

Claims

1. A method of repelling an arthropod pest, the method comprising contacting a subject or article with a composition comprising massoia lactone compound, a massoia lactone-
5 like compound or mixture thereof.
2. The method according to claim 1, wherein the pest is selected from the group comprising ants, cockroaches, fleas, flies, mites, mosquitoes, spiders, ticks, termites and wasps.
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3. The method according to claim 1 or 2, wherein the pest is an insect, such as a mosquito or fly.
4. The method according to claim 3, wherein the mosquito is selected from the group
15 comprising the genus *Aedes*, the genus *Culex* and the genus *Anopheles*.
5. The method according to claim 4, wherein the mosquito is selected from the group comprising the species *Aedes aegypti*, the species *Culex quinquefasciatus*, the species *Anopheles sinensis* and the species *Anopheles gambiae*.
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6. The method according to any one of claims 1 to 5, wherein the subject is a human, or animal such as a household pet, livestock animal or bird.
7. The method according to any one of claims 1 to 6, wherein the article is comprised of
25 fabric or other solid substrate.
8. The method according to any one of claims 1 to 7, wherein the article is selected from the group comprising items of furniture, items of clothing, such as bracelets, hairbands, waistbands, shoe laces, leather belts, caps and similar items, candles, air diffusers,
30 tablets, cosmetics, a household window, door frame, wall and house paint.
9. The method according to any one of claims 1 to 8, wherein the composition is formulated for topical application.

10. The method according to claim 9, wherein the composition is selected from the group comprising a foam, gel, cream, lotion, oil, spray, patch, suspension, emulsion, microemulsion and emulsifiable concentrate.
- 5 11. The method according to any one of claims 1 to 10, wherein the composition is formulated as an aerosol or surface spray.
12. The method according to any one of claims 1 to 11, wherein the composition comprises massoia lactone, a massoia lactone-like compound or mixture thereof in the
10 range of 0.001% to 15% (v/v).
13. The method according to any one of claims 1 to 12, wherein the massoia lactone-like compound is selected from the group comprising: 5,6-dihydro-6-heptyl-2H-pyran-2-one, 5,6-dihydro-6-nonyl-2H-pyran-2-one, 6-Amy- α -pyrone, 4,6-Dimethyl- α -pyrone, 2,6-
15 Dimethyl- γ -pyrone, 2H-Pyran-2-one, 4-Hydroxy-6-methyl-2-pyrone, 4-Methoxy-6-methyl-2H-pyran-2-one, δ -Valerolactone, γ -Hexalactone, γ -Octalactone, γ -Nonanoic lactone, δ -Nonalactone, δ -Decalactone, Eugenol, 2-Undecanone, ethyl pyruvate, and/or cyclopentanone.
- 20 14. A pest-repellent composition for use in repelling arthropod pests, comprising massoia lactone compound, a massoia lactone-like compound or mixture thereof.
15. The composition according to claim 14, wherein the massoia lactone-like compound is selected from the group comprising: 5,6-dihydro-6-heptyl-2H-pyran-2-one, 5,6-
25 dihydro-6-nonyl-2H-pyran-2-one, 6-Amy- α -pyrone, 4,6-Dimethyl- α -pyrone, 2,6-Dimethyl- γ -pyrone, 2H-Pyran-2-one, 4-Hydroxy-6-methyl-2-pyrone, 4-Methoxy-6-methyl-2H-pyran-2-one, δ -Valerolactone, γ -Hexalactone, γ -Octalactone, γ -Nonanoic lactone, δ -Nonalactone, δ -Decalactone, Eugenol, 2-Undecanone, ethyl pyruvate, and/or cyclopentanone.
- 30 16. The composition according to claim 14 or 15, wherein the pest is selected from the group comprising ants, cockroaches, fleas, flies, mites, mosquitos, spiders, ticks, termites and wasps.

17. The composition according to any one of claims 14 to 16, wherein the amount of massoia lactone, a massoia lactone-like compound or mixture thereof is in the range of 0.001% to 15% (v/v).
- 5 18. The composition according to any one of claims 14 to 17, wherein the composition is a foam, gel, cream, lotion, spray, patch, suspension, emulsion, microemulsion and emulsifiable concentrate.
- 10 19. The composition according to any one of claims 14 to 18, wherein the composition is formulated for topical application.
20. The composition according to any one of claims 14 to 18, wherein the composition is formulated as an aerosol or surface spray.
- 15 21. Use of massoia lactone, a massoia lactone-like compound or mixture thereof, for repelling an arthropod pest.
- 20 22. The use according to claim 21, wherein the arthropod pest is selected from the group comprising ants, cockroaches, fleas, flies, mites, mosquitoes, spiders, ticks, termites and wasps.
23. The use according to claim 21 or 22, wherein the amount of massoia lactone, a massoia lactone-like compound or mixture thereof is in the range of 0.001% to 15% (v/v).
- 25 24. Use of massoia lactone, a massoia lactone-like compound or mixture thereof, in the manufacture of an arthropod pest repellent.
- 30 25. The use according to claim 24, wherein the arthropod pest is selected from the group comprising ants, cockroaches, fleas, flies, mites, mosquitoes, spiders, ticks, termites and wasps.