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(54) **DELIVERY SYSTEMS**

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Description

Technical Field

[0001] The present invention relates to delivery systems and aerosol-generating materials for use in delivery systems.

Background

[0002] Certain tobacco industry products produce an aerosol during use, which is inhaled by a user. The aerosol is produced by an aerosolisable material, such as tobacco, that is heated or burned during use. Some tobacco industry products may include flavourants.

[0003] US 2017/238607 relates to smoking articles.

Summary

[0004] According to a first aspect of the disclosure, there is provided a delivery system comprising: an aerosol-generating material comprising tobacco material and an aerosolisable material in the form of a shredded sheet comprising an inorganic material in an amount of 50% to 90% by weight of the aerosolisable material, a binder and an aerosol-former material; and an aerosol-modifying agent release component comprising an aerosol modifying agent.

Brief Description of Drawings

[0005] Embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figures 1 to 3 are schematic views of delivery systems.

Detailed Description

[0006] According to a first aspect of the disclosure, there is provided a delivery system. As used herein, the term "delivery system" is intended to encompass systems that deliver a substance to a user, and includes:

combustible aerosol provision systems, such as cigarettes, cigarillos, cigars, and tobacco for pipes or for roll-your-own or for make-your-own cigarettes (whether based on tobacco, tobacco derivatives, expanded tobacco, reconstituted tobacco, tobacco substitutes or other smokable material);

non-combustible aerosol provision systems release compounds from an aerosol-generating material without combusting the aerosol-generating material, such as electronic cigarettes, tobacco heating products, and hybrid systems to generate aerosol using a combination of aerosol-generating materials; and

combustible aerosol provision systems comprising aerosol-generating material and configured to be used in one of these non-combustible aerosol provi-

sion systems.

[0007] According to the present disclosure, a "combustible" aerosol provision system is one where a constituent aerosol-generating material of the aerosol provision system (or component thereof) is combusted or burned in order to facilitate delivery to a user.

[0008] According to the present disclosure, a "non-combustible" aerosol provision system is one where a constituent aerosol-generating material of the aerosol provision system (or component thereof) is not combusted or burned in order to facilitate delivery to a user.

[0009] In some embodiments, the delivery system is a combustible aerosol provision system, such as a system selected from the group consisting of a cigarette, a cigarillo and a cigar.

[0010] In some embodiments, the disclosure relates to a component for use in a combustible aerosol provision system or a non-combustible aerosol provision system, such as a filter, a filter rod, a filter segment, a tobacco rod, a spill, an aerosol-modifying agent release component such as a capsule, a thread, or a bead, or a paper such as a plug wrap, a tipping paper or a cigarette paper.

[0011] In some embodiments described, the delivery system is a non-combustible aerosol provision system, such as a powered non-combustible aerosol provision system. The non-combustible aerosol provision system can be an electronic cigarette, also known as a vaping device or electronic nicotine delivery system (END), although it is noted that the presence of nicotine in the aerosol-generating material is not a requirement.

[0012] The non-combustible aerosol provision system can be a tobacco heating system, also known as a heat-not-burn system.

[0013] The non-combustible aerosol provision system can be a hybrid system to generate aerosol using a combination of aerosol-generating materials, one or a plurality of which may be heated. Each of the aerosol-generating materials may be, for example, in the form of a solid, liquid or gel and may or may not contain nicotine. The hybrid system can comprise a liquid or gel aerosol-generating material and a solid aerosol-generating material. The solid aerosol-generating material may comprise, for example, tobacco or a non-tobacco product.

[0014] Typically, the non-combustible aerosol provision system may comprise a non-combustible aerosol provision device and a consumable for use with the non-combustible aerosol provision system. However, it is envisaged that combustible aerosol provision systems which themselves comprise a means for powering an aerosol-generating component may themselves form the non-combustible aerosol provision system.

[0015] The non-combustible aerosol provision device can comprise a power source and a controller. The power source may be an electric power source or an exothermic power source. The exothermic power source can comprise a carbon substrate which may be energised so as to distribute power in the form of heat to an aerosolisable

material or heat transfer material in proximity to the exothermic power source. The power source, such as an exothermic power source, can be provided in the combustible aerosol provision system so as to form the non-combustible aerosol provision.

[0016] The aerosol-generating component can be a heater capable of interacting with the aerosol-generating material so as to release one or more volatiles from the aerosol-generating material to form an aerosol. The aerosol-generating component can be capable of generating an aerosol from the aerosol-generating material without heating. For example, the aerosol-generating component may be capable of generating an aerosol from the aerosol-generating material without applying heat thereto, for example via one or more of vibrational, mechanical, pressurisation or electrostatic means.

[0017] A consumable is an article comprising or consisting of aerosol-generating material, part or all of which is intended to be consumed during use by a user. A consumable may comprise one or more other components, such as an aerosol-generating material storage area, an aerosol-generating material transfer component, an aerosol generation area, a housing, a wrapper, a mouthpiece, a filter and/or an aerosol-modifying agent.

[0018] A consumable may also comprise an aerosol generator, such as a heater, that emits heat to cause the aerosol-generating material to generate aerosol in use. The heater may, for example, comprise combustible material, a material heatable by electrical conduction, or a susceptor.

[0019] The terms 'upstream' and 'downstream' used herein are relative terms defined in relation to the direction of mainstream aerosol drawn through a delivery system in use. Although a component or part of a delivery system is referred to as a 'mouthpiece' herein, this component or part of the combustible aerosol provision system can alternatively be a portion or component which is downstream of an aerosol-generating material, without necessarily being arranged to be at least partially placed in a user's mouth.

[0020] The delivery system comprises an aerosol-generating material. Aerosol-generating material is a material that is capable of generating aerosol, for example when heated, irradiated or energized in any other way. The aerosol-generating material is included in an aerosol-generating region of the delivery system.

[0021] The aerosol-generating material comprises tobacco material. As used herein, the term "tobacco material" refers to a material derived from a plant of the *Nicotiana* species. The selection of the plant of the *Nicotiana* species is not limited, and the types of tobacco or tobaccos used may vary.

[0022] The term "tobacco material" may include one or more of tobacco, tobacco derivatives, expanded tobacco, reconstituted tobacco or tobacco substitutes. The tobacco material may comprise one or more of ground tobacco, tobacco fibre, cut tobacco, extruded tobacco, tobacco stem, tobacco lamina, reconstituted tobacco

and/or tobacco extract.

[0023] In some embodiments, the tobacco material is selected from flue-cured or Virginia, Burley, sun-cured, Maryland, dark-fired, dark air cured, light air cured, Indian air cured, Red Russian and Rustica tobaccos, and mixtures thereof, as well as various other rare or specialty tobaccos, green or cured. Tobacco material produced via any other type of tobacco treatment which could modify the tobacco taste, such as fermented tobacco or genetic modification or crossbreeding techniques, is also within the scope of the present disclosure. For example, it is envisaged that tobacco plants may be genetically engineered or crossbred to increase or decrease production of components, characteristics or attributes.

[0024] In some embodiments, the tobacco material is sun-cured tobacco, selected from Indian Kurnool and Oriental tobaccos, including Izmir, Basma, Samsun, Katerini, Prelip, Komotini, Xanthi and Yambol tobaccos. In some embodiments, the tobacco material is dark air cured tobacco, selected from Passanda, Cubano, Jatín and Besuki tobaccos. In some embodiments, the tobacco material is light air cured tobacco, selected from North Wisconsin and Galpao tobaccos.

[0025] In some embodiments, the tobacco material is a cured or non-cured mixture of flue-cured, Burley and Oriental tobaccos.

[0026] In some embodiments, the tobacco material is selected from Brazilian tobaccos, including Mata Fina and Bahia tobaccos. In some embodiments, the tobacco material is selected from criollo, Piloto Cubano, Olor, Green River, Isabela DAC, White Pata, Eluru, Jatim, Madura, Kasturi, Connecticut Seed, Broad Leaf, Connecticut, Pennsylvanian, Italian dry air cured, Paraguayan dry air cured and One Sucker tobaccos.

[0027] For the preparation of smoking/vaping or smokeless tobacco products, plants of the *Nicotiana* species may be subjected to a curing process. Certain types of tobaccos may be subjected to alternative types of curing processes, such as fire curing or sun curing. Preferably, but not necessarily, harvested tobaccos that are cured are aged.

[0028] The tobacco can be harvested in different stages of growth, for example when the plant has reached a level of maturity and the lower leaves are ready for harvest whilst the upper leaves are still in development.

[0029] In some embodiments, at least one portion of the plant of the *Nicotiana* species (e.g. at least a portion of the tobacco material) is employed in an immature form. That is, in some embodiments, the plant, or at least one portion of that plant, is harvested before reaching a stage normally regarded as ripe or mature.

[0030] In some embodiments, at least a portion of the plant of the *Nicotiana* species (e.g. at least a portion of the tobacco material) is employed in a mature form. That is, in some embodiments, the plant, or at least one portion of that plant, is harvested when that plant (or plant portion) reaches a point that is traditionally viewed as being ripe,

overripe or mature, which can be accomplished through the use of tobacco harvesting techniques conventionally employed by farmers. Both Oriental tobacco and Burley tobacco plants can be harvested. Also, the Virginia tobacco leaves can be harvested or primed depending upon their stalk position.

[0031] The *Nicotiana* species may be selected for the content of various compounds that are present in the plant. For example, plants may be selected on the basis that those plants produce relatively high quantities of one or more of the compounds desired to be isolated (i.e. the volatile compounds of interest). In certain embodiments, plants of the *Nicotiana* species are specifically cultivated for their abundance of leaf surface compounds. Tobacco plants may be grown in green-houses, growth chambers, or outdoors in fields, or grown hydroponically.

[0032] Various parts or portions of the plant of the *Nicotiana* species may be employed in the method defined herein. In some embodiments, the whole plant, or substantially the whole plant, is harvested and employed as such. As used herein, the term "substantially the whole plant" means that at least 90% of the plant is harvested, such as at least 95% of the plant, such as at least 99% of the plant. Alternatively, in some embodiments, various parts or pieces of the plant are harvested or separated for further use after harvest. In some embodiments, the tobacco material is selected from the leaves, stems, stalks of the plant, and various combinations of these parts. The tobacco material of the disclosure may thus comprise an entire plant or any portion of a plant of the *Nicotiana* species.

[0033] To achieve a desired flavour profile, aerosol-generating materials used in combustible aerosol provision systems, such as smoking combustible aerosol provision systems, usually comprise a blend of tobacco materials obtained from different parts of the tobacco plant, tobacco materials obtained from different plants and tobacco materials that have been subjected to post-harvesting treatment.

[0034] The tobacco material can be a blend of different species of tobacco material and/or tobacco materials that have been treated according to tobacco treatment processes. The blend of tobacco material can be tailored to alter the organoleptic properties of the aerosol that is produced during use of the combustible aerosol provision system. For example, the relative amounts of different varieties of tobacco material in the composition can be tailored to alter the organoleptic properties of the composition.

