

Claims

1. An alcoholic beverage comprising esters and having an ethanol content of  $\leq$  10% by volume, wherein the esters comprise at least one of: ethyl 2,4-hexadienoate  
5 and ethyl decanoate; and wherein the alcoholic beverage is an undistilled alcoholic beverage and is derived from spent coffee grounds.
2. The beverage according to claim 1, wherein the beverage further comprises at least one of: ethyl (*E*)-4-hexenoate; isoamyl acetate; 3-methylbutyl octanoate, ethyl  
10 nonanoate, ethyl 9-decenoate, phenethyl acetate.
3. The beverage according to claim 1 or 2, wherein the beverage is a fermented beverage.
- 15 4. The beverage according to any preceding claim, wherein the beverage has an ethanol content of 0.5-8% by volume.
5. The beverage according to any preceding claim, wherein the beverage has a Brix of 5-26.  
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6. The beverage according to any preceding claim, wherein the beverage has a pH of 3.5-6.5.
7. A method of forming an undistilled alcoholic beverage derived from spent coffee  
25 grounds, the method comprising:
  - hydrolysing a liquid mixture of spent coffee grounds to obtain a hydrolysed liquid mixture;
  - adding yeast to the hydrolysed liquid mixture; and
  - fermenting the hydrolysed liquid mixture comprising yeast at a pre-  
30 determined temperature for a pre-determined period of time to form the beverage.

8. The method according to claim 7, wherein the alcoholic beverage formed from the method comprises esters, the esters comprising at least one ester selected from: ethyl 2,4-hexadienoate and ethyl decanoate.

5 9. The method according to claim 7 or 8, wherein the hydrolysing comprises acid hydrolysing the liquid mixture with a food-grade acid.

10. The method according to claim 9, wherein the food-grade acid is: citric acid, malic acid, lactic acid, or a combination thereof.

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11. The method according to claim 9 or 10, wherein the hydrolysing comprises enzyme hydrolysing following the acid hydrolysing.

12. The method according to claims 11, wherein the enzyme comprises  
15 carbohydrase.

13. The method according to any of claims 7 to 12, wherein the yeast is *Saccharomyces* yeast, non-*Saccharomyces* yeast, or a combination thereof.

20 14. The method according to any of claims 7 to 13, wherein the yeast is *Kluyveromyces* (*K.*) *thermotolerans*, *Saccharomyces* (*S.*) *cerevisiae*, *Torulaspora* (*T.*) *delbrueckii*, *Pichia* (*P.*) *kluyveri*, *Lachancea* (*L.*) *thermotolerans*, or a combination thereof.

25 15. The method according to any of claims 7 to 14, wherein the adding comprises adding yeast to obtain an initial yeast count of 5-7 log CFU yeast/mL.

16. The method according to any of claims 7 to 15, wherein the pre-determined period of time is 2-29 days.

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17. The method according to any of claims 7 to 16, wherein the pre-determined temperature is 15-37°C.

18. The method according to any of claims 7 to 17, further comprising adding sugar to the hydrolysed liquid mixture prior to the adding yeast to the hydrolysed liquid mixture.

5 19. The method according to claim 18, wherein the adding sugar to the hydrolysed liquid mixture comprises adding sugar such that the hydrolysed liquid mixture has a Brix of 5-26 °Bx.

20. The method according to any of claims 7 to 19, further comprising heating the  
10 hydrolysed liquid mixture prior to the adding yeast to the hydrolysed liquid mixture.

21. The method according to any of claims 7 to 20, further comprising adding yeast extract prior to the adding yeast to the hydrolysed liquid mixture.

15 22. The method according to any of claims 7 to 21, further comprising adjusting pH of the hydrolysed liquid mixture prior to the adding yeast to the hydrolysed liquid mixture.

23. The method according to any of claims 7 to 22, wherein the adding yeast further  
20 comprises adding lactic acid bacteria.

24. The method according to claim 23, wherein the adding comprises adding yeast to obtain an initial yeast count of 5 log CFU yeast/mL and adding lactic acid bacteria to obtain an initial lactic acid bacteria count of 4-7 log CFU/mL.

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25. The method according to claim 23 or 24, wherein the lactic acid bacteria is *Oenococcus (O.) oeni*, *Lactobacillus (L.) plantarum*, or a combination thereof.

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