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(54) **THE USE OF A NON-CANONICAL TERPENES OR TERPENOIDS AS AROMA CHEMICALS**

(57) The present invention relates to the use of non-canonical terpenes or terpenoids, mixtures thereof, stereoisomers thereof or mixtures of different stereoisomers thereof as an aroma chemical; to the use thereof for modifying and/or enhancing the aroma of a composition; to a composition comprising such non-canonical terpenes or terpenoids, mixtures thereof, stereoisomers thereof or mixtures of different stereoisomers thereof; to a method for preparing an aroma chemical composition and to a method for conferring an aroma to a composition by using said non-canonical terpenes or terpenoids, mixtures thereof, stereoisomers thereof or mixtures of different stereoisomers thereof.

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Description

[0001] The present invention relates to the use of non-canonical terpenes or terpenoids, mixtures thereof, stereoisomers thereof or mixtures of different stereoisomers thereof as an aroma chemical; to the use thereof for modifying and/or enhancing the aroma of a composition; to a composition comprising such non-canonical terpenes or terpenoids, mixtures thereof, stereoisomers thereof or mixtures of different stereoisomers thereof and at least one of aroma chemicals different from said non-canonical terpenes and terpenoids, non-aroma chemical carriers, anti-oxidants and deodorant-active agents; to a method for preparing an aroma chemical composition comprising incorporating said non-canonical terpenes or terpenoids, mixtures thereof, stereoisomers thereof or mixtures of different stereoisomers thereof into the composition or comprising mixing said non-canonical terpenes or terpenoids, mixtures thereof, stereoisomers thereof or mixtures of different stereoisomers thereof simultaneously or consecutively with the other components of said composition or with pre-formed mixtures of a part of the other components of said composition; and to a method for conferring an aroma, preferably a fragrance, to a composition, comprising incorporating a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids into said composition.

BACKGROUND OF THE INVENTION

[0002] Aroma chemicals, especially fragrances, are of great interest especially in the field of cosmetics and cleaning and laundry compositions. Fragrances of natural origin are mostly expensive, often limited in their available amount and, on account of fluctuations in environmental conditions, are also subject to variations in their content, purity etc. To circumvent these undesirable factors, it is therefore of great interest to create synthetic substances which have sensory properties that resemble more expensive natural fragrances or which have novel and interesting sensory profiles.

[0003] Despite a large number of already existing aroma chemicals, there is a constant need for new components in order to be able to satisfy the multitude of properties desired for extremely diverse areas of application. These include, firstly, the sensory properties, i.e. the compounds should have advantageous odiferous (olfactory) or gustatory properties. Furthermore, aroma chemicals should also have additional positive secondary properties, such as e.g. an efficient preparation method, the possibility of providing better sensory profiles as a result of synergistic effects with other aroma chemicals, a higher stability in a wide range of compositions as well as under certain application conditions, a higher extendability and/or a better staying power.

[0004] However, since even small changes in chemical structure bring about massive changes in the sensory properties such as odor and also taste, the targeted search for substances with certain sensory properties such as a certain odor is extremely difficult. The search for new fragrances and flavorings is therefore in most cases difficult and laborious without knowing whether a substance with the desired odor and/or taste will even actually be found.

[0005] Terpenes and terpenoids form a large and heterogeneous group of chemical compounds, whose common feature is that their backbone is based on isoprene units: The "biogenetic isoprene rule" or short "isoprene rule", formulated in the mid 20th century, predicted that terpenes/terpenoids are biosynthesized via polymerization of C_5 isoprene units. The carbon number in the backbone of terpenes and terpenoids is thus a multiple of 5 (i.e. n $\times$ 5 carbon atoms; n being an integer; isoprene rule). Terpenes and terpenoids occur naturally in organisms, often in form of secondary metabolites in plants, animals and microorganisms. Terpenes are pure hydrocarbons of the molecular formula $(C_5H_8)_n$, whereas terpenoids contain additional functional groups, usually oxygen-containing groups. Terpenes and terpenoids wherein n is 1 are termed hemiterpenes and hemiterpenoids, respectively, terpenes and terpenoids wherein n is 2 are termed monoterpenes and monoterpenoids, respectively, and terpenes and terpenoids wherein n is 3 are termed sesquiterpenes and sesquiterpenoids, respectively. Short-chain terpenes and terpenoids are relevant as aroma compounds, including hemi- (C_5), mono- (C_{10}), and sesquiterpenes and -terpenoids (C_{15}). A known examples for a hemiterpenoid with aroma properties is prenol, which occurs e.g. in hop or ylang-ylang flowers; examples for monoterpenoids and monoterpenes with aroma properties include linalool with a citrus- and lavender-like scent, thymol with a thyme-like flavor, and limonene with a fresh, orange-like odor of the (R)-enantiomer and a pine-like flavor of the (S)-enantiomer; and farnesol and (S)-nerolidol are examples of sesquiterpenoids with aroma properties; they are associated with a flowery scent.

[0006] The biosynthesis of terpenes and terpenoids can however also differ from the sequential condensation of C_5 units, resulting thus in structures with a number of carbon atoms different from a multiple of five. These terpenes/terpenoids are called non-canonical. Non-canonical terpenes or terpenoids are also available via biosynthesis involving the action of methyltransferases, enzymes which catalyze the addition of methyl groups to the prenyl pyrophosphate precursors, thereby changing the final number of carbon atoms of the terpene or terpenoid structures. The methyltransferases sometimes also cyclize the classical isoprenyl diphosphate substrates.

[0007] It was the object of the present invention to provide new aroma chemicals. Besides, these substances should be combinable with other aroma chemicals, allowing the creation of novel advantageous sensory profiles. In addition, the process for the preparation of these new aroma chemicals should be easy and efficient to allow their fast, economic

and environmentally friendly manufacturing. A particular object was to provide aroma chemicals with a reduced carbon footprint, especially aroma chemicals which are at least partially available from renewable sources.

[0008] These and further objects are achieved by non-canonical terpenes or terpenoids as defined below.

SUMMARY OF THE INVENTION

[0009] The invention relates to the use of a non-canonical terpene or of a non-canonical terpenoid or of a stereoisomer thereof or of a mixture of different stereoisomers thereof or of a mixture of different non-canonical terpenes and/or non-canonical terpenoids as an aroma chemical.

[0010] The invention relates furthermore to the use of a non-canonical terpene or terpenoid or of a stereoisomer thereof or of a mixture of different stereoisomers thereof or of a mixture of different non-canonical terpenes and/or terpenoids for modifying and/or enhancing the aroma of a composition.

[0011] The invention relates moreover to a composition comprising a non-canonical terpene or a non-canonical terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or non-canonical terpenoids, and at least one further component selected from the group consisting of aroma chemicals different from said non-canonical terpenes and non-canonical terpenoids, non-aroma chemical carriers, anti-oxidants and deodorant-active agents.

[0012] The invention relates also to a method for preparing an aroma chemical composition, in particular a fragranced composition, specifically a fragranced ready-to-use composition, comprising incorporating a non-canonical terpene or a non-canonical terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or non-canonical terpenoids into said composition; or mixing a non-canonical terpene or a non-canonical terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or non-canonical terpenoids simultaneously or consecutively with the other components of said composition or with pre-formed mixtures of a part of the other components of said composition.

[0013] The invention relates also to a method for conferring an aroma, preferably a fragrance, to a composition, comprising incorporating a non-canonical terpene or a non-canonical terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or non-canonical terpenoids into said composition.

DETAILED DESCRIPTION OF THE INVENTION

Definitions:

[0014] In the context of the present invention, the term "aroma" refers to a sensory property and comprises an odor and/or a flavor.

[0015] The term "aroma chemical" denotes a substance which is used to obtain an aroma impression (the term "aroma impression" is used interchangeably herein with the term "note") and comprises its use to obtain an olfactory and/or a flavor impression. The term "olfactory impression" or "odor impression" denotes an odor impression without any positive or negative judgement, while the term "scent impression" or "fragrance impression" (used interchangeably herein) as used herein is connected to an odor impression which is generally felt as pleasant. Thus, a "fragrance" or "scent" denotes an aroma chemical which predominately induces a pleasant odor impression. A flavor denotes an aroma chemical which induces a taste impression.

[0016] The term "aroma profile" denotes the overall aroma impression of an aroma chemical and is composed of the individual aroma impressions of an aroma chemical.

[0017] The term "aroma composition", as used herein, refers to a composition which induces an aroma. The term aroma composition comprises "odor composition" and/or "flavor composition". An odor composition is a composition which predominately induces an odor impression, whereas a flavor composition is a composition which predominantly induces a taste impression.

[0018] The term "odor composition" comprises "fragrance composition" or "scent composition" (used interchangeably herein), which predominately induce an odor impression which is generally felt as pleasant.

[0019] "Pleasant odor", "pleasant odor impression", "pleasant odiferous properties", "odor impression felt as pleasant" and similar terms are hedonistic expressions which describe the niceness and conciseness of an odor impression conveyed by an aroma chemical. The more general hedonistic expressions "advantageous sensory properties" or "advantageous organoleptic properties" describe the niceness and conciseness of an organoleptic impression conveyed by an aroma chemical. In terms of the present invention, the terms "organoleptic" and "sensory" relate to olfactory or flavor properties. "Niceness" and "conciseness" are terms which are familiar to the person skilled in the art, a perfumer. Niceness generally refers to a spontaneously brought about, positively perceived, pleasant sensory impression. However, "nice" does not have to be synonymous with "sweet". "Nice" can also be the odor of musk or sandalwood. "Conciseness"

generally refers to a spontaneously brought about sensory impression which - for the same test panel - brings about a reproducibly identical reminder of something specific. For example, a substance can have an odor which is spontaneously reminiscent of that of an "apple": the odor would then be concisely of "apples". If this apple odor were very pleasant because the odor is reminiscent, for example, of a sweet, fully ripe apple, the odor would be termed "nice". However, the odor of a typical apple tart can also be concise. If both reactions arise upon smelling the substance, in the example thus a nice and concise apple odor, then this substance has particularly advantageous sensory properties.

[0020] The term "odor-intensive substances" refers to substances or aroma chemicals exhibiting intense odor impressions. Intense odor impressions are to be understood as meaning those properties of aroma chemicals which permit a striking perception even in very low gas space concentrations.

[0021] The intensity can be determined via a threshold value determination. A threshold value is the concentration of a substance in the relevant gas space at which an odor impression can just still be perceived by a representative test panel, although it no longer has to be defined. A substance class which probably belongs to the most odor-intensive known substance classes, i.e. has very low odor threshold values, are thiols, whose threshold value is often in the ppb/m^3 range.

[0022] The term "tenacity" describes the evaporation behavior over time of an aroma chemical. The tenacity can for example be determined by applying the aroma chemical to a test strip, and by subsequent olfactory evaluation of the odor impression of the test strip. For aroma chemicals with high tenacity the time span after which the panel can still identify an aroma impression is long.

[0023] The term "substantivity" describes the interaction of an aroma chemical with a surface, such as for example the skin or a textile, especially after subsequent treatment of the surface, such as for example washing. The substantivity can for example be determined by washing a textile with a textile detergent composition comprising the aroma chemical and subsequent olfactory evaluation of the textile directly after washing (wet textile) as well as evaluation of the dry textile after prolonged storage.

[0024] The term "stability" describes the behavior of an aroma chemical upon contact with oxygen, light and/or other substances. An aroma chemical with high stability maintains its aroma profile over a long period in time, preferably in a large variety of compositions and under various storage conditions.

[0025] In order to impart a long-lasting aroma impression to a composition or to a surface treated with a composition, the tenacity, the substantivity as well as the stability of the aroma chemical in the compositions should preferably be high.

[0026] The term "booster", "boosting" or "boost" is used herein to describe the effect of enhancing and/or modifying the aroma of an aroma chemical or of a composition. The term "enhancing" comprises an improvement of the niceness and/or conciseness of an aroma and/or an improvement of the intensity. The term "modifying" comprises the change of an aroma profile.

[0027] Booster effects are particularly desired in fragrance composition when top-note-characterized applications are required, in which the odor is to be conveyed particularly quickly and intensively, for example in deodorants, air fresheners or in the taste sector in chewing gums.

[0028] The terms "compound" and "substance" are used synonymously throughout the invention.

[0029] As already explained above, terpenes and terpenoids are a group of chemical compounds whose common feature is that their backbone is based on isoprene units. The carbon number in their backbone is thus a multiple of 5 (i.e. n $\times$ 5 carbon atoms; n being an integer; isoprene rule). Terpenes are pure hydrocarbons of the molecular formula $(C_5H_8)_n$, whereas terpenoids contain additional functional groups, usually oxygen-containing groups, e.g. OH groups, C=O groups or ether groups -O-. Terpenes and terpenoids wherein n is 1 are termed hemiterpenes and hemiterpenoids, respectively; terpenes and terpenoids wherein n is 2 are termed monoterpenes and monoterpenoids, respectively; and terpenes and terpenoids wherein n is 3 are termed sesquiterpenes and sesquiterpenoids, respectively.

[0030] Non-canonical terpenes and non-canonical terpenoids are structurally related to terpenes or terpenoids; due to a different biosynthesis or structural modification, the number of their carbon atoms is however different from a multiple of five.

[0031] "Methylated" in context with the present non-canonical terpenes or terpenoids means that one or more hydrogen atoms bound to a carbon atom of a basic, "classical" terpene or terpenoid structure (i.e. having n $\times$ 5 carbon atoms) is/are replaced by a methyl (CH_3) group.

[0032] "Methylenated" in context with the present non-canonical terpenes or terpenoids means that two hydrogen atoms bound to the same carbon atom of the basic, "classical" terpene or terpenoid structure (i.e. having n $\times$ 5 carbon atoms) are replaced by a methylene (=CH_2) group.

[0033] If in the following the non-canonical terpene or terpenoid is defined to be a specific, defined compound (and not to be a mixture of different non-canonical terpenes and/or terpenoids), this means that the non-canonical terpene or terpenoid contains less than 0.1 % by weight of another non-canonical terpene or terpenoid, relative to the overall weight of the specific, defined non-canonical terpene or terpenoid and the optionally present other non-canonical terpenes or terpenoids.

[0034] "Mixture of different non-canonical terpenes and/or terpenoids" means a mixture of two or more different non-

canonical terpenes or a mixture of two or more different non-canonical terpenoids or a mixture of one or more non-canonical terpenes and one or more non-canonical terpenoids.

[0035] The term "stereoisomers" as used in context with the present invention relates to optical isomers, such as enantiomers or diastereomers, the latter existing due to more than one stereogenic center in the molecule, as well as to (Z/E) isomers (due to the presence of correspondingly substituted double bonds or ring systems).

[0036] Unless stated otherwise, the remarks made below concerning preferred definitions, e.g. of the non-canonical terpenes and terpenoids and other components, apply to the use, methods and compositions of the invention.

Embodiments (E.x) of the invention

[0037] General and preferred embodiments E.x are summarized in the following, non-exhaustive list. Further preferred embodiments become apparent from the paragraphs following this list.

E.1. The use of a non-canonical terpene or terpenoid or of a stereoisomer thereof or of a mixture of different stereoisomers thereof or of a mixture of different non-canonical terpenes and/or terpenoids as an aroma chemical.

E.2. The use according to embodiment E.1, where the non-canonical terpene or terpenoid is a methylated or methylenated terpene or terpenoid.

E.3. The use according to embodiment E.2, where the non-canonical terpene is derived from a hemiterpene, monoterpene or sesquiterpene, and the non-canonical terpenoid is derived from a hemiterpenoid, monoterpenoid or sesquiterpenoid.

E.4. The use according to any of the preceding embodiments, where the non-canonical terpenoid contains a hydroxyl group as only functional group.

E.5. The use according to any of the preceding embodiments, where the non-canonical terpene or terpenoid is selected from the group consisting of methylated or methylenated bornane, camphene, 3-carene, limonene, prenol, isoprenol, α-fenchol, α-terpineol, citronellol, geraniol, nerol, linalool and farnesol.

E.6. The use according to embodiment E.5, where the non-canonical terpene or terpenoid is selected from the group consisting of monomethylenated or monomethylated bornane, monomethylated camphene, monomethylated 3-carene, monomethylated limonene, mono- or dimethylated prenol, mono- or dimethylated isoprenol, monomethylated α-fenchol, monomethylated α-terpineol, monomethylated citronellol, monomethylated geraniol, monomethylated nerol, monomethylated linalool and monomethylated farnesol.

E.7. The use according to embodiment E.6, where the non-canonical terpene or terpenoid is selected from the group consisting of 2-methylenebornane, 1-methylcamphene, 4-methyl-3-carene, 2-methyllimonene, 2-methylisoprenol, 4-methylisoprenol, 5-methylisoprenol, 2,4-dimethylisoprenol, 2,5-dimethylisoprenol, 4,4-dimethylisoprenol, 4,5-dimethylisoprenol, 5,5-dimethylisoprenol, 2-methylprenol, 4-methylprenol, 2,4-dimethylprenol, 4,4-dimethylprenol, 4,5-dimethylprenol, 2-methyl-α-fenchol, 2-methyl-α-terpineol, 2-methylcitronellol, 2-methylgeraniol, 4-methylgeraniol, 8-methylgeraniol, 2-methylnerol, 4-methylnerol, 8-methylnerol, 2-methyllinalool, 4-methylfarnesol, mixtures thereof, stereoisomers thereof and mixtures of stereoisomers thereof.

E.8. The use according to embodiment E.7, where the non-canonical terpene or terpenoid is selected from the group consisting of 2-methylenebornane, (S)-1-methylcamphene, 4-methyl-3-carene, 2-methyllimonene, 2-methylisoprenol, (E)-4-methylisoprenol, (Z)-4-methylisoprenol, 5-methylisoprenol, 2,4-dimethylisoprenol, 2,5-dimethylisoprenol, 4,4-dimethylisoprenol, 4,5-dimethylisoprenol, 5,5-dimethylisoprenol, 2-methylprenol, (Z)-4-methylprenol, (E)-4-methylprenol, 2,4-dimethylprenol, 4,4-dimethylprenol, 4,5-dimethylprenol, (S)-2-methyl-α-fenchol, 2-methyl-α-terpineol, 2-methylcitronellol, 2-methylgeraniol, 4-methylgeraniol, 8-methylgeraniol, 2-methylnerol, 4-methylnerol, 8-methylnerol, 2-methyllinalool, 4-methylfarnesol, mixtures thereof, stereoisomers thereof and mixtures of stereoisomers thereof.

E.9. The use according to any of the preceding embodiments, as a fragrance.

E.10. The use of a non-canonical terpene or terpenoid or of a stereoisomer thereof or of a mixture of different stereoisomers thereof or of a mixture of different non-canonical terpenes and/or terpenoids as defined in any of embodiments E.1 to E.8, for modifying and/or enhancing the aroma of a composition.

E.11. The use according to embodiment E.10, for modifying and/or enhancing the fragrance impression of a composition.

E.12. The use according to embodiment E.11, for modifying the scent character of a fragranced ready-to-use composition.

E.13. The use according to any of the preceding embodiments, in a composition selected from the group consisting of perfume compositions, body care compositions, products for oral or dental hygiene, hygiene articles, cleaning compositions, textile detergent compositions, compositions for scent dispensers, foods, food supplements, pharmaceutical compositions and crop protection compositions.