[0035] The aerosol-generating material can comprise the tobacco material in an amount of from about 20% to about 90% by weight of the aerosol-generating material. In some embodiments, the aerosol-generating material comprises the tobacco material in an amount of from about 30% to about 85%, from about 35% to about 80%, from about 40% to about 75% or from about 45% to about 70% by weight of the aerosol-generating material. In some embodiments, the aerosol-generating material

comprises the tobacco material in an amount of from about 50% to about 70% by weight of the aerosol-generating material. For example, the aerosol-generating material may comprise the tobacco material in an amount of about 50%, 51%, 52%, 53%, 54%, 55%, 56%, 57%, 58%, 59%, 60%, 61%, 62%, 63%, 64%, 65%, 66%, 67%, 68%, 69% or about 70% by weight of the aerosol-generating material.

[0036] Where amounts given herein are given in % by weight, for the avoidance of doubt this refers to a dry weight basis, unless specifically indicated to the contrary. Thus, any water that may be present in the tobacco material, or in any component thereof, is entirely disregarded for the purposes of the determination of the weight %. The water content of the tobacco material described herein may vary and may be, for example, from 2 to 25% by weight. The water content of the tobacco material described herein may vary according to, for example, the temperature, pressure and humidity conditions at which the compositions are maintained. The water content can be determined by Karl-Fisher analysis, as known to those skilled in the art.

[0037] As noted, tobacco plants comprise a stem and tobacco leaves. During growth, a tobacco plant produces a wide variety of chemical compounds, including carbohydrate species (such as sugars and starch) and nicotine. Sugars are also produced during the curing of some varieties of tobacco plant.

[0038] In some embodiments, the tobacco material comprises leaf tobacco. The tobacco material can consist of leaf tobacco or it can comprise tobacco material obtained from other parts of the tobacco plant, such as tobacco stem. In some embodiments, the tobacco material is a blend comprising leaf tobacco and tobacco stem.

[0039] The leaf tobacco may be in whole leaf form. In some embodiments, the tobacco material comprises cured whole leaf tobacco. In some embodiments, the tobacco material substantially comprises cured whole leaf tobacco. In some embodiments, the tobacco material consists essentially of cured whole leaf tobacco.

[0040] The ratio of sugars to nicotine varies throughout the tobacco plant. As used herein, the terms "sugar" and "sugars" are intended to cover total sugars, including reducing sugars (e.g. glucose and fructose) and non-reducing sugars (e.g. starch).

[0041] The sugar to nicotine ratio in the leaves generally decreases from the leaves in the lower regions of the plant to the leaves in the higher regions of the plant. Thus, the leaves of the lower portion of the tobacco plant (for example, the lower half of the plant) comprise a relatively high ratio of sugars to nicotine compared with the leaves in the upper region (e.g. the top third) of the tobacco plant. The youngest tobacco leaves are found in the upper region of the tobacco plant, whilst the oldest tobacco leaves are found in the lower region of the tobacco plant. Typically, the leaves at the lower half of the tobacco plant contain less sugar than the leaves at

the top half of the tobacco plant because sugars in the bottom half of the plant are transported to the leaves in the top half of the plant to aid growth and flowering.

[0042] The sugar to nicotine ratio and the overall sugar content of the tobacco material has an effect on the organoleptic properties of the tobacco material when it is aerosolised in a delivery system. For example, the sugars can be converted into other compounds that exhibit desirable organoleptic properties during processing of the tobacco material.

[0043] Although it is desirable for the tobacco material to contain sugars, a relatively high sugar to nicotine content can lead to a "harsh" flavour and/or irritation when smoked, which may be undesirable. As a result, lower-stalk and mid-stalk leaves, which comprise a relatively high sugar to nicotine ratio, conventionally constitute a minor component (less than 5 wt%) of conventional aerosol-generating materials that are used in combustible aerosol provision systems.

[0044] The leaf tobacco may comprise sugar and nicotine in a range of weight ratios. The leaf tobacco comprises a leaf tobacco comprising sugars and nicotine in a weight ratio of between about 8:1 and about 20:1. It may also comprise leaf tobacco comprising sugars and nicotine in a weight ratio that is outside this range.

[0045] In some embodiments, the leaf tobacco comprises sugars and nicotine in a weight ratio (sugars:nicotine) of at least about 8:1, 9:1, 10:1, 11:1, 12:1, 13:1, 14:1, 15:1, 16:1, 17:1, 18:1 or 19:1. In some embodiments, the leaf tobacco comprises sugar and nicotine in a weight ratio (sugars:nicotine) of no more than about 20:1, 19:1, 18:1, 17:1, 16:1, 15:1, 14:1, 13:1, 12:1, 11:1, 10:1 or 9:1. The leaf tobacco material can comprise sugars and nicotine in a weight ratio of about 8:1, 9:1, 10:1, 11:1, 12:1, 13:1, 14:1, 15:1, 16:1, 17:1, 18:1, 19:1 or 20:1. In some embodiments, the weight ratio of sugars to nicotine in the leaf tobacco is between about 10:1 to about 15:1. In some embodiments, the weight ratio of sugars to nicotine in the leaf tobacco is about 9:1, 10:1, 11:1 or about 12:1.

[0046] The tobacco material can comprise the leaf tobacco comprising sugars and nicotine in a weight ratio of between about 8:1 and about 20:1 in an amount of from about 5% to about 90% by weight of the tobacco material. In some embodiments, the tobacco material comprises the leaf tobacco comprising sugars and nicotine in a weight ratio of between about 8:1 and about 20:1 in an amount of from about 10% to about 80%, from about 15% to about 70%, from about 20% to about 60%, from about 25% to about 50% or from about 30% to about 45% by weight of the tobacco material. In some embodiments, the tobacco material comprises the leaf tobacco comprising sugars and nicotine in a weight ratio of between about 8:1 and about 20:1 in an amount of about 25%, 26%, 27%, 28%, 29%, 30%, 31%, 32%, 33%, 34%, 35%, 36%, 37%, 38%, 39%, 40%, 41%, 42%, 43%, 44% or 45% by weight of the tobacco material.

[0047] The inventors of the present application have surprisingly found that tobacco material comprising low-

er-stalk leaf tobacco, that is to say, leaf tobacco having a weight ratio of sugars to nicotine of between about 8:1 and about 20:1, in an amount of greater than 5% by weight of the tobacco material, can be combined with an aerosol-former material to provide aerosol-generating material having excellent organoleptic properties when used in a combustible aerosol provision system. Not only that, due to the relatively high inclusion level of the lower-stalk leaf tobacco in the tobacco material, the resultant aerosol-generating material has a highly-desirable light colour compared with conventional aerosol-generating materials.

[0048] The leaf tobacco comprising sugars and nicotine in a weight ratio of between about 8:1 and about 20:1 is, in some embodiments, lower-stalk leaf tobacco.

[0049] The leaf tobacco may be subjected to post-harvesting processing prior to incorporation into the aerosol-generating material. For example, the leaf tobacco may be subjected to one or more of curing (including flue-curing and air-curing), aging, fermentation or conditioning prior to inclusion in the aerosol-generating material.

[0050] The leaf tobacco comprising sugars and nicotine in a weight ratio of between about 8:1 and about 20:1 may comprise a total sugar content of between about 5% and about 20% by weight of the leaf tobacco material. In some embodiments, the leaf tobacco comprising sugars and nicotine in a weight ratio of between about 8:1 and about 20:1 may comprise a total sugar content of between about 10% and about 14% by weight of the leaf tobacco material. In some embodiments, the leaf tobacco comprising sugars and nicotine in a weight ratio of between about 8:1 and about 20:1 comprises a total sugar content of between about 12% and about 14% by weight of the aerosol-generating material.

[0051] In some embodiments, the tobacco material comprises stem tobacco material. The tobacco material may comprise at least 10%, at least 20%, at least 30%, at least 40%, at least 50%, at least 60%, at least 70%, at least 80%, at least 90%, or at least 95% stem tobacco material.

[0052] The tobacco material may be shredded tobacco material. The cut width of the shredded tobacco material may be from about 0.5 cuts per mm to about 2.5 cuts per mm. In some embodiments, the cut width of the shredded tobacco material is from about 0.8 to about 1.8 or from about 0.9 to about 1.7 cuts per mm. In some embodiments, the cut width of the shredded tobacco material is between about 1.4 and about 1.6 cuts per mm, or about 1.45 cuts per mm, or about 37 cuts per inch.

[0053] The tobacco material may comprise an aerosol-former material. An aerosol-former material comprises one or more constituents capable of forming an aerosol. The aerosol-former material may comprise or consist of one or more of glycerine, glycerol, propylene glycol, diethylene glycol, triethylene glycol, tetraethylene glycol, 1,3-butylene glycol, erythritol, meso-Erythritol, ethyl vanillate, ethyl laurate, a diethyl suberate, triethyl citrate, triacetin, a diacetin mixture, benzyl benzoate, benzyl

phenyl acetate, tributyrin, lauryl acetate, lauric acid, myristic acid, sorbitol and propylene carbonate. Combinations of aerosol-former materials may also be used. For example, the aerosol-former may comprise a combination of glycerol and propylene glycol.

[0054] Without wishing to be bound by theory, it is speculated that a combination of the leaf tobacco having a high amount of sugar relative to nicotine (e.g. between 8:1 and about 20:1) and an aerosol-former material provides a tobacco material having superior organoleptic properties and a smoother taste.

[0055] The aerosol-former material can be combined with the tobacco material by any suitable means. For example, the tobacco material can be mixed with the aerosol-former material or the aerosol-former material can be sprayed onto the tobacco material.

[0056] The tobacco material may comprise nicotine in an amount of from about 0.5% to about 3%, from about 0.6% to about 2.9%, from about 0.7% to about 2.8%, from about 0.8% to about 2.7%, from about 0.9% to about 2.6% by weight of the tobacco material. In some embodiments, the nicotine content of the tobacco material is from about 1% to about 2.5%, from about 1.1% to about 2.4%, from about 1.2% to about 2.3%, from about 1.3% to about 2.2% or from about 1.4% to about 2.1% by weight of the tobacco material. In some embodiments, the nicotine content of the tobacco material is from about 1.8 to about 2% by weight of the tobacco material. In some embodiments, the nicotine content of the tobacco material is about 1.8%, 1.9% or 2% by weight of the tobacco material.

[0057] In some embodiments, the tobacco material comprises an expanded tobacco material. In some embodiments, the tobacco material comprises dry ice expanded tobacco (DIET) material and/or expanded stem tobacco. In some embodiments, the tobacco material consists of DIET material. DIET material can be present in an amount of about 5%, 10%, 20%, 25%, 30%, 35%, 40%, 45%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, or 100% by weight of the tobacco material. In some embodiments, DIET is present in an amount of between about 5% and about 50% by weight of the tobacco material.

[0058] In some embodiments, DIET is present in an amount of from about 5% to about 30%, from about 10% to about 20% or from about 10% to about 15%.

[0059] Advantageously, where the delivery system is a combustible aerosol provision system, the DIET material may improve the combustion characteristics of the combustible aerosol provision system. For example, it may increase the rate of combustion or reduce the chances of combustion becoming extinguished. Furthermore, DIET typically has a higher fill value than leaf tobacco. This means that, for a given volume, an aerosol-generating material comprising DIET may weigh less than an aerosol-generating material without DIET. The inclusion of DIET in the an aerosol-generating material may therefore lower the overall weight of the aerosol-generating material

and thus reduce transportation costs.

[0060] In some embodiments, the tobacco material comprises tobacco stalk. Tobacco stalk material can be present in an amount of about 5%, 10%, 20%, 25%, 30%, 35%, 40%, 45%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95% by weight of the tobacco material. In some embodiments, tobacco stalk is present in an amount of between about 5% and about 50% by weight of the tobacco material.

