

DESCRIPTION

TITLE OF INVENTION: ORAL COMPOSITION, AND METHOD FOR
SUPPRESSING BITTERNESS DERIVED FROM ERGOTHIONEINE AND OFF-
5 FLAVOR DERIVED FROM GLUCOSAMINE COMPOUND

TECHNICAL FIELD

[0001]

The present invention relates to an oral composition
10 containing ergothioneine or a salt thereof and a
glucosamine-class compound. The present invention also
relates to a method for suppressing bitterness derived from
ergothioneine and off-taste derived from a glucosamine-
class compound.

15

BACKGROUND ART

[0002]

Ergothioneine is one of the hydrophilic sulfur-
containing amino acids and is known to have various
20 physiological activities including an antioxidant ability.
For example, Patent Literature 1 reports physiological
activities of ergothioneine, such as an action that
promotes the immune response activating cytokine
production.

25 Ergothioneine, which has various physiological
activities, has been drawing attention recently for its use
for foods, cosmetics, and pharmaceutical products.

[0003]

Glucosamine is an amino sugar in which the hydroxy
30 group at position 2 of glucose is replaced with an amino
group. Glucosamine is a component of cartilage, which is a
tissue that absorbs shock at joints, and is used in health
foods and the like to improve symptoms of osteoarthritis
and the like.

35

CITATION LIST

- Patent Literature

[0004]

Patent Literature 1: JP 2017-218431 A

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SUMMARY OF INVENTION

- Technical Problem

[0005]

As described above, since ergothioneine has useful
10 physiological activities, foods such as supplements
containing ergothioneine or a salt thereof are useful for
maintaining or promoting health. However, ergothioneine or
a salt thereof has a unique aroma and taste, particularly a
bitterness (bitter taste) that stings the tongue, so that
15 there is room for improvement in providing an oral
composition containing ergothioneine or a salt thereof.

Glucosamine has a characteristic off-taste,
specifically, a characteristic off-taste involving
saltiness, sweetness that lingers on the tongue, and harsh
20 taste. The characteristic off-taste sometimes causes a
problem when glucosamine is added to an oral composition.
[0006]

The present invention aims to provide an oral
composition containing ergothioneine or a salt thereof and
25 a glucosamine-class compound, in which the bitterness
derived from the ergothioneine or a salt thereof and the
off-taste derived from the glucosamine-class compound are
suppressed. The present invention also aims to provide a
method for suppressing the bitterness derived from
30 ergothioneine or a salt thereof and the off-taste derived
from a glucosamine-class compound.

- Solution to Problem

[0007]

35 As a result of extensive studies to solve the above

problems, the present inventors found that when ergothioneine or a salt thereof and a glucosamine-class compound are combined at a specific ratio, the bitterness derived from the ergothioneine or a salt thereof and the off-taste (the characteristic off-taste involving saltiness, sweetness that lingers on the tongue, and harsh taste) derived from the glucosamine-class compound can be suppressed.

[0008]

10 The present invention encompasses the following composition and the like.

 (1) An oral composition containing a component (A) and a component (B) defined as follows:

 (A) ergothioneine or a salt thereof; and (B)
15 glucosamine-class compound,

 wherein a (B)/(A) weight ratio of the component (B) in terms of glucosamine to the component (A) in terms of ergothioneine is 0.2 to 150.

 (2) The composition according to (1), wherein the
20 glucosamine-class compound is at least one selected from the group consisting of glucosamine, a glucosamine derivative, and salts thereof.

 (3) The composition according to (2), wherein the
25 glucosamine derivative is a compound in which a hydrogen atom of at least one hydroxy group and/or a hydrogen atom of an amino group of glucosamine is replaced with a C1-C10 acyl group and/or a C1-C10 alkyl group.

 (4) The composition according to any one of (1) to (3), wherein the composition is a food or beverage.

30 (5) A method for suppressing bitterness derived from ergothioneine or a salt thereof and off-taste derived from a glucosamine-class compound in an oral composition containing a component (A) and a component (B) defined as follows: (A) ergothioneine or a salt thereof; and (B)
35 glucosamine-class compound, the method including:

adjusting a (B)/(A) weight ratio of the component (B) in terms of glucosamine to the component (A) in terms of ergothioneine to 0.2 to 150.