E.14. The use according to any of the preceding embodiments,

of 2-methylenebornane for conferring one of the following olfactory notes: earthy, coniferous forest, resinous; or any combination thereof; or
of (S)-1-methylcamphene for conferring one of the following olfactory notes: resinous, coniferous forest, woody, fruity; or any combination thereof; or
of 4-methyl-3-carene for conferring one of the following olfactory notes: fruity, coniferous forest, resinous, sweetish, pepper, mint, citrus; or any combination thereof; or
of 2-methyllimonene for conferring one of the following olfactory notes: resinous, terpene, mushroom; or any combination thereof; or
of 2-methylisoprenol for conferring one of the following olfactory notes: resinous, sweetish, coniferous forest, fruity; or any combination thereof; or
of (E)-4-methylisoprenol for conferring one of the following olfactory notes: green, grass, herbal, coniferous forest, apple; or any combination thereof; or
of (Z)-4-methylisoprenol for conferring one of the following olfactory notes: flowery, green, fruity, apple; or any combination thereof; or
of 5-methylisoprenol for conferring one of the following olfactory notes: pungent, solvent, glue, varnish; or any combination thereof; or
of 2,4-dimethylisoprenol for conferring one of the following olfactory notes: coniferous forest, green, resinous; or any combination thereof; or
of 2,5-dimethylisoprenol for conferring one of the following olfactory notes: resinous, coniferous forest, mint, green, varnish; or any combination thereof; or
of 4,4-dimethylisoprenol for conferring one of the following olfactory notes: green, citrus, flowery, soapy, grass; or any combination thereof; or
of 4,5-dimethylisoprenol for conferring one of the following olfactory notes: resinous, woody, coniferous forest; or any combination thereof; or
of 5,5-dimethylisoprenol for conferring one of the following olfactory notes: coniferous forest, resinous, woody; or any combination thereof; or
of 2-methylprenol for conferring one of the following olfactory notes: plastic, terpene-like; or any combination thereof; or
of (Z)-4-methylprenol for conferring one of the following olfactory notes: plastic, terpene-like, chemical; or any combination thereof; or
of (E)-4-methylprenol for conferring one of the following olfactory notes: sweetish, flowery, green, citrus, fresh, resinous; or any combination thereof; or
of 2,4-dimethylprenol for conferring one of the following olfactory notes: resinous, woody, coniferous forest, glue, sweetish; or any combination thereof; or
of 4,4-dimethylprenol for conferring one of the following olfactory notes: sweetish, fruity; or any combination thereof; or
of 4,5-dimethylprenol for conferring one of the following olfactory notes: woody, resinous, plastic; or any combination thereof; or
of (S)-2-methyl-α-fenchol for conferring one of the following olfactory notes: earthy, mouldy, moss, beetroot; or any combination thereof; or
of 2-methyl-α-terpineol for conferring one of the following olfactory notes: sweetish, green; or any combination thereof; or
of 2-methylcitronellol for conferring one of the following olfactory notes: flowery, citrus, rose, sweetish, ethereal, fruity; or any combination thereof; or
of a mixture of 2-methylgeraniol and 2-methylnerol for conferring one of the following olfactory notes: flowery, citrus, resinous, rose, sweetish; or any combination thereof; or
of a mixture of 4-methylgeraniol and 4-methylnerol for conferring one of the following olfactory notes: citrus, lemon, lemon peel; or any combination thereof; or
of a mixture of 8-methylgeraniol and 8-methylnerol for conferring one of the following olfactory notes: flowery, resinous, sweetish, citrus, varnish; or any combination thereof; or
of 2-methyllinalool for conferring one of the following olfactory notes: flowery, citrus, sweetish, fruity, bergamot, blueberry, lavender; or any combination thereof; or of 4-methylfarnesol for conferring one of the following olfactory notes: citrus, resinous, green; or any combination thereof.

E.15. Composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids as defined in any of embodiments E.1 to E.8, and at least one further component selected from the group consisting of aroma chemicals different from said non-canonical terpenes and terpenoids, non-aroma chemical carriers, anti-oxidants and deodor-

ant-active agents.

E.16. The composition according to embodiment E.15, where the at least one further component is selected from the group consisting of aroma chemicals different from said non-canonical terpenes and terpenoids, surfactants, oil components, solvents, anti-oxidants and deodorant-active agents.

E.17. The composition according to any of embodiments E.15 or E.16, where in case that the non-aroma chemical carriers comprise one or more solvents, these are selected from the group consisting of ethanol, isopropanol, dipropylene glycol (DPG), propylene glycol, 1,2-butylene glycol, glycerol, diethylene glycol monoethyl ether, diethyl phthalate (DEP), isopropyl myristate (IPM), triethyl citrate (TEC), benzyl benzoate and mixtures thereof.

E.18. The composition according to any of embodiments E.15 to E.17, where the aroma chemicals different from said non-canonical terpenes and terpenoids are selected from the group consisting of geranyl acetate, alpha-hexylcinnamaldehyde, 2-phenoxyethyl isobutyrate, dihydromyrcenol, methyl dihydrojasmonate (preferably with a content of cis isomer of more than 60 wt.%), 4,6,6,7,8,8-hexamethyl-1,3,4,6,7,8-hexahydrocyclopenta[g]benzopyran, tetrahydrolinalool, ethyllinalool, benzyl salicylate, 2-methyl-3-(4-tert-butylphenyl)propanal, cinnamyl alcohol, 4,7-methano-3a,4,5,6,7,7a-hexahydro-5-indenyl acetate, 4,7-methano-3a,4,5,6,7,7a-hexahydro-6-indenyl acetate, citronellol, citronellyl acetate, tetrahydrogeraniol, vanillin, linalyl acetate, styrolyl acetate, octahydro-2,3,8,8-tetramethyl-2-acetonaphthone, 2-acetyl-1,2,3,4,6,7,8-octahydro-2,3,8,8-tetramethylnaphthalene, hexyl salicylate, 4-tert-butylcyclohexyl acetate, 2-tert-butylcyclohexyl acetate, alpha-ionone, n-alpha-methylionone, alpha-isomethylionone, coumarin, terpinyl acetate, 2-phenylethyl alcohol, 4-(4-hydroxy-4-methylpentyl)-3-cyclohexenecarboxaldehyde, alpha-amylcinnamaldehyde, ethylene brassylate, (E)-3-methylcyclopentadec-5-enone, (Z)-3-methylcyclopenta-dec-5-enone, 15-pentadec-11-enolide, 15-pentadec-12-enolide, 15-cyclopentadecanolide, 1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthalenyl)ethanone, 2-isobutyl-4-methyltetrahydro-2H-pyran-4-ol, 2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol, cis-3-hexenyl acetate, trans-3-hexenyl acetate, trans-2/cis-6-nonadienol, 2,4-dimethyl-3-cyclohexenecarboxaldehyde, 2,4,4,7-tetramethyloct-6-en-3-one, 2,6-dimethyl-5-hepten-1-al, borneol, 3-(3-isopropylphenyl)butanal, 2-methyl-3-(3,4-methylenedioxyphenyl)propanal, 3-(4-ethylphenyl)-2,2-dimethylpropanal, 7-methyl-2H-1,5-benzodioxepin-3(4H)-one, 3,3,5-trimethylcyclohexyl acetate (preferably with a content of cis isomers of 70 wt.% or more), 2,5,5-trimethyl-1,2,3,4,4a,5,6,7-octahydronaphthalen-2-ol, 3-(4-*tert*-butylphenyl)-propanal, ethyl 2-methylpentanoate, ethoxymethoxycyclododecane, 2,4-dimethyl-4,4a,5,9b-tetrahydroindeno[1,2-d][1,3]dioxine, (2-tert-butylcyclohexyl) acetate, 3-[5,5,6-trimethylbicyclo[2.2.1]hept-2-yl]cyclohexan-1-ol, menthone, isomenthone, carvone, camphor, beta-ionone, beta-n-methylionone, beta-isomethylionone, alpha-irone, alpha-damascone, beta-damascone, beta-damascenone, delta-damascone, acetylated cedar wood oil, and mixtures thereof.

E.19. The composition according to any of embodiments E.15 to E.18, which is selected from the group consisting of perfume compositions, body care compositions, products for oral or dental hygiene, hygiene articles, cleaning compositions, textile detergent compositions, compositions for scent dispensers, foods, food supplements, pharmaceutical compositions and crop protection compositions.

E.20. A method for preparing an aroma chemical composition comprising incorporating a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids as defined in any of embodiments E.1 to E.8 into said composition; or mixing a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids as defined in any of embodiments E.1 to E.8 simultaneously or consecutively with the other components of said composition or with pre-formed mixtures of a part of the other components of said composition.

E.21. The method according embodiment E.20, for preparing a fragranced composition.

E.22. The method according embodiment E.21, for preparing a fragranced ready-to-use composition.

E.23. A method for conferring an aroma to a composition, comprising incorporating a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids as defined in any of embodiments E.1 to E.8 into said composition.

E.24. The method according embodiment E.23, for conferring a fragrance to a composition.

[0038] The companies from which the above-listed aroma chemical compounds identified by tradenames and indices can be obtained are listed below.

[0039] Preferably, the non-canonical terpene or terpenoid is a methylated or methylenated terpene or terpenoid. As explained above, in a methylated terpene or terpenoid, one or more hydrogen atoms bound to a carbon atom of the basic, "classical" terpene or terpenoid structure (i.e. having $n \times 5$ carbon atoms) is/are replaced by a methyl (CH_3) group. In a methylenated terpene or terpenoid, two hydrogen atoms bound to the same carbon atom of the basic, "classical" terpene or terpenoid structure are replaced by a methylene ($=CH_2$) group.

[0040] Preferably, the non-canonical terpene is derived from a hemiterpene (C_5), monoterpene (C_{10}) or sesquiterpene (C_{15}), and the non-canonical terpenoid is derived from a hemiterpenoid (C_5), monoterpenoid (C_{10}) or sesquiterpenoid

(C_{15}). The non-canonical hemiterpene or hemiterpenoid contains thus 5+x carbon atoms, x being an integer and generally 1, 2 or 3, most frequently 1 or 2; the non-canonical monoterpene or monoterpenoid contains 10+x carbon atoms, x being an integer and generally 1, 2 or 3, most frequently 1 or 2; and the non-canonical sesquiterpene or sesquiterpenoid contains 15+x carbon atoms, x being an integer and generally 1, 2 or 3, most frequently 1 or 2.

[0041] As explained above, terpenoids differ from terpenes, which are pure hydrocarbons consisting exclusively of C and H atoms, in containing additional functional groups, usually oxygen-containing groups, e.g. OH groups, C=O groups or ether groups -O-. Preferably, the non-canonical terpenoid contains a hydroxyl group as only functional group.

[0042] More preferably, the non-canonical terpene or terpenoid is derived from bornane, camphene, 3-carene, limonene, prenol, isoprenol, α-fenchol, α-terpineol, citronellol, geraniol, nerol, linalool or farnesol and is even more preferably selected from the group consisting of methylated or methylenated bornane, camphene, 3-carene, limonene, prenol, isoprenol, α-fenchol, α-terpineol, citronellol, geraniol, nerol, linalool and farnesol. The basic terpene or terpenoid is preferably methylated or methylenated with 1, 2 or 3, more preferably with 1 or 2 methyl and/or methylene groups.

[0043] Even more preferably, the non-canonical terpene or terpenoid is selected from the group consisting of monomethylenated or monomethylated bornane, monomethylated camphene, monomethylated 3-carene, monomethylated limonene, mono- or dimethylated prenol, mono- or dimethylated isoprenol, monomethylated α-fenchol, monomethylated α-terpineol, monomethylated citronellol, monomethylated geraniol, monomethylated nerol, monomethylated linalool and monomethylated farnesol.

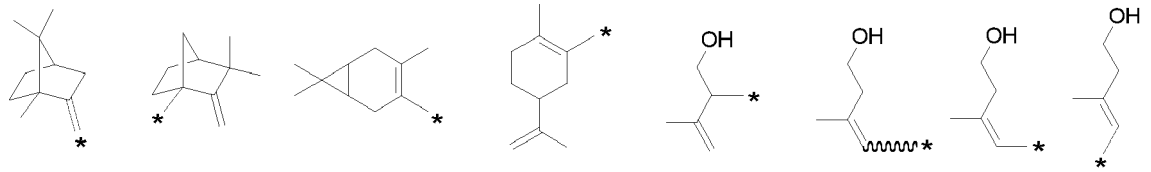
[0044] In particular, the non-canonical terpene or terpenoid is selected from the group consisting of 2-methylenebornane, 1-methylcamphene, 4-methyl-3-carene, 2-methyllimonene, 2-methylisoprenol, 4-methylisoprenol, 5-methylisoprenol, 2,4-dimethylisoprenol, 2,5-dimethylisoprenol, 4,4-dimethylisoprenol, 4,5-dimethylisoprenol, 5,5-dimethylisoprenol, 2-methylprenol, 4-methylprenol, 2,4-dimethylprenol, 4,4-dimethylprenol, 4,5-dimethylprenol, 2-methyl-α-fenchol, 2-methyl-α-terpineol, 2-methylcitronellol, 2-methylgeraniol, 4-methylgeraniol, 8-methylgeraniol, 2-methylnerol, 4-methylnerol, 8-methylnerol, 2-methyllinalool, 4-methylfarnesol, mixtures thereof, stereoisomers thereof and mixtures of stereoisomers thereof.

[0045] In particular, the non-canonical terpene or terpenoid is selected from the group consisting of 2-methylenebornane, 1-methylcamphene, (S)-1-methylcamphene, 4-methyl-3-carene, 2-methyllimonene, 2-methylisoprenol, 4-methylisoprenol, (E)-4-methylisoprenol, (Z)-4-methylisoprenol, 5-methylisoprenol, 2,4-dimethylisoprenol, 2,5-dimethylisoprenol, 4,4-dimethylisoprenol, 4,5-dimethylisoprenol, 5,5-dimethylisoprenol, 2-methylprenol, 4-methylprenol, (Z)-4-methylprenol, (E)-4-methylprenol, 2,4-dimethylprenol, 4,4-dimethylprenol, 4,5-dimethylprenol, 2-methyl-α-fenchol, (S)-2-methyl-α-fenchol, 2-methyl-α-terpineol, 2-methylcitronellol, 2-methylgeraniol, 4-methylgeraniol, 8-methylgeraniol, 2-methylnerol, 4-methylnerol, 8-methylnerol, 2-methyllinalool, 4-methylfarnesol, mixtures thereof, stereoisomers thereof and mixtures of stereoisomers thereof.

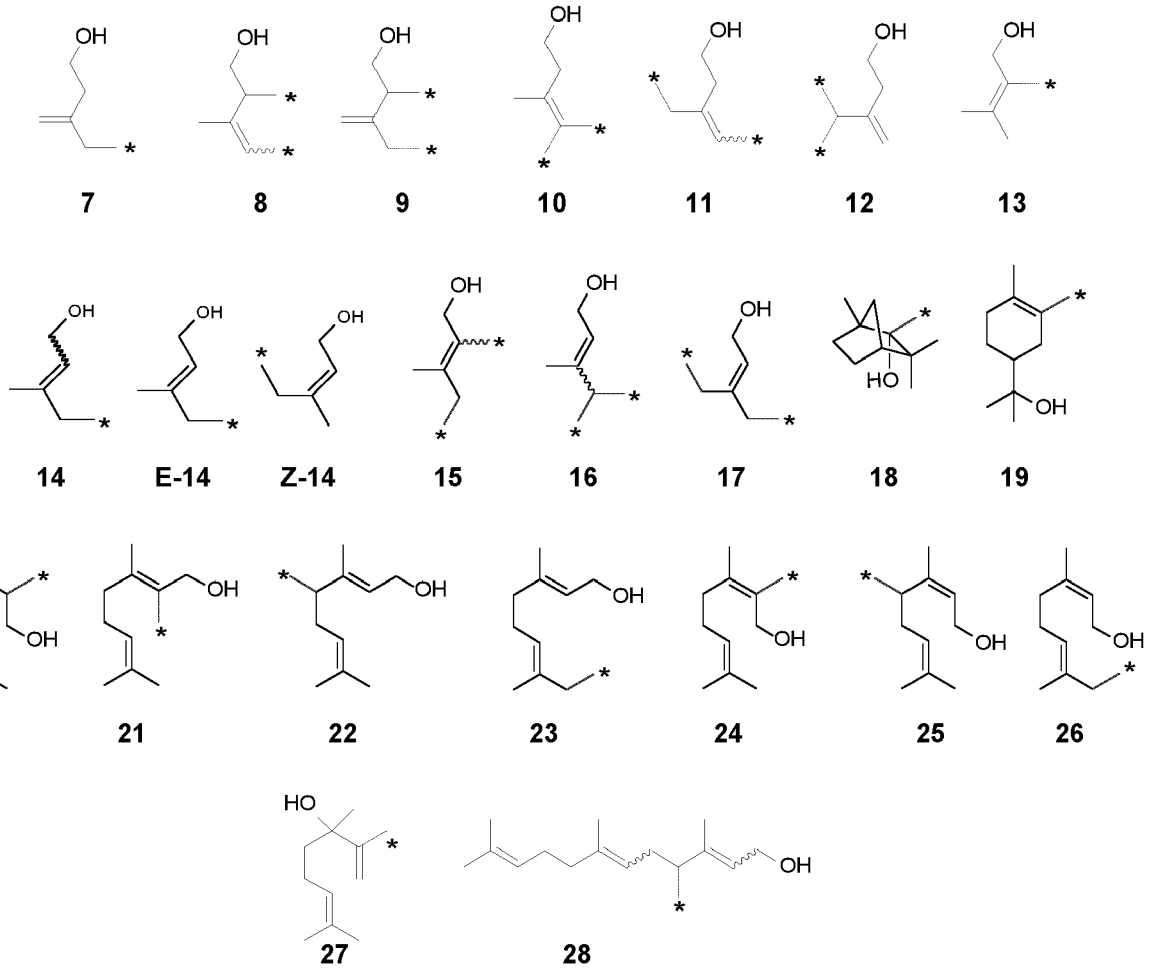
[0046] Specifically, the non-canonical terpene or terpenoid is selected from the group consisting of 2-methylenebornane, (S)-1-methylcamphene, 4-methyl-3-carene, 2-methyllimonene, 2-methylisoprenol, (E)-4-methylisoprenol, (Z)-4-methylisoprenol, 5-methylisoprenol, 2,4-dimethylisoprenol, 2,5-dimethylisoprenol, 4,4-dimethylisoprenol, 4,5-dimethylisoprenol, 5,5-dimethylisoprenol, 2-methylprenol, (Z)-4-methylprenol, (E)-4-methylprenol, 2,4-dimethylprenol, 4,4-dimethylprenol, 4,5-dimethylprenol, (S)-2-methyl-α-fenchol, 2-methyl-α-terpineol, 2-methylcitronellol, 2-methylgeraniol, 4-methylgeraniol, 8-methylgeraniol, 2-methylnerol, 4-methylnerol, 8-methylnerol, 2-methyllinalool, 4-methylfarnesol, mixtures thereof, stereoisomers thereof and mixtures of stereoisomers thereof.

[0047] The specified compounds have following structures:

2-methylenebornane (1), 1-methylcamphene (2), 4-methyl-3-carene (3), 2-methyllimonene (4), 2-methylisoprenol (5), 4-methylisoprenol (6), (Z)-4-methylisoprenol (Z-6), (E)-4-methylisoprenol (E-6), 5-methylisoprenol (7), 2,4-dimethylisoprenol (8), 2,5-dimethylisoprenol (9), 4,4-dimethylisoprenol (10), 4,5-dimethylisoprenol (11), 5,5-dimethylisoprenol (12), 2-methylprenol (13), 4-methylprenol (14), (E)-4-methylprenol (E-14), (Z)-4-methylprenol (Z-14), 2,4-dimethylprenol (15), 4,4-dimethylprenol (16), 4,5-dimethylprenol (17), 2-methyl-α-fenchol (18), 2-methyl-α-terpineol (19), 2-methylcitronellol (20), 2-methylgeraniol (21), 4-methylgeraniol (22), 8-methylgeraniol (23), 2-methylnerol (24), 4-methylnerol (25), 8-methylnerol (26), 2-methyllinalool (27), 4-methylfarnesol (28):



1 **2** **3** **4** **5** **6** **Z-6** **E-6**



[0048] The asterisk denotes the methyl or methylene group(s) which distinguish(es) the non-canonical terpene/terpenoid from the corresponding basic, "classical" terpene/terpenoid. Wavy bonds indicate that the stereochemistry is not determined or the compound is a mixture of the possible stereoisomers.

[0049] The above-specified compounds (to be more precise 2-methylenebornane, 1-methylcamphene, 4-methyl-3-carene, 2-methyllimonene, 2-methylisoprenol, 4-methylisoprenol, 5-methylisoprenol, 2,4-dimethylisoprenol, 2,5-dimethylisoprenol, 4,4-dimethylisoprenol, 4,5-dimethylisoprenol, 5,5-dimethylisoprenol, 2-methylprenol, 4-methylprenol, 2,4-dimethylprenol, 4,4-dimethylprenol, 4,5-dimethylprenol, 2-methyl-α-fenchol, 2-methyl-α-terpineol, 2-methylcitronellol, 2-methylgeraniol, 4-methylgeraniol, 8-methylgeraniol, 2-methylnerol, 4-methylnerol, 8-methylnerol, 2-methyllinalool, 4-methylfarnesol) are known and are commercially available. Alternatively, they and non-canonical terpenes and terpenoids different from those listed above can be prepared by or in analogy to methods known in the art, generally by biotechnological methods as described, for example, by C. Ignea et al., Nat. Chem. Biol. 2018, 14, 1090-1098, M.J. Kschowak et al., PLoS One 2018, 13, e0196082 or L. Drummond et al., ACS Synth. Biol. 2019, 8, 1303-1313.