[0061] Advantageously, where the delivery system is a combustible aerosol provision system, the stalk may improve the combustion characteristics of the combustible aerosol provision system. For example, it may increase the rate of combustion or reduce the chances of combustion becoming extinguished. It may also reduce the costs associated with producing the delivery system because stem may be a less costly material than other components of the aerosol-generating material.

[0062] In some embodiments, the tobacco material comprises reconstituted tobacco in an amount of between about 0% to about 90% by weight of the composition. In some embodiments, the tobacco material comprises paper reconstituted tobacco in an amount of from 10% to 90%, 10% to 80% or 20% to 70% by weight of the composition. In some embodiments, the tobacco material comprises reconstituted tobacco in an amount of between about 1% and about 20%, between about 2% and about 15% or between about 3% and about 10%.

[0063] The aerosol-generating material comprises an aerosolisable material comprising an inorganic material, a binder an aerosol-former material.

[0064] The aerosol-generating material may comprise the aerosolisable material in any suitable amount. For example, the aerosol-generating material may comprise the aerosolisable material in an amount of between about 1% and about 99%, between about 1% and about 50% or between about 30% and about 45% by weight of the aerosol-generating material. In some embodiments, the aerosol-generating material comprises the aerosolisable material in an amount of from about 1%, about 2%, about 3%, about 4%, about 5%, about 6%, about 7%, about 8%, about 9% or about 10% up to about 90%, about 80%, about 70%, about 60%, about 50%, about 40%, about 30%, about 20% by weight of the aerosol-generating material.

[0065] In some embodiments, the aerosol-generating material comprises the aerosolisable material in an amount of about 3%, 4%, 5%, about 6%, about 7%, about 8%, about 9%, about 10%, about 11%, about 12%, about 13%, about 14%, about 15%, about 16%, about 17%, about 18%, about 19%, about 20%, about 21%, about 22%, about 23%, about 24%, about 25%, about 26%, about 27%, about 28%, about 29%, about 30%, about 31%, about 32%, about 33%, about 34%, about 35%, about 36%, about 37%, about 38%, about 39%, about 40%, about 41%, about 42%, about 43%, about 44% or about 45% by weight of the aerosol-generating material.

[0066] In some embodiments, the aerosol-generating

material comprises the aerosolisable material in an amount of from about 1% to about 10%. In some embodiments, the aerosol-generating material comprises the aerosolisable material in an amount of from about 5% to about 60%, from about 6% to about 55%, from about 7% to about 50%, from about 8% to about 45%, from about 9% to about 40% or from about 10 to about 35% by weight of the aerosol-generating material.

[0067] The aerosol-generating material may comprise the aerosolisable material in an amount of from about 5% to about 95% by weight of the aerosol-generating material. In some embodiments, the aerosol-generating material comprises the aerosolisable material in an amount of from about 10% to about 80%, from about 20% to about 60% or from about 30% to about 40% by weight of the aerosol-generating material. In some embodiments, the aerosolisable material is present in an amount of from about 35% to about 40% by weight of the aerosol-generating material, or in an amount of 37% to 39% by weight of the aerosol-generating material or in an amount about 37.5% by weight of the aerosol-generating material.

[0068] The inventors have found that an article comprising an aerosol-generating material comprising a relatively high amount of the aerosolisable material (e.g. greater than about 20%) improves various sensory (e.g. organoleptic) properties, particularly the smoothness of the smoke that is produced when the article is smoked. In other words, the greater the amount of aerosolisable material, the smoother the flavour profile.

[0069] The inventors have also found that an article comprising an aerosol-generating material comprising relatively low amounts of the aerosolisable material (e.g. less than about 20%) not only provides a smooth flavour profile, but also enhances the flavour and taste of other components, in particular the flavour and taste of the tobacco material in the aerosol-generating material. Advantageously, this allows for varieties of tobacco which would conventionally be considered to have a desirable, but subtle, flavour profile to be used in aerosol-generating material.

[0070] In some embodiments, the aerosolisable material is an amorphous solid.

[0071] The aerosolisable material comprises a binder. The binder can be one or more compounds selected from the group comprising alginates, pectins, starches (and derivatives), celluloses (and derivatives), gums, silica or silicones compounds, clays, polyvinyl alcohol and combinations thereof. For example, in some embodiments, the binder comprises one or more of alginates, pectins, hydroxyethyl cellulose, hydroxypropyl cellulose, carboxymethylcellulose, pullulan, xanthan gum, guar gum, carrageenan, agarose, acacia gum, fumed silica, PDMS, sodium silicate, kaolin and polyvinyl alcohol. In some cases, the binder comprises alginate and/or pectin. In some embodiments, the binder comprises an alginate, such as sodium alginate. The binder binds the components of the aerosolisable material together.

[0072] The aerosolisable material may comprise the

binder in an amount of from 1% to about 15% by weight of the aerosolisable material. In some embodiments, the binder is present in an amount of from about 5% to about 10% or about 7% to about 9% (e.g. about 8%) by weight of the aerosolisable material.

[0073] The aerosolisable material comprises an inorganic material. The inorganic material can comprise or consist of one or more metal carbonates, such as calcium carbonate or magnesium carbonate. Alternatively, the inorganic material may be a mixture of a metal carbonate, such as magnesium carbonate or calcium carbonate, a metal oxide, such as calcium or magnesium oxide and/or a metal sulfate, such as calcium sulfate. The inorganic material may be a mineral that comprises one or more metal carbonates. In some embodiments, the inorganic material is chalk. The inorganic material may have an appearance that enhances the appearance of the aerosolisable material, and thus the appearance of the aerosol-generating material.

[0074] The aerosolisable material comprises the inorganic material in an amount of 50% to 90% by weight of the aerosolisable material. . For example, from about 60% to about 85% or from about 75% to about 80% by weight of the aerosolisable material.

[0075] The aerosolisable material comprises one or more aerosol-former materials, as previously described. The aerosolisable material may comprise an aerosol-former material in an amount of from about 1% to about 30%, 5% to about 30% by weight of the aerosolisable material or from about 5% to about 20% by weight of the aerosolisable material. In some embodiments, the aerosolisable material is present in an amount of from 9% to about 16% by weight of the aerosolisable material, from about 10% to about 15% or from about 11% to about 14% or from about 12% to about 13% by weight of the aerosolisable material.

[0076] In some embodiments, the aerosolisable material comprises the aerosol-former material in an amount of from about 10 wt% to about 20 wt% based on the total weight of the aerosolisable material, the binder in an amount of from about 1 wt% to about 10 wt% based on the total weight of the aerosolisable material and the inorganic material in an amount of from about 75 wt% to about 85 wt% based on the total weight of the aerosolisable material. The aerosol former is preferably glycerol or propylene glycol, although other aerosol former materials (including any described herein) may be used. The overall content of aerosol-former material in the aerosol-generating material may be between about 1% and about 20% by weight of the aerosol-generating material.

[0077] The aerosolisable material may comprise any of the flavours described herein.

[0078] In some embodiments, the aerosolisable material comprises a tobacco extract. The tobacco extract may be prepared by any means that would be known to a person skilled in the art. The inclusion of a tobacco extract in the aerosolisable material may further enhance

the flavour of the aerosol-generating material.

[0079] Optionally, the aerosol-generating material can comprise the aerosolisable material and tobacco material comprising leaf tobacco comprising sugars and nicotine in a weight ratio of between about 8:1 and about 20:1 in an amount of at least 5% by weight of the tobacco material.

[0080] In some embodiments, the aerosolisable material does not comprise any colourants. Alternatively, the aerosolisable material may comprise a colourant. The colourant may alter the visual appearance of the aerosolisable material. The presence of colourant in the aerosolisable material may enhance the visual appearance of an aerosol-generating material comprising the aerosolisable material. For example, the aerosolisable material may be colour-matched with a tobacco material such that it visually blends in with the tobacco material when the two materials are combined. The colour of aerosolisable material may be white, green, blue, brown or black. In a preferred embodiment, the colour of the aerosolisable material is white.

[0081] In some embodiments, the colour of the aerosol-generating material may be tailored to achieve any desired colour. For example, a material that is configured to alter the appearance of the aerosol-generating material, such as a colourant, may be applied to some or all of the aerosol-generating material. In some embodiments, the material configured to alter the appearance of the aerosol-generating material is applied to the tobacco material and/or the aerosolisable materials individually (e.g. prior to blending these material). The material configured to alter the appearance of the aerosol-generating material may be applied to the aerosol-generating material after or during the aerosolisable material and tobacco material are blended. The material configured to alter the appearance of the aerosol-generating material can be applied by spraying, for example.

[0082] The aerosolisable material can be formed as a sheet of material and then cut or shredded into separate individual segments or portions of material.

[0083] The cut width of the shredded aerosolisable material tobacco material may be from about 0.5 cuts per mm to about 2.5 cuts per mm. In some embodiments, the cut width of the shredded aerosolisable material is from about 0.8 to about 1.8 or from about 0.9 to about 1.7 cuts per mm. In some embodiments, the cut width of the shredded aerosolisable material is between about 1.4 and about 1.6 cuts per mm, or about 1.45 cuts per mm, or about 37 cuts per inch.

[0084] The shredded aerosolisable material may have a cut width of from about 0.2 to about 1 cut per mm, from about 0.3 to about 0.9 cuts per mm, from about 0.4 to about 0.8 cuts per mm or from about 0.5 to about 0.7 cuts per mm.

[0085] The aerosolisable material may be manufactured by combining the aerosol-former material, the binder and the inorganic material, and optionally a flavour, with a solvent, such as water; casting the slurry on a

heated band caster to produce a wet sheet; and drying the wet sheet to provide the aerosolisable material. The aerosolisable material may be further processed. For example, the aerosolisable material may be shredded.

[0086] The aerosolisable material can have a moisture content after drying of between about 1% and about 10%. In preferred embodiments, the moisture content of the aerosolisable material is between about 2% and about 5%.

[0087] The aerosolisable material may not exhibit undesirable organoleptic properties when heated or burnt. Thus, an aerosol produced by the aerosol-generating material when it is heated exhibits a smooth and neutral flavour profile and does not emit overpowering or unpleasant flavours. Without wishing to be bound by theory, it is postulated that this may be due to the aerosolisable material having a diluting effect on the smoke stream.

[0088] In some embodiments, the aerosol-generating material comprises one or more flavours applied to the surface of the aerosol-generating material or included in the aerosolisable material according to the method as previously described. The inventors have surprisingly found that, where the aerosol-generating material comprises a flavour, this flavour can be readily perceived by the user. As such, relatively small amounts of flavour may need to be added to the composition to achieve the desired flavour characteristics. For example, one or more flavours can be added to the aerosol-generating material and/or aerosolisable material in an amount of less than about 2000 ppm, for example about 100 ppm, 500 ppm, 1000 ppm, 1500 ppm. In some embodiments, the one or more flavours are added in an amount of between about 2000 ppm and about 12000 ppm, such as about 2000 ppm, 3000 ppm, 4000 ppm, 5000 ppm, 6000 ppm, 7000 ppm, 8000 ppm, 9000 ppm, 10000 or 11000 ppm.