5 - Advantageous Effects of Invention
[0009]

The present invention can provide an oral composition containing ergothioneine or a salt thereof and a glucosamine-class compound, in which the bitterness derived
10 from the ergothioneine or a salt thereof and the off-taste derived from the glucosamine-class compound are suppressed. The present invention can also provide a method for suppressing the bitterness derived from ergothioneine or a salt thereof and the off-taste derived from a glucosamine-
15 class compound.

DESCRIPTION OF EMBODIMENTS

[0010]

An oral composition of the present invention contains
20 a component (A) and a component (B) defined as follows: (A) ergothioneine or a salt thereof; and (B) glucosamine-class compound, wherein a (B)/(A) weight ratio of the component (B) in terms of glucosamine to the component (A) in terms of ergothioneine is 0.2 to 150.

25 [0011]

Ergothioneine is one of the sulfur-containing amino acids. In the present invention, ergothioneine is preferably L-ergothioneine.

The salt of ergothioneine is not limited as long as
30 it is a pharmacologically or dietary acceptable salt, and it may be either an acid salt or a basic salt. Examples of the acid salt include inorganic acid salts such as hydrochloride, sulfate, nitrate, and phosphate, and organic acid salts such as acetate, citrate, maleate, malate,
35 oxalate, lactate, succinate, fumarate, and propionate.

Examples of the basic salt include alkali metal salts such as sodium salt and potassium salt, and alkaline earth metal salts such as calcium salt and magnesium salt.

[0012]

5 Ergothioneine or a salt thereof is not limited in any way by its form, production method, or the like. Chemically synthesized ergothioneine or a salt thereof may be used, or a naturally extracted and purified ergothioneine or a salt thereof may be used. L-
10 ergothioneine is abundant in golden/yellow oyster mushrooms (scientific name: *Pleurotus cornucopiae* var. *citrinopileatus*) belonging to the genus *Pleurotus* of the family Pleurotaceae. L-ergothioneine is also present in mushrooms such as common mushrooms (scientific name:
15 *Agaricus bisporus*) including white button mushrooms, cremini mushrooms, and portabella mushrooms; grey oyster mushrooms (scientific name: *Pleurotus ostreatus*), shiitake (scientific name: *Lentinula edodes*), hen-of-the-woods (scientific name: *Grifola frondosa*), reishi mushrooms
20 (scientific name: *Ganoderma lucidum*), lion's mane mushrooms (scientific name: *Hericium erinaceus*), Yanagi-matsutake (scientific name: *Agrocybe aegerita*), girolles (scientific name: *Cantharellus cibarius*), porcini mushrooms (scientific name: *Boletus edulis*), and common morel mushrooms
25 (scientific name: *Morchella esculenta*). When L-ergothioneine is obtained from a natural product, preferably, it is extracted from a golden/yellow oyster mushroom, for example. Ergothioneine or a salt thereof can also be produced by microbial fermentation. Ergothioneine
30 or a salt thereof may be in an isolated form.

[0013]

Glucosamine (2-amino-2-deoxy-D-glucose) is an amino sugar in which the hydroxy group at position 2 of glucose is replaced with an amino group and is widely distributed
35 as a component of mucopolysaccharides in cartilage and

connective tissues in the animal body.

Glucosamine has a characteristic off-taste involving saltiness, sweetness that lingers on the tongue, and harsh taste.

5 The composition of the present invention contains a glucosamine-class compound, so that the bitterness derived from ergothioneine or a salt thereof is reduced.

 The characteristic off-taste involving saltiness, sweetness that lingers on the tongue, and harsh taste
10 derived from a glucosamine-class compound can also be suppressed when the glucosamine-class compound is combined with ergothioneine or a salt thereof.

 This facilitates continuous intake of ergothioneine or a salt thereof and a glucosamine-class compound.

