

CLAIMS

1. A method for preparing a personal care product (302), comprising steps of:
obtaining a wood vinegar (203, 301); and
5 adding the wood vinegar (203, 301) into the personal care product (302) so that
the wood vinegar (203, 301) makes up 18–22% of the total weight or volume of the
personal care product,
characterized in that the wood vinegar (203, 301) is obtained by pyrolysis (100)
of *Rhizophora apiculata* (101), wherein the wood vinegar (203, 301) inactivates or
10 kills microorganisms that cause skin and urinary tract infections but retains a
substantial amount of beneficial microorganisms.
2. The method for preparing a personal care product (302) according to claim
1, wherein the wood vinegar (203, 301) is obtained without having guaiacol.
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3. The method for preparing a personal care product (302) according to claim
1, wherein the substantial amount of beneficial microorganisms helps defend
against attack by pathogenic microorganisms.
- 20 4. The method for preparing a personal care product (302) according to claim
1 or 3, wherein the beneficial microorganisms retained are lactic acid bacteria.
5. The method for preparing a personal care product (302) according to claim
1, wherein the wood vinegar (203, 301) makes up 20% of the total weight or volume
25 of the personal care product (302).
6. The method for preparing a personal care product (302) according to claim
1, wherein a freshly extracted wood vinegar (203) is left to age for at least three
months before being purified and added into the personal care product (302).
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7. The method for preparing a personal care product (302) according to claim
6, wherein the wood vinegar (301) is purified by filtration or distillation to remove
impurities.

8. The method for preparing a personal care product (302) according to claim 1, wherein the parts of *Rhizophora apiculata* (101) used for pyrolysis (100) include woods and leaves (102) from barks, stems, branches, roots or any combination thereof.

9. The method for preparing a personal care product (302) according to claim 1, wherein the wood vinegar (203, 301) contains syringol, benzoic acid, maltol, catechol and vanillin.

10. The method for preparing a personal care product (302) according to claim 1, wherein the personal care product (302) includes, for example, feminine intimate wash, shower gel, soap, facial and cosmetic products, perfume, body lotion, hair shampoo and conditioner, hair grooming products, ointment, antiseptics, and other skin and oral care products.

11. The method for preparing a personal care product (302) according to claim 1, wherein an antidegradation stabilizer is added into the personal care product (302).

12. The method for preparing a personal care product (302) according to claim 1, wherein a surfactant or a detergent to reduce surface tension of liquid–liquid or liquid–solid interfaces is added into the personal care product (302).

13. The method for preparing a personal care product (302) according to claim 1, wherein a gelling agent is added into the personal care product (302).

14. The method for preparing a personal care product (302) according to claim 1, wherein an emulsifier is added into the personal care product (302).

15. A personal care product (302), comprising:

a wood vinegar (203, 301) added into the personal care product (302) so that the wood vinegar (203, 301) makes up 18–22% of the total weight or volume of the personal care product (302),

characterized in that the wood vinegar (203, 301) is obtained by pyrolysis (100)
5 of *Rhizophora apiculata* (101), wherein the wood vinegar (203, 301) inactivates or kills microorganisms that cause skin and urinary tract infections but retains a substantial amount of beneficial microorganisms.