[0089] Instead of, or in addition to, being applied to the surface of the aerosol-generating material, the flavour can be incorporated into the aerosolisable material. For example, the aerosolisable material may comprise an embedded flavour. The flavour may be added to the aerosolisable material during its manufacture. Advantageously, where the flavour is included in the aerosolisable material, it may release more slowly from the aerosolisable material compared with flavour that is included on the surface of the aerosol-generating material. This may extend the shelf-life of the aerosol-generating material and also the period over which flavour is released during smoking of the article.

[0090] The flavour can be added to the aerosolisable material in an amount of between about 0.01% to about 0.1% by weight of the aerosolisable material.

[0091] Furthermore, owing to the relatively neutral organoleptic properties of the aerosol-generating material described, herein it may be possible to use flavours that are not traditionally used in, for example, cigarettes, such as flavours exhibiting a subtle taste and/or aroma.

[0092] As used herein, the terms "flavour" and "flavourant" refer to materials which, where local regulations

permit, may be used to create a desired taste or aroma in a product for adult consumers. One or more flavours can be used as the aerosol modifying agent described herein. They may include extracts (e.g., licorice, matcha, yuzu, cappuccino, cranberry, starfruit, hydrangea, Japanese white bark magnolia leaf, chamomile, fenugreek, clove, menthol, Japanese mint, aniseed, cinnamon, herb, wintergreen, cherry, berry, peach, apple, Drambuie, bourbon, scotch, whiskey, spearmint, peppermint, lavender, cardamom, celery, cascarrilla, nutmeg, sandalwood, bergamot, geranium, honey essence, rose oil, vanilla, lemon oil, orange oil, cassia, caraway, cognac, jasmine, ylang-ylang, sage, fennel, piment, ginger, anise, coriander, coffee, or a mint oil from any species of the genus *Mentha*), flavour enhancers, bitterness receptor site blockers, sensorial receptor site activators or stimulators, sugars and/or sugar substitutes (e.g., sucralose, acesulfame potassium, aspartame, saccharine, cyclamates, lactose, sucrose, glucose, fructose, sorbitol, or mannitol), and other additives such as charcoal, chlorophyll, minerals, botanicals, or breath freshening agents. They may be imitation, synthetic or natural ingredients or blends thereof. They may be in any suitable form, for example, oil, liquid, or powder.

[0093] In some embodiments, the flavour comprises menthol, spearmint and/or peppermint. In some embodiments, the flavour comprises flavour components of cucumber, blueberry, citrus fruits and/or redberry. In a particular embodiment, the flavour is cappuccino. In some embodiments, the flavour comprises eugenol. In some embodiments, the flavour comprises flavour components extracted from tobacco. In some embodiments, the flavour comprises flavour components extracted from cannabis.

[0094] In some embodiments, the flavour may comprise a sensate, which is intended to achieve a somato-sensorial sensation which are usually chemically induced and perceived by the stimulation of the fifth cranial nerve (trigeminal nerve), in addition to or in place of aroma or taste nerves, and these may include agents providing heating, cooling, tingling, numbing effect. A suitable heat effect agent may be, but is not limited to, vanillyl ethyl ether and a suitable cooling agent may be, but not limited to eucalyptol, WS-3.

[0095] Where the aerosol-generating material comprises an aerosolisable material as, described herein, and a flavour or sensate, the aerosolisable material may enhance a user's perception of the flavour or sensate compared with aerosol-generating material that do not comprise the aerosolisable material. Without wishing to be bound by theory, it is thought that the relatively neutral flavour properties of the aerosolisable material mean that it can act as a "flavour carrier" and enhance other flavours or sensates.

[0096] The aerosol provision system comprises an aerosol-modifying agent. An aerosol-modifying agent is a substance, typically located downstream of the aerosol generation area, that is configured to modify the

aerosol generated by the aerosol-generating material when it is heated, for example by changing the taste, flavour, acidity or another characteristic of the aerosol.

[0097] The aerosol-modifying agent may, for example, be an additive or a sorbent. The aerosol-modifying agent may, for example, comprise one or more of a flavours, a colourant, water, and a carbon adsorbent. The aerosol-modifying agent may, for example, be a solid, a liquid, or a gel. The aerosol-modifying agent may be in powder, thread or granule form. The aerosol-modifying agent may be free from filtration material.

[0098] Preferred aerosol-modifying agents are flavourants and sensates, as described previously.

[0099] As noted previously, the aerosol produced by the aerosol-generating material described herein exhibits relatively smooth and neutral organoleptic properties. The inventors have found that the aerosol-generating material does not tend to mask aerosol-modifying agents present in the aerosol. This means that the aerosol can act as a "carrier" for aerosol-modifying agents. Therefore, the organoleptic properties of the aerosol-modifying agent can be readily perceived by the user, lower quantities of aerosol-modifying agent may need to be added to the aerosol-generating material to achieve the desired aerosol characteristics and the aerosol produced by the aerosol-generating material can be used to carry a wide variety of different aerosol-modifying agents.

[0100] The aerosol-modifying agent is provided in or on an aerosol-modifying agent release component, which may be operable to selectively release the aerosol-modifying agent. The aerosol-modifying agent release component can be a capsule, a thread, or a bead, or a wrapper, such as a paper wrapper, a plug wrap, a tipping paper or a cigarette paper. The aerosol-modifying agent is not part of the aerosol-generating material. The aerosol-generating material does not comprise the aerosol-modifying agent.

[0101] In some embodiments, the aerosol-modifying agent release component is a wrapper, in particular a tipping paper, comprising an aerosol-modifying agent. The tipping paper or any of the papers/wrappers described herein can comprise an aerosol-modifying agent, such as a sensate material.

[0102] In some embodiments, the sensate material may comprise one or more of pH regulators, stabilizers, and/or antioxidants. These materials may help to increase the shelf-life of the wrapper and thus the combustible aerosol provision system.

[0103] The aerosol-modifying agent can be encapsulated in an encapsulating material. For instance, the sensate material can be provided in the form of micro-capsules which are applied to the tipping paper or other wrapper. Encapsulation of the aerosol-modifying agent may provide various advantages. For example, the encapsulated aerosol-modifying agent may comprise or consist of a flavourant having a desired taste or aroma. Encapsulation may enhance the longevity of the taste and/or aroma.

[0104] In particular, encapsulation of the aerosol-modifying agent may improve the longevity of the aroma of the aerosol-modifying agent by reinforcing the flavour detected by the user. Thus, the aroma may continue to be detected by a user even after the flavour has diminished (e.g. when the flavour is no longer detectable by the user or is less detectable by the consumer), thereby enhancing the user's experience.

[0105] The encapsulated aerosol-modifying agent may also help to mask other aromas that may be emitted by components of the combustible aerosol provision system for use in a non-combustible aerosol provision system before or during its use.

[0106] The encapsulated aerosol-modifying agent may exhibit an aroma that is indicative of the flavour of the aerosol-modifying agent. For example, the aroma may provide the user with a cue to the flavour of the aerosol-modifying agent. This may help the user to place the flavour of the sensate material rapidly.

[0107] In some embodiments, the aerosol-modifying agent release component is a capsule.

[0108] The capsule may have a core-shell structure. A core-shell structure comprises a shell encapsulating a liquid agent, for instance an aerosol-modifying agent as described herein. The shell of the capsule can be configured to be ruptured by a user to release the aerosol-modifying agent.

[0109] The delivery system may comprise an individual capsule or it may comprise more than one capsule.

[0110] The shell of the capsule can comprise an encapsulating material or a barrier material which creates a shell around a core that comprises the aerosol modifying agent. The shell structure hinders migration of the aerosol modifying agent during storage of the delivery system but allows controlled release of the aerosol modifying agent during use.

[0111] The barrier material (also referred to herein as the encapsulating material) is frangible. The capsule is crushed or otherwise fractured or broken by the user to release the encapsulated aerosol modifier. Typically, the capsule is broken immediately prior to heating being initiated but the user can select when to release the aerosol modifier. The term "breakable capsule" refers to a capsule, wherein the shell can be broken by means of a pressure to release the core; more specifically the shell can be ruptured under the pressure imposed by the user's fingers when the user wants to release the core of the capsule.

[0112] In some embodiments, the filter may comprise a capsule and a plurality of particles configured such that, in use, the particles promote breaking of the capsule upon the application of an external force to the wall of the tobacco industry product component by a user. The particles may be made from a material that is more robust (e.g. harder) than the capsule shell. This helps to promote breakage of the additive capsules upon the application of the external force. The particles being more robust also helps to prevent breakage of the capsules during transit.

Suitable arrangements are described in WO 2019/207302, for example.

[0113] In some cases, the barrier material is heat resistant. That is to say, in some cases, the barrier will not rupture, melt or otherwise fail at the temperature reached at the capsule site during operation of the aerosol provision device. Illustratively, a capsule located in a mouth-piece may be exposed to temperatures in the range of 30 °C to 100 °C for example, and the barrier material may continue to retain the liquid core up to at least about 50 °C to 120 °C.

[0114] In other cases, the capsule releases the core composition on heating, for example by melting of the barrier material or by capsule swelling leading to rupture of the barrier material.

[0115] The capsule can be spherical and have a diameter of about 3 mm to about 3.5 mm. In other examples, other shapes and sizes of capsule can be used. For example, the capsule may have a diameter less than 4 mm, or less than 3.5 mm, or less than 3.25 mm. In alternative embodiments, the capsule may have a diameter greater than about 3.25 mm, for example greater than 3.5 mm, or greater than 4 mm.

[0116] The total weight of the capsule may be in the range of about 1 mg to about 100 mg, suitably about 5 mg to about 60 mg, about 8 mg to about 50 mg, about 10 mg to about 20 mg, or about 12 mg to about 18 mg.

[0117] The total weight of the core formulation may be in the range of about 2 mg to about 90 mg, suitably about 3 mg to about 70 mg, about 5 mg to about 25 mg, about 8 mg to about 20 mg, or about 10 mg to about 15 mg.

[0118] The barrier material may comprise one or more of a gelling agent, a bulking agent, a buffer, a colouring agent and a plasticiser. Suitably, the gelling agent may be, for example, a polysaccharide or cellulosic gelling agent, a gelatin, a gum, a gel, a wax or a mixture thereof. Suitable polysaccharides include alginates, dextrans, maltodextrins, cyclodextrins and pectins. Suitable alginates include, for instance, a salt of alginic acid, an esterified alginate or glyceryl alginate. Salts of alginic acid include ammonium alginate, triethanolamine alginate, and group I or II metal ion alginates like sodium, potassium, calcium and magnesium alginate. Esterified alginates include propylene glycol alginate and glyceryl alginate. In an embodiment, the barrier material is sodium alginate and/or calcium alginate. Suitable cellulosic materials include methyl cellulose, ethyl cellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, carboxymethyl cellulose, cellulose acetate and cellulose ethers. The gelling agent may comprise one or more modified starches. The gelling agent may comprise carrageenans. Suitable gums include agar, gellan gum, gum Arabic, pullulan gum, mannan gum, gum ghatti, gum tragacanth, Karaya, locust bean, acacia gum, guar, quince seed and xanthan gums. Suitable gels include agar, agarose, carrageenans, furoidan and furcellaran. Suitable waxes include carnauba wax. In some cases, the gelling agent may comprise carrageenans and/or gellan gum; these

gelling agents are particularly suitable for inclusion as the gelling agent as the pressure required to break the resulting capsules is particularly suitable.

