containing composition"), as well as a flying-insect pest repellent fragrance-containing composition and a flying-insect pest repellent product that exhibits the excellent flying-insect pest repellent effect in use by suppressing the decomposition and deterioration of the flying-insect pest repellent fragrance during storage as the product.

SOLUTION TO PROBLEM

[0014]

The present disclosure has been made based on findings that the following configurations exhibit excellent effects in achieving the above object.

[0014a]

In an aspect, there is provided an absorption promotor for causing a flying-insect pest repellent fragrance-containing composition to be absorbed into an elastomer molded body having a hardness of 60 degrees or less, comprising

d-limonene and/or 1,8-cineole as an active ingredient,

wherein the absorption promotor is blended in a range of 10 to 65% by mass in the flying-insect pest repellent fragrance-containing composition.

[0014b]

In anther aspect, there is provided a flying-insect pest repellent fragrance-containing composition, comprising:

a component (a) and a component (b); and d-limonene and/or

1,8-cineole,

the component (a) being an acetate compound as a single substance or a mixture, represented by general formula (I) below,

CH_3-COO-R1 ··· (I)

wherein R1 is an alcohol residue having 6 to 12 carbons,

the component (b) being a monoterpene-based alcohol and/or an aromatic alcohol having 10 carbon atoms,

wherein the blending amount of the d-limonene and/or 1,8-cineole is in a range of 10 to 65% by mass.

[0014c]

In another aspect, there is provided a flying-insect pest repellent product, comprising a flying-insect pest repellent fragrance-containing composition in which the absorption promotor as defineda above is blended, the flying-insect pest repellent fragrance-containing composition being held on an elastomer molded body while being embedded in interstices of a molecular structure of the elastomer molded body, the elastomer molded body having a hardness of 60 degrees or less.

[0015]

(1) In an ~~aspect~~example, there is provided an absorption promotor for causing a flying-insect pest repellent fragrance-containing composition to be absorbed into an elastomer molded body having a hardness of 60 degrees or less, including

d-limonene and/or 1,8-cineole as an active ingredient.

(2) The absorption promotor of (1), wherein the elastomer

molded body is a silicon rubber molded body.

(3) The absorption promotor of (1), wherein the elastomer molded body is a thermoplastic elastomer molded body.

(4) The absorption promotor of (3), wherein the thermoplastic elastomer molded body is a styrene-based thermoplastic elastomer molded body or an olefin-based

linalool, thymol, eugenol, and p-menthane-3,8-diol.

(13) The absorption promotor of any one of (7) to (12), wherein the flying-insect pest repellent fragrance-containing composition further contains a glycol and/or a glycol ether having a vapor pressure of 0.2 to 20 Pa at 20°C, as a repellant effect persistence component when a flying-insect pest repellent fragrance is volatilized.

(14) The absorption promotor of (13), wherein the glycol and/or the glycol ether is at least one selected from the group consisting of benzyl glycol, propylene glycol, dipropylene glycol, tripropylene glycol, 1,3-butylene glycol, hexylene glycol, diethylene glycol monobutyl ether, dipropylene glycol monobutyl ether, and tripropylene glycol monomethyl ether.

(15) In another ~~aspect~~example, there is provided a flying-insect pest repellent fragrance-containing composition, comprising: a component (a) and a component (b); and d-limonene and/or 1,8-cineole,

the component (a) being an acetate compound as a single substance or a mixture, represented by general formula (I) below,

CH_3-COO-R1 ··· (I)

wherein R1 is an alcohol residue having 6 to 12 carbon atoms,

the component (b) being a monoterpene-based alcohol and/or an aromatic alcohol having 10 carbon atoms.

(16) The flying-insect pest repellent fragrance-

containing composition of (15), wherein

the component (a) is at least one selected from the acetate compound and an allyl ester compound as a single substance or a mixture, represented by general formula (II) below,

$$R2\text{-}CH_2\text{-}COO\text{-}CH_2\text{-}CH{=}CH_2 \quad \cdots \quad (II)$$

wherein R2 is an alkyl, alkoxy, cycloalkyl, cycloalkoxy, or phenoxy group having 4 to 7 carbon atoms.

