfruit, peach, pear, plum, plumcot, prune, pineapple, pomegranate, pomelo, purple mangosteen, raisin, raspberry, rambutan, redcurrant, satsuma, strawberry, tangerine, tomato, ugli fruit, and combinations thereof.

8. The process of claim 7, wherein the hygroscopic ingredient is cultured.

9. The process of claim 1, wherein the low molecular weight antimicrobial organic acid is sodium acetate and the hygroscopic ingredient is cultured celery juice.

10. The process of claim 1, further comprising a step of packaging the antimicrobial powder in a container.

11. An antimicrobial powder obtainable by the process according to claim 1, wherein the low molecular weight antimicrobial organic acid is present in the antimicrobial powder in both anhydrous and hydrate forms in a ratio of about 1:5 to 5:1 parts w/w anhydrous form to hydrate form.

12. An antimicrobial powder obtainable by the process according to claim 5, wherein the neutralized vinegar is sodium acetate and is present in the antimicrobial powder in a glassy-crystal phase of both anhydrous and tri-hydrate forms in a ratio of about 1:5 to 5:1 parts w/w anhydrous form to tri-hydrate form.

13. The antimicrobial powder of claim 11, wherein the antimicrobial powder comprises less than about 91% of a carrier.

14. The antimicrobial powder of claim 13, wherein the antimicrobial powder when stored at a temperature of about 20°C and about a 70% equilibrium relative humidity for at least 6 months has a water content of no more than about 5%.

15. An antimicrobial powder, comprising a low molecular weight antimicrobial organic acid and a hygroscopic ingredient, wherein the low molecular weight antimicrobial organic acid is present in both anhydrous and hydrate forms in a ratio of between 1:5 to 5:1 parts w/w anhydrous form to hydrate form.

16. The antimicrobial powder of claim 15, wherein the low molecular weight antimicrobial organic acid and the hygroscopic ingredient are present in a ratio of between about 1:100 and 100:100 parts w/w hygroscopic ingredient solids to organic acid solids.

17. The antimicrobial powder of claim 15, wherein the antimicrobial powder comprises less than about 91% of a carrier.

18. The antimicrobial powder of claim 17, wherein the antimicrobial powder when stored at a temperature of about 20°C and about a 70% equilibrium relative humidity for at least 6 months has a water content of no more than about 5%.

19. The antimicrobial powder of claim 15, wherein the low molecular weight antimicrobial organic acid is a neutralized vinegar selected from the group consisting of sodium acetate, magnesium acetate, potassium acetate, calcium acetate, and combinations thereof.

20. The antimicrobial powder of claim 19, wherein the neutralized vinegar is sodium acetate and is present in the antimicrobial powder in a glassy-crystal phase of both anhydrous and tri-hydrate forms in a ratio of between 1:5 to 5:1 parts w/w anhydrous form to tri-hydrate form.

21. The antimicrobial powder of claim 15, wherein the hygroscopic ingredient is selected from the group consisting of celery, beet, cabbage, cucumber, eggplant, mushroom, lettuce, squash, zucchini, mixed salad greens, carrot, artichoke, green beans, lima beans, broccoli, cauliflower, collard greens, corn, mustard, okra, onion, chinese pea pods, black eyed peas, green peas, potatoes, turnips, radishes, spinach, swiss chard, apple, apricot, banana, bilberry, blackberry, blackcurrant, blueberry, coconut, currant, cherry, cherimoya, clementine, cloudberry, date, damson, durian, elderberry, fig, feijoa, gooseberry, grape,

grapefruit, huckleberry, jackfruit, jambul, jujube, kiwifruit, kumquat, lemon, lime, loquat, lychee, mango, melon, cantaloupe, honeydew, watermelon, rock melon, nectarine, orange, passionfruit, peach, pear, plum, plumcot, prune, pineapple, pomegranate, pomelo, purple mangosteen, raisin, raspberry, rambutan, redcurrant, satsuma, strawberry, tangerine, tomato, ugli fruit, and combinations thereof.

22. The antimicrobial powder of claim 21, wherein the hygroscopic ingredient is cultured.

23. The antimicrobial powder of claim 19, wherein the neutralized vinegar is sodium acetate and the hygroscopic ingredient is cultured celery juice.

24. The antimicrobial powder of claim 15, wherein the antimicrobial powder is packaged in a container, and the packaged antimicrobial powder includes less than about 91% of a carrier.

25. A method of producing a foodstuff or beverage, comprising the steps of combining the antimicrobial powder of claim 15 with one or more edible or potable ingredients.

26. A foodstuff or beverage prepared by contacting one or more edible or potable ingredients with the antimicrobial powder of claim 15.

27. A foodstuff or beverage comprising an edible or potable ingredient and the antimicrobial powder of claim 15, wherein the antimicrobial powder is contained in an amount of between about 0.1% to about 5% by weight of the edible or potable ingredient.