[0119] The barrier material may comprise one or more bulking agents, such as starches, modified starches (such as oxidised starches) and sugar alcohols such as maltitol.

[0120] The barrier material may comprise a colouring agent which renders easier the location of the capsule within the aerosol-generating device during the manufacturing process of the aerosol-generating device. The colouring agent is preferably chosen among colorants and pigments.

[0121] The barrier material may further comprise at least one buffer, such as a citrate or phosphate compound.

[0122] The barrier material may further comprise at least one plasticiser, which may be glycerol, sorbitol, maltitol, triacetin, polyethylene glycol, propylene glycol or another polyalcohol with plasticising properties, and optionally one acid of the monoacid, diacid or triacid type, especially citric acid, fumaric acid, malic acid, and the like. The amount of plasticiser ranges from 1% to 30% by weight, preferably from 2% to 15% by weight, and even more preferably from 3 to 10% by weight of the total dry weight of the shell.

[0123] The barrier material may also comprise one or more filler materials. Suitable filler materials include comprising starch derivatives such as dextrin, maltodextrin, cyclodextrin (alpha, beta or gamma), or cellulose derivatives such as hydroxypropylmethylcellulose (HPMC), hydroxypropylcellulose (HPC), methylcellulose (MC), carboxy-methylcellulose (CMC), polyvinyl alcohol, polyols or mixture thereof. Dextrin is a preferred filler. The amount of filler in the shell is at most 98.5%, preferably from 25 to 95% more preferably from 40 to 80% and even more preferably from 50 to 60 % by weight on the total dry weight of the shell.

[0124] The capsule shell may additionally comprise a hydrophobic outer layer which reduces the susceptibility of the capsule to moisture-induced degradation. The hydrophobic outer layer is suitably selected from the group comprising waxes, especially carnauba wax, candelilla wax or beeswax, carbowax, shellac (in alcoholic or aqueous solution), ethyl cellulose, hydroxypropyl methyl cellulose, hydroxyl- propylcellulose, latex composition, polyvinyl alcohol, or a combination thereof. More preferably, the at least one moisture barrier agent is ethyl cellulose or a mixture of ethyl cellulose and shellac.

[0125] The capsule core comprises an aerosol-modifying agent as described previously.

[0126] Where the aerosol-modifying agent is a flavourant, the flavourant may suitably be licorice, rose oil, vanilla, lemon oil, orange oil, a mint- flavour, suitably menthol and/or a mint oil from any species of the genus *Mentha* such as peppermint oil and/or spearmint oil, or lavender, fennel or anise. In some cases, the flavourant comprises menthol.

[0127] In some cases, the capsule may comprise at least about 25% w/w flavourant (based on the total weight of the capsule), suitably at least about 30% w/w flavourant, 35% w/w flavourant, 40% w/w flavourant, 45% w/w flavourant or 50% w/w flavourant.

[0128] In some cases, the core may comprise at least about 25% w/w flavourant (based on the total weight of the core), suitably at least about 30% w/w flavourant, 35% w/w flavourant, 40% w/w flavourant, 45% w/w flavourant or 50% w/w flavourant. In some cases, the core may comprise less than or equal to about 75% w/w flavourant (based on the total weight of the core), suitably less than or equal to about 65% w/w flavourant, 55% w/w flavourant, or 50% w/w flavourant. Illustratively, the capsule may include an amount of flavourant in the range of 25-75% w/w (based on the total weight of the core), about 35-60% w/w or about 40-55% w/w.

[0129] The capsules may include at least about 2 mg, 3 mg or 4 mg of the aerosol-modifying agent, suitably at least about 4.5 mg of the aerosol-modifying agent, 5 mg of the aerosol-modifying agent, 5.5 of mg the aerosol-modifying agent or 6 mg of the aerosol-modifying agent.

[0130] In some cases, the capsule comprises at least about 7 mg of the aerosol-modifying agent, suitably at least about 8 mg of the aerosol-modifying agent, 10 mg of the aerosol-modifying agent, 12 mg of the aerosol-modifying agent or 15 mg of the aerosol-modifying agent. The core may also comprise a solvent which dissolves the aerosol-modifying agent. Any suitable solvent may be used.

[0131] Where the aerosol-modifying agent comprises a flavourant, the solvent may suitably comprise short or medium chain fats and oils. For example, the solvent may comprise tri-esters of glycerol such as C2-C12 triglycerides, suitably C6-C10 triglycerides or C8-C12 triglycerides. For example, the solvent may comprise medium chain triglycerides (MCT - C8-C12), which may be derived from palm oil and/or coconut oil.

[0132] The esters may be formed with caprylic acid and/or capric acid. For example, the solvent may comprise medium chain triglycerides which are caprylic triglycerides and/or capric triglycerides. For example, the solvent may comprise compounds identified in the CAS registry by numbers 73398-61-5, 65381-09-1, 85409-09-2. Such medium chain triglycerides are odourless and tasteless.

[0133] The hydrophilic-lipophilic balance (HLB) of the solvent may be in the range of 9 to 13, suitably 10 to 12. Methods of making the capsules include co-extrusion, optionally followed by centrifugation and curing and/or drying. The contents of WO 2007/010407 A2 is incorporated by reference, in its entirety.

[0134] The delivery system may comprise a filter. The filter may be positioned in a mouthpiece of the delivery system such that filters aerosol generated by the aerosol-generating material during use of the delivery system.

[0135] The filter may comprise a body of material. The body of material may comprise filamentary tow. The

filamentary tow material described herein can comprise cellulose acetate fibre tow. The filamentary tow can also be formed using other materials used to form fibres, such as polyvinyl alcohol (PVOH), polylactic acid (PLA), polycaprolactone (PCL), poly(1-4 butanediol succinate) (PBS), poly(butylene adipate-co-terephthalate)(PBAT), starch based materials, cotton, aliphatic polyester materials and polysaccharide polymers or a combination thereof. The filamentary tow may be plasticised with a suitable plasticiser for the tow, such as triacetin where the material is cellulose acetate tow, or the tow may be non-plasticised. The tow can have any suitable specification, such as fibres having a 'Y' shaped or other cross section such as 'X' shaped, filamentary denier values between 2.5 and 15 denier per filament, for example between 8.0 and 11.0 denier per filament and total denier values of 5,000 to 50,000, for example between 10,000 and 40,000.

[0136] The filter can comprise a body of material comprising a capsule. The capsule can be manufactured and inserted into the filter using existing processes and machinery.

[0137] In some embodiments, the delivery system may comprise two or more filter sections. A first filter section can comprise continuous filter material having one or more capsules disposed in the axial region thereof. The second filter section can comprise a tubular filter section. The tubular filter section can be formed from a fibrous filter material.

[0138] According to a further aspect of the disclosure, there is provided a packet containing a delivery system as described herein. The packet may comprise an opening arranged to allow the removal of the one or more delivery systems from the packet. The one or more delivery systems are arranged such that the aerosol-generating material is visible to a user through the opening prior to removal of the one or more delivery systems from the packet through the opening.

Exemplary Embodiments

Exemplary Embodiment 1

[0139] Figure 1 is a schematic illustration of a combustible aerosol provision system 1a which is generally cylindrical in shape. The delivery system includes a rod 2 comprising an aerosol-generating material and wrapped in a wrapping material 3, in this example cigarette paper, connected longitudinally to a filter 4 by tipping material 5 overlaying the filter 4 and partially overlaying the wrapping material 3 so as to connect the filter 4 to the rod 2. The filter comprises an absorbent material 7 and is wrapped in plug wrap 8.

[0140] A range of wrapping materials may be suitable for wrapping the aerosol-generating material. The wrapping material can have a variety of colours. In some embodiments, the colour of the wrapping material may be selected so as to match or coordinate with the aerosol-

generating material. The wrapping material may also be translucent, or transparent to enable the user to identify the aerosol-generating material within the consumable. For example, an aerosol-generating material or a component of the aerosol-generating material may have a distinctive appearance which is visible to a user through the transparent or translucent wrapper.

[0141] The aerosol-generating material may comprise tobacco material and aerosolisable material, as described herein. In some embodiments, the distribution of tobacco material and aerosolisable material in the rod 2 is homogenous. Alternatively, the distribution of tobacco material and aerosolisable material in the rod 2 is inhomogeneous. The concentration of the aerosolisable material in the aerosol-generating material can vary along the length of the rod 2. For example, the aerosolisable material may be present in a higher concentration nearer to the mouthpiece. This may improve the smoothness of the aerosol produced by the consumable towards the end of a session. Where the aerosolisable material comprises a flavour, the aerosol produced by the consumable towards the end of the session may have a particularly high concentration of flavour, thus altering (e.g. improving) the sensory properties of the consumable at the end of a session.

[0142] The axial region is a region, in the present example, centred on the axis 'a' of the delivery system 1a, having a radius of about 3mm. In alternative embodiments, the radius of the axial region can be anywhere from 1mm to 4mm, or from 1mm to 3mm, or about 1mm, 1.5mm, 2mm, 2.5mm, 3mm or 3.5mm.

[0143] The axis of the delivery system 1a, about which the tobacco rod 2 and the filter 4 are aligned, is indicated as 'a' in Figure 1.

Exemplary Embodiment 2

[0144] Figure 2 is a schematic illustration of a combustible aerosol provision system 1b.

[0145] Reference numerals are retained from the embodiment illustrated by Figure 1 and as described previously.

[0146] A capsule 9 is provided in the filter 4. The capsule comprises an aerosol modifying agent which modifies properties of mainstream smoke passing through the smoking article 2. The capsule can be manufactured and inserted into the filter 4 using existing processes and machinery. In the present example, the capsule contains menthol flavourant, although other fluids or granular additives could be contained within the capsule.

[0147] The capsule 9 can be a breakable capsule, for instance a capsule which has a solid, frangible shell surrounding a liquid payload. The capsule can be ruptured by a consumer to release the fluid additive into the absorbent filter material 7. The capsule 9 is entirely embedded within the body of material 7. In other words, the capsule 9 is completely surrounded by the material

forming the body 7.

[0148] In the present example, a single capsule 9 is used. In alternative embodiments, the filter 4 may comprise one or more capsules. In other examples, a plurality of breakable capsules may be disposed within the body of material 7, for instance two, three or more breakable capsules. The length of the body of material 7 can be increased to accommodate the number of capsules required. In examples where a plurality of capsules is used, the individual capsules may be the same as each other, or may differ from one another in terms of size and/or capsule payload.

[0149] In other examples, multiple bodies of material 7 may be provided, with each body containing one or more capsules.

Exemplary Embodiment 3

[0150] Figure 3 is a schematic illustration of a combustible aerosol provision system 1c. Reference numerals are retained from the embodiment illustrated by Figures 1 and 2 as described previously.