15 [0014]

 In the present invention, the term "glucosamine-class compound" is a collective term for compounds including glucosamine, a glucosamine derivative, and salts thereof.
 [0015]

20 Any glucosamine derivative may be used. Examples include a compound in which a hydroxy group of glucosamine is esterified, a compound in which a hydroxy group of glucosamine is etherified, and a compound in which an amino group of glucosamine is acylated.

25 A preferred glucosamine derivative is a compound in which a hydrogen atom of at least one hydroxy group and/or a hydrogen atom of an amino group of glucosamine is replaced with a C1-C10 acyl group and/or a C1-C10 alkyl group. A more preferred glucosamine derivative is a
30 compound in which a hydrogen atom of an amino group of glucosamine is replaced with a C1-C10 acyl group or a C1-C10 alkyl group.

 The carbon number of the acyl group and/or the alkyl group is preferably 1 to 8, more preferably 1 to 5, still
35 more preferably 1 to 3, particularly preferably 2.

Specific examples of the acyl group include a formyl group, an acetyl group, a propionyl group, and a benzoyl group.

Still more preferred glucosamine derivatives are N-acetylglucosamine and N-methyl-L-glucosamine, with N-acetylglucosamine being particularly preferred.
[0016]

The salts of glucosamine and a glucosamine derivative are not limited as long as they are pharmacologically or dietary acceptable salts. Examples include inorganic acid salts such as hydrochloride, sulfate, nitrate, and phosphate; and organic acid salts such as acetate, citrate, maleate, malate, oxalate, lactate, succinate, fumarate, and propionate. Preferred are inorganic acid salts, with hydrochloride being more preferred.
[0017]

Any glucosamine-class compound may be used in the present invention without limitations on the form, production method, or the like. A commercial product may be used, or a product extracted and purified from a natural product may be used. For example, glucosamine can be obtained by hydrolysis of chitin found in crustaceans (e.g., crabs, shrimp, and krill) and squid cartilage with an acid or enzyme, followed by separation and purification.
[0018]

In the composition of the present invention, the weight ratio of the component (B) in terms of glucosamine to the component (A) in terms of ergothioneine ((B) in terms of glucosamine/(A) in terms of ergothioneine) is 0.2 to 150.

Ergothioneine and salts thereof have a bitterness that stings the tongue. Glucosamine-class compounds have a characteristic off-taste. In a composition containing the components (A) and (B), when the (B)/(A) weight ratio of the component (B) (in terms of glucosamine) to the

component (A) (in terms of ergothioneine) is in the above range, the bitterness derived from the component (A) can be suppressed and the off-taste derived from the component (B) can also be suppressed. This facilitates continuous intake
5 of ergothioneine or a salt thereof and a glucosamine-class compound.

The (B)/(A) weight ratio is preferably 0.4 to 130, more preferably 0.5 to 120, still more preferably 1 to 100, particularly preferably 5 to 80, most preferably 10 to 50.

10 [0019]

The amount of the ergothioneine or a salt thereof in the composition of the present invention is not limited and may be set according to the form of the composition or the like.

15 The amount of the ergothioneine or a salt thereof in terms of ergothioneine in the composition of the present invention is, for example, preferably 0.1 wt% or more, more preferably 0.5 wt% or more, still more preferably 0.6 wt% or more, yet still more preferably 0.8 wt% or more,
20 particularly preferably 1 wt% or more, while it is preferably 50 wt% or less, more preferably 40 wt% or less, still more preferably 30 wt% or less, yet still more preferably 20 wt% or less, particularly preferably 10 wt% or less. In one embodiment, the amount of the
25 ergothioneine or a salt thereof in terms of ergothioneine in the composition of the present invention is preferably 0.1 to 50 wt%, more preferably 0.5 to 40 wt%, still more preferably 0.6 to 30 wt%, yet still more preferably 0.8 to 20 wt%, particularly preferably 1 to 10 wt%. In the
30 composition of the present invention, when the ergothioneine or a salt thereof includes two or more compounds, the amount of the ergothioneine or a salt thereof is the total amount of these compounds. The amount of the ergothioneine can be measured by high-performance
35 liquid chromatography (HPLC).