(17) In another ~~aspect~~example, there is provided a flying-insect pest repellent product, comprising a flying-insect pest repellent fragrance-containing composition in which the absorption promotor as defined above is blended, the flying-insect pest repellent fragrance-containing composition being held on an elastomer molded body while being embedded in interstices of a molecular structure of the elastomer molded body, the elastomer molded body having a hardness of 60 degrees or less.

(18) The flying-insect pest repellent product of (17), wherein the elastomer molded body having the hardness of 60 degrees or less is configured such that a flying-insect pest repellent fragrance is volatilized from a surface of the elastomer molded body at a rate (average volatilization amount per unit surface area) of 0.04 to 0.9 $mg/cm^2 \cdot h$.

(19) The flying-insect pest repellent product of (17) or (18), wherein the elastomer molded body having the hardness of 60 degrees or less is a ring-shaped elastomer molded body that includes a stretchable ring-shaped portion which a part of a

CLAIMS

1. An absorption promotor for causing a flying-insect pest repellent fragrance-containing composition to be absorbed into an elastomer molded body having a hardness of 60 degrees or less, comprising

d-limonene and/or 1,8-cineole as an active ingredient, wherein the absorption promotor is blended in a range of 10 to 65% by mass in the flying-insect pest repellent fragrance-containing composition.

2. The absorption promotor of claim 1, wherein the elastomer molded body is a silicon rubber molded body.

3. The absorption promotor of claim 1, wherein the elastomer molded body is a thermoplastic elastomer molded body.

4. The absorption promotor of claim 3, wherein the thermoplastic elastomer molded body is a styrene-based thermoplastic elastomer molded body or an olefin-based thermoplastic elastomer molded body.

~~5. The absorption promotor of any one of claims 1 to 4, wherein the absorption promotor is blended in a range of 2.0 to 65% by mass in the flying-insect pest repellent fragrance-~~

~~containing composition.~~

5~~6~~. The absorption promotor of any one of claims 1 to 4~~5~~, wherein the absorption promotor is blended in a range of 10 to 45% by mass in the flying-insect pest repellent fragrance-containing composition.

6~~7~~. The absorption promotor of any one of claims 1 to 5~~6~~, wherein the flying-insect pest repellent fragrance-containing composition contains the following component (a) and component (b),

the component (a) being an acetate compound as a single substance or a mixture, represented by general formula (I) below,

$CH_3-COO-R1$ ··· (I)

wherein R1 is an alcohol residue having 6 to 12 carbons,

the component (b) being a monoterpene-based alcohol and/or an aromatic alcohol having 10 carbon atoms.

7~~8~~. The absorption promotor of claim 6~~7~~, wherein the component (a) is at least one selected from the acetate compound and an allyl ester compound as a single substance or a mixture, represented by general formula (II) below,

$R2-CH_2-COO-CH_2-CH=CH_2$ ··· (II)

wherein R2 is an alkyl, alkoxy, cycloalkyl, cycloalkoxy, or phenoxy group having 4 to 7 carbon atoms.

8~~9~~. The absorption promotor of claim 6~~7~~ or 7~~8~~, wherein a blending ratio of the component (a) to the component (b) in the flying-insect pest repellent fragrance-containing composition is set in a range of 0.2 to 2.0 times.

9~~10~~. The absorption promotor of any one of claims 6~~7~~ to 8~~9~~, wherein the acetate compound is at least one selected from the group consisting of: p-tert-butylcyclohexyl acetate, o-tert-butylcyclohexyl acetate, p-tert-pentylcyclohexyl acetate, tricyclodecenyl acetate, benzyl acetate, phenylethyl acetate, styralyl acetate, anisyl acetate, menthyl acetate, cinnamyl acetate, terpinyl acetate, dihydroterpinyl acetate, linalyl acetate, ethyl linalyl acetate, citronellyl acetate, geranyl acetate, neryl acetate, bornyl acetate, and isobornyl acetate.