[0050] Generally, an easy-to-cultivate microorganism suitable for biotechnological processes, mostly a bacterium, such as *Escherichia coli,* or a yeast, such as *Saccharomyces cerevisae,* is modified by transferring genes encoding prenyl methyltransferases (just by way of example geranyl pyrophosphate transferase from *Streptomyces coelicolor* or isopentenyl pyrophosphate methyltransferase from *Streptomyces monomycini*) and optionally also the suitable synthase (just by way of example 2-methylene bornane synthase from *Pseudomonas fluorescens* for producing 2-methylenebornane). The thusly modified microorganism is used for the production of the desired compound. If the microorganism produces more than one compound, this can be isolated from the obtained mixture by usual means, such as chromatography, or by distillative or extractive methods.

[0051] Preferably, the non-canonical terpenes or terpenoids, the stereoisomers thereof, the mixtures of different stereoisomers and the mixtures of different non-canonical terpenes and/or terpenoids are used as a fragrance.

[0052] In particular,

2-methylenebornane is used for imparting one of the following olfactory notes: earthy, coniferous forest, resinous; or any combination thereof;

(S)-1-methylcamphene is used for imparting one of the following olfactory notes: resinous, coniferous forest, woody, fruity; or any combination thereof;
4-methyl-3-carene is used for imparting one of the following olfactory notes: fruity, coniferous forest, resinous, sweetish, pepper, mint, citrus; or any combination thereof; 2-methyllimonene is used for imparting one of the following olfactory notes: resinous, terpene, mushroom; or any combination thereof;
2-methylisoprenol is used for imparting one of the following olfactory notes: resinous, sweetish, coniferous forest, fruity; or any combination thereof;
(E)-4-methylisoprenol is used for imparting one of the following olfactory notes: green, grass, herbal, coniferous forest, apple; or any combination thereof;
(Z)-4-methylisoprenol is used for imparting one of the following olfactory notes: flowery, green, fruity, apple; or any combination thereof;
5-methylisoprenol is used for imparting one of the following olfactory notes: pungent, solvent, glue, varnish; or any combination thereof;
2,4-dimethylisoprenol is used for imparting one of the following olfactory notes: coniferous forest, green, resinous; or any combination thereof;
2,5-dimethylisoprenol is used for imparting one of the following olfactory notes: resinous, coniferous forest, mint, green, varnish; or any combination thereof;
4,4-dimethylisoprenol is used for imparting one of the following olfactory notes: green, citrus, flowery, soapy, grass; or any combination thereof;
4,5-dimethylisoprenol is used for imparting one of the following olfactory notes: resinous, woody, coniferous forest; or any combination thereof;
5,5-dimethylisoprenol is used for imparting one of the following olfactory notes: coniferous forest, resinous, woody; or any combination thereof;
2-methylprenol is used for imparting one of the following olfactory notes: plastic, terpene-like; or any combination thereof;
(Z)-4-methylprenol is used for imparting one of the following olfactory notes: plastic, terpene-like, chemical; or any combination thereof;
(E)-4-methylprenol is used for imparting one of the following olfactory notes: sweetish, flowery, green, citrus, fresh, resinous; or any combination thereof;
2,4-dimethylprenol is used for imparting one of the following olfactory notes: resinous, woody, coniferous forest, glue, sweetish; or any combination thereof;
4,4-dimethylprenol is used for imparting one of the following olfactory notes: sweetish, fruity; or any combination thereof;
4,5-dimethylprenol is used for imparting one of the following olfactory notes: woody, resinous, plastic; or any combination thereof;
(S)-2-methyl-α-fenchol one of the following olfactory notes: earthy, mouldy, moss, beetroot; or any combination thereof;
2-methyl-α-terpineol is used for imparting one of the following olfactory notes: sweetish, green; or any combination thereof;
2-methylcitronellol is used for imparting one of the following olfactory notes: flowery, citrus, rose, sweetish, ethereal, fruity; or any combination thereof;
a mixture of 2-methylgeraniol and 2-methylnerol is used for imparting one of the following olfactory notes: flowery, citrus, resinous, rose, sweetish; or any combination thereof;
a mixture of 4-methylgeraniol and 4-methylnerol is used for imparting one of the following olfactory notes: citrus, lemon, lemon peel; or any combination thereof;
a mixture of 8-methylgeraniol and 8-methylnerol is used for imparting one of the following olfactory notes: flowery, resinous, sweetish, citrus, varnish; or any combination thereof;
2-methyllinalool is used for imparting one of the following olfactory notes: flowery, citrus, sweetish, fruity, bergamot, blueberry, lavender; or any combination thereof;
4-methylfarnesol is used for imparting one of the following olfactory notes: citrus, resinous, green; or any combination thereof.

[0053] The non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers and the mixture of different non-canonical terpenes and/or terpenoids is generally used in a ready-to-use composition, in particular in a fragranced ready-to-use composition. "Fragranced ready-to-use composition", as used herein, refers to a ready-to-use composition which predominately induces a pleasant odor impression.

[0054] The non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers and the mixture of different non-canonical terpenes and/or terpenoids is also used for modifying and/or enhancing the aroma

of a composition; in particular for modifying and/or enhancing the fragrance impression of a composition; specifically for modifying the scent character of a fragranced ready-to-use composition.

[0055] Fragranced ready-to-use compositions are for example compositions used in personal care, in home care, in industrial applications as well as compositions used in other applications, such as pharmaceutical compositions or crop protection compositions.

[0056] Preferably, the non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers and the mixture of different non-canonical terpenes and/or terpenoids is used in a composition selected from the group consisting of perfume compositions, body care compositions (including cosmetic compositions), products for oral and dental hygiene, hygiene articles, cleaning compositions (including dishwashing compositions), textile detergent compositions, compositions for scent dispensers, foods, food supplements, pharmaceutical compositions and crop protection compositions.

[0057] In particular,

2-methylenebornane is used for imparting one of the following olfactory notes: earthy, coniferous forest, resinous; or any combination thereof to the above-listed compositions;

(S)-1-methylcamphene is used for imparting one of the following olfactory notes: resinous, coniferous forest, woody, fruity; or any combination thereof to the above-listed compositions;

4-methyl-3-carene is used for imparting one of the following olfactory notes: fruity, coniferous forest, resinous, sweetish, pepper, mint, citrus; or any combination thereof;

2-methyllimonene is used for imparting one of the following olfactory notes: resinous, terpene, mushroom; or any combination thereof to the above-listed compositions;

2-methylisoprenol is used for imparting one of the following olfactory notes: resinous, sweetish, coniferous forest, fruity; or any combination thereof to the above-listed compositions;

(E)-4-methylisoprenol is used for imparting one of the following olfactory notes: green, grass, herbal, coniferous forest, apple; or any combination thereof to the above-listed compositions;

(Z)-4-methylisoprenol is used for imparting one of the following olfactory notes: flowery, green, fruity, apple; or any combination thereof to the above-listed compositions;

5-methylisoprenol is used for imparting one of the following olfactory notes: pungent, solvent, glue, varnish; or any combination thereof to the above-listed compositions;

2,4-dimethylisoprenol is used for imparting one of the following olfactory notes: coniferous forest, green, resinous; or any combination thereof to the above-listed compositions;

2,5-dimethylisoprenol is used for imparting one of the following olfactory notes: resinous, coniferous forest, mint, green, varnish; or any combination thereof to the above-listed compositions;

4,4-dimethylisoprenol is used for imparting one of the following olfactory notes: green, citrus, flowery, soapy, grass; or any combination thereof to the above-listed compositions;

4,5-dimethylisoprenol is used for imparting one of the following olfactory notes: resinous, woody, coniferous forest; or any combination thereof to the above-listed compositions;

5,5-dimethylisoprenol is used for imparting one of the following olfactory notes: coniferous forest, resinous, woody; or any combination thereof to the above-listed compositions f;

2-methylprenol is used for imparting one of the following olfactory notes: plastic, terpene-like; or any combination thereof to the above-listed compositions;

(Z)-4-methylprenol is used for imparting one of the following olfactory notes: plastic, terpene-like, chemical; or any combination thereof to the above-listed compositions;

(E)-4-methylprenol is used for imparting one of the following olfactory notes: sweetish, flowery, green, citrus, fresh, resinous; or any combination thereof to the above-listed compositions;

2,4-dimethylprenol is used for imparting one of the following olfactory notes: resinous, woody, coniferous forest, glue, sweetish; or any combination thereof;

4,4-dimethylprenol is used for imparting one of the following olfactory notes: sweetish, fruity; or any combination thereof to the above-listed compositions;

4,5-dimethylprenol is used for imparting one of the following olfactory notes: woody, resinous, plastic; or any combination thereof to the above-listed compositions;

(S)-2-methyl-α-fenchol one of the following olfactory notes: earthy, mouldy, moss, beetroot; or any combination thereof to the above-listed compositions;

2-methyl-α-terpineol is used for imparting one of the following olfactory notes: sweetish, green; or any combination thereof to the above-listed compositions;

2-methylcitronellol is used for imparting one of the following olfactory notes: flowery, citrus, rose, sweetish, ethereal, fruity; or any combination thereof to the above-listed compositions;

a mixture of 2-methylgeraniol and 2-methylnerol is used for imparting one of the following olfactory notes: flowery,

citrus, resinous, rose, sweetish; or any combination thereof to the above-listed compositions;
a mixture of 4-methylgeraniol and 4-methylnerol is used for imparting one of the following olfactory notes: citrus, lemon, lemon peel; or any combination thereof to the above-listed compositions;
a mixture of 8-methylgeraniol and 8-methylnerol is used for imparting one of the following olfactory notes: flowery, resinous, sweetish, citrus, varnish; or any combination thereof;
2-methyllinalool is used for imparting one of the following olfactory notes: flowery, citrus, sweetish, fruity, bergamot, blueberry, lavender; or any combination thereof to the above-listed compositions;
4-methylfarnesol is used for imparting one of the following olfactory notes: citrus, resinous, green; or any combination thereof to the above-listed compositions.

[0058] Details to the above-listed compositions are given below.

[0059] In addition to the olfactory properties, the non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers and the mixture of different non-canonical terpenes and/or terpenoids exhibit advantageous secondary properties.

[0060] For example, they can provide better sensory profiles as a result of synergistic effects with other fragrances, which means that they can provide a booster effect for other fragrances. They are therefore suitable as boosters for other fragrances.

[0061] Accordingly, another aspect of the invention relates to the use of non-canonical terpenes or terpenoids, of stereoisomers thereof, of mixtures of different stereoisomers and of mixtures of different non-canonical terpenes and/or terpenoids for modifying the scent character of a fragranced composition; and specifically to the use as a booster for other fragrances.

[0062] Booster effect means that the substances enhance and intensify in perfumery formulations the overall impression of the mixture. In the mint range, for example, it is known that menthyl methyl ether intensifies the perfumery or taste mixtures of peppermint oils and particularly in top notes brings about a considerably more intensive and more complex perception although the ether itself, being a pure substance, develops no particular intensive odor at all. In fragrance applications, Hedione® (methyl dihydrojasmonate), which as a pure substance only exhibits a light floral jasmine-note, reinforces diffusion, freshness and volume of a perfume composition as an odor booster. Booster effects are particularly desired when top-note-characterized applications are required, in which the odor impression is to be conveyed particularly quickly and intensively, for example in deodorants, air fresheners or in the taste sector in chewing gums.

[0063] To achieve such a booster effect, the non-canonical terpenes or terpenoids, the stereoisomers thereof, the mixtures of different stereoisomers and the mixtures of different non-canonical terpenes and/or terpenoids are generally used in an overall amount of 0.1 to 20% by weight, preferably in an amount of 0.5 to 5% by weight, in particular in an amount of from 0.6 to 3% by weight, based on the total weight of the fragrance mixture.

[0064] Furthermore, the non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers and the mixture of different non-canonical terpenes and/or terpenoids can have further positive effects on the composition in which they are used. For example, they can enhance the overall performance of the composition into which they are incorporated, such as the stability, e.g. the formulation stability, the extendability or the staying power of the composition.

[0065] A further embodiment of the invention is directed to a method of preparing an aroma chemical composition, in particular a fragranced composition, especially a fragranced ready-to-use composition, comprising incorporating at a non-canonical terpene or terpenoid, a stereoisomer thereof, a mixture of different stereoisomers or a mixture of different non-canonical terpenes and/or terpenoids into the target composition, e.g. a ready-to-use composition, resulting in an aroma chemical composition, in particular in a fragranced composition, especially in a fragranced ready-to-use composition. Alternatively, the invention is directed to a method of preparing an aroma chemical composition, in particular a fragranced composition, especially a fragranced ready-to-use composition, comprising mixing the non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers or the mixture of different non-canonical terpenes and/or terpenoids with at least one aroma chemical different therefrom and/or with at least one non-aroma chemical carrier and/or with at least one antioxidant and/or with at least one deodorant-active agent. Suitable and preferred aroma chemicals different from said non-canonical terpenes and terpenoids, non-aroma chemical carriers, antioxidants and deodorant-active agents are described below.

[0066] For example, the method can be carried out by mixing the non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers or the mixture of different non-canonical terpenes and/or terpenoids, as defined above, and at least one further component selected from the group consisting of aroma chemicals different therefrom, non-aroma chemical carriers, antioxidants and deodorant-active agents.

[0067] The invention is also directed to a method for modifying the scent character of an aroma chemical composition, in particular of a fragranced composition, especially of a fragranced ready-to-use composition, comprising incorporating the non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers or the mixture of different non-canonical terpenes and/or terpenoids into an aroma chemical composition, in particular into a fragranced

composition, especially into a fragranced ready-to-use composition.

[0068] In particular, the invention is directed to a method of preparing a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, comprising including the non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers or the mixture of different non-canonical terpenes and/or terpenoids as defined above in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0069] In a particular embodiment the invention is directed to a method for imparting one of the olfactory notes: earthy, coniferous forest, resinous or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 2-methylenebornane in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0070] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: resinous, coniferous forest, woody, fruity or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including (S)-1-methylcamphene in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0071] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: fruity, coniferous forest, resinous, sweetish, pepper, mint, citrus or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 4-methyl-3-carene in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0072] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: resinous, terpene, mushroom or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 2-methyllimonene in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0073] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: resinous, sweetish, coniferous forest, fruity or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 2-methylisoprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0074] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: green, grass, herbal, coniferous forest, apple or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including (E)-4-methylisoprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0075] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: flowery, green, fruity, apple or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including (Z)-4-methylisoprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0076] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes:

pungent, solvent, glue, varnish or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 5-methylisoprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0077] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: coniferous forest, green, resinous or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 2,4-dimethylisoprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0078] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: resinous, coniferous forest, mint, green, varnish or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 2,5-dimethylisoprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0079] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: green, citrus, flowery, soapy, grass or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 4,4-dimethylisoprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0080] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: resinous, woody, coniferous forest or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 4,5-dimethylisoprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0081] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: coniferous forest, resinous, woody or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 5,5-dimethylisoprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0082] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: plastic, terpene-like or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 2-methylprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0083] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: plastic, terpene-like, chemical or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including (Z)-4-methylprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0084] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: sweetish, flowery, green, citrus, fresh, resinous or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, com-

position for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including (E)-4-methylprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0085] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: resinous, woody, coniferous forest, glue, sweetish or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 2,4-dimethylprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0086] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: sweetish, fruity or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 4,4-dimethylprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0087] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: woody, resinous, plastic or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 4,5-dimethylprenol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0088] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: earthy, mouldy, moss, beetroot or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including (S)-2-methyl-α-fenchol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0089] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: sweetish, green or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 2-methyl-α-terpineol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0090] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: flowery, citrus, rose, sweetish, ethereal, fruity or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 2-methylcitronellol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0091] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: flowery, citrus, resinous, rose, sweetish or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including a mixture of 2-methylgeraniol and 2-methylnerol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0092] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: citrus, lemon, lemon peel or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including a mixture of 4-methylgeraniol and 4-methylnerol in a perfume composition, body care composition, product for oral and

dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0093] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: flowery, resinous, sweetish, citrus, varnish or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including a mixture of 8-methylgeraniol and 8-methylnerol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0094] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: flowery, citrus, sweetish, fruity, bergamot, blueberry, lavender or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 2-methyllinalool in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0095] In another particular embodiment the invention is directed to a method for imparting one of the olfactory notes: citrus, resinous, green or any combination thereof to a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition, which comprises including 4-methylfarnesol in a perfume composition, body care composition, product for oral and dental hygiene, hygiene article, cleaning composition, textile detergent composition, composition for scent dispensers, food, food supplement, pharmaceutical composition or crop protection composition.

[0096] The above particular methods can also be carried out by mixing the specified non-canonical terpene/terpenoid and the other components of the specified composition simultaneously or consecutively with each other.

Compositions

[0097] The invention relates moreover to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, and at least one further component selected from the group consisting of aroma chemicals different from said non-canonical terpenes and terpenoids, non-aroma chemical carriers, anti-oxidants and deodorant-active agents.

[0098] The non-aroma chemical carriers, anti-oxidants and deodorant-active agents are of course also different from said non-canonical terpenes or terpenoids.

[0099] The non-aroma chemical carrier is in particular selected from the group consisting of surfactants, oil components (emollients) and solvents.

[0100] Thus, in a preferred embodiment, the composition comprises a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, and at least one further component selected from the group consisting of aroma chemicals different from said non-canonical terpenes and terpenoids, surfactants, oil components, solvents, anti-oxidants and deodorant-active agents.

[0101] The pleasant aroma, low volatility and excellent solubility make the non-canonical terpenes or terpenoids suitable components in compositions where a pleasing aroma is desirable.

[0102] Accordingly, said composition is preferably an aroma chemical composition, more preferably an odor composition and in particular a fragrance composition.

[0103] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids as defined above and at least one further component selected from the group consisting of oil components, solvents, anti-oxidants and deodorant-active agents.

[0104] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids and at least one aroma chemical.

[0105] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids and at least one non-aroma chemical carrier.

[0106] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids and at least one surfactant.

[0107] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids and at least one oil component.

[0108] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids and at least one solvent.

[0109] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids and at least one anti-oxidant.

[0110] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids and at least one deodorant-active agent.

[0111] The non-canonical terpenes or terpenoids or the stereoisomers thereof or the mixture of different stereoisomers thereof or the mixture of different non-canonical terpenes and/or terpenoids can preferably be used in aroma compositions. In preferred embodiments, the aroma composition is an odor composition, i.e. a composition inducing an odor impression, and is in particular a fragrance composition, i.e. a composition inducing a pleasant odor.

[0112] The composition according to the invention can be selected from, but is not limited to, the group consisting of perfume compositions, body care compositions (including cosmetic compositions), products for oral and dental hygiene, hygiene articles, cleaning compositions (including dishwashing compositions), textile detergent compositions, compositions for scent dispensers, foods, food supplements, pharmaceutical compositions and crop protection compositions.

Aroma chemicals (different from said non-canonical terpenes and terpenoids)

[0113] By virtue of the physical properties of the above-defined non-canonical terpenes and terpenoids, combinations of said compounds have particularly good, virtually universal solvent properties for and in aroma chemicals and other customary ingredients in aroma compositions such as, in particular, fragrance compositions. Therefore, the non-canonical terpenes or terpenoids, the stereoisomers thereof, the mixtures of different stereoisomers thereof and the mixtures of different non-canonical terpenes and/or terpenoids are well combinable with aroma chemicals which are different from the above-defined non-canonical terpenes and terpenoids, allowing, in particular, the creation of aroma compositions (preferably fragrance compositions) having novel advantageous sensory profiles. Especially, as already explained above, the combinations can boost the sensory profile of aroma chemicals (such as for example of fragrances) wherein said aroma chemicals are different from the above-defined non-canonical terpenes and terpenoids.