When ergothioneine is used, the expression "the amount of the ergothioneine or a salt thereof in terms of ergothioneine" or an expression similar thereto refers to the amount of the ergothioneine. When a salt of ergothioneine is used, the expression refers to a value obtained by multiplying the molar number of the salt by the molecular weight of the ergothioneine.

[0020]

The amount of the glucosamine-class compound in the composition of the present invention is not limited and can be set according to the form of the composition or the like. The amount of the glucosamine-class compound in terms of glucosamine in the composition of the present invention is, for example, preferably 0.02 wt% or more, more preferably 0.1 wt% or more, still more preferably 1 wt% or more, yet still more preferably 5 wt% or more, even more preferably 10 wt% or more, even still more preferably 20 wt% or more, particularly preferably 30 wt% or more, further particularly preferably 40 wt% or more, while it is preferably 99 wt% or less, more preferably 95 wt% or less, still more preferably 90 wt% or less, yet still more preferably 80 wt% or less, even more preferably 70 wt% or less, particularly preferably 60 wt% or less. In one embodiment, the amount of the glucosamine-class compound in terms of glucosamine in the composition of the present invention is preferably 0.02 to 99 wt%, more preferably 0.1 to 99 wt%, still more preferably 1 to 99 wt%, yet still more preferably 5 to 95 wt%, even more preferably 10 to 90 wt%, even still more preferably 20 to 80 wt%, particularly preferably 30 to 70 wt%, further particularly preferably 40 to 60 wt%. When the glucosamine-class compound includes two or more compounds, the amount is the total amount of these compounds. The amount of the glucosamine-class compound can be measured by HPLC.

When glucosamine is used, the expression "the amount

of the glucosamine-class compound in terms of glucosamine" or an expression similar thereto refers to the amount of the glucosamine. When glucosamine is a compound other than glucosamine, the expression refers to a value obtained by multiplying the molar number of the compound by the molecular weight of the glucosamine.

[0021]

The amount of the ergothioneine or a salt thereof in terms of ergothioneine in the composition of the present invention per adult daily intake is preferably 1 to 100 mg, more preferably 2 to 50 mg, still more preferably 5 to 25 mg, particularly preferably 5 to 20 mg.

The amount of the glucosamine-class compound in terms of glucosamine in the composition of the present invention per adult daily intake is preferably 10 to 5000 mg, more preferably 20 to 3000 mg, still more preferably 50 to 2000 mg.

[0022]

Ergothioneine and salts thereof and glucosamine-class compounds are compounds that are found in natural products as well as food and beverages and that have been consumed. Thus, for example, daily intake of ergothioneine or a salt thereof and a glucosamine-class compound is less likely to cause problems in terms of safety. The present invention can provide a composition that is highly safe and easy to ingest because the bitterness derived from ergothioneine or a salt thereof and the off-taste derived from a glucosamine-class compound are reduced.

[0023]

As described above, ergothioneine or a salt thereof is known to provide various physiological activities and health functions. Known examples include antioxidant action, brain function improving effect, anti-aging action, eye disease alleviating effect, whitening effect, UV absorbing effect, melanin production suppressing effect,

active oxygen species scavenging effect, elastase activity inhibitory effect, wrinkle formation suppressing effect, anti-skin sagging effect, and autophagy promoting effect.

Thus, the composition of the present invention can be
5 suitably used for antioxidation, brain function improvement, anti-aging, eye disease alleviation, whitening, UV absorption, melanin production suppression, active oxygen species scavenging, elastase activity inhibition, wrinkle formation suppression, anti-skin
10 sagging, autophagy promotion, and the like.
[0024]

Glucosamine-class compounds are known to achieve health functions such as alleviation of pain from knee osteoarthritis, hip osteoarthritis, and the like. The
15 composition of the present invention, which contains a glucosamine-class compound, can be used to obtain the effects that can be achieved based on the compound.
[0025]

The composition of the present invention is
20 applicable for therapeutic use (medical use) and non-therapeutic use (non-medical use). The "non-therapeutic" is a concept that does not include medical activities, i.e., a concept that does not include methods of surgery, therapy, or diagnosis of humans.