10~~11~~. The absorption promotor of any one of claims 7~~8~~ to 9~~10~~, wherein the allyl ester compound is at least one selected from the group consisting of allyl hexanoate, allyl heptanoate, allyl octanoate, allyl n-amyl oxyacetate, allyl cyclohexyl acetate, allyl cyclohexyl oxyacetate, and allyl phenoxyacetate.

11~~12~~. The absorption promotor of any one of claims 6~~7~~ to 10~~11~~, wherein the monoterpene-based alcohol and/or the aromatic alcohol having 10 carbon atoms is at least one selected from the

group consisting of terpineol, geraniol, dihydromyrcenol, borneol, menthol, citronellol, nerol, linalool, ethyl linalool, thymol, eugenol, and p-menthane-3,8-diol.

12~~13~~. The absorption promotor of any one of claims 6~~7~~ to 11~~12~~, wherein the flying-insect pest repellent fragrance-containing composition further contains a glycol and/or a glycol ether having a vapor pressure of 0.2 to 20 Pa at 20°C, as a repellant effect persistence component when a flying-insect pest repellent fragrance is volatilized.

13~~14~~. The absorption promotor of claim 12~~13~~, wherein the glycol and/or the glycol ether is at least one selected from the group consisting of benzyl glycol, propylene glycol, dipropylene glycol, tripropylene glycol, 1,3-butylene glycol, hexylene glycol, diethylene glycol monobutyl ether, dipropylene glycol monobutyl ether, and tripropylene glycol monomethyl ether.

14~~15~~. A flying-insect pest repellent fragrance-containing composition, comprising: a component (a) and a component (b); and d-limonene and/or 1,8-cineole,

the component (a) being an acetate compound as a single substance or a mixture, represented by general formula (I) below,

CH_3-COO-R1 ··· (I)

wherein R1 is an alcohol residue having 6 to 12 carbons,

the component (b) being a monoterpene-based alcohol and/or an aromatic alcohol having 10 carbon atoms, wherein the blending amount of the d-limonene and/or 1,8-cineole is in a range of 10 to 65% by mass.

15~~16~~. The flying-insect pest repellent fragrance-containing composition of claim 14~~15~~, wherein

the component (a) is at least one selected from the acetate compound and an allyl ester compound as a single substance or a mixture, represented by general formula (II) below,

$$R2\text{-}CH_2\text{-}COO\text{-}CH_2\text{-}CH{=}CH_2 \quad \cdots \quad (II)$$

wherein R2 is an alkyl, alkoxy, cycloalkyl, cycloalkoxy, or phenoxy group having 4 to 7 carbon atoms.

16~~17~~. A flying-insect pest repellent product, comprising a flying-insect pest repellent fragrance-containing composition in which the absorption promotor according to any one of claims 1 to 13~~14~~ is blended, the flying-insect pest repellent fragrance-containing composition being held on an elastomer molded body while being embedded in interstices of a molecular structure of the elastomer molded body, the elastomer molded body having a hardness of 60 degrees or less.

17~~18~~. The flying-insect pest repellent product of claim

16~~17~~, wherein the elastomer molded body having the hardness of 60 degrees or less is configured such that a flying-insect pest repellent fragrance is volatilized from a surface of the elastomer molded body at a rate (average volatilization amount per unit surface area) of 0.04 to 0.9 mg/cm^2·h.

18~~19~~. The flying-insect pest repellent product of claim 16~~17~~ or 17~~18~~, wherein the elastomer molded body having the hardness of 60 degrees or less is a ring-shaped elastomer molded body that includes a stretchable ring-shaped portion which a part of a human body or an object is inserted into or attached to, or a band-shaped elastomer molded body which is capable of forming a stretchable ring-shaped portion by connecting or proximating ends and which a part of a human body or an object is inserted into or attached to.

19~~20~~. The flying-insect pest repellent product of claim 18~~19~~, wherein the flying-insect pest repellent fragrance is volatilized over 5 to 15 hours while the part of the human body or object is inserted into or attached to the ring-shaped portion.