[0114] The compositions of the invention can comprise at least one aroma chemical that is different from compounds the above-defined non-canonical terpenes and terpenoids. Said at least one aroma chemical can for example be 1, 2, 3, 4, 5, 6, 7, 8 or more aroma chemicals, selected from the group consisting of:
Geranyl acetate (3,7-dimethyl-2,6 octadien-1 yl acetate), alpha-hexylcinnamaldehyde, 2-phenoxyethyl isobutyrate (Phenirat[1]), dihydromyrcenol (2,6-dimethyl-7-octen-2-ol), methyl dihydrojasmonate (preferably with a content of cis isomer of more than 60 wt.%) (Hedione[9], Hedione HC[9]), 4,6,6,7,8,8-hexamethyl-1,3,4,6,7,8-hexahydro-cyclopenta[g]benzopyran (Galaxolid[3]), tetrahydrolinalool (3,7-dimethyloctan-3-ol), ethyllinalool, benzyl salicylate, 2-methyl-3-(4-tert-butylphenyl)propanal (Lysmeral2), cinnamyl alcohol, 4,7-methano-3a,4,5,6,7,7a-hexahydro-5-indenyl acetate and/or 4,7-methano-3a,4,5,6,7,7a-hexahydro-6-indenyl acetate (Herbaflorat[1]), citronellol, citronellyl acetate, tetrahydrogeraniol, vanillin, linalyl acetate, styrolyl acetate (1-phenylethyl acetate), octahydro-2,3,8,8-tetramethyl-2-acetonaphthone and/or 2-acetyl-1,2,3,4,6,7,8-octahydro-2,3,8,8-tetramethylnaphthalene (Iso E Super[3]), hexyl salicylate, 4-tert-butylcyclohexyl acetate (Oryclone[1]), 2-tert-butylcyclohexyl acetate (Agrumex HC[1]), alpha-ionone (4-(2,2,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one), n-alpha-methylionone, alpha-isomethylionone, coumarin, terpinyl acetate, 2-phenylethyl alcohol, 4-(4-hydroxy-4-methylpentyl)-3-cyclohexenecarboxaldehyde (Lyral3), alpha-amylcinnamaldehyde, ethylene brassylate, (E)- and/or (Z)-3-methyl-cyclopentadec-5-enone (Muscenon[9]), 15-pentadec-11-enolide and/or 15-pentadec-12-enolide (Globalide[1]), 15-cyclopentadecanolide (Macrolide[1]), 1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthalenyl)ethanone (Tonalid[10]), 2-isobutyl-4-methyl-tetrahydro-2H-pyran-4-ol (Florol[9]), 2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol (Sandolen[1]), cis-3-hexenyl acetate, trans-3-hexenyl acetate, trans-2/cis-6-nonadienol, 2,4-dimethyl-3-cyclohexenecarboxaldehyde (Vertocitral[1]), 2,4,4,7-tetra-methyloct-6-en-3-one (Claritone[1]), 2,6-dimethyl-5-hepten-1-al (Melonal[2]), borneol, 3-(3-isopropylphenyl)butanal (Florhydral[2]), 2-methyl-3-(3,4-methylenedioxyphenyl)-propanal (Helional[3]), 3-(4-ethylphenyl)-2,2-dimethylpropanal (Florazon[1]), 7-methyl-2H-1,5-benzodioxepin-3(4H)-one (Calone), 3,3,5-trimethylcyclohexyl acetate (preferably with a content of cis isomers of 70 wt.%) or more, 2,5,5-trimethyl-1,2,3,4,4a,5,6,7-octahydronaphthalen-2-ol (Ambrinol S[1]), 3-(4-*tert*-butylphenyl)-propanal (Bourgeonal[4]), ethyl 2-methylpentanoate (Manzanate[4]), ethoxymethoxycyclododecane (Amberwood[1]), 2,4-dimethyl-4,4a,5,9b-tetrahydroindeno[1,2-d][1,3]dioxine (Magnolan[1]), (2-tert-butylcyclohexyl) acetate (Verdox[3]) and 3-[5,5,6-trimethylbicyclo[2.2.1]hept-2-yl]cyclohexan-1-ol (Sandela[4]). Within the context of the present invention, the aforementioned aroma chemical(s) are

accordingly preferably combined with a compound of formula (I), or a mixture of different compounds (I), as described above.

[0115] Where trade names are given above, these refer to the following sources:

[1] trade name of Symrise GmbH, Germany;
[2] trade name of BASF SE;
[3] trade name of International Flavors & Fragrances Inc., USA;
[4] Givaudan AG, Switzerland;
[9] trade name of Firmenich S.A., Switzerland;
[10] trade name of PFW Aroma Chemicals B.V., the Netherlands.

[0116] A preferred embodiment of the invention relates to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids and at least one aroma chemical selected from the group consisting of methyl benzoate, benzyl acetate, geranyl acetate, 2-isobutyl-4-methyltetrahydro-2H-pyran-4-ol and linalool.

[0117] A further embodiment of the invention relates to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids and 2-isobutyl-4-methyltetrahydro-2H-pyran-4-ol.

[0118] A further embodiment of the invention relates to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, and methyl benzoate.

[0119] A preferred embodiment of the invention relates to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, and at least one further aroma chemical selected from the group consisting of ethylvan-illin, vanillin, 2,5-dimethyl-4-hydroxy-2H-furan-3-one (furaneol) or 3-hydroxy-2-methyl-4H-pyran-4-one (maltol).

[0120] Further aroma chemicals with which the non-canonical terpene or terpenoid or the stereoisomer thereof or the mixture of different stereoisomers thereof or the mixture of different non-canonical terpenes and/or terpenoids can be combined to give a composition according to the invention can be found, e.g., in S. Arctander, Perfume and Flavor Chemicals, Vol. I and II, Montclair, N. J., 1969, self-published or K. Bauer, D. Garbe and H. Surburg, Common Fragrance and Flavor Materials, 4th Ed., Wiley- VCH, Wein-heim 2001. Specifically, mention may be made of:

extracts from natural raw materials such as essential oils, concretes, absolutes, resins, resinoids, balsams, tinctures such as e.g.

ambergris tincture; amyris oil; angelica seed oil; angelica root oil; aniseed oil; valerian oil; basil oil; tree moss absolute; bay oil; mugwort oil; benzoin resin; bergamot oil; beeswax absolute; birch tar oil; bitter almond oil; savory oil; buchu leaf oil; cabreuva oil; cade oil; calmus oil; camphor oil; cananga oil; cardamom oil; cascarilla oil; cassia oil; cassia absolute; castoreum absolute; cedar leaf oil; cedar wood oil; cistus oil; citronella oil; lemon oil; copaiba balsam; copaiba balsam oil; coriander oil; costus root oil; cumin oil; cypress oil; davana oil; dill weed oil; dill seed oil; Eau de brouts absolute; oak moss absolute; elemi oil; tarragon oil; eucalyptus citriodora oil; eucalyptus oil; fennel oil; pine needle oil; galbanum oil; galbanum resin; geranium oil; grapefruit oil; guaiacwood oil; gurjun balsam; gurjun balsam oil; helichrysum absolute; helichrysum oil; ginger oil; iris root absolute; iris root oil; jasmine absolute; calmus oil; camomile oil blue; roman camomile oil; carrot seed oil; cascarilla oil; pine needle oil; spearmint oil; caraway oil; labdanum oil; labdanum absolute; labdanum resin; lavandin absolute; lavandin oil; lavender absolute; lavender oil; lemongrass oil; lovage oil; lime oil distilled; lime oil pressed; linalool oil; litsea cubeba oil; laurel leaf oil; mace oil; marjoram oil; mandarin oil; massoia bark oil; mimosa absolute; musk seed oil; musk tincture; clary sage oil; nutmeg oil;

myrrh absolute; myrrh oil; myrtle oil; clove leaf oil; clove flower oil; neroli oil; olibanum absolute; olibanum oil; opopanax oil; orange blossom absolute; orange oil; origanum oil; palmarosa oil; patchouli oil; perilla oil; peru balsam oil; parsley leaf oil; parsley seed oil; petitgrain oil; peppermint oil; pepper oil; pimento oil; pine oil; pennyroyal oil; rose absolute; rose wood oil; rose oil; rosemary oil; Dalmatian sage oil; Spanish sage oil; sandalwood oil; celery seed oil; spike-lavender oil; star anise oil; styrax oil; tagetes oil; fir needle oil; tea tree oil; turpentine oil; thyme oil; tolubalsam; tonka absolute; tuberose absolute; vanilla extract; violet leaf absolute; verbena oil; vetiver oil; juniper berry oil; wine lees oil; wormwood oil; winter green oil; hyssop oil; civet absolute; cinnamon leaf oil; cinnamon bark oil, and fractions thereof, or ingredients isolated therefrom;

individual fragrances from the group of hydrocarbons, such as e.g. 3-carene; alpha-pinene; beta-pinene; alpha-terpinene; gamma-terpinene; p-cymene; bisabolene; camphene; caryophyllene; cedrene; farnesene; limonene;

longifolene; myrcene; ocimene; valencene; (E,Z)-1,3,5-undecatriene; styrene; diphenylmethane;

the aliphatic alcohols such as e.g. hexanol; octanol; 3-octanol; 2,6-dimethylheptanol; 2-methyl-2-heptanol; 2-methyl-2-octanol; (E)-2-hexenol; (E)- and (Z)-3-hexenol; 1-octen-3-ol; mixture of 3,4,5,6,6-pentamethyl-3/4-hepten-2-ol and 3,5,6,6-tetramethyl-4-methyleneheptan-2-ol; (E,Z)-2,6-nonadienol; 3,7-dimethyl-7-methoxyoctan-2-ol; 9-decenol; 10-undecenol; 4-methyl-3-decen-5-ol;

the aliphatic aldehydes and acetals thereof such as e.g. hexanal; heptanal; octanal; nonanal; decanal; undecanal; dodecanal; tridecanal; 2-methyloctanal; 2-methylnonanal; (E)-2-hexenal; (Z)-4-heptenal; 2,6-dimethyl-5-heptenal; 10-undecenal; (E)-4-decenal; 2-dodecenal; 2,6,10-trimethyl-9-undecenal; 2,6,10-trimethyl-5,9-undecadienal; heptanal diethylacetal; 1,1-dimethoxy-2,2,5-trimethyl-4-hexene; citronellyloxyacetaldehyde; (E/Z)-1-(1-methoxypropoxy)-hex-] 3-ene; the aliphatic ketones and oximes thereof such as e.g. 2-heptanone; 2-octanone; 3-octanone; 2-nonanone; 5-methyl-3-heptanone; 5-methyl-3-heptanone oxime; 2,4,4,7-tetramethyl-6-octen-3-one; 6-methyl-5-hepten-2-one;

the aliphatic sulfur-containing compounds such as e.g. 3-methylthiohexanol; 3-methylthiohexyl acetate; 3-mercaptohexanol; 3-mercaptohexyl acetate; 3-mercaptohexyl butyrate; 3-acetylthiohexyl acetate; 1-menthene-8-thiol;

the aliphatic nitriles such as e.g. 2-nonenenitrile; 2-undecenenitrile; 2-tridecenenitrile; 3,12-tridecadienenitrile; 3,7-dimethyl-2,6-octadienenitrile; 3,7-dimethyl-6-octenenitrile;

the esters of aliphatic carboxylic acids such as e.g. (E)- and (Z)-3-hexenyl formate; ethyl acetoacetate; isoamyl acetate; hexyl acetate; 3,5,5-trimethylhexyl acetate; 3-methyl-2-butenyl acetate; (E)-2-hexenyl acetate; (E)- and (Z)-3-hexenyl acetate; octyl acetate; 3-octyl acetate; 1-octen-3-yl acetate; ethyl butyrate; butyl butyrate; isoamyl butyrate; hexyl butyrate; (E)- and (Z)-3-hexenyl isobutyrate; hexyl crotonate; ethyl isovalerate; ethyl 2-methylpentanoate; ethyl hexanoate; allyl hexanoate; ethyl heptanoate; allyl heptanoate; ethyl octanoate; ethyl (E,Z)-2,4-decadienoate; methyl 2-octinate; methyl 2-noninate; allyl 2-isoamyloxy acetate; methyl-3,7-dimethyl-2,6-octadienoate; 4-methyl-2-pentyl crotonate;

the acyclic terpene alcohols such as e.g. geraniol; nerol; linalool; lavandulol; nerolidol; farnesol; tetrahydrolinalool; 2,6-dimethyl-7-octen-2-ol; 2,6-dimethyloctan-2-ol; 2-methyl-6-methylene-7-octen-2-ol; 2,6-dimethyl-5,7-octadien-2-ol; 2,6-dimethyl-3,5-octadien-2-ol; 3,7-dimethyl-4,6-octadien-3-ol; 3,7-dimethyl-1,5,7-octatrien-3-ol; 2,6-dimethyl-2,5,7-octatrien-1-ol; and the formates, acetates, propionates, isobutyrates, butyrates, isovalerates, pentanoates, hexanoates, crotonates, tiglinates and 3-methyl-2-butenoates thereof;

the acyclic terpene aldehydes and ketones such as e.g. geranial; neral; citronellal; 7-hydroxy-3,7-dimethyloctanal; 7-methoxy-3,7-dimethyloctanal; 2,6,10-trimethyl-9-undecenal; geranyl acetone; as well as the dimethyl- and diethylacetals of geranial, neral, 7-hydroxy-3,7-dimethyloctanal; the cyclic terpene alcohols such as e.g. menthol; isopulegol; alpha-terpineol; terpine-4-ol; menthan-8-ol; menthan-1-ol; menthan-7-ol; borneol; isoborneol; linalool oxide; nopol; cedrol; ambrinol; vetiverol; guajol; and the formates, acetates, propionates, isobutyrates, butyrates, isovalerates, pentanoates, hexanoates, crotonates, tiglinates and 3-methyl-2-butenoates thereof;

the cyclic terpene aldehydes and ketones such as e.g. menthone; isomenthone; 8-mercaptomenthan-3-one; carvone; camphor; fenchone; alpha-ionone; beta-ionone; alpha-n-methylionone; beta-n-methylionone; alpha-isomethylionone; beta-isomethylionone; alpha-irone; alpha-damascone; beta-damascone; beta-damascenone; delta-damascone; gamma-damascone; 1-(2,4,4-trimethyl-2-cyclohexen-1-yl)-2-buten-1-one; 1,3,4,6,7,8a-hexahydro-1,1,5,5-tetramethyl-2H-2,4a-methano-naphthalene-8(5H)-one; 2-methyl-4-(2,6,6-trimethyl-1 -cyclohexen-1 -yl)-2-butenal; noot-katone; dihydronootkatone; 4,6,8-megastigmatrien-3-one; alpha-sinensal; beta-sinensal; acetylated cedar wood oil (methyl cedryl ketone);

the cyclic alcohols such as e.g. 4-tert-butylcyclohexanol; 3,3,5-trimethylcyclohexanol; 3-isocamphylcyclohexanol; 2,6,9-trimethyl-Z2,Z5,E9-cyclododecatrien-1-ol; 2-isobutyl-4-methyltetrahydro-2H-pyran-4-ol;

the cycloaliphatic alcohols such as e.g. alpha-3,3-trimethylcyclohexylmethanol; 1-(4-isopropylcyclohexyl)ethanol; 2-methyl-4-(2,2,3-trimethyl-3-cyclopent-1-yl)butanol; 2-methyl-4-(2,2,3-trimethyl-3-cyclopent-1-yl)-2-buten-1-ol; 2-ethyl-4-(2,2,3-trimethyl-3-cyclopent-1-yl)-2-buten-1-ol; 3-methyl-5-(2,2,3-trimethyl-3-cyclopent-1-yl)pentan-2-ol; 3-methyl-5-(2,2,3-trimethyl-3-cyclopent-1-yl)-4-penten-2-ol; 3,3-dimethyl-5-(2,2,3-trimethyl-3-cyclopent-1-yl)-4-penten-2-ol; 1-(2,2,6-trimethylcyclohexyl)pentan-3-ol; 1-(2,2,6-trimethylcyclohexyl)hexan-3-ol;

the cyclic and cycloaliphatic ethers such as e.g. cineol; cedryl methyl ether; cyclododecyl methyl ether; 1,1-dimethoxycyclododecane; (ethoxymethoxy)cyclododecane; alpha-cedrene epoxide; 3a,6,6,9a-tetramethyldodecahydronaphtho[2,1-b]furan; 3a-ethyl-6,6,9a-trimethyldodecahydronaphtho[2,1-b]furan; 1,5,9-trimethyl-13-oxabicyclo-[10.1.0]trideca-4,8-diene; rose oxide; 2-(2,4-dimethyl-3-cyclohexen-1-yl)-5-methyl-5-(1-methylpropyl)-1,3-dioxane;

the cyclic and macrocyclic ketones such as e.g. 4-tert-butylcyclohexanone; 2,2,5-trimethyl-5-pentylcyclopentanone; 2-heptylcyclopentanone; 2-pentylcyclo-pentanone; 2-hydroxy-3-methyl-2-cyclopenten-1-one; 3-methyl-cis-2-penten-1-yl-2-cyclopenten-1-one; 3-methyl-2-pentyl-2-cyclopenten-1 -one; 3-methyl-4-cyclopenta-decenone; 3-methyl-5-cyclopentadecenone; 3-methylcyclopentadecanone; 4-(1-ethoxyvinyl)-3,3,5,5-tetramethylcyclohexanone; 4-tert-pentylcyclohexanone; 5-cyclohexadecen-1-one; 6,7-dihydro-1,1,2,3,3-pentamethyl-4(5H)-indanone; 8-cyclo-hexadecen-1-one; 7-cyclohexadecen-1-one; (7/8)-cyclohexadecen-1-one; 9-cyclo-heptadecen-1-one; cyclopentadecanone; cyclohexadecanone;

the cycloaliphatic aldehydes such as e.g. 2,4-dimethyl-3-cyclohexenecarbaldehyde; 2-methyl-4-(2,2,6-trimethylcyclohexen-1-yl)-2-butenal; 4-(4-hydroxy-4-methylpentyl)-3-cyclohexene carbaldehyde; 4-(4-methyl-3-penten-1-yl)-3-cyclohexenecarbaldehyde;

the cycloaliphatic ketones such as e.g. 1-(3,3-dimethylcyclohexyl)-4-penten-1-one; 2,2-dimethyl-1-(2,4-dimethyl-3-cyclohexen-1-yl)-1-propanone; 1-(5,5-dimethyl-1-cyclo-hexen-1-yl)-4-penten-1-one; 2,3,8,8-tetramethyl-1 ,2,3,4,5,6,7,8-octahydro-2-naphthalenyl methyl ketone; methyl 2,6,10-trimethyl-2,5,9-cyclododecatrienyl ketone; tert-butyl (2,4-dimethyl-3-cyclohexen-1-yl) ketone;

the esters of cyclic alcohols such as e.g. 2-tert-butylcyclohexyl acetate; 4-tert-butylcyclohexyl acetate; 2-tert-pentylcyclohexyl acetate; 4-tert-pentylcyclohexyl acetate; 3,3,5-trimethylcyclohexyl acetate; decahydro-2-naphthyl acetate; 2-cyclopentylcyclopentyl crotonate; 3-pentyltetrahydro-2H-pyran-4-yl acetate; decahy-dro-2,5,5,8a-tetramethyl-2-naphthyl acetate; 4,7-methano-3a,4,5,6,7,7a-hexahydro-5 or 6-indenyl acetate; 4,7-methano-3a,4,5,6,7,7a-hexahydro-5 or 6-indenyl propionate; 4,7-methano-3a,4,5,6,7,7a-hexahydro-5 or 6-indenyl isobutyrate; 4,7-methanooctahydro-5 or 6-indenyl acetate;

the esters of cycloaliphatic alcohols such as e.g. 1-cyclohexylethyl crotonate;

the esters of cycloaliphatic carboxylic acids such as e.g. allyl 3-cyclohexylpropionate; allyl cyclohexyloxyacetate; cis- and trans-methyl dihydrojasmonate; cis- and trans-methyl jasmonate; methyl 2-hexyl-3-oxocyclopentanecarboxylate; ethyl 2-ethyl-6,6-dimethyl-2-cyclohexenecarboxylate; ethyl 2,3,6,6-tetramethyl-2-cyclohexenecarboxylate; ethyl 2-methyl-1,3-dioxolane-2-acetate;

the araliphatic alcohols such as e.g. benzyl alcohol; 1-phenylethyl alcohol, 2-phenylethyl alcohol, 3-phenylpropanol; 2-phenylpropanol; 2-phenoxyethanol; 2,2-dimethyl-3-phenylpropanol; 2,2-dimethyl-3-(3-methylphenyl)propanol; 1,1-dimethyl-2-phenylethyl alcohol; 1,1-dimethyl-3-phenylpropanol; 1-ethyl-1-methyl-3-phenylpropanol; 2-methyl-5-phenylpentanol; 3-methyl-5-phenylpentanol; 3-phenyl-2-propen-1-ol; 4-methoxybenzyl alcohol; 1-(4-isopropylphenyl)ethanol;

the esters of araliphatic alcohols and aliphatic carboxylic acids such as e.g. benzyl acetate; benzyl propionate; benzyl isobutyrate; benzyl isovalerate; 2-phenylethyl acetate; 2-phenylethyl propionate; 2-phenylethyl isobutyrate; 2-phenylethyl isovalerate; 1-phenylethyl acetate; alpha-trichloromethylbenzyl acetate; alpha,alpha-dimethyl-phenylethyl acetate; alpha,alpha-dimethylphenylethyl butyrate; cinnamyl acetate; 2-phenoxyethyl isobutyrate; 4-methoxybenzyl acetate;

the araliphatic ethers such as e.g. 2-phenylethyl methyl ether; 2-phenylethyl isoamyl ether; 2-phenylethyl 1-ethoxyethyl ether; phenylacetaldehyde dimethyl acetal; phenyla-cetaldehyde diethyl acetal; hydratropaaldehyde dimethyl acetal; phenylacetaldehyde glycerol acetal; 2,4,6-trimethyl-4-phenyl-1,3-dioxane; 4,4a,5,9b-tetrahydroindeno[1,2-d]-m-dioxine; 4,4a,5,9b-tetrahydro-2,4-dimethylindeno[1,2-d]-m-dioxine;

the aromatic and araliphatic aldehydes such as e.g. benzaldehyde; phenylacetaldehyde; 3-phenylpropanal; hydratropaaldehyde; 4-methylbenzaldehyde;