25 The composition of the present invention can be provided in the form of a food or beverage, a pharmaceutical product, a quasi-pharmaceutical product, feed, or the like. The composition of the present invention may be a material, preparation, or the like to be
30 added to a food or beverage, a pharmaceutical product, a quasi-pharmaceutical product, feed, or the like.
[0026]

The composition of the present invention is an oral composition. Specifically, the oral composition may be a
35 food or beverage, an oral pharmaceutical product, an oral

quasi-pharmaceutical product, feed, or the like. The composition is preferably a food or beverage or an oral pharmaceutical product, more preferably a food or beverage. [0027]

5 The composition of the present invention can contain optional additives and optional components in addition to the ergothioneine or a salt thereof and the glucosamine-class compound, as long as the effect of the present invention is not impaired. Such additives and components
10 may be selected depending on the form of the composition, for example, and those generally usable in oral compositions such as food or beverages, pharmaceutical products, quasi-pharmaceutical products, and feed can be used. When the composition of the present invention is
15 provided as a food or beverage, a pharmaceutical product, a quasi-pharmaceutical product, feed, or the like, any common method can be used for production. In one embodiment, the composition of the present invention may consist of ergothioneine or a salt thereof and a glucosamine-class
20 compound.

 The oral composition of the present invention may be in any form such as a solid (e.g., powder, granule, or tablet), liquid, or paste form. [0028]

25 For example, when the composition of the present invention is provided as a food or beverage, components usable in food or beverages (e.g., food materials and optional food additives) can be added to ergothioneine or a salt thereof and a glucosamine-class compound to provide
30 various food or beverages. The food or beverage is not limited. Examples include general food or beverages, health foods, health supplements, health drinks, foods with function claims, foods for specified health uses, and foods for the sick. The health foods, health supplements, foods
35 with function claims, foods for specified health uses, and

the like can be used in various forms of preparations such as fine granules, tablets, granules, powders, capsules, chewable tablets, dry syrups, syrups, liquid agents, beverages, energy drinks, and liquid foods.

5 [0029]

When the composition of the present invention is provided as a pharmaceutical product or a quasi-pharmaceutical product, for example, a pharmacologically acceptable carrier, an optional additive, or the like can be added to ergothioneine or a salt thereof and a glucosamine-class compound to provide various dosage forms of pharmaceutical products or quasi-pharmaceutical products. Such a carrier, additive, or the like may be any pharmacologically acceptable one that can be used in pharmaceutical products or quasi-pharmaceutical products. Examples include excipients, binders, disintegrants, lubricants, antioxidants, and colorants. One or more of these can be used. Examples of the dosage form for oral administration of pharmaceutical products or quasi-pharmaceutical products include liquids, tablets, powders, fine granules, granules, sugar-coated tablets, capsules, suspensions, emulsions, and chewable tablets.

[0030]

When the composition of the present invention is provided as feed, ergothioneine or a salt thereof and a glucosamine-class compound are simply added to feed. The feed includes feed additives. Examples of the feed include livestock feed for animals such as cows, pigs, chickens, sheep, and horses; feed for small animals such as rabbits, rats, and mice; and pet food for animals such as dogs, cats, and birds.

[0031]

The composition of the present invention may be ingested by or administered to any subject (administration subject). The administration subject is preferably a human

or non-human mammal, more preferably a human.

[0032]

The present invention also encompasses the following method:

5 a method for suppressing bitterness derived from ergothioneine or a salt thereof and off-taste derived from a glucosamine-class compound in an oral composition containing (A) ergothioneine or a salt thereof and (B) glucosamine-class compound, the method including: adjusting
10 a (B)/(A) weight ratio of the component (B) in terms of glucosamine to the component (A) in terms of ergothioneine to 0.2 to 150.

In the preparation of the oral composition, the (B)/(A) weight ratio of the component (B) (in terms of
15 glucosamine) to the component (A) (in terms of ergothioneine) is adjusted to the above range. This results in an oral composition in which the bitterness derived from the ergothioneine or a salt thereof and the off-taste derived from the glucosamine-class compound are
20 suppressed.

