CLAIMS

What is claimed is:

1. A method for preparation of a myceliated coffee product, comprising:
   a) providing prepared green coffee beans comprising the steps of:
      i. providing green coffee beans;
      ii. sterilizing the green coffee beans to provide prepared green coffee beans;
   b) providing a prepared fungal component;
   c) inoculating the prepared green coffee beans with the prepared fungal component; and
   d) culturing the prepared green coffee beans and prepared fungal component to allow myceliation to prepare the myceliated coffee product.

2. The method of claim 1, wherein the step of providing prepared green coffee beans further comprises reducing the amount of at least one undesirable taste component.

3. The method of claim 2, wherein the step of reducing the amount of at least one undesirable taste component comprises at least one aqueous wash of the green coffee beans.

4. The method of claim 3, wherein the step of reducing the amount of at least one undesirable taste component comprises two aqueous washes of the green coffee beans.

5. The method of claim 3, wherein the undesirable taste component is chlorogenic acid.

6. The method of claim 1, wherein the step of providing prepared green coffee beans further comprises hydrating the green coffee beans.

7. The method of claim 6, wherein the green coffee beans are hydrated to about a 60% moisture level or to about a 30% moisture level.

8. The method of claim 1, wherein the prepared fungal component is selected from the group consisting of *G. lucidum, H. erinaceus, T. versicolor, L. edodes, T. matsutake, F. velutipes, A. blazei, G. frondosa, P. nameko, L. officinalis, M. hortensis, M.*

angusticeps, A. auricula, T. fuciformis, I. obliquus, F. fomentarius, L. sulfureus, C. sinensis, T. melanosporum, and combinations thereof.

9. The method of claim 8, wherein the prepared fungal component is *G. lucidum.*

10. The method of claim 9, wherein the prepared fungal component is *G. lucidum* strain 806.

11. The method of claim 8, wherein the prepared fungal component is *C. sinensis.*

12. The method of claim 8, wherein the prepared fungal component is *T. melanosporum*

13. The method of claim 1, wherein the prepared fungal component is prepared by a method comprising screening a number of strains of fungi and selecting a strain having an enhanced ability to tolerate, grow on, metabolize or utilize green coffee beans.

14. The method of claim 13, wherein the selected strain is capable of enhanced removal of one or more undesirable taste components from the green coffee beans.

15. The method of claim 14, wherein the selected strain is capable of enhanced removal of caffeine from the green coffee beans.

16. The method of claim 1, wherein the prepared fungal component is prepared by a method comprising maintaining a strain of fungi on an undefined media comprising an aqueous green coffee bean extract and an energy source.

17. The method of claim 16, wherein the maintenance of the strain of fungi causes adaptation of the fungi resulting in enhancement of the fungi's ability to tolerate, grow on, metabolize or utilize green coffee beans.

18. The method of claim 1, wherein the culturing step is a fermentation step carried out under semi-anaerobic conditions.

19. The method of claim 1, wherein the culturing step is carried out for about 7 days.

20. The method of claim 1, wherein the myceliated coffee product has a reduced level of at least one undesirable taste component and an increased level of at least one myceliation product, relative to the green coffee beans.

21. The method of claim 20, wherein the undesirable taste component is chlorogenic acid.

22. The method of claim 20, wherein the myceliation product is beta glucans or polysaccharides.

23. The method of claim 1, wherein the green coffee beans are from *Coffea arabica*.

24. The method of claim 1, wherein the green coffee beans are from *Coffea robusta*.

25. A myceliated coffee product prepared by the method of claim 1.

26. A method for reduction of the levels of undesirable taste components and for the increase of levels of myceliation products in green coffee beans, comprising:
    a) providing prepared green coffee beans comprising the steps of:
        i. providing green coffee beans;
        ii. sterilizing the green coffee beans to provide prepared green coffee beans;
    b) providing a prepared fungal component;
    c) inoculating the prepared green coffee beans with the prepared fungal component; and
    d) culturing the prepared green coffee beans and prepared fungal component to allow myceliation to prepare the green coffee beans having reduced levels of at least one undesirable taste component and increased levels of at least one myceliation product.

27. A green coffee bean prepared by the method of claim 26.

28. A myceliated coffee product having reduced levels of undesirable taste components and increased levels of myceliation products relative to green coffee beans.

29. The myceliated coffee product of claim 28, wherein the undesirable taste component is chlorogenic acid.

30. The myceliated coffee product of claim 28, wherein the myceliation product is beta glucans or polysaccharides.

CLAIMS

What is claimed is:

1. A method for preparation of a myceliated coffee product, comprising:
   a) providing prepared green coffee beans comprising the steps of:
      i. providing green coffee beans;
      ii. sterilizing the green coffee beans to provide prepared green coffee beans;
   b) providing a prepared fungal component as a submerged fungal liquid tissue culture;
   c) inoculating the prepared green coffee beans with the prepared fungal component; and
   d) culturing the prepared green coffee beans and prepared fungal component to allow myceliation to prepare the myceliated coffee product, wherein the myceliated coffee beans are capable of being used to prepare a palatable coffee beverage for human consumption.

2. The method of claim 1, wherein the step of providing prepared green coffee beans further comprises reducing the amount of at least one undesirable taste component.

3. The method of claim 2, wherein the step of reducing the amount of at least one undesirable taste component comprises at least one aqueous wash of the green coffee beans.

4. The method of claim 3, wherein the undesirable taste component is chlorogenic acid.

5. The method of claim 1, wherein the step of providing prepared green coffee beans further comprises hydrating the green coffee beans.

6. The method of claim 5, wherein the green coffee beans are hydrated to about a 60% moisture level or to about a 30% moisture level.

7. The method of claim 1, wherein the prepared fungal component is selected from the group consisting of *G. lucidum, H. erinaceus, T. versicolor, L. edodes, T. matsutake, F. velutipes, A. blazei, G. frondosa, P. nameko, L. officinalis, M. hortensis, M. angusticeps, A. auricula, T. fuciformis, I. obliquus, F. fomentarius, L. sulfureus, C. sinensis, T. melanosporum,* and combinations thereof.

8. The method of claim 7, wherein the prepared fungal component is *G. lucidum.*

9. The method of claim 8, wherein the prepared fungal component is *G. lucidum* strain 806.

10. The method of claim 7, wherein the prepared fungal component is *C. sinensis.*

11. The method of claim 1, wherein the prepared fungal component is prepared by a method comprising maintaining a strain of fungi on an undefined media comprising an aqueous green coffee bean extract and an energy source.

12. The method of claim 1, wherein the culturing step is carried out for about 7 days.

13. The method of claim 1, wherein the green coffee beans are from *Coffea arabica.*

14. The method of claim 1, wherein the green coffee beans are from *Coffea robusta.*

15. A myceliated coffee product prepared by the method of claim 1.