4-methylphenylacetaldehyde; 3-(4-ethylphenyl)-2,2-dimethylpropanal; 2-methyl-3-(4-isopropylphenyl)propanal; 2-

methyl-3-(4-tert-butylphenyl)propanal; 2-methyl-3-(4-isobutylphenyl)propanal; 3-(4-tert-butylphenyl)propanal; cinnamaldehyde; alpha-butylcinnamaldehyde; alpha-amylcinnamaldehyde; alpha-hexylcinnamaldehyde; 3-methyl-5-phenylpentanal; 4-methoxybenzaldehyde; 4-hydroxy-3-methoxybenzaldehyde; 4-hydroxy-3-ethoxybenzaldehyde; 3,4-methylenedioxybenzaldehyde; 3,4-dimethoxybenzaldehyde; 2-methyl-3-(4-methoxyphenyl)propanal; 2-methyl-3-(4-methylenedioxyphenyl)propanal;

the aromatic and araliphatic ketones such as e.g. acetophenone; 4-methylacetophenone; 4-methoxyacetophenone; 4-tert-butyl-2,6-dimethylaceto-phenone; 4-phenyl-2-butanone; 4-(4-hydroxyphenyl)-2-butanone; 1-(2-naphthalenyl)-ethanone; 2-benzofuranylethanone; (3-methyl-2-benzofuranyl)ethanone; benzophenone; 1,1,2,3,3,6-hexamethyl-5-indanyl methyl ketone; 6-tert-butyl-1,1-dimethyl-4-indanyl methyl ketone; 1-[2,3-dihydro-1,1,2,6-tetramethyl-3-(1-methylethyl)-1H-5-indenyl]ethanone; 5',6',7',8'-tetrahydro-3',5',5',6',8',8'-hexamethyl-2-acetonaphthone;

the aromatic and araliphatic carboxylic acids and esters thereof such as e.g. benzoic acid; phenylacetic acid; methyl benzoate; ethyl benzoate; hexyl benzoate; benzyl benzoate; methyl phenylacetate; ethyl phenylacetate; geranyl phenylacetate; phenylethyl phenylacetate; methyl cinnamate; ethyl cinnamate; benzyl cinnamate; phenylethyl cinnamate; cinnamyl cinnamate; allyl phenoxyacetate; methyl salicylate; isoamyl salicylate; hexyl salicylate; cyclohexyl salicylate; cis-3-hexenyl salicylate; benzyl salicylate; phenylethyl salicylate; methyl 2,4-dihydroxy-3,6-dimethylbenzoate; ethyl 3-phenylglycidate; ethyl 3-methyl-3-phenylglycidate;

the nitrogen-containing aromatic compounds such as e.g. 2,4,6-trinitro-1,3-dimethyl-5-tert-butylbenzene; 3,5-dinitro-2,6-dimethyl-4-tert-butylacetophenone; cinnamonitrile; 3-methyl-5-phenyl-2-pentenonitrile; 3-methyl-5-phenylpentanonitrile; methyl anthranilate; methyl-N-methylanthranilate; Schiff bases of methyl anthranilate with 7-hydroxy-3,7-dimethyloctanal, 2-methyl-3-(4-tert-butylphenyl)propanal or 2,4-dimethyl-3-cyclohexenecarbaldehyde; 6-isopropylquinoline; 6-isobutylquinoline; 6-sec-butylquinoline; 2-(3-phenylpropyl)pyridine; indole; skatole; 2-methoxy-3-isopropyl-pyrazine; 2-isobutyl-3-methoxypyrazine;

the phenols, phenyl ethers and phenyl esters such as e.g. estragole; anethole; euge-nol; eugenyl methyl ether; isoeugenol; isoeugenyl methyl ether; thymol; carvacrol; diphenyl ether; beta-naphthyl methyl ether; beta-naphthyl ethyl ether; beta-naphthyl isobutyl ether; 1,4-dimethoxybenzene; eugenyl acetate; 2-methoxy-4-methylphenol; 2-ethoxy-5-(1-propenyl)phenol; p-cresyl phenylacetate;

the heterocyclic compounds such as e.g. 2,5-dimethyl-4-hydroxy-2H-furan-3-one; 2-ethyl-4-hydroxy-5-methyl-2H-furan-3-one; 3-hydroxy-2-methyl-4H-pyran-4-one; 2-ethyl-3-hydroxy-4H-pyran-4-one;

the lactones such as e.g. 1,4-octanolide; 3-methyl-1,4-octanolide; 1,4-nonanolide; 1,4-decanolide; 8-decen-1,4-olide; 1,4-undecanolide; 1,4-dodecanolide; 1,5-decanolide; 1,5-dodecanolide; 4-methyl-1,4-decanolide; 1,15-pentadecanolide; cis- and trans-11-pentadecen-1,15-olide; cis- and trans-12-pentadecen-1,15-olide; 1,16-hexadecanolide; 9-hexadecen-1,16-olide; 10-oxa-1,16-hexadecanolide; 11-oxa-1,16-hexadecanolide; 12-oxa-1,16-hexadecanolide; ethylene 1,12-dodecanedioate; ethylene 1,13-tridecanedioate; coumarin; 2,3-dihydrocoumarin; octahydrocoumarin.

[0121] In a preferred embodiment, the aroma chemicals different from said non-canonical terpenes and terpenoids are selected from the group consisting of geranyl acetate, alpha-hexylcinnamaldehyde, 2-phenoxyethyl isobutyrate, dihydromyrcenol, methyl dihydrojasmonate (preferably with a content of cis isomer of more than 60 wt.%), 4,6,6,7,8,8-hexamethyl-1,3,4,6,7,8-hexahydrocyclopenta[g]benzopyran, tetrahydrolinalool, ethyllinalool, benzyl salicylate, 2-methyl-3-(4-tert-butylphenyl)propanal, cinnamyl alcohol, 4,7-methano-3a,4,5,6,7,7a-hexahydro-5-indenyl acetate, 4,7-methano-3a,4,5,6,7,7a-hexahydro-6-indenyl acetate, citronellol, citronellyl acetate, tetrahydrogeraniol, vanillin, linalyl acetate, styrolyl acetate, octahydro-2,3,8,8-tetramethyl-2-acetonaphthone, 2-acetyl-1,2,3,4,6,7,8-octahydro-2,3,8,8-tetramethylnaphthalene, hexyl salicylate, 4-tert-butylcyclohexyl acetate, 2-tert-butylcyclohexyl acetate, alpha-ionone, n-alpha-methylionone, alpha-isomethylionone, coumarin, terpinyl acetate, 2-phenylethyl alcohol, 4-(4-hydroxy-4-methylpentyl)-3-cyclohexenecarboxaldehyde, alpha-amylcinnamaldehyde, ethylene brassylate, (E)-3-methylcyclopentadec-5-enone, (Z)-3-methylcyclopentadec-5-enone, 15-pentadec-11-enolide, 15-pentadec-12-enolide, 15-cyclopentadecanolide, 1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthalenyl)-ethanone, 2-isobutyl-4-methyltetrahydro-2H-pyran-4-ol, 2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol, cis-3-hexenyl acetate, trans-3-hexenyl acetate, trans-2/cis-6-nonadienol, 2,4-dimethyl-3-cyclohexenecarboxaldehyde, 2,4,4,7-tetramethyloct-6-en-3-one, 2,6-dimethyl-5-hepten-1-al, borneol, 3-(3-isopropylphenyl)-butanal, 2-methyl-3-(3,4-methylenedioxyphenyl)propanal, 3-(4-ethylphenyl)-2,2-dimethylpropanal, 7-methyl-2H-1,5-benzodioxepin-3(4H)-one, 3,3,5-trimethylcyclohexyl acetate (preferably with a content of cis isomers of 70 wt.% or more), 2,5,5-trimethyl-1,2,3,4,4a,5,6,7-octahydro-naphthalen-2-ol, 3-(4-

tert-butylphenyl)-propanal, ethyl 2-methylpentanoate, ethoxymethoxycyclododecane, 2,4-dimethyl-4,4a,5,9b-tetrahydroindeno[1,2-d][1,3]dioxine, (2-tert-butylcyclohexyl) acetate, 3-[5,5,6-trimethylbicyclo[2.2.1]hept-2-yl]cyclohexan-1-ol, menthone, isomenthone, carvone, camphor, beta-ionone, beta-n-methylionone, beta-isomethylionone, alpha-irone, alpha-damascone, beta-damascone, beta-damascen-one, delta-damascone, acetylated cedar wood oil, and mixtures thereof.

Non-aroma chemical carriers

[0122] A further embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, and at least one non-aroma chemical carrier.

[0123] The at least one non-aroma chemical carrier can be a compound, a mixture of compounds or other additives which has/have no or no noteworthy sensory properties. The non-aroma chemical carrier can serve for the dilution and/or the fixing of the non-canonical terpene or terpenoid and the optionally present at least one aroma chemical, as defined above, or any other component, if comprised in the composition.

[0124] A further embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, and at least one non-aroma chemical carrier selected from the group consisting of solvents, surfactants and oil components.

[0125] According to preferred embodiments of the present invention, said non-aroma chemical carrier(s) is/are selected from the solvents, surfactants and oil components listed below.

[0126] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, as described herein and at least one solvent.

[0127] In the context of the present invention, a "solvent" serves for the dilution of the compound(s) (I) to be used according to the invention and/or any further component of the composition without having its own aroma.

[0128] The one or more solvent(s) can be present in the composition in amount of 0.01 to 99 wt.% based on the composition. In a preferred embodiment of the invention, the composition comprises 0.1 to 90 wt.%, preferably 0.5 to 80 wt.% of solvent(s) based on the total weight of the composition. The amount of solvent(s) can be chosen depending on the composition. In one embodiment of the invention, the composition comprises 0.05 to 10 wt.%, preferably 0.1 to 5 wt.%, more preferably 0.2 to 3 wt.% based on the total weight of the composition. In one embodiment of the invention, the composition comprises 20 to 70 wt.%, preferably 25 to 50 wt.% of solvent(s) based on the total weight of the composition.

[0129] Preferred solvents are ethanol, isopropanol, dipropylene glycol (DPG), propylene glycol, 1,2-butylene glycol, glycerol, diethylene glycol monoethyl ether, diethyl phthalate (DEP), isopropyl myristate (IPM), triethyl citrate (TEC), and benzyl benzoate (BB).

[0130] Especially preferred solvents are selected from the group consisting of ethanol, propylene glycol, dipropylene glycol, triethyl citrate, benzyl benzoate and isopropyl myristate.

[0131] In a preferred embodiment of the invention, the solvent is selected from the group consisting of ethanol, isopropanol, dipropylene glycol (DPG), propylene glycol, 1,2-butylene glycol, glycerol, diethylene glycol monoethyl ether, diethyl phthalate (DEP), isopropyl myristate (IPM), triethyl citrate (TEC), benzyl benzoate and mixtures thereof.

[0132] According to a further embodiment, the non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers thereof or the mixture of different non-canonical terpenes and/or terpenoids is used according to the present invention in surfactant-containing compositions. Due to its characteristic fragrance property and its substantivity, tenacity as well as stability, the non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers thereof or the mixture of different non-canonical terpenes and/or terpenoids can especially be used to provide an odor, preferably a fragrance impression to surfactant-containing compositions such as, for example, cleaners (in particular laundry care products and all-purpose cleaners). It can preferably be used to impart a long-lasting clean note to a surfactant comprising composition.

[0133] One embodiment of the invention is therefore directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, and at least one surfactant.

[0134] The surfactant(s) may be selected from anionic, non-ionic, cationic and/or amphoteric or zwitterionic surfactants. Surfactant-containing compositions, such as for example shower gels, foam baths, shampoos, etc., preferably contain at least one anionic surfactant.

[0135] The compositions according to the invention usually contain the surfactant(s), in the aggregate, in an amount of 0 to 40 wt.%, preferably 0 to 20 wt.%, more preferably 0.1 to 15 wt.%, and particularly 0.1 to 10 wt.%, based on the total weight of the composition. Typical examples of nonionic surfactants are fatty alcohol polyglycol ethers, alkylphenol

polyglycol ethers, fatty acid polyglycol esters, fatty acid amide polyglycol ethers, fatty amine polyglycol ethers, alkoxylated triglycerides, mixed ethers and mixed formals, optionally partly oxidized alk(en)yl oligoglycosides or glucuronic acid derivatives, fatty acid-N-alkyl glucamides, protein hydrolyzates (particularly wheat-based vegetable products), polyol fatty acid esters, sugar esters, sorbitan esters, polysorbates and amine oxides. If the nonionic surfactants contain polyglycol ether chains, they may have a conventional homolog distribution, although they preferably have a narrow-range homolog distribution.

[0136] Zwitterionic surfactants are surface-active compounds which contain at least one quaternary ammonium group and at least one $-COO^{(-)}$ or $-SO_3^{(-)}$ group in the molecule. Particularly suitable zwitterionic surfactants are the so-called betaines, such as the N-alkyl-N,N-dimethyl ammonium glycinates, for example, cocoalkyl dimethyl ammonium glycinate, N-acylaminopropyl-N,N-dimethyl ammonium glycinates, for example, cocoacylaminopropyl dimethyl ammonium glycinate, and 2-alkyl-3-carboxymethyl-3-hydroxyethyl imidazolines, containing 8 to 18 carbon atoms in the alkyl or acyl group, and cocoacylaminoethyl hydroxyethyl carboxymethyl glycinate. The fatty acid amide derivative known under the CTFA name of Cocamidopropyl Betaine is particularly preferred.

[0137] Ampholytic surfactants are also suitable, particularly as co-surfactants. Ampholytic surfactants are surface-active compounds which, in addition to a C_8 to C_{18} alkyl or acyl group, contain at least one free amino group and at least one -COOH- or $-SO_3H$- group in the molecule and which are capable of forming inner salts. Examples of suitable ampholytic surfactants are N-alkyl glycines, N-alkyl propionic acids, N-alkylaminobutyric acids, N-alkyliminodipropionic acids, N-hydroxyethyl-N-alkylamidopropyl glycines, N-alkyl taurines, N-alkyl sarcosines, 2-alkylaminopropionic acids and alkylaminoacetic acids containing around 8 to 18 carbon atoms in the alkyl group. Particularly preferred ampholytic surfactants are N-cocoalk-ylaminopropionate, cocoacylaminoethyl aminopropionate and acyl sarcosine.

[0138] Anionic surfactants are characterized by a water-solubilizing anionic group such as, for example, a carboxylate, sulfate, sulfonate or phosphate group and a lipophilic group. Dermatologically safe anionic surfactants are known to the practitioner in large numbers from relevant textbooks and are commercially available. They are, in particular, alkyl sulfates in the form of their alkali metal, ammonium or alkanolammonium salts, alkylether sulfates, alkylether carboxylates, acyl isethionates, acyl sarcosinates, acyl taurines containing linear C_{12}-C_{18} alkyl or acyl groups and sulfosuccinates and acyl glutamates in the form of their alkali metal or ammonium salts.

[0139] Particularly suitable cationic surfactants are quaternary ammonium compounds, preferably ammonium halides, more especially chlorides and bromides, such as alkyl trimethyl ammonium chlorides, dialkyl dimethyl ammonium chlorides and trialkyl methyl ammonium chlorides, for example, cetyl trimethyl ammonium chloride, stearyl trim ethyl ammonium chloride, distearyl dimethyl ammonium chloride, lauryl dimethyl ammonium chloride, lauryl dimethyl benzyl ammonium chloride and tricetyl methyl ammonium chloride. In addition, the readily biodegradable quaternary ester compounds, such as, for example, the dialkyl ammonium methosulfates and methyl hydroxyalkyl dialkoyloxyalkyl ammonium methosulfates marketed under the name of Stepantexe and the corresponding products of the Dehyquart® series, may be used as cationic surfactants. "Es-terquats" are generally understood to be quaternized fatty acid triethanolamine ester salts. They can provide the compositions with particular softness. They are known substances which are prepared by the relevant methods of organic chemistry. Other cationic surfactants suitable for use in accordance with the invention are the quaternized protein hydrolyzates.

[0140] One embodiment of the invention is directed to a composition a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, and at least one oil component.

[0141] The oil components are typically present in an amount of 0.1 to 80 wt.%, preferably 0.5 to 70 wt.%, more preferably 1 to 60 wt.%, even more preferably 1 to 50 wt.%, in particular 1 to 40 wt.%, more particularly 5 to 25 wt.% and specifically 5 to 15 wt.% based on the total weight of the composition.

[0142] The oil components may be selected, for example, from Guerbet alcohols based on fatty alcohols containing 6 to 18, preferably 8 to 10, carbon atoms and other additional esters, such as myristyl myristate, myristyl palmitate, myristyl stearate, myristyl isostearate, myristyl oleate, myristyl behenate, myristyl erucate, cetyl myristate, cetyl palmitate, cetyl stearate, cetyl isostearate, cetyl oleate, cetyl behenate, cetyl erucate, stearyl myristate, stearyl palmitate, stearyl stearate, stearyl isostearate, stearyl oleate, stearyl behenate, stearyl erucate, isostearyl myristate, isostearyl palmitate, isostearyl stearate, isostearyl isostearate, isostearyl oleate, isostearyl behenate, isostearyl oleate, oleyl myristate, oleyl palmitate, oleyl stearate, oleyl isostearate, oleyl oleate, oleyl behenate, oleyl erucate, behenyl myristate, behenyl palmitate, behenyl stearate, behenyl isostearate, behenyl oleate, behenyl behenate, behenyl erucate, erucyl myristate, erucyl palmitate, erucyl stearate, erucyl isostearate, erucyl oleate, erucyl behenate and erucyl erucate. Also suitable are esters of C_{18}-C_{38} alkyl-hydroxycarboxylic acids with linear or branched C_6-C_{22} fatty alcohols, more especially dioctyl malate, esters of linear and/or branched fatty acids with polyhydric alcohols (for example propylene glycol, dimer dial or trimer triol), triglycerides based on C_6-C_{10} fatty acids, liquid mono-, di- and triglyceride mixtures based on C_6-C_{18} fatty acids, esters of C_6-C_{22} fatty alcohols and/or Guerbet alcohols with aromatic carboxylic acids, more particularly benzoic acid, esters of dicarboxylic acids with polyols containing 2 to 10 car- bon atoms and 2 to 6 hydroxyl groups, vegetable oils, branched primary alcohols, substituted cyclohexanes, linear and branched C_6-C_{22} fatty alcohol carbonates such as, for

example, dicaprylyl carbonate (Cetiol® CC), Guerbet carbonates based on fatty alcohols containing 6 to 18, preferably 8 to 10, carbon atoms, esters of benzoic acid with linear and/or branched C_6 to C_{22} alcohols (for example Finsolv® TN), linear or branched, symmetrical or nonsymmetrical dialkyl ethers containing 6 to 22 carbon atoms per alkyl group such as, for example, dicaprylyl ether (Cetiol® OE), ring opening products of epoxidized fatty acid esters with polyols and hydrocarbons or mixtures thereof.