[0033]

The above method can effectively suppress the bitterness derived from the ergothioneine or a salt thereof and the off-taste derived from the glucosamine-class
25 compound. The taste of the oral composition can be improved by suppressing the bitterness derived from the ergothioneine or a salt thereof and the off-taste derived from the glucosamine-class compound.

In the above method, the ergothioneine or a salt
30 thereof, the glucosamine-class compound, and preferred embodiments thereof are the same as those of the oral composition of the present invention described above. Preferred ranges of the (B)/(A) weight ratio of the component (B) (in terms of glucosamine) to the component
35 (A) (in terms of ergothioneine) are also the same as those

in the oral composition of the present invention.

[0034]

The above method alone can suppress the bitterness derived from the ergothioneine or a salt thereof and the off-taste derived from the glucosamine-class compound, but the above method may be combined with another method for suppressing these unpleasant flavors.

Examples of other suppression methods include a formulation method including adding a sweetener or a taste masking agent to a component having these unpleasant flavors, a formulation method including coating the component with sugar, and a formulation method including encapsulating the component.

[0035]

Glucosamine-class compounds are useful in suppressing the bitterness of ergothioneine or a salt thereof. The present invention also encompasses use of (B) glucosamine-class compound for suppressing the bitterness derived from (A) ergothioneine or a salt thereof. The glucosamine-class compound is used in an amount such that the (B)/(A) weight ratio of (B) glucosamine-class compound (in terms of glucosamine) to (A) ergothioneine or a salt thereof (in terms of ergothioneine) is preferably 0.2 or more, more preferably 0.2 to 150.

[0036]

Ergothioneine and salts thereof are useful in suppressing the off-taste of glucosamine-class compounds. The present invention also encompasses use of (A) ergothioneine or a salt thereof for suppressing the off-taste derived from (B) glucosamine-class compound. The ergothioneine or a salt thereof is used in an amount such that the (B)/(A) weight ratio of (B) glucosamine-class compound (in terms of glucosamine) to (A) ergothioneine or a salt thereof (in terms of ergothioneine) is 0.2 or more, more preferably 0.2 to 150.

[0037]

The numerical range defined by the lower limit and the upper limit herein, i.e., "the lower limit to the upper limit", includes the lower limit and the upper limit. For example, the range defined by "1 to 2" means 1 or more and 2 or less, with 1 and 2 being inclusive. Herein, the range may be any combination of any upper limit and any lower limit.

10

EXAMPLES

[0038]

The present invention is described in further detail below with reference to Examples. The present invention is not limited to these Examples.

15

[0039]

The following materials were used in an evaluation test described below.

(A) Ergothioneine: Raw material containing 100% L-ergothioneine

20

(B) Glucosamine hydrochloride: Raw material containing 100% glucosamine hydrochloride

[0040]

<Example 1: Aroma and taste evaluation test on composition containing ergothioneine and glucosamine hydrochloride>

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A composition containing ergothioneine and glucosamine hydrochloride was prepared and subjected to sensory evaluation by three panelists with expertise in sensory evaluation.

30

The components (A) and (B) in the amounts shown in Table 1 were mixed to prepare compositions (compositions containing ergothioneine and glucosamine hydrochloride) of samples 1 to 9. Table 1 shows the (B)/(A) weight ratio ((B) in terms of glucosamine/(A)) in each of the compositions of the samples 1 to 9. The three panelists placed the whole amount of the composition prepared (for

35

example, 11 mg in total including 10 mg ergothioneine and 1 mg glucosamine hydrochloride in the case of the sample 1) directly on the tongue. The intensity of the bitterness derived from the ergothioneine and the intensity of the off-taste derived from the glucosamine hydrochloride were evaluated based on the following criteria.

[0041]

(A) Criteria for bitterness derived from ergothioneine

Five points were given to the intensity of the bitterness of (A) ergothioneine (10 mg) used alone (control 1). One point was given when no bitterness derived from the ergothioneine was perceived. The intensity was evaluated with one to five points (five-point scale).

Evaluation results by the three panelists were totaled. Table 1 shows the average results.

5 points: The bitterness derived from ergothioneine is strongly perceived.

4 points: The bitterness derived from ergothioneine is perceived.

3 points: The bitterness derived from ergothioneine is slightly perceived.

