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(54) **AEROSOL GENERATING SUBSTRATE AND ARTICLE CONTAINING THE SUBSTRATE**

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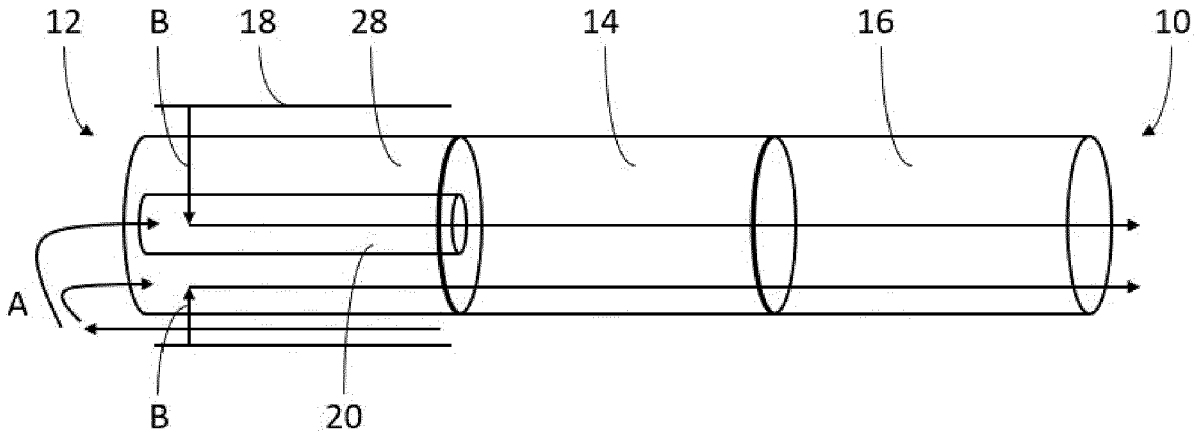
(57) **ABSTRACT**

An aerosol generating substrate for a non-combustion aerosol generating device includes a first aerosol generating portion and at least one second aerosol generating portion positioned adjacent to the first aerosol generating portion. The first and second aerosol generating portions contain an aerosol generating agent, and respectively first and second flavourant(s) which are different from each other. At least one of the first and second aerosol generating portion is a foam containing non-tobacco flavourant. The foam is configured to produce aerosol upon heating. The foam is not meltable under conditions of aerosol generation at a temperature comprised within a heating temperature range of the aerosol generating device. The heating temperature range is between 180° C. and 350° C. The foam includes a foam-forming agent selected from the group consisting of agar, gellan gum, lecithin, polyglycerol esters of fatty acids, glycerol esters of fatty acids, sorbitan esters of fatty acids, and/or mixtures thereof.