Anti-oxidants

[0143] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, and at least one anti-oxidant.

[0144] Anti-oxidants are able to inhibit or prevent the undesired changes in the compositions to be protected caused by oxygen effects and other oxidative processes. The effect of the anti-oxidants consists in most cases in them acting as free-radical scavengers for the free radicals which arise during autoxidation.

[0145] Anti-oxidants can for example be selected from the group consisting of

- amino acids (for example glycine, alanine, arginine, serine, threonine, histidine, tyrosine, tryptophan) and derivatives thereof,
- imidazoles (e.g. urocanic acid) and derivatives thereof,
- peptides, such as D,L-carnosine, D-carnosine, L-carnosine (=β-Alanyl-L-histidin) and derivatives thereof
- carotenoids, carotenes (e.g. alpha-carotene, beta-carotene, lycopene, lutein) or derivatives thereof,
- chlorogenic acid and derivatives thereof,
- lipoic acid and derivatives thereof (for example dihydrolipoic acid),
- auro-thioglucose, propylthiouracil and other thiols (for example thioredoxin, gluta-thione, cysteine, cystine, cystamine and the glycosyl, N-acetyl, methyl, ethyl, propyl, amyl, butyl and lauryl, palmitoyl, oleyl, gamma-linoleyl, cholesteryl and glyceryl esters thereof) and salts thereof,
- dilauryl thiodipropionate, distearyl thiodipropionate, thiodipropionic acid and derivatives thereof (esters, ethers, peptides, lipids, nucleotides, nucleosides and salts),
- sulfoximine compounds (for example buthionine sulfoximines, homocysteine sulfoximine, buthionine sulfones, penta-, hexa-, heptathionine sulfoximine)
- (metal) chelating agents (e.g. alpha-hydroxy fatty acids, palmitic acid, phytic acid, lactoferrin),
- alpha-hydroxy acids (for example citric acid, lactic acid, malic acid),
- humic acid, bile acid, bile extracts, bilirubin, biliverdin, boldin (= alkaloid from the plant Peumus boldus, boldo extract,
- EDTA, EGTA and derivatives thereof,
- unsaturated fatty acids and derivatives thereof (e.g. gamma-linolenic acid, linoleic acid, oleic acid),
- folic acid and derivatives thereof,
- ubiquinone and ubiquinol and derivatives thereof,
- vitamin C and derivatives (for example ascorbyl palmitate, Mg ascorbyl phosphate, ascorbyl acetate),
- tocopherols and derivatives (for example vitamin E acetate),
- vitamin A and derivatives (for example vitamin A palmitate),
- coniferyl benzoate of gum benzoin, rutic acid and derivatives thereof, alpha-glycosylrutin, ferulic acid, furfurylideneglucitol,
- butylhydroxytoluene (BHT), butylhydroxyanisole (BHA)
- nordihydroguaiacic acid, nordihydroguaiaretic acid, trihydroxybutyrophenone, uric acid and derivatives thereof, mannose and derivatives thereof,
- superoxide dismutase
- zinc and derivatives thereof (for example ZnO, ZnSO4),
- selenium and derivatives thereof (for example selenomethionine) and
- stilbenes and derivatives thereof (e.g. stilbene oxide, trans-stilbene oxide)

[0146] In a preferred embodiment, the anti-oxidant is selected from the group consisting of pentaerythrityl, tetra-di-t-butyl hydroxyhydrocinnamate, nordihydroguaiaretic acid, ferulic acid, resveratrol, propyl gallate, butylhydroxytoluene (BHT), butylhydroxyanisole (BHA), ascorbyl palmitate and tocopherol.

[0147] The compositions according to the invention can comprise the anti-oxidants in an amount of 0.001 to 25 wt.-%, preferably 0.005 to 10 wt.-%, preferably 0.01 to 8 wt.-%, preferably 0.025 to 7 wt.-%, preferably 0.05 to 5 wt.-%, based on the total weight of the composition.

Deodorant-active agents

[0148] One embodiment of the invention is directed to a composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, and at least one deodorant-active agent.

[0149] The non-canonical terpene or terpenoid, the stereoisomer thereof, the mixture of different stereoisomers thereof or the mixture of different non-canonical terpenes and/or terpenoids can be used to impart a clean, long-lasting note to deodorizing compositions as well as to the skin treated with such compositions.

[0150] Deodorizing compositions (deodorants and antiperspirants) counteract, mask or eliminate body odors. Body odors are formed through the action of skin bacteria on apocrine perspiration which results in the formation of unpleasant-smelling degradation products.

[0151] In a preferred embodiment of the invention, the at least one deodorant-active agent is selected from the groups consisting of anti-perspirants, esterase inhibitors and antibacterial agents.

[0152] Suitable antiperspirants can be selected from the group consisting of salts of aluminium, zirconium or zinc. Examples are aluminium chloride, aluminium chlorohydrate, aluminium dichlorohydrate, aluminium sesquichlorohydrate and complex compounds thereof, for example with 1,2-propylene glycol, aluminium hydroxyallantoinate, aluminium chloride tartrate, aluminium zirconium trichlorohydrate, aluminium zirconium tetrachlorohydrate, aluminium zirconium pentachlorohydrate and complex compounds thereof, for example with amino acids, such as glycine. Aluminium chlorohydrate, aluminium zirconium tetrachlorohydrate, aluminium zirconium pentachlorohydrate and complex compounds thereof are preferably used.

[0153] In a preferred embodiment of the invention the compositions comprise at least one antiperspirant selected from the group consisting aluminium chloride, aluminium chlorohydrate, aluminium dichlorohydrate, aluminium sesquichlorohydrate, aluminium hydroxyallantoinate, aluminium chloride tartrate, aluminium zirconium trichlorohydrate, aluminium zirconium tetrachlorohydrate and aluminium zirconium pentachlorohydrate

[0154] The compositions according to the invention can comprise the antiperspirants in an amount of 1 to 50, preferably 5 to 30 and more particularly 10 to 25 wt.-%, based on the solids content of the composition.

[0155] Where perspiration is present in the underarm region, extracellular enzymes-esterases, mainly proteases and/or lipases are formed by bacteria and split the esters present in the perspiration, releasing odors in the process. Suitable esterase inhibitors are for example trialkyl citrates, such as trimethyl citrate, tripropyl citrate, triisopropyl citrate, tributyl citrate and, in particular, triethyl citrate. Esterase inhibitors inhibit enzyme activity and thus reduce odor formation. The free acid is probably released by the cleavage of the citric acid ester and reduces the pH value of the skin to such an extent that the enzymes are inactivated by acylation. Other esterase inhibitors are sterol sulfates or phosphates such as, for example, lanosterol, cholesterol, campesterol, stigmasterol and sitosterol sulfate or phosphate, dicarboxylic acids and esters thereof, for example glutaric acid, glutaric acid monoethyl ester, glutaric acid diethyl ester, adipic acid, adipic acid monoethyl ester, adipic acid diethyl ester, malonic acid and malonic acid diethyl ester, hydroxycarboxylic acids and esters thereof, for example citric acid, malic acid, tartaric acid or tartaric acid diethyl ester, and zinc glycinate.

[0156] In a preferred embodiment of the invention the compositions comprise at least one esterase inhibitor selected from the group consisting of trimethyl citrate, tripropyl citrate, triisopropyl citrate, tributyl citrate triethyl citrate, lanosterol, cholesterol, campesterol, stigmasterol, sitosterol sulfate, sitosterol phosphate, glutaric acid, glutaric acid monoethyl ester, glutaric acid diethyl ester, adipic acid, adipic acid monoethyl ester, adipic acid diethyl ester, malonic acid, malonic acid diethyl ester, citric acid, malic acid, tartaric acid, tartaric acid diethyl ester and zinc glycinate.

[0157] The compositions according to the invention can comprise the esterase inhibitors in amounts of 0.01 to 20, preferably 0.1 to 10 and more particularly 0.5 to 5 wt.-%, based on the solids content of the composition.

[0158] The term "anti-bacterial agents" as used herein encompasses substances which have bactericidal and/or bacteriostatic properties. Typically these substances act against gram-positive bacteria such as, for example, 4-hydroxybenzoic acid and salts and esters thereof, N-(4-chlorophenyl)-N'-(3,4-dichlorophenyl)-urea, 2,4,4'-trichloro-2'-hydroxydiphenylether (triclosan), 4-chloro-3,5-dimethylphenol, 2,2'-methylene-bis-(6-bromo-4-chlorophenol), 3-methyl-4-(1-methylethyl)-phenol, 2-benzyl-4-chlorophenol, 3-(4-chlorophenoxy)-propane-1,2-diol, 3-iodo-2-propinyl butyl carbamate, chlorhexidine, 3,4,4'-trichlorocarbanilide (TTC), phenoxyethanol, glycerol monocaprate, glycerol monocaprylate, glycerol monolaurate (GML), diglycerol monocaprate (DMC), salicylic acid-N-alkylamides such as, for example, salicylic acid-n-octyl amide or salicylic acid-n-decyl amide.

[0159] In a preferred embodiment the antibacterial agent is selected from the group consisting of chitosan, phenoxyethanol, 5-chloro-2-(2,4-dichlorophenoxy)-phenol, 4-hydroxybenzoic acid and salts and esters thereof, N-(4-chlorophenyl)-N'-(3,4-dichlorophenyl)-urea, 2,4,4'-trichloro-2'-hydroxydiphenylether (triclosan), 4-chloro-3,5-dimethylphenol, 2,2'-methylene-bis-(6-bromo-4-chlorophenol), 3-methyl-4-(1-methylethyl)-phenol, 2-benzyl-4-chlorophenol, 3-(4-chlorophenoxy)-propane-1,2-diol, 3-iodo-2-propinyl butyl carbamate, chlorhexidine, 3,4,4'-trichlorocarbanilide (TTC), phenoxyethanol, glycerol monocaprate, glycerol monocaprylate, glycerol monolaurate (GML), diglycerol monocaprate (DMC), salicylic acid-N-alkylamides.

[0160] The compositions according to the invention can comprise the antibacterial agents in amounts of 0.01 to 5 wt.% and preferably 0.1 to 2 wt.-%, based on the solids content of the composition.

[0161] The compositions according to the invention can further comprise one or more substances, such as, for example: preservatives, abrasives, anti-acne agents, agents to combat skin aging, anti-cellulite agents, antidandruff agents, anti-inflammatory agents, irritation-preventing agents, irritation-alleviating agents, astringents, sweat-inhibiting agents, antiseptics, anti-statics, binders, buffers, carrier materials, chelating agents, cell stimulants, care agents, hair removal agents, emulsifiers, enzymes, essential oils, fibers, film formers, fixatives, foam formers, foam stabilizers, substances for preventing foaming, foam boosters, fungicides, gelling agents, gel-forming agents, hair care agents, hair shaping agents, hair smoothing agents, moisture-donating agents, moisturizing substances, humectant substances, bleaching agents, strengthening agents, stain removal agents, optical brighteners, impregnating agents, soil repellents, friction-reducing agents, lubricants, moisturizing creams, ointments, opacifiers, plasticizers, covering agents, polish, shine agents, polymers, powders, proteins, refatting agents, exfoliating agents, silicones, skin-calming agents, skin-cleansing agents, skin care agents, skin-healing agents, skin lightening agents, skin-protective agents, skin-softening agents, cooling agents, skin-cooling agents, warming agents, skin-warming agents, stabilizers, UV-absorbent agents, UV filters, fabric softeners, suspending agents, skin-tanning agents, thickeners, vitamins, waxes, fats, phospholipids, saturated fatty acids, mono- or polyunsaturated fatty acids, α-hydroxy acids, polyhydroxy fatty acids, liquefiers, dyes, color-protection agents, pigments, anti-corrosives, polyols, electrolytes, or silicone derivatives.

[0162] The non-canonical terpenes or terpenoids, the stereoisomers thereof, the mixtures of different stereoisomers thereof and the mixtures of different non-canonical terpenes and/or terpenoids, as described herein, can be used in a wide range of compositions, preferably in aroma compositions, more preferably in fragrance compositions. The olfactory properties and the substance properties (such as solubility in customary solvents and compatibility with further customary constituents of such compositions) of the non-canonical terpenes or terpenoids underline the particular suitability of the combinations for the stated use purposes and compositions.

[0163] Suitable compositions are for example perfume compositions, body care compositions (including cosmetic compositions), products for oral and dental hygiene, hygiene articles, cleaning compositions (including dishwashing compositions), textile detergent compositions, compositions for scent dispensers, foods, food supplements, pharmaceutical compositions and crop protection compositions.

[0164] Perfume compositions can be selected from fine fragrances, air fresheners in liquid form, gel-like form or a form applied to a solid carrier, aerosol sprays, scented cleaners, perfume candles and oils, such as lamp oils or oils for massage.

[0165] Examples for fine fragrances are perfume extracts, Eau de Parfums, Eau de Toilettes, Eau de Colognes, Eau de Solide and Extrait Parfum.

[0166] Body care compositions include cosmetic compositions, and can be selected from after-shaves, pre-shave products, splash colognes, solid and liquid soaps, shower gels, shampoos, shaving soaps, shaving foams, bath oils, cosmetic emulsions of the oil-in-water type, of the water-in-oil type and of the water-in-oil-in-water type, such as e.g. skin creams and lotions, face creams and lotions, sunscreen creams and lotions, after-sun creams and lotions, hand creams and lotions, foot creams and lotions, hair removal creams and lotions, after-shave creams and lotions, tanning creams and lotions, hair care products such as e.g. hairsprays, hair gels, setting hair lotions, hair conditioners, hair shampoo, permanent and semi-permanent hair colorants, hair shaping compositions such as cold waves and hair smoothing compositions, hair tonics, hair creams and hair lotions, deodorants and antiperspirants such as e.g. underarm sprays, roll-ons, deodorant sticks and deodorant creams, products of decorative cosmetics such as e.g. eye-liners, eyeshadows, nail varnishes, make-ups, lipsticks and mascara.

[0167] Products for oral and dental hygiene can be selected from toothpaste, dental floss, mouth wash, breath fresheners, dental foam, dental gels and dental strips.

[0168] Hygiene articles can be selected from joss sticks, insecticides, repellents, propellants, rust removers, perfumed freshening wipes, armpit pads, baby diapers, sanitary towels, toilet paper, cosmetic wipes, pocket tissues, dishwasher and deodorizer.

[0169] Cleaning compositions, such as e.g. cleaners for solid surfaces, can be selected from perfumed acidic, alkaline and neutral cleaners, such as e.g. floor cleaners, window cleaners, dishwashing compositions both for handwashing and machine washing use, bath and sanitary cleaners, scouring milk, solid and liquid toilet cleaners, powder and foam carpet cleaners, waxes and polishes such as furniture polishes, floor waxes, shoe creams, disinfectants, surface disinfectants and sanitary cleaners, brake cleaners, pipe cleaners, limescale removers, grill and oven cleaners, algae and moss removers, mold removers, facade cleaners.

[0170] Textile detergent compositions can be selected from liquid detergents, powder detergents, laundry pretreatments such as bleaches, soaking agents and stain removers, fabric softeners, washing soaps, washing tablets.

[0171] Food means a raw, cooked, or processed edible substance, ice, beverage or ingredient used or intended for use in whole or in part for human consumption, or chewing gum, gummies, jellies, and confectionaries.

[0172] A food supplement is a product intended for ingestion that contains a dietary ingredient intended to add further

nutritional value to the diet. A dietary ingredient may be one, or any combination, of the following substances: a vitamin, a mineral, an herb or other botanical, an amino acid, a dietary substance for use by people to supplement the diet by increasing the total dietary intake, a concentrate, metabolite, constituent, or extract. Food supplements may be found in many forms such as tablets, capsules, softgels, gelcaps, liquids, or powders.

[0173] Pharmaceutical compositions comprise compositions which are intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease as well as articles (other than food) intended to affect the structure or any function of the body of man or other animals.

[0174] Crop protection compositions comprise compositions which are intended for the managing of plant diseases, weeds and other pests (both vertebrate and invertebrate) that damage agricultural crops and forestry.

[0175] The compositions according to the invention can further comprise one or more substances, such as, for example: preservatives, abrasives, anti-acne agents, agents to combat skin aging, antibacterial agents, anti-cellulite agents, anti-dandruff agents, anti-inflammatory agents, irritation-preventing agents, irritation-alleviating agents, antimicrobial agents, antioxidants, astringents, sweat-inhibiting agents, antiseptics, anti-statics, binders, buffers, carrier materials, chelating agents, cell stimulants, cleaning agents, care agents, hair removal agents, surface-active substances, deodorizing agents, antiperspirants, emulsifiers, enzymes, essential oils, fibers, film formers, fixatives, foam formers, foam stabilizers, substances for preventing foaming, foam boosters, fungicides, gelling agents, gel-forming agents, hair care agents, hair shaping agents, hair smoothing agents, moisture-donating agents, moisturizing substances, humectant substances, bleaching agents, strengthening agents, stain removal agents, optical brighteners, impregnating agents, soil repellents, friction-reducing agents, lubricants, moisturizing creams, ointments, opacifiers, plasticizers, covering agents, polish, shine agents, polymers, powders, proteins, refatting agents, exfoliating agents, silicones, skin-calming agents, skin-cleansing agents, skin care agents, skin-healing agents, skin lightening agents, skin-protective agents, skin-softening agents, cooling agents, skin-cooling agents, warming agents, skin-warming agents, stabilizers, UV-absorbent agents, UV filters, fabric softeners, suspending agents, skin-tanning agents, thickeners, vitamins, waxes, fats, phospholipids, saturated fatty acids, mono- or polyunsaturated fatty acids, α-hydroxy acids, polyhydroxy fatty acids, liquefiers, dyes, color-protection agents, pigments, anti-corrosives, polyols, electrolytes, or silicone derivatives.

[0176] The non-canonical terpenes or terpenoids, the stereoisomers thereof, the mixtures of different stereoisomers thereof and the mixtures of different non-canonical terpenes and/or terpenoids may be worked into in compositions simply by directly mixing them with the basic composition lacking only this/these compound(s). Alternatively, the non-canonical terpenes or terpenoids, the stereoisomers thereof, the mixtures of different stereoisomers thereof or the mixtures of different non-canonical terpenes and/or terpenoids may be mixed simultaneously or consecutively with the other components of the composition or with pre-formed mixtures of a part of the other components.

[0177] The non-canonical terpenes or terpenoids, the stereoisomers thereof, the mixtures of different stereoisomers thereof or the mixtures of different non-canonical terpenes and/or terpenoids may, in an earlier step, be entrapped with an entrapment material, for example, polymers, capsules, microcapsules and nanocapsules, liposomes, film formers, absorbents such as carbon or zeolites, cyclic oligosaccharides and mixtures thereof, or may be chemically bonded to substrates, which are adapted to release said non-canonical terpenes or terpenoids upon application of an external stimulus such as light, enzyme, or the like, and then mixed with the composition.

[0178] The non-canonical terpenes or terpenoids, the stereoisomers thereof, the mixtures of different stereoisomers thereof or the mixtures of different non-canonical terpenes and/or terpenoids and compositions comprising these compounds can also be in mi-croencapsulated form, spray-dried form, in the form of inclusion complexes or in the form of extrusion products. The properties can be further optimized by so-called "coating" with suitable materials with regard to a more targeted release of the scent, for which purpose preferably waxy synthetic substances such as e.g. polyvinyl alcohol are used.

[0179] The microencapsulation can take place for example by the so-called coacervation method with the help of capsule materials, e.g. made of polyurethane-like substances or soft gelatin. The spray-dried perfume oils can be produced for example by spray-drying an emulsion or dispersion comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, or a composition of the present invention described herein, wherein carrier substances that can be used are modified starches, proteins, dextrin and vegetable gums. Inclusion complexes can be prepared e.g. by introducing dispersions of fragrance compositions and cyclodextrins or urea derivatives into a suitable solvent, e.g. water. Extrusion products can be produced by melting a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids, or a composition of the present invention described herein with a suitable wax-like substance and by extrusion with subsequent solidification, optionally in a suitable solvent, e.g. isopropanol.