2 points: The bitterness derived from ergothioneine is not much perceived.

1 point: The bitterness derived from ergothioneine is not perceived.

[0042]

(B) Evaluation criteria for off-taste derived from glucosamine hydrochloride

Five points were given to the intensity of the characteristic off-taste involving saltiness, sweetness that lingers on the tongue, and harsh taste of (B) glucosamine hydrochloride (10 mg) used alone (control 2). One point was given when no off-taste derived from the glucosamine hydrochloride was perceived. The intensity was evaluated with one to five points (five-point scale).

Evaluation results by the three panelists were totaled. Table 1 shows the average results.

5 points: The off-taste derived from glucosamine hydrochloride is strongly perceived.

5 4 points: The off taste derived from glucosamine hydrochloride is perceived.

3 points: The off-taste derived from glucosamine hydrochloride is slightly perceived.

2 points: The off-taste derived from glucosamine hydrochloride is not much perceived.

1 point: The off-taste derived from glucosamine hydrochloride is not perceived.

[0043]

When the average evaluation points of the bitterness derived from the ergothioneine and the average evaluation points of the off-taste derived from the glucosamine hydrochloride were both less than 4.0 points, it was evaluated that the bitterness derived from the ergothioneine and the off-taste derived from the glucosamine hydrochloride were suppressed.

[0044]

[Table 1]

	Amount (mg)		Ratio (B) in terms of glucosamine/(A)	Evaluation results (points)	
	(A) Ergothioneine	(B) Glucosamine hydrochloride		Bitterness derived from (A)	Characteristic off-taste derived from (B)
Control 1	10	0	0	5.0	—
Sample 1	10	1	0.1	4.0	1.0
Sample 2	10	5	0.4	3.0	1.7
Sample 3	10	10	0.8	2.3	2.0
Sample 4	10	100	8.3	1.3	3.0
Sample 5	10	500	42	1.0	2.3
Sample 6	10	1000	83	1.0	3.0
Sample 7	10	1500	125	1.0	3.7
Sample 8	10	2000	166	1.0	4.7
Sample 9	20	1200	50	1.0	3.3
Control 2	0	10	-	-	5.0

[0045]

When no glucosamine hydrochloride was added, the ergothioneine-derived bitterness that stings the tongue was strongly perceived (control 1). In contrast, when only
5 glucosamine hydrochloride was added, the off-taste derived from the glucosamine hydrochloride was strongly perceived (control 2). In the samples 2 to 7 and 9 each in which the (B)/(A) weight ratio of (B) glucosamine hydrochloride (in terms of glucosamine) to (A) ergothioneine was in the range
10 of 0.2 to 150, both the bitterness derived from the ergothioneine and the off-taste derived from the glucosamine hydrochloride were effectively reduced.

CLAIMS

Claim 1. An oral composition comprising a component (A) and a component (B) defined as follows:

- 5 (A) ergothioneine or a salt thereof; and
 (B) glucosamine-class compound,

 wherein a (B)/(A) weight ratio of the component (B) in terms of glucosamine to the component (A) in terms of ergothioneine is 0.2 to 150.

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Claim 2. The composition according to claim 1, wherein the glucosamine-class compound is at least one selected from the group consisting of glucosamine, a glucosamine derivative, and salts thereof.

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Claim 3. The composition according to claim 2, wherein the glucosamine derivative is a compound in which a hydrogen atom of at least one hydroxy group and/or a hydrogen atom of an amino group of glucosamine is
20 replaced with a C1-C10 acyl group and/or a C1-C10 alkyl group.

Claim 4. The composition according to any one of claims 1 to 3,

25 wherein the composition is a food or beverage.

Claim 5. A method for suppressing bitterness derived from ergothioneine or a salt thereof and off-taste derived from a glucosamine-class compound in an oral composition
30 containing a component (A) and a component (B) defined as follows:

- (A) ergothioneine or a salt thereof; and
 (B) glucosamine-class compound,
 the method comprising
35 adjusting a (B)/(A) weight ratio of the component (B) in

terms of glucosamine to the component (A) in terms of
ergothioneine to 0.2 to 150.