[0151] The filter 4 comprises a first section 7a made from absorbent material and a second section 10 at the mouth-end of the filter 4 comprising fibrous filter material 11 formed into a tubular shape and having a channel 12 extending through the centre of the filter material 11. The empty or hollow channel 12 extending through the centre of the filter material 11 can be from 1mm to 6mm in diameter, for instance from 2mm to 5mm in diameter. The channel 12 extending through the centre of the filter material 11 is, in the present example, an empty, hollow passageway. The channel, in some embodiments, extends through an axial region of the filter material of the second filter section 10. The axial region of the second filter section 10 is a region, in the present example, centred on the axis 'a' of the smoking article 1, having a radius of about 2.5mm. In alternative embodiments, the radius of the axial region can be anywhere from 1mm to 4mm, or from 1mm to 3mm, or about 1mm, 1.5mm, 2mm, 2.5mm, 3mm or 3.5mm. In the present example, the tubular filter section is formed from cellulose acetate tow and is wrapped in a second plug wrap 13. The wall thickness of the tubular filter is about 1.5mm. In alternative embodiments, the wall thickness can be anywhere from 1mm to 4mm, or from 1mm to 3mm, or about 1mm, 1.5mm, 2mm, 2.5mm, 3mm or 3.5mm. However, the specific dimensions may be selected based on the density of filter material forming the tube and the level of plasticiser applied to the material, to result in a tube having the desired rigidity, porosity or other characteristics. The tubular filter section 10 can be manufactured using existing processes and machinery.

[0152] When the consumer breaks the capsule 9 either prior to or in the course of smoking the smoking article 1, the aerosol-modifying agent contained therein, in the present case menthol, is released in greater concentration into the axial region of the first filter section 7a through

which an increased flow of mainstream smoke is directed, as a result of the second filter section 10. Accordingly, the increased flow of mainstream smoke enhances the delivery of the smoke modifying additive to the consumer and the smoking article 1c can therefore exhibit improved delivery of a smoke modifying additive to a consumer compared to conventional smoking articles.

Exemplary Embodiment 4 - Aerosolisable Material

[0153] An aerosolisable material was made as follows. Water and sodium alginate (Protanal® RF6650; 8% on a dry weight basis) were combined and mixed in a high-shear mixer for 15 minutes. Chalk (79% on a dry weight basis) and glycerol (13% on a dry weight basis) were added to the mixture and mixed for 5 minutes. The mixture was agitated in a tank until the slurry reached a uniform consistency. The slurry was then cast using a heated band caster (cast width 800 mm; 80 to 90 °C, 20 minutes) to produce a wet sheet of about 0.5 mm thickness. The aerosolisable material was then shredded at 37 cuts per inch (about 1.5 cuts per mm) using a shredder to provide a shredded aerosolisable material.

Exemplary Embodiment 5 - Aerosol-Generating Material

[0154] The aerosolisable material prepared as described above was blended with tobacco material to produce an aerosol-generating material comprising tobacco and the aerosolisable material. The relative quantities of aerosolisable material and tobacco material in the aerosol-generating material are shown in Table 1.

[0155] The tobacco comprised tobacco leaf in an amount of about 50 wt% based on the total weight of the composition. About 40 wt% of the tobacco leaf was leaf obtained from the lower half of the tobacco plant and had a ratio of sugars to nicotine of about 10:1. The aerosol-generating material comprised tobacco stem in an amount of about 18 wt% based on the total weight of the composition.

Table 1

Aerosol-Generating Material Composition	
Aerosolisable material	37 wt%
Tobacco material	63 wt%

Exemplary Embodiment 6 - Delivery Systems

[0156] Three cigarettes comprising a filter were manufactured using the aerosol-generating material of Exemplary Embodiment 5. Cigarettes comprising the aerosol-generating material may be marketed under the name "White Tobacco". One cigarette did not comprise any additional flavourants. The other two cigarettes comprised a flavourant (menthol, 1 mg).

[0157] The configurations are shown in Table 2.

Table 2

Cigarette	Flavourant*
1	No
2	Yes (Cranberry)
3	Yes (Cappuccino)
*Added to the aerosol-generating material	

Sensory Evaluation

[0158] The sensory characteristics of Cigarettes 1 to 3 were evaluated by a panel of expert smokers against a Control Cigarette which did not contain the aerosolisable material as described herein (Kent Super Slim (1 mg menthol)).

[0159] The panel of expert smokers concluded that, when smoked, Cigarettes 1 to 3 exhibited better after taste, better flavour perception and better mouthfeel compared with the Control Cigarette.

[0160] The expert smokers reported that Cigarettes 2 and 3 exhibited markedly improved cooling compared with the Control Cigarette, despite the identical levels of menthol flavourant (1 mg).

[0161] The various embodiments described herein are presented only to assist in understanding and teaching the claimed features. These embodiments are provided as a representative sample of embodiments only, and are not exhaustive and/or exclusive. It is to be understood that advantages, embodiments, examples, functions, features, structures, and/or other aspects described herein are not to be considered limitations on the scope of the invention as defined by the claims, and that other embodiments may be utilised and modifications may be made without departing from the scope of the claimed invention.

Claims

1. A delivery system (1b) comprising:

an aerosol-generating material comprising tobacco material and an aerosolisable material in the form of a shredded sheet comprising:

an inorganic material in an amount of 50% to 90% by weight of the aerosolisable material;
a binder; and
an aerosol-former material

and an aerosol-modifying agent release component (9) comprising an aerosol modifying agent.

2. A delivery system as claimed in claim 1, wherein the delivery system (1b) comprises a filter material (7) comprising the aerosol-modifying agent release component (9), optionally wherein the filter material (7) comprises a filamentary tow or a cellulose based material.

3. A delivery system (1b) as claimed in either claims 1 or claim 2, wherein the aerosol-modifying agent release component (9) comprises a breakable capsule containing the aerosol modifying agent, optionally wherein the capsule comprises a shell and the aerosol modifying agent is enclosed within the shell, optionally wherein the capsule is spherical in shape, optionally wherein the capsule has a diameter in the range 2 mm to 4 mm.

4. A delivery system (1b) as claimed in either claim 1 or claim 2, wherein the aerosol-modifying release component (9) comprises a plurality of breakable capsules containing the aerosol modifying agent, optionally wherein the aerosol modifying agent in one or more capsule of the plurality of breakable capsules differs from the aerosol modifying agent in another capsule of the plurality of capsules, optionally wherein the aerosol modifying agent in each capsule of the plurality of capsules is different to the aerosol modifying agent in each of the other capsules of the plurality of capsules or, optionally, the aerosol modifying agent in each capsule of the plurality of capsules is identical to the aerosol modifying agent in each of the other capsules of the plurality of capsules, optionally wherein the aerosol modifying agent is a liquid.

5. A delivery system (1b) as claimed in any one of claims 2 to 4, wherein the filamentary tow comprises a total denier in the range 8,000 to 40,000, optionally wherein the filamentary tow comprises a denier per filament in the range 5 to 12.

6. A delivery system (1b) as claimed in claim 1, wherein the aerosol modifying agent release component is a wrapper comprising the aerosol modifying agent.

7. A delivery system (1b) as claimed in any one of claims 1 to 6, wherein the aerosolisable material comprises the aerosol-former material in an amount of between 10% and 20% by weight of the aerosolisable material, optionally wherein the aerosol-generating material comprises the aerosolisable material an amount of between 10% and 90% by weight of the aerosol-generating material, optionally wherein the aerosolisable material comprises the binder in an amount of at least 1% by weight of the aerosolisable material, optionally wherein the aerosol-former material is selected from the group consisting of: glycerol, sorbitol, propylene glycol, triethylene glycol,

lactic acid, diacetin, triacetin, triethylene glycol diacetate, triethyl citrate, ethyl myristate, isopropyl myristate, methyl stearate, dimethyl dodecanedioate, dimethyl tetradecanedioate, and mixtures thereof.

8. A delivery system (1b) as claimed in any one of claims 1 to 7, wherein the tobacco material comprises dry ice expanded tobacco material, optionally wherein the tobacco material comprises leaf tobacco. 10
9. A delivery system (1b) as claimed in claim 8, wherein the leaf tobacco comprises sugars and nicotine in a weight ratio of between 8:1 and 20:1, wherein said leaf tobacco comprising sugars and nicotine in a weight ratio of between 8:1 and 20:1 is present in the tobacco material in an amount of at least 5% by weight of the tobacco material. 15
10. A delivery system (1b) as claimed in claim 9, wherein a weight ratio of the sugars to nicotine in the leaf tobacco is between 8:1 and 15:1, optionally wherein the leaf tobacco is lower-stalk leaf tobacco. 20
11. A delivery system (1b) as claimed in any one of claims 1 to 10, wherein the tobacco material comprises nicotine in an amount of between 1% and 2.5% by weight of the tobacco material, optionally wherein the tobacco material comprises the leaf tobacco in an amount of between 30% and 50% by weight of the tobacco material, optionally wherein the leaf tobacco comprises sugars in an amount of between 5% and 20% by weight of the leaf tobacco material, optionally wherein the aerosol-generating material comprises the tobacco material in an amount of between 20% and 90% of the aerosol-generating material. 25 30 35
12. A delivery system (1b) as claimed in any one of claims 1 to 11, wherein the tobacco material and/or the aerosolisable material is shredded and has a width of between 0.01 and 1.5 mm, optionally, wherein the aerosolisable material does not comprise additional colourants, optionally wherein the aerosol-generating material comprises a flavourant. 40 45
13. A delivery system (1b) as claimed in any one of claims 1 to 12, wherein the combustible aerosol provision system is cylindrical in shape, optionally wherein the combustible aerosol provision system has a circumference in the range 15 mm to 23 mm. 50
14. A delivery system (1b) as claimed in any one of claims 1 to 13, wherein the delivery system is a combustible aerosol-provision system. 55
15. A packet comprising an aerosol delivery system (1b) as claimed in any one of claims 1 to 14.

Patentansprüche

1. Verabreichungssystem (1b), umfassend:
ein Aerosolerzeugungsmaterial, das Tabakmaterial und ein aerosolisierbares Material in der Form eines zerkleinerten Blattes umfasst, umfassend:

ein anorganisches Material in einer Menge von 50 Gew.-% bis 90 Gew.-% des aerosolisierbaren Materials;
ein Bindemittel; und
ein Aerosolbildungsmaterial
und eine Aerosolmodifikationsmittelfreisetzungskomponente (9), die ein Aerosolmodifikationsmittel umfasst.
2. Verabreichungssystem nach Anspruch 1, wobei das Verabreichungssystem (1b) ein Filtermaterial (7) umfasst, das die Aerosolmodifikationsmittelfreisetzungskomponente (9) umfasst, wobei optional das Filtermaterial (7) ein Reißspinnkabel oder ein cellulosebasiertes Material umfasst.
3. Verabreichungssystem (1b) nach Anspruch 1 oder Anspruch 2, wobei die Aerosolmodifikationsmittelfreisetzungskomponente (9) eine brechbare Kapsel umfasst, die das Aerosolmodifikationsmittel enthält, wobei optional die Kapsel eine Hülle umfasst und das Aerosolmodifikationsmittel innerhalb der Hülle eingeschlossen ist, wobei optional die Kapsel kugelförmig ist, wobei optional die Kapsel einen Durchmesser in dem Bereich von 2 mm bis 4 mm aufweist.
4. Verabreichungssystem (1b) nach Anspruch 1 oder Anspruch 2, wobei die Aerosolmodifikationsmittelfreisetzungskomponente (9) eine Vielzahl von brechbaren Kapseln umfasst, die das Aerosolmodifikationsmittel enthält, wobei sich optional das Aerosolmodifikationsmittel in einer oder mehreren Kapseln aus der Vielzahl von brechbaren Kapseln von dem Aerosolmodifikationsmittel in einer anderen Kapsel aus der Vielzahl von Kapseln unterscheidet, wobei sich optional das Aerosolmodifikationsmittel in jeder Kapsel aus der Vielzahl von Kapseln von dem Aerosolmodifikationsmittel in jeder der anderen Kapseln aus der Vielzahl von Kapseln unterscheidet oder optional das Aerosolmodifikationsmittel in jeder Kapsel aus der Vielzahl von Kapseln identisch mit dem Aerosolmodifikationsmittel in jeder der anderen Kapseln aus der Vielzahl von Kapseln ist, wobei optional das Aerosolmodifikationsmittel eine Flüssigkeit ist.
5. Verabreichungssystem (1b) nach einem der Ansprüche 2 bis 4, wobei das Reißspinnkabel ein Gesamt-denier in dem Bereich von 8.000 bis 40.000 umfasst, wobei optional das Reißspinnkabel ein Denier pro Filament in dem Bereich von 5 bis 12 umfasst.