[0180] Generally, the total amount of the one or more non-canonical terpene or terpenoid in the compositions according to the present invention is typically adapted to the particular intended use or the intended application and can, thus, vary over a wide range. As a rule, the customary standard commercial amounts for scents are used.

[0181] The compositions according to the invention can comprise the non-canonical terpene or terpenoid in an overall

amount of from 0.001 to 99.9% by weight, preferably from 0.01 to 90% by weight, more preferably from 0.05 to 80%, in particular from 0.1 to 60% by weight, more particularly from 0.1 to 40% by weight, e.g. from 0.1 to 10% by weight or 0.1 to 15% by weight, based on the total weight of the composition.

[0182] In one embodiment of the invention, the compositions comprise the non-canonical terpene or terpenoid in an overall amount of from 0.001 to 5 weight%, preferably from 0.01 to 2 weight% based on the total weight of the composition.

[0183] The non-canonical terpenes and terpenoids not only have a pleasant aroma, especially fragrance; they are also readily available. In particular they can be readily produced with a reduced CO_2 footprint, e.g. by using renewable sources.

[0184] The following examples serve as further illustration of the invention.

EXAMPLES

[0185] The tested compounds are commercially available. The purities are indicated in brackets. (Z)-4-Methylisoprenol (≥ 95%) and (E)-4-methylisoprenol (≥ 95%) were purchased from AKos GmbH (Lörrach, Germany). 2-Methylene bornane (95%), 1-methylcamphene (95%), 4-methyl-3-carene (95%), 2-methylcitronellol (95%), 4-methylfarnesol (95%), (1S)-2-methyl-α-fenchol (95%), (E/Z)-mixture of 2-methylgeraniol and 2-methylnerol (95%), (E/Z)-mixture of 4-methylgeraniol and 4-methylnerol (95%), (E/Z)-mixture of 8-methylgeraniol and 8-methylnerol (95%), 2-methyllimonene (95%), 2-methyllinalool (95%), 2-methylisoprenol (95%), 5-methylisoprenol (95%), 2,4-dimethylisoprenol (95%), 2,5-dimethylisoprenol (99%), 4,4-dimethylisoprenol (95%), 4,5-dimethylisoprenol (99%), 5,5-dimethylisoprenol (95%), 2-methylprenol (95%), (Z)-4-methylprenol (≥ 95%), (E)-4-methylprenol (≥ 95%), 2,4-dimethylprenol (95%), 4,4-dimethylprenol (95%), 4,5-dimethylprenol (95%), and 2-methyl-α-terpineol (95%) were purchased from Enamine Ltd. (Riga, Latvia).

Olfactory tests

[0186] In order to test the quality and intensity of the odor of the listed compounds, scent strip tests were performed.

[0187] For this purpose, 1 μL or 0.95 mg of the listed compounds were dissolved in 200 μL of propane-1,2-diol, and 4 μL of the solutions were placed on a filter paper strip. The scent impression was olfactively evaluated by a panel of fifteen participants (8 women, 7 men, 23-34 years) marked with a three-digit code. The intensity of each odor impression was evaluated from 0 (no odor) to 5 (very intense odor). The results are compiled in the following table 1.

Table 1

Ex. No.	Substance	Odor impression	Intensity
1.1	2-methylenebornane	earthy, coniferous forest, resinous	0.9
1.2	(S)-1-methylcamphene	resinous, coniferous forest, woody, fruity	3.3
1.3	4-methyl-3-carene	fruity, coniferous forest, resinous, sweetish, pepper, mint, citrus	3.5
1.4	2-methylcitronellol	flowery, citrus, rose, sweetish, ethereal, fruity	3.9
1.5	4-methylfarnesol	citrus, resinous, green	1.7
1.6	(S)-2-methyl-α-fenchol	earthy, moldy, moss, beetroot	4.8
1.7	2-methylgeraniol*	flowery, citrus, resinous, rose, sweetish	2.9
1.8	4-methylgeraniol**	citrus, lemon, lemon peel	3.7
1.9	8-methylgeraniol***	flowery, resinous, sweetish, citrus, varnish	2.5
1.10	2-methylisoprenol	resinous, sweetish, coniferous forest, fruity	1.6
1.11	(E)-4-methylisoprenol	green, grass, herbal, coniferous forest, apple	2.5
1.12	(Z)-4-methylisoprenol	flowery, green, fruity, apple	3.1
1.13	5-methylisoprenol	pungent, solvent, glue, varnish	4.6
1.14	2,4-dimethylisoprenol	coniferous forest, green, resinous	2.5
1.15	2,5-dimethylisoprenol	resinous, coniferous forest, mint, green, varnish	3.2
1.16	4,4-dimethylisoprenol	green, citrus, flowery, soapy, grass	2.5
1.17	4,5-dimethylisoprenol	resinous, woody, coniferous forest	1.5

(continued)

Ex. No.	Substance	Odor impression	Intensity
1.18	5,5-dimethylisoprenol	coniferous forest, resinous, woody	3.4
1.19	2-methyllimonene	resinous, terpene, mushroom	3.7
1.20	2-methyllinalool	flowery, citrus, sweetish, fruity, bergamot, blueberry, lavender	3.7
1.21	2-methylprenol	plastic, terpene-like	1.5
1.22	(Z)-4-methylprenol	plastic, terpene-like, chemical	1.7
1.23	(E)-4-methylprenol	sweetish, flowery, green, citrus, fresh, resinous	2.3
1.24	2,4-dimethylprenol	resinous, woody, coniferous forest, glue, sweetish	2.8
1.25	4,4-dimethylprenol	sweetish, fruity	2.1
1.26	4,5-dimethylprenol	woody, resinous, plastic	3.1
1.27	2-methyl-α-terpineol	sweetish, green	1.1
* Mixture of (E)- and (Z)-isomer; i.e. of 2-methylgeraniol and 2-methylnerol ** Mixture of (E)- and (Z)-isomer; i.e. of 4-methylgeraniol and 4-methylnerol *** Mixture of (E)- and (Z)-isomer; i.e. of 8-methylgeraniol and 8-methylnerol			

Sales products and advantageous fragrance compositions

[0188]

"Solution A" is the non-diluted product of example 1.1.
"Solution B" is the non-diluted product of example 1.2.
"Solution C" is the non-diluted product of example 1.3.
"Solution D" is the non-diluted product of example 1.4.
"Solution E" is the non-diluted product of example 1.5.
"Solution F" is the non-diluted product of example 1.6.
"Solution G" is the non-diluted product of example 1.7.
"Solution H" is the non-diluted product of example 1.8.
"Solution I" is the non-diluted product of example 1.9.
"Solution J" is the non-diluted product of example 1.10.
"Solution K" is the non-diluted product of example 1.11.
"Solution L" is the non-diluted product of example 1.12.
"Solution M" is the non-diluted product of example 1.13.
"Solution N" is the non-diluted product of example 1.14.
"Solution O" is the non-diluted product of example 1.15.
"Solution P" is the non-diluted product of example 1.16.
"Solution Q" is the non-diluted product of example 1.17.
"Solution R" is the non-diluted product of example 1.18.
"Solution S" is the non-diluted product of example 1.19.
"Solution T" is the non-diluted product of example 1.20.
"Solution U" is the non-diluted product of example 1.21.
"Solution V" is the non-diluted product of example 1.22.
"Solution W" is the non-diluted product of example 1.23.
"Solution X" is the non-diluted product of example 1.24.
"Solution Y" is the non-diluted product of example 1.25.
"Solution Z" is the non-diluted product of example 1.26.
"Solution AA" is the non-diluted product of example 1.27.

Advantageous fragrance compositions:

[0189] Solution A as described above was formulated in the compositions according to table 2. The amounts given in

table 2 are weight units in grams.

Table 2: Fragrance compositions 1A and 1B

	1A	1B
Lactone C10 gamma (5-hexyloxolan-2-one)	2	2
Bourgeonal (3-(4-tert-butylphenyl)propanal)	2	2
Citronellol	3	3
Aldehyde C-14 (5-heptyloxolan-2-one)	3	3
Allyl heptylate	4	4
Amber core (1-(2-tert-butylcyclohexyl)oxybutan-2-ol)	4	4
Ethyl-2-methyl butyrate	4	4
Geranyl acetate	5	5
Helional® (3-(1 ,3-benzodioxol-5-yl)-2-methylpropanal)	10	10
Manzanate (ethyl 2-methylpentanoate)	10	10
Amberwood® (ethoxymethoxycyclododecane)	10	10
Hexyl acetate	11	11
Benzyl salicylate	12	12
Magnolan® (2,4-dimethyl-4,4a,5,9b-tetrahydroindeno[1,2-d][1,3]dioxine)	15	15
Verdox® (2-tert-butylcyclohexyl) acetate)	25	25
Bergamot oil bergaptene free	25	25
Linalol	30	30
Dipropylene glycol	45	45
Iso E Super® (Tetramethyl acetyloctahydronaphthalenes)	110	110
Pyranol (4-methyl-2-(2-methyl propyl)oxan-4-ol)	170	170
Hedione® (methyl 3-oxo-2-pentylcyclopentaneacetate)	200	200
Galaxolide® 50% IPM (1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylcyclopenta(g)-2-benzopyran 50% in isopropyl myristate)	300	300
Solution A	25	50
	1025	1050

[0190] Solution A as described above was formulated in the compositions according to table 3. The amounts given in table 3 are weight units in grams.

Table 3: Fragrance compositions 2A and 2B

	2A	2B
Raspberry ketone (4-(4-hydroxyphenyl)butan-2-one)	4	4
Vanitrope® (2-ethoxy-5-prop-1-enylphenol)	6	6
Cyclamen aldehyde (at least 90% 2-methyl-3-(p-isopropylphenyl)-propionaldehyde; secondary component: 5% 3-(p-cumenyl)-2-methylpropionic acid)	10	10
Bicyclononalactone (3,4,4a,5,6,7,8,8a-octahydrochromen-2-one)	10	10
Aldehyde C-14 (5-heptyloxolan-2-one)	14	14
Ethylvanillin (3-ethoxy-4-hydroxybenzaldehyde)	16	16

(continued)

	2A	2B
Heliotropine (1,3-benzodioxole-5-carbaldehyde)	20	20
Iso E Super® (tetramethyl acetyloctahydronaphthalenes)	20	20
Sandela® (3-[5,5,6-trimethylbicyclo[2.2.1]hept-2-yl]cyclohexan-1-ol)	30	30
Vanillin isobutyrate ((4-formyl-2-methoxyphenyl) 2-methylpropanoate)	40	40
Aldehyde C-18 (5-pentyloxolan-2-one)	50	50
Benzyl salicylate	60	60
Hexyl cinnamic aldehyde (2-(phenylmethylidene)octanal)	70	70
Hedione® (methyl 3-oxo-2-pentylcyclopentaneacetate)	130	130
Pyranol (4-methyl-2-(2-methyl propyl)oxan-4-ol)	150	150
Ethylene brassylate (1,4-dioxacycloheptadecane-5,17-dione)	170	170
Galaxolide® 50% IPM (1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylcyclopenta(g)-2-benzopyran 50% in isopropyl myristate)	200	200
Solution A	10	20
	1010	1020

[0191] **Fragrance composition 3** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution B. **Fragrance composition 4** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution B. **Fragrance composition 5** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution B. **Fragrance composition 6** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution B.

[0192] **Fragrance composition 7** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution C. **Fragrance composition 8** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution C. **Fragrance composition 9** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution C. **Fragrance composition 10** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution C.

[0193] **Fragrance composition 11** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution D. **Fragrance composition 12** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution D. **Fragrance composition 13** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution D. **Fragrance composition 14** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution D.

[0194] **Fragrance composition 15** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution E. **Fragrance composition 16** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution E. **Fragrance composition 17** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution E. **Fragrance composition 18** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution E.

[0195] **Fragrance composition 19** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution F. **Fragrance composition 20** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution F. **Fragrance composition 21** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution F. **Fragrance composition 22** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution F.

[0196] **Fragrance composition 23** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution G. **Fragrance composition 24** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution G. **Fragrance composition 25** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution G. **Fragrance composition 26** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution G.

[0197] **Fragrance composition 27** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution H. **Fragrance composition 28** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution H. **Fragrance composition 29** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution H. **Fragrance composition 30** corresponds to fragrance

composition 2B, where Solution A is replaced by the same amount of Solution H.

[0198] **Fragrance composition 31** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution I. **Fragrance composition 32** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution I. **Fragrance composition 33** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution I. **Fragrance composition 34** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution I.

[0199] **Fragrance composition 35** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution J. **Fragrance composition 36** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution J. **Fragrance composition 37** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution J. **Fragrance composition 38** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution J.

[0200] **Fragrance composition 39** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution K. **Fragrance composition 40** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution K. **Fragrance composition 41** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution K. **Fragrance composition 42** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution K.

[0201] **Fragrance composition 43** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution L. **Fragrance composition 44** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution L. **Fragrance composition 45** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution L. **Fragrance composition 46** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution L.

[0202] **Fragrance composition 47** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution M. **Fragrance composition 48** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution M. **Fragrance composition 49** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution M. **Fragrance composition** 50 corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution M.

[0203] **Fragrance composition 51** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution N. **Fragrance composition 52** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution N. **Fragrance composition 53** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution N. **Fragrance composition 54** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution N.

[0204] **Fragrance composition 55** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution O. **Fragrance composition 56** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution O. **Fragrance composition 57** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution O. **Fragrance composition 58** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution O.

[0205] **Fragrance composition 59** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution P. **Fragrance composition 60** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution P. **Fragrance composition 61** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution P. **Fragrance composition 62** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution P.

[0206] **Fragrance composition 63** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution Q. **Fragrance composition 64** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution Q. **Fragrance composition 65** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution Q. **Fragrance composition 66** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution Q.

[0207] **Fragrance composition 67** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution R. **Fragrance composition 68** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution R. **Fragrance composition 69** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution R. **Fragrance composition 70** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution R.

[0208] **Fragrance composition 71** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution S. **Fragrance composition 72** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution S. **Fragrance composition 73** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution S. **Fragrance composition 74** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution S.

[0209] **Fragrance composition 75** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution T. **Fragrance composition 76** corresponds to fragrance composition 1B, where Solution A

is replaced by the same amount of Solution T. **Fragrance composition 77** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution T. **Fragrance composition 78** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution T.

[0210] **Fragrance composition 79** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution U. **Fragrance composition 80** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution U. **Fragrance composition 81** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution U. **Fragrance composition 82** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution U.

[0211] **Fragrance composition 83** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution V. **Fragrance composition 84** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution V. **Fragrance composition 85** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution V. **Fragrance composition 86** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution V.

[0212] **Fragrance composition 87** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution W. **Fragrance composition 88** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution W. **Fragrance composition 89** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution W. **Fragrance composition 90** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution W.

[0213] **Fragrance composition 91** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution X. **Fragrance composition 92** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution X. **Fragrance composition 93** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution X. **Fragrance composition 94** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution X.

[0214] **Fragrance composition 95** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution Y. **Fragrance composition 96** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution Y. **Fragrance composition 97** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution Y. **Fragrance composition 98** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution Y.

[0215] **Fragrance composition 99** corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution Z. **Fragrance composition 100** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution Z. **Fragrance composition 101** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution Z. **Fragrance composition 102** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution Z.

[0216] **Fragrance composition** 103 corresponds to fragrance composition 1A, where Solution A is replaced by the same amount of Solution AA. **Fragrance composition 104** corresponds to fragrance composition 1B, where Solution A is replaced by the same amount of Solution AA. **Fragrance composition 105** corresponds to fragrance composition 2A, where Solution A is replaced by the same amount of Solution AA. **Fragrance composition 106** corresponds to fragrance composition 2B, where Solution A is replaced by the same amount of Solution AA.

[0217] The compositions according to tables 2 and table 3, namely 1A, 1B, 2A and 2B as well as fragrance compositions 3to 106 could be included in various compositions selected from the group consisting of deo pump spray, clean hair-conditioner, face wash gel, foam bath concentrate, hair gel, self-foaming bodywash, sprayable sun care emulsion, sprayable sun protection emulsion, emollient facial gel, 2-phases oil foam bath, shampoos, shower bath, hydro-alcoholic AP/deo pump spray, aerosol, aqueous/alcoholic AP/deo roll-on, styling gel type "Out of Bed", shaving foam, sensitive skin baby shampoo, body wash for sensitive skin, gloss enhancing shampoo for sensitive scalp, deo stick, baby wipe, after shave balm, face gel, face day care cream, face cleanser, body lotion, sun care SPF50+, sprayable lotion, hand dish cleaner - regular, hand dish cleaner - concentrate, sanitary cleaner - concentrate, all-purpose cleaner, anti-bacterial fabric softener, detergent composition, powder detergent composition and liquid detergent composition.

[0218] A person skilled in art may be well versed with the various general formulations for the above-mentioned products.

[0219] Compositions 1A, 1B, 2A, 2B and 3to 106 can for example be formulated in specific formulations as disclosed in IP.com Number: IPCOM000258614D entitled New Aroma Chemicals pages 6 to 46, Table 1 to Table D13, wherein the "Fragrance Composition 1A" is replaced by identical amounts of compositions 1A, 1B, 2A, 2B and 3 to 106.

Claims

1. The use of a non-canonical terpene or terpenoid or of a stereoisomer thereof or of a mixture of different stereoisomers thereof or of a mixture of different non-canonical terpenes and/or terpenoids as an aroma chemical.

2. The use as claimed in claim 1, where the non-canonical terpene or terpenoid is a methylated or methylenated terpene or terpenoid.

3. The use as claimed in claim 2, where the non-canonical terpene is derived from a hemiterpene, monoterpene or sesquiterpene, and the non-canonical terpenoid is derived from a hemiterpenoid, monoterpenoid or sesquiterpenoid.

4. The use as claimed in any of the preceding claims, where the non-canonical terpenoid contains a hydroxyl group as only functional group.

5. The use as claimed in any of the preceding claims, where the non-canonical terpene or terpenoid is selected from the group consisting of methylated or methylenated bornane, camphene, 3-carene, limonene, prenol, isoprenol, α-fenchol, α-terpineol, citronellol, geraniol, nerol, linalool and farnesol,
where the non-canonical terpene or terpenoid is preferably selected from the group consisting of monomethylenated or monomethylated bornane, monomethylated camphene, monomethylated 3-carene, monomethylated limonene, mono- or dimethylated prenol, mono- or dimethylated isoprenol, monomethylated α-fenchol, monomethylated α-terpineol, monomethylated citronellol, monomethylated geraniol, monomethylated nerol, monomethylated linalool and monomethylated farnesol.

6. The use as claimed in claim 5, where the non-canonical terpene or terpenoid is selected from the group consisting of 2-methylenebornane, 1-methylcamphene, 4-methyl-3-carene, 2-methyllimonene, 2-methylisoprenol, 4-methylisoprenol, 5-methylisoprenol, 2,4-dimethylisoprenol, 2,5-dimethylisoprenol, 4,4-dimethylisoprenol, 4,5-dimethylisoprenol, 5,5-dimethylisoprenol, 2-methylprenol, 4-methylprenol, 2,4-dimethylprenol, 4,4-dimethylprenol, 4,5-dimethylprenol, 2-methyl-α-fenchol, 2-methyl-α-terpineol, 2-methylcitronellol, 2-methylgeraniol, 4-methylgeraniol, 8-methylgeraniol, 2-methylnerol, 4-methylnerol, 8-methylnerol, 2-methyllinalool, 4-methylfarnesol, mixtures thereof, stereoisomers thereof and mixtures of stereoisomers thereof.

7. The use as claimed in claim 6, where the non-canonical terpene or terpenoid is selected from the group consisting of 2-methylenebornane, (S)-1-methylcamphene, 4-methyl-3-carene, 2-methyllimonene, 2-methylisoprenol, (E)-4-methylisoprenol, (Z)-4-methylisoprenol, 5-methylisoprenol, 2,4-dimethylisoprenol, 2,5-dimethylisoprenol, 4,4-dimethylisoprenol, 4,5-dimethylisoprenol, 5,5-dimethylisoprenol, 2-methylprenol, (Z)-4-methylprenol, (E)-4-methylprenol, 2,4-dimethylprenol, 4,4-dimethylprenol, 4,5-dimethylprenol, (S)-2-methyl-α-fenchol, 2-methyl-α-terpineol, 2-methylcitronellol, 2-methylgeraniol, 4-methylgeraniol, 8-methylgeraniol, 2-methylnerol, 4-methylnerol, 8-methylnerol, 2-methyllinalool, 4-methylfarnesol, mixtures thereof, stereoisomers thereof and mixtures of stereoisomers thereof.