6. Verabreichungssystem (1b) nach Anspruch 1, wobei die Aerosolmodifikationsmittelfreisetzungskomponente eine Umhüllung ist, die das Aerosolmodifikationsmittel umfasst.
7. Verabreichungssystem (1b) nach einem der Ansprüche 1 bis 6, wobei das aerosolisierbare Material das Aerosolbildungsmaterial in einer Menge zwischen 10 Gew.-% und 20 Gew.-% des aerosolisierbaren Materials umfasst, wobei optional das Aerosolermittlungsmaterial das aerosolisierbare Material in einer Menge zwischen 10 Gew.-% und 90 Gew.-% des Aerosolermittlungsmaterials umfasst, wobei optional das aerosolisierbare Material das Bindemittel in einer Menge von zumindest 1 Gew.-% des aerosolisierbaren Materials umfasst, wobei optional das Aerosolbildungsmaterial ausgewählt ist aus der Gruppe bestehend aus: Glycerin, Sorbit, Propylenglycol, Triethylenglycol, Milchsäure, Diacetyl, Triacetyl, Triethylenglycoldiacetyl, Triethylcitrat, Ethylmyristat, Isopropylmyristat, Methylstearat, Dimethyldodecandioat, Dimethyltetradecandioat und Mischungen davon.
8. Verabreichungssystem (1b) nach einem der Ansprüche 1 bis 7, wobei das Tabakmaterial trockenexpandiertes Tabakmaterial umfasst, wobei optional das Tabakmaterial Blatttabak umfasst.
9. Verabreichungssystem (1b) nach Anspruch 8, wobei der Blatttabak Zucker und Nikotin in einem Gewichtsverhältnis zwischen 8:1 und 20:1 umfasst, wobei der Blatttabak, der Zucker und Nikotin in einem Gewichtsverhältnis zwischen 8:1 und 20:1 umfasst, in dem Tabakmaterial in einer Menge von zumindest 5 Gew.-% des Tabakmaterials vorhanden ist.
10. Verabreichungssystem (1b) nach Anspruch 9, wobei ein Gewichtsverhältnis der Zucker zu Nikotin in dem Blatttabak zwischen 8:1 und 15:1 ist, wobei optional der Blatttabak Niederstielblatttabak ist.
11. Verabreichungssystem (1b) nach einem der Ansprüche 1 bis 10, wobei das Tabakmaterial Nikotin in einer Menge zwischen 1 Gew.-% und 2,5 Gew.-% des Tabakmaterials umfasst, wobei optional das Tabakmaterial den Blatttabak in einer Menge zwischen 30 Gew.-% und 50 Gew.-% des Tabakmaterials umfasst, wobei optional der Blatttabak Zucker in einer Menge zwischen 5 Gew.-% und 20 Gew.-% des Blatttabakmaterials umfasst, wobei optional das Aerosolermittlungsmaterial das Tabakmaterial in einer Menge zwischen 20 % und 90 % des Aerosolermittlungsmaterials umfasst.
12. Verabreichungssystem (1b) nach einem der Ansprüche 1 bis 11, wobei das Tabakmaterial und/oder das

aerosolisierbare Material zerkleinert ist und eine Breite zwischen 0,01 und 1,5 mm aufweist, wobei optional das aerosolisierbare Material keine zusätzlichen Farbstoffe umfasst, wobei optional das Aerosolermittlungsmaterial ein Aroma umfasst.

13. Verabreichungssystem (1b) nach einem der Ansprüche 1 bis 12, wobei das brennbare Aerosolbereitstellungssystem zylinderförmig ist, wobei optional das brennbare Aerosolbereitstellungssystem einen Umfang in dem Bereich von 15 mm bis 23 mm aufweist.
14. Verabreichungssystem (1b) nach einem der Ansprüche 1 bis 13, wobei das Verabreichungssystem ein brennbares Aerosolbereitstellungssystem ist.
15. Packung, umfassend ein Aerosolverabreichungssystem (1b) nach einem der Ansprüche 1 bis 14.

Revendications

1. Système de distribution (1b) comprenant :
un matériau générateur d'aérosol comprenant un matériau de tabac et un matériau pouvant être mis en aérosol sous la forme d'un feuillet déchiqueté comprenant :
un matériau inorganique en une quantité de 50 % à 90 % en poids du matériau pouvant être mis en aérosol ;
un liant ; et
un matériau formateur d'aérosol
et un composant de libération d'agent modificateur d'aérosol (9) comprenant un agent modificateur d'aérosol.
2. Système de distribution selon la revendication 1, dans lequel le système de distribution (1b) comprend un matériau filtrant (7) comprenant le composant de libération d'agent modificateur d'aérosol (9), éventuellement dans lequel le matériau filtrant (7) comprend un câble filamentaire ou un matériau à base de cellulose.
3. Système de distribution (1b) selon la revendication 1 ou la revendication 2, dans lequel le composant de libération d'agent modificateur d'aérosol (9) comprend une capsule cassable contenant l'agent modificateur d'aérosol, éventuellement dans lequel la capsule comprend une coque et l'agent modificateur d'aérosol est enfermé dans la coque, éventuellement dans lequel la capsule est de forme sphérique, éventuellement dans lequel la capsule présente un diamètre allant de 2 mm à 4 mm.
4. Système de distribution (1b) selon la revendication 1

- ou la revendication 2, dans lequel le composant de libération modificateur d'aérosol (9) comprend une pluralité de capsules cassables contenant l'agent modificateur d'aérosol, éventuellement dans lequel l'agent modificateur d'aérosol dans une ou plusieurs capsules de la pluralité de capsules cassables diffère de l'agent modificateur d'aérosol dans une autre capsule de la pluralité de capsules, éventuellement dans lequel l'agent modificateur d'aérosol dans chaque capsule de la pluralité de capsules est différent de l'agent modificateur d'aérosol dans chacune des autres capsules de la pluralité de capsules ou, éventuellement, l'agent modificateur d'aérosol dans chaque capsule de la pluralité de capsules est identique à l'agent modificateur d'aérosol dans chacune des autres capsules de la pluralité de capsules, éventuellement dans lequel l'agent modificateur d'aérosol est un liquide.
5. Système de distribution (1b) selon l'une quelconque des revendications 2 à 4, dans lequel le câble filamentaire comprend un denier total allant de 8 000 à 40 000, éventuellement dans lequel le câble filamentaire comprend un denier par filament allant de 5 à 12.
6. Système de distribution (1b) selon la revendication 1, dans lequel le composant de libération d'agent modificateur d'aérosol est une enveloppe comprenant l'agent modificateur d'aérosol.
7. Système de distribution (1b) selon l'une quelconque des revendications 1 à 6, dans lequel le matériau pouvant être mis en aérosol comprend le matériau formateur d'aérosol en une quantité allant de 10 % à 20 % en poids du matériau pouvant être mis en aérosol, éventuellement dans lequel le matériau générateur d'aérosol comprend le matériau pouvant être mis en aérosol en une quantité allant de 10 % à 90 % en poids du matériau générateur d'aérosol, éventuellement dans lequel le matériau pouvant être mis en aérosol comprend le liant en une quantité d'au moins 1 % en poids du matériau pouvant être mis en aérosol, éventuellement, le matériau formateur d'aérosol est choisi dans le groupe constitué par : le glycérol, le sorbitol, le propylène glycol, le triéthylène glycol, l'acide lactique, la diacétine, la triacétine, le diacétate de triéthylène glycol, le citrate de triéthyle, le myristate d'éthyle, le myristate d'isopropyle, le stéarate de méthyle, le dodécanedioate de diméthyle, le tétradécanedioate de diméthyle et leurs mélanges.
8. Système de distribution (1b) selon l'une quelconque des revendications 1 à 7, dans lequel le matériau de tabac comprend un matériau de tabac expansé à la glace sèche, éventuellement dans lequel le matériau de tabac comprend du tabac en feuilles.
9. Système de distribution (1b) selon la revendication 8, dans lequel le tabac en feuilles comprend des sucres et de la nicotine dans un rapport de poids allant de 8:1 à 20:1, dans lequel le tabac en feuilles comprenant des sucres et de la nicotine dans un rapport de poids allant de 8:1 à 20:1 est présent dans le matériau de tabac en une quantité d'au moins 5 % en poids du matériau de tabac.
10. Système de distribution (1b) selon la revendication 9, dans lequel un rapport de poids des sucres à la nicotine dans le tabac en feuilles est allant de 8:1 à 15:1, éventuellement dans lequel le tabac en feuilles est du tabac en feuilles de tige inférieure.
11. Système de distribution (1b) selon l'une quelconque des revendications 1 à 10, dans lequel le matériau de tabac comprend de la nicotine en une quantité allant de 1 % à 2,5 % en poids du matériau de tabac, éventuellement dans lequel le matériau de tabac comprend le tabac en feuilles en une quantité allant de 30 % à 50 % en poids du matériau de tabac, éventuellement dans lequel le tabac en feuilles comprend des sucres en une quantité allant de 5 % à 20 % en poids du matériau de tabac en feuilles, éventuellement dans lequel le matériau générateur d'aérosol comprend le matériau de tabac en une quantité allant de 20 % à 90 % du matériau générateur d'aérosol.
12. Système de distribution (1b) selon l'une quelconque des revendications 1 à 11, dans lequel le matériau de tabac et/ou le matériau pouvant être mis en aérosol est déchiqueté et présente une largeur allant de 0,01 à 1,5 mm, éventuellement, dans lequel le matériau pouvant être mis en aérosol ne comprend pas de colorants supplémentaires, éventuellement dans lequel le matériau générant un aérosol comprend un arôme.
13. Système de distribution (1b) selon l'une quelconque des revendications 1 à 12, dans lequel le système de fourniture d'aérosol combustible est de forme cylindrique, éventuellement dans lequel le système de fourniture d'aérosol combustible présente une circonférence allant de 15 mm à 23 mm.
14. Système de distribution (1b) selon l'une quelconque des revendications 1 à 13, dans lequel le système de distribution est un système de fourniture d'aérosol combustible.
15. Paquet comprenant un système de distribution d'aérosol (1b) selon l'une quelconque des revendications 1 à 14.

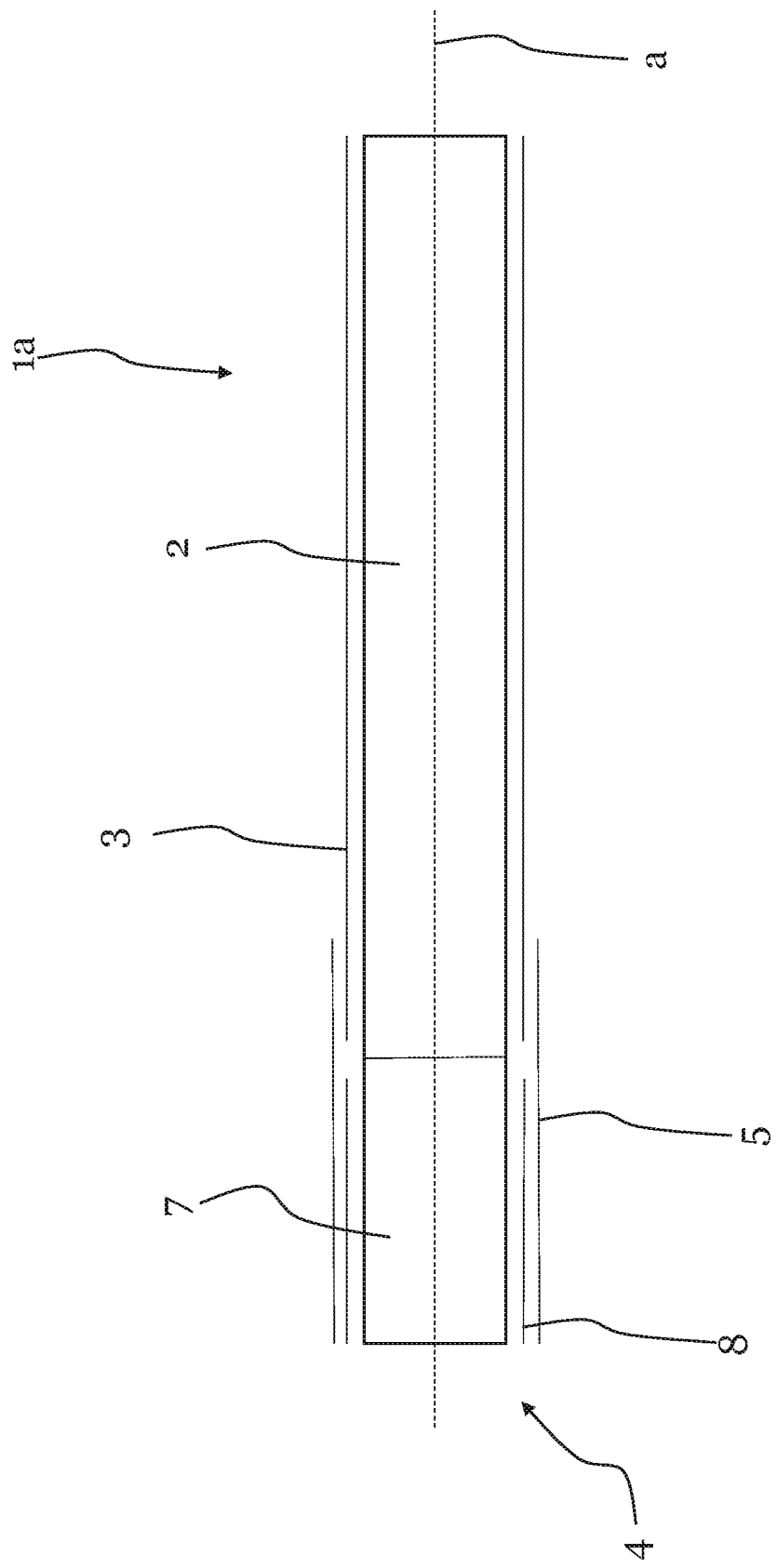


Fig. 1

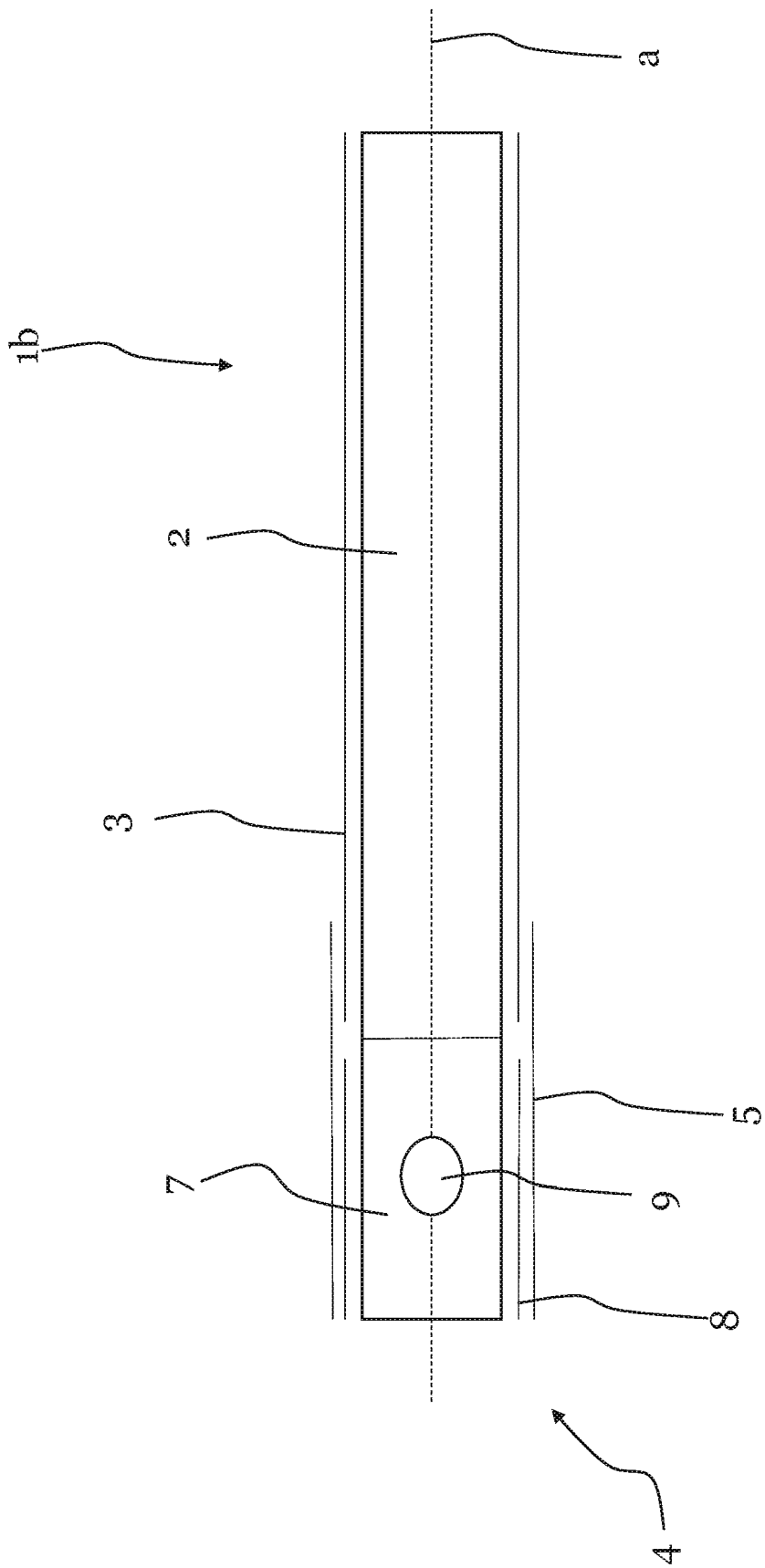


Fig. 2

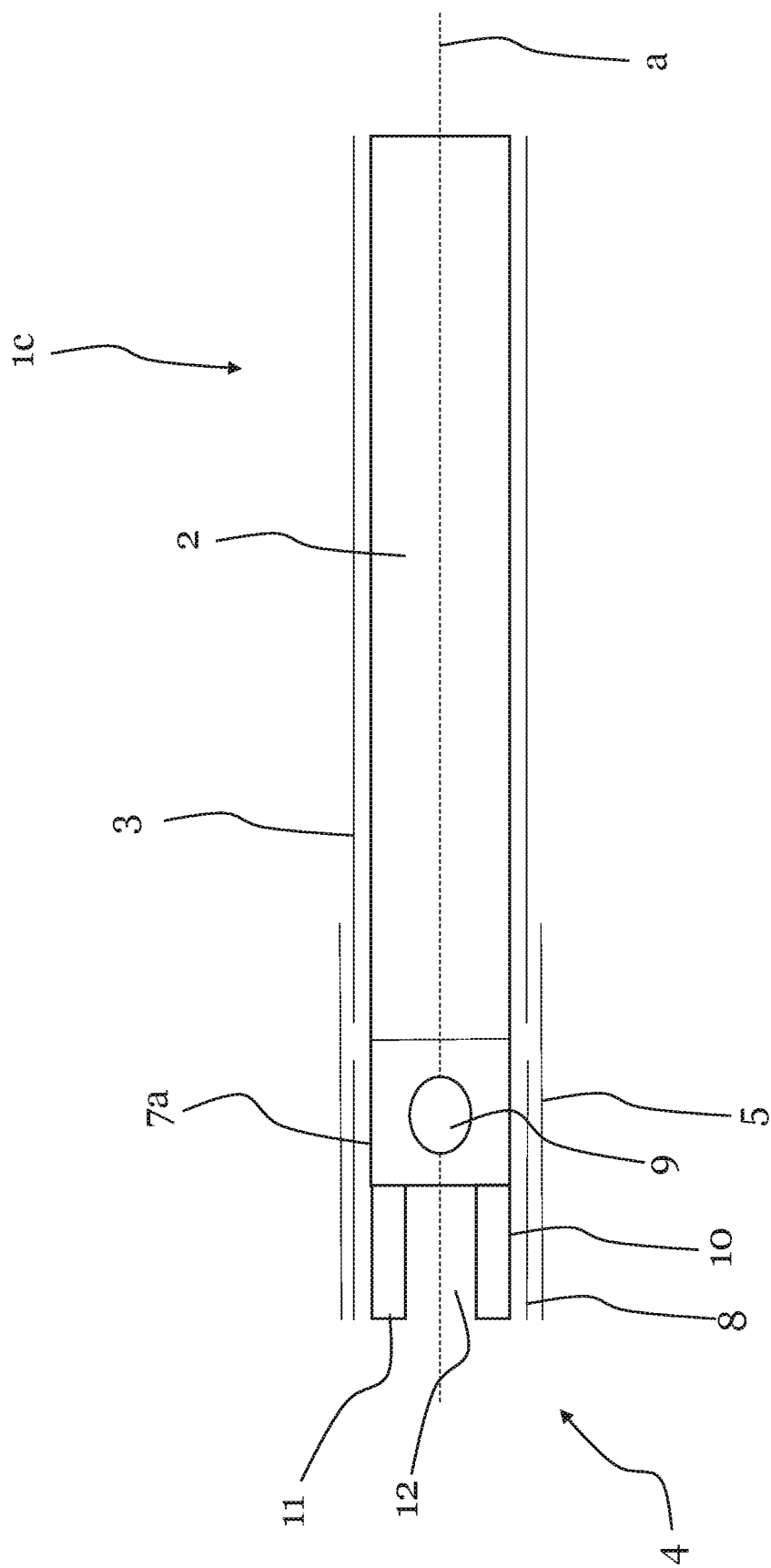


Fig. 3

REFERENCES CITED IN THE DESCRIPTION

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