8. The use according to any of the preceding claims, as a fragrance.

9. The use of a non-canonical terpene or terpenoid or of a stereoisomer thereof or of a mixture of different stereoisomers thereof or of a mixture of different non-canonical terpenes and/or terpenoids as defined in any of claims 1 to 7, for modifying and/or enhancing the aroma of a composition; in particular for modifying and/or enhancing the fragrance impression of a composition; specifically for modifying the scent character of a fragranced ready-to-use composition.

10. The use according to any of the preceding claims, in a composition selected from the group consisting of perfume compositions, body care compositions, products for oral or dental hygiene, hygiene articles, cleaning compositions, textile detergent compositions, compositions for scent dispensers, foods, food supplements, pharmaceutical compositions and crop protection compositions.

11. The use according to any of the preceding claims,

of 2-methylenebornane for conferring one of the following olfactory notes: earthy, coniferous forest, resinous; or any combination thereof; or
of (S)-1-methylcamphene for conferring one of the following olfactory notes: resinous, coniferous forest, woody, fruity; or any combination thereof; or
of 4-methyl-3-carene for conferring one of the following olfactory notes: fruity, coniferous forest, resinous, sweetish, pepper, mint, citrus; or any combination thereof; or
of 2-methyllimonene for conferring one of the following olfactory notes: resinous, terpene, mushroom; or any combination thereof; or
of 2-methylisoprenol for conferring one of the following olfactory notes: resinous, sweetish, coniferous forest,

fruity; or any combination thereof; or
of (E)-4-methylisoprenol for conferring one of the following olfactory notes: green, grass, herbal, coniferous forest, apple; or any combination thereof; or
of (Z)-4-methylisoprenol for conferring one of the following olfactory notes: flowery, green, fruity, apple; or any combination thereof; or
of 5-methylisoprenol for conferring one of the following olfactory notes: pungent, solvent, glue, varnish; or any combination thereof; or
of 2,4-dimethylisoprenol for conferring one of the following olfactory notes: coniferous forest, green, resinous; or any combination thereof; or
of 2,5-dimethylisoprenol for conferring one of the following olfactory notes: resinous, coniferous forest, mint, green, varnish; or any combination thereof; or
of 4,4-dimethylisoprenol for conferring one of the following olfactory notes: green, citrus, flowery, soapy, grass; or any combination thereof; or
of 4,5-dimethylisoprenol for conferring one of the following olfactory notes: resinous, woody, coniferous forest; or any combination thereof; or
of 5,5-dimethylisoprenol for conferring one of the following olfactory notes: coniferous forest, resinous, woody; or any combination thereof; or
of 2-methylprenol for conferring one of the following olfactory notes: plastic, terpene-like; or any combination thereof; or
of (Z)-4-methylprenol for conferring one of the following olfactory notes: plastic, terpene-like, chemical; or any combination thereof; or
of (E)-4-methylprenol for conferring one of the following olfactory notes: sweetish, flowery, green, citrus, fresh, resinous; or any combination thereof; or
of 2,4-dimethylprenol for conferring one of the following olfactory notes: resinous, woody, coniferous forest, glue, sweetish; or any combination thereof; or
of 4,4-dimethylprenol for conferring one of the following olfactory notes: sweetish, fruity; or any combination thereof; or
of 4,5-dimethylprenol for conferring one of the following olfactory notes: woody, resinous, plastic; or any combination thereof; or
of (S)-2-methyl-α-fenchol for conferring one of the following olfactory notes: earthy, mouldy, moss, beetroot; or any combination thereof; or
of 2-methyl-α-terpineol for conferring one of the following olfactory notes: sweetish, green; or any combination thereof; or
of 2-methylcitronellol for conferring one of the following olfactory notes: flowery, citrus, rose, sweetish, ethereal, fruity; or any combination thereof; or
of a mixture of 2-methylgeraniol and 2-methylnerol for conferring one of the following olfactory notes: flowery, citrus, resinous, rose, sweetish; or any combination thereof; or
of a mixture of 4-methylgeraniol and 4-methylnerol for conferring one of the following olfactory notes: citrus, lemon, lemon peel; or any combination thereof; or of a mixture of 8-methylgeraniol and 8-methylnerol for conferring one of the following olfactory notes: flowery, resinous, sweetish, citrus, varnish; or any combination thereof; or
of 2-methyllinalool for conferring one of the following olfactory notes: flowery, citrus, sweetish, fruity, bergamot, blueberry, lavender; or any combination thereof; or
of 4-methylfarnesol for conferring one of the following olfactory notes: citrus, resinous, green; or any combination thereof.

12. Composition comprising a non-canonical terpene or terpenoid or a stereoisomer thereof or a mixture of different stereoisomers thereof or a mixture of different non-canonical terpenes and/or terpenoids as defined in any of claims 1 to 7, and at least one further component selected from the group consisting of aroma chemicals different from said non-canonical terpenes and terpenoids, non-aroma chemical carriers, anti-oxidants and deodorant-active agents; and in particular from the group consisting of aroma chemicals different from said non-canonical terpenes and terpenoids, surfactants, oil components, solvents, anti-oxidants and deodorant-active agents.

13. The composition according to claim 12, where in case that the non-aroma chemical carriers comprise one or more solvents, these are selected from the group consisting of ethanol, isopropanol, dipropylene glycol (DPG), propylene glycol, 1,2-butylene glycol, glycerol, diethylene glycol monoethyl ether, diethyl phthalate (DEP), isopropyl myristate (IPM), triethyl citrate (TEC), benzyl benzoate and mixtures thereof.

14. The composition according to any of claims 12 or 13, where the aroma chemicals different from said non-canonical terpenes and terpenoids are selected from the group consisting of geranyl acetate, alpha-hexylcinnamaldehyde, 2-phenoxyethyl isobutyrate, dihydromyrcenol, methyl dihydrojasmonate (preferably with a content of cis isomer of more than 60 wt.%), 4,6,6,7,8,8-hexamethyl-1,3,4,6,7,8-hexa-hydrocyclopenta[g]benzopyran, tetrahydrolinalool, ethyllinalool, benzyl salicylate, 2-methyl-3-(4-tert-butylphenyl)propanal, cinnamyl alcohol, 4,7-methano-3a,4,5,6,7,7a-hexahydro-5-indenyl acetate, 4,7-methano-3a,4,5,6,7,7a-hexahydro-6-indenyl acetate, citronellol, citronellyl acetate, tetrahydrogeraniol, vanillin, linalyl acetate, styrolyl acetate, octahydro-2,3,8,8-tetramethyl-2-acetonaphthone, 2-acetyl-1,2,3,4,6,7,8-octahydro-2,3,8,8-tetramethyl-naphthalene, hexyl salicylate, 4-tert-butylcyclohexyl acetate, 2-tert-butylcyclohexyl acetate, alpha-ionone, n-alpha-methylionone, alpha-isomethylionone, coumarin, terpinyl acetate, 2-phenylethyl alcohol, 4-(4-hydroxy-4-methylpentyl)-3-cyclohexenecarboxaldehyde, alpha-amylcinnamaldehyde, ethylene brassylate, (E)-3-methylcyclopentadec-5-enone, (Z)-3-methylcyclopentadec-5-enone, 15-pentadec-11-enolide, 15-pentadec-12-enolide, 15-cyclopentadecanolide, 1-(5,6,7,8-tetrahydro-3,5,5,6,8,8-hexamethyl-2-naphthalenyl)ethanone, 2-isobutyl-4-methyltetrahydro-2H-pyran-4-ol, 2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol, cis-3-hexenyl acetate, trans-3-hexenyl acetate, trans-2/cis-6-nonadienol, 2,4-dimethyl-3-cyclohexenecarboxaldehyde, 2,4,4,7-tetramethyloct-6-en-3-one, 2,6-dimethyl-5-hepten-1-al, borneol, 3-(3-isopropylphenyl)butanal, 2-methyl-3-(3,4-methylenedioxyphenyl)propanal, 3-(4-ethylphenyl)-2,2-dimethylpropanal, 7-methyl-2H-1,5-benzodioxepin-3(4H)-one, 3,3,5-trimethylcyclohexyl acetate (preferably with a content of cis isomers of 70 wt.% or more), 2,5,5-trimethyl-1,2,3,4,4a,5,6,7-octahydronaphthalen-2-ol, 3-(4-*tert*-butylphenyl)-propanal, ethyl 2-methylpentanoate, ethoxymethoxycyclododecane, 2,4-dimethyl-4,4a,5,9b-tetrahydroindeno[1,2-d][1,3]dioxine, (2-tert-butylcyclohexyl) acetate, 3-[5,5,6-trimethylbicyclo[2.2.1]hept-2-yl]cyclohexan-1-ol, menthone, isomenthone, carvone, camphor, beta-ionone, beta-n-methylionone, beta-isomethylionone, alpha-irone, alpha-damascone, beta-damascone, beta-damascenone, delta-damascone, acetylated cedar wood oil, and mixtures thereof.

15. The composition according to any of claims 12 to 14, which is selected from the group consisting of perfume compositions, body care compositions, products for oral or dental hygiene, hygiene articles, cleaning compositions, textile detergent compositions, compositions for scent dispensers, foods, food supplements, pharmaceutical compositions and crop protection compositions.

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EUROPEAN SEARCH REPORT

Application Number
EP 22 17 4377

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	MARTIN JOHN F. ET AL: "Musty odor in chronically off-flavored channel catfish: isolation of 2-methylenebornane and 2-methyl-2-bornene", JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol. 36, no. 6, 1 November 1988 (1988-11-01), pages 1257-1260, XP055975973, US ISSN: 0021-8561, DOI: 10.1021/jf00084a032 * page 1258, left-hand column, last paragraph; figure 2; table 1 * * page 1259, left-hand column, last paragraph * -----	1-15	INV. C11B9/00
X	US 2018/187123 A1 (CLERY ROBIN [CH] ET AL) 5 July 2018 (2018-07-05) * paragraphs [0026] - [0028] * * paragraphs [0117] - [0122] * -----	1-4, 8-10, 12-15	TECHNICAL FIELDS SEARCHED (IPC)
X	ROMAN KAISER ET AL: "Neue und ungewöhnliche Naturstoffe faszinierender Blütendüfte: Überraschende Dufterlebnisse", CHEMIE IN UNSERER ZEIT., vol. 35, no. 1, 1 January 2001 (2001-01-01), pages 8-23, XP055431339, DE ISSN: 0009-2851, DOI: 10.1002/1521-3781(200101)35:1<8::AID-CIUZ8>3.0.CO;2-F * page 18, right-hand column, last paragraph - page 19, left-hand column, paragraph 1 * * figure 24; compound 69 * ----- -/--	1-4, 8-10, 12-15	C11B C11D A61Q

~~The present search report has been drawn up for all claims~~

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Place of search	Date of completion of the search	Examiner
Munich	19 January 2023	Vermeulen, Stéphane

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	OGAWA KAKUYOU ET AL: "Appetite-Enhancing Effects of Curry Oil", BIOLOGICAL & PHARMACEUTICAL BULLETIN, vol. 39, no. 9, 1 January 2016 (2016-01-01), pages 1559-1563, XP055975795, JP ISSN: 0918-6158, DOI: 10.1248/bpb.b16-00351 * page 1560; table 1 *	12-15	
X	US 2021/139811 A1 (MORGENTHALER DOMINIC S [US] ET AL) 13 May 2021 (2021-05-13) * paragraphs [0002], [0021] - [0027] * * paragraphs [0037] - [0039] * * paragraphs [0041] - [0043] * * paragraphs [0046] - [0047] * * paragraphs [0126], [0130], [0132]; figures 1-3 *	5-15	
X	US 2022/031901 A1 (MIHARA HISASHI [JP] ET AL) 3 February 2022 (2022-02-03) * paragraphs [0057], [0060] * * paragraph [0108]; example 3 * * Fragrance 1-3; example 4; table 2 * * paragraph [0114]; example 5; table 9 *	5-15	TECHNICAL FIELDS SEARCHED (IPC)

-/--

~~The present search report has been drawn up for all claims~~

Place of search	Date of completion of the search	Examiner
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EUROPEAN SEARCH REPORT

Application Number
EP 22 17 4377

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	Anonymous: "endo-1,2,3,3-tetramethyl bicyclo(2.2.1)heptan-2-ol, 28462-85-3", , 18 September 2021 (2021-09-18), XP093013899, Retrieved from the Internet: URL:http://web.archive.org/web/20210918214940/http://www.thegoodscentscompany.com/data/rw1437681.html [retrieved on 2023-01-13] * Odor Description; page 2 * * Safety in Use Information; page 4 *	5-15	
X	US 2020/190014 A1 (HICKMANN VOLKER [DE] ET AL) 18 June 2020 (2020-06-18) * paragraphs [0121] - [0122]; compound II.d * * paragraphs [0161], [0176] * * paragraphs [0182] - [0190], [0192] * * Compositions Z1-Z4; paragraphs [0277] - [0282]; example 3; compound 3 *	5-15	TECHNICAL FIELDS SEARCHED (IPC)
X	GB 814 636 A (HOFFMANN LA ROCHE) 10 June 1959 (1959-06-10) * page 1, lines 13-24 * * page 3, lines 3-18 * * claim 2 *	5-15	
X	WO 2021/198525 A1 (GIVAUDAN SA [CH]) 7 October 2021 (2021-10-07) * example 4 *	5-15	

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~~The present search report has been drawn up for all claims~~

Place of search	Date of completion of the search	Examiner
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EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2014/114733 A1 (BASF SE [DE]) 31 July 2014 (2014-07-31) * page 3, line 9 - page 4, line 11 * * page 5, line 27 - page 6, line 16 * * page 8, line 11 - page 9, line 5 * * page 20, lines 9-21 * * examples 1-3 *	5-15	
X	US 2011/266361 A1 (HARMSEN SVEN [DE] ET AL) 3 November 2011 (2011-11-03) * (E)-3,4,7-trimethyl-2,6-octadien-1-ol; paragraphs [0014], [0046] * * paragraphs [0058], [0074] *	5-10, 12-15	
X	KSCHOWAK MAX J. ET AL: "Heterologous expression of 2-methylisoborneol / 2 methylenebornane biosynthesis genes in Escherichia coli yields novel C11-terpenes", PLOS ONE, vol. 13, no. 4, 19 April 2018 (2018-04-19), page e0196082, XP055975504, DOI: 10.1371/journal.pone.0196082 * table 3 *	12	TECHNICAL FIELDS SEARCHED (IPC)

~~The present search report has been drawn up for all claims~~

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Place of search	Date of completion of the search	Examiner
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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☒ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

1-4(completely); 5-15(partially)

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 22 17 4377

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-4(completely); 5-15(partially)

Use of a non-canonical terpene or terpenoid as an aroma chemical, wherein the non-canonical terpene or terpenoid is a methylated or methylenated bornane. Composition comprising said non-canonical terpene or terpenoid.

---

2. claims: 5-15(partially)

Use of a non-canonical terpene or terpenoid as an aroma chemical, wherein the non-canonical terpene or terpenoid is a methylated or methylenated camphene. Composition comprising said non-canonical terpene or terpenoid.

---

3. claims: 5-15(partially)

Use of a non-canonical terpene or terpenoid as an aroma chemical, wherein the non-canonical terpene or terpenoid is a methylated or methylenated 3-carene. Composition comprising said non-canonical terpene or terpenoid.

---

4. claims: 5-15(partially)

Use of a non-canonical terpene or terpenoid as an aroma chemical, wherein the non-canonical terpene or terpenoid is a methylated or methylenated limonene. Composition comprising said non-canonical terpene or terpenoid.

---

5. claims: 5-15(partially)

Use of a non-canonical terpene or terpenoid as an aroma chemical, wherein the non-canonical terpene or terpenoid is a methylated or methylenated prenol or isoprenol. Composition comprising said non-canonical terpene or terpenoid.

---

6. claims: 5-15(partially)

Use of a non-canonical terpene or terpenoid as an aroma chemical, wherein the non-canonical terpene or terpenoid is a methylated or methylenated alpha-fenchol. Composition comprising said non-canonical terpene or terpenoid.

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7. claims: 5-15(partially)

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LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 22 17 4377

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

Use of a non-canonical terpene or terpenoid as an aroma chemical, wherein the non-canonical terpene or terpenoid is a methylated or methylenated alpha-terpineol. Composition comprising said non-canonical terpene or terpenoid.

---

8. claims: 5-15(partially)

Use of a non-canonical terpene or terpenoid as an aroma chemical, wherein the non-canonical terpene or terpenoid is a methylated or methylenated citronellol, geraniol or nerol. Composition comprising said non-canonical terpene or terpenoid.

---

9. claims: 5-15(partially)

Use of a non-canonical terpene or terpenoid as an aroma chemical, wherein the non-canonical terpene or terpenoid is a methylated or methylenated linalool. Composition comprising said non-canonical terpene or terpenoid.

---

10. claims: 5-15(partially)

Use of a non-canonical terpene or terpenoid as an aroma chemical, wherein the non-canonical terpene or terpenoid is a methylated or methylenated farnesol. Composition comprising said non-canonical terpene or terpenoid.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 22 17 4377

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2018187123 A1	05-07-2018	CN 108138081 A	08-06-2018
		EP 3353272 A1	01-08-2018
		JP 2018529817 A	11-10-2018
		US 2018187123 A1	05-07-2018
		WO 2017050971 A1	30-03-2017
US 2021139811 A1	13-05-2021	EP 4054514 A1	14-09-2022
		US 2021139811 A1	13-05-2021
		WO 2021092307 A1	14-05-2021
US 2022031901 A1	03-02-2022	EP 3944854 A2	02-02-2022
		EP 3944855 A2	02-02-2022
		JP 2022025044 A	09-02-2022
		JP 2022025045 A	09-02-2022
		US 2022031901 A1	03-02-2022
		US 2022034866 A1	03-02-2022
US 2020190014 A1	18-06-2020	BR 112019023173 A2	02-06-2020
		CN 110831920 A	21-02-2020
		EP 3619189 A1	11-03-2020
		ES 2927085 T3	02-11-2022
		JP 7177086 B2	22-11-2022
		JP 2020519580 A	02-07-2020
		US 2020190014 A1	18-06-2020
		WO 2018206415 A1	15-11-2018
GB 814636 A	10-06-1959	NONE	
WO 2021198525 A1	07-10-2021	BR 112022017990 A2	18-10-2022
		CN 115397798 A	25-11-2022
		EP 4126802 A1	08-02-2023
		IL 296949 A	01-12-2022
		WO 2021198525 A1	07-10-2021
WO 2014114733 A1	31-07-2014	CN 104937087 A	23-09-2015
		EP 2948534 A1	02-12-2015
		ES 2628542 T3	03-08-2017
		JP 6289505 B2	07-03-2018
		JP 2016511778 A	21-04-2016
		WO 2014114733 A1	31-07-2014
US 2011266361 A1	03-11-2011	AR 074951 A1	23-02-2011
		AU 2009334777 A1	21-07-2011
		BR PI0923908 A2	04-08-2015
		CA 2747367 A1	08-07-2010
		CN 102271498 A	07-12-2011

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19-01-2023

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		EA 201101013 A1	30-01-2012
		EP 2384111 A1	09-11-2011
		JP 2012513746 A	21-06-2012
		KR 20110106428 A	28-09-2011
		US 2011266361 A1	03-11-2011
		WO 2010076316 A1	08-07-2010
		ZA 201105562 B	31-10-2012

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Non-patent literature cited in the description

- **C. IGNEA et al.** *Nat. Chem. Biol.,* 2018, vol. 14, 1090-1098 **[0049]**
- **M.J. KSCHOWAK et al.** *PLoS One,* 2018, vol. 13, e0196082 **[0049]**
- **L. DRUMMOND et al.** *ACS Synth. Biol.,* 2019, vol. 8, 1303-1313 **[0049]**
- **S. ARCTANDER.** *Perfume and Flavor Chemicals,* 1969, vol. I,II **[0120]**
- **K. BAUER ; D. GARBE ; H. SURBURG.** Common Fragrance and Flavor Materials. Wiley- VCH, 2001 **[0120]**