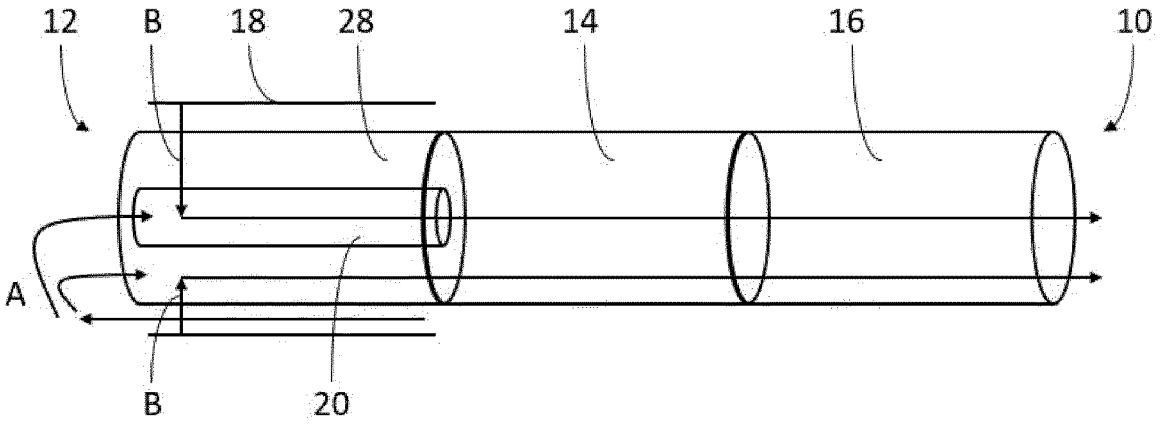


Fig. 1

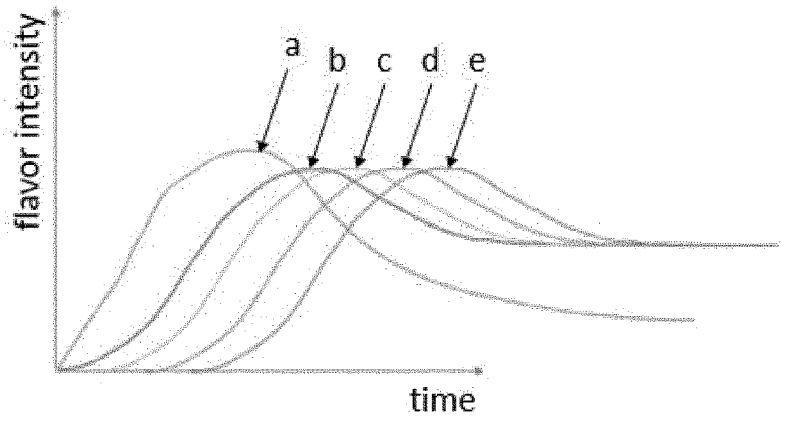


Fig. 2

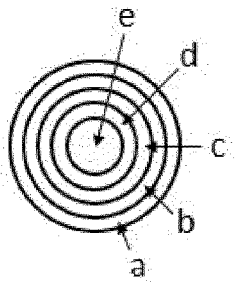


Fig. 3

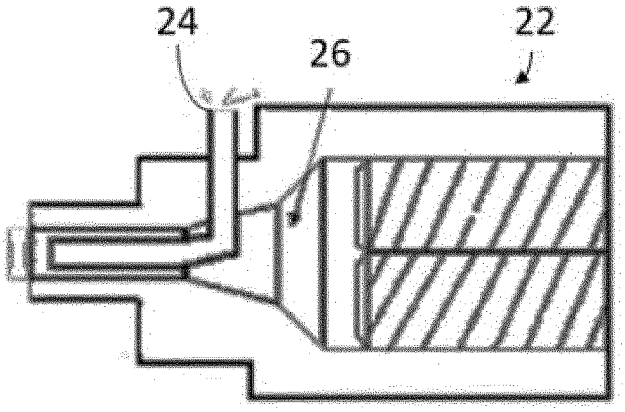


Fig. 4

AEROSOL GENERATING SUBSTRATE AND ARTICLE CONTAINING THE SUBSTRATE

TECHNICAL FIELD

[0001] The invention relates to an aerosol generating substrate and an article containing the substrate for a non-combustion heating aerosol generating device.

TECHNICAL BACKGROUND

[0002] Aerosol generating devices such as vaporizers have become popular as a replacement for conventional smoking articles. In such devices, an aerosol is heated for example by means of an electric heater. In this context, it is desirable that the users can experience intense and/or diversified flavours when vaping.

PRIOR ART

[0003] Aerosol generating substrates which are provided as a mousse are disclosed by WO 2018/122 375 A1 and WO 2020/002607 A1. WO 2020 254582 A1, 2021/083844 A1, WO 2021/094453 A1 and WO 2021/094365 A1 are related to such mousses and hot pressed tobacco substrates respectively. WO 2020/127261 A1 teaches an extrusion for forming a tobacco mousse, and WO 2021 105449 A1 is related to a consumable for an aerosol generating device comprising at least two aerosol generating materials of a different composition, each comprising an amorphous solid formed of a gelling agent. Similarly, WO 2021/128828 A1 and WO 2021/053029 A1 are related to consumables containing a meltable gel.

SUMMARY OF THE INVENTION

[0004] Despite the above-mentioned teachings, there is still a need to provide an aerosol generating substrate and article which are improved with regard to the flavour release, such as intensity and/or diversity.

[0005] This is achieved by the subject-matter of claim **1**.

[0006] Accordingly, the aerosol generating substrate for a non-combustion aerosol generating device comprises a first aerosol generating portion and at least one second aerosol generating portion positioned adjacent to the first aerosol generating portion, wherein the first and second aerosol generating portions contain an aerosol generating agent, and respectively first and second flavourant(s) which are different from each other, wherein at least one of the first and second aerosol generating portion is a foam containing non-tobacco flavourant and wherein the foam is configured to produce aerosol upon heating and wherein the foam is not meltable under conditions of aerosol generation at a temperature comprised within a heating temperature range of the aerosol generating device and wherein the heating temperature range is between 180° C. and 350° C., and wherein the foam comprises a foam-forming agent selected from the group consisting of agar, gellan gum, lecithin, polyglycerol esters of fatty acids, glycerol esters of fatty acids, sorbitan esters of fatty acids, and/or mixtures thereof. In a possible example, both first and second aerosol generating portions contain respectively first and second non-tobacco flavourants.

[0007] Providing the aerosol generating substrate in the form of a foam provides the significant advantage that leakage can be prevented, as the foam is significantly more stable than a liquid and does not leak as easily as a liquid may. In particular, this can be achieved by providing the foam stable and not meltable at a temperature comprised within the heating temperature range of the aerosol generating device, such that the foam resists up to the temperature of at least one value in the heating temperature range. Moreover, the amount of foam can be adjusted in a manner which corresponds to the session time, which users are used to, i.e. to the session time of a regular cigarette. Moreover, it has been found that any desirable ingredients of the aerosol, such as the flavourant(s) can easily be provided in a foam.

[0008] Due to the different flavourants provided in at least two aerosol generating portions, the flavour as a whole can be intensified and/or diversified. In particular, the aerosol generating portions, in particular the foam, can be provided in a manner to release significant parts of the flavour during specific, preferably different or at least staggered times, so that a varying predominant flavour over time can be experienced. Moreover, the total time of flavour release can be prolonged, and flavour consistency along vaping is achieved. Finally, by providing different flavourants in different aerosol generating portions, flavours can be kept separate in different aerosol generating portions and do not have to be mixed which may deteriorate the users' experience regarding different flavours. In summary, flavour quality and intensity can be kept at a high level over a longer period of time than previously.

[0009] Preferred embodiments are described in the further claims.

[0010] As regards the heating temperature range of the aerosol generating device, this can for example be 200-320° C., and preferably 230-320° C. In this range, the aerosol can be reliably produced, and melting of the foam can at the same time be avoided. In particular, at these temperatures, the foam may experience charring and browning but no change of shape that usually results when melting.

[0011] The aerosol generating substrate can have tobacco material in particular homogenized tobacco material, but the aerosol generating substrate can also be free of tobacco material and/or contain a non-tobacco flavouring agent. Tobacco material differs from that contained in a normal cigarette as it generally contains reconstituted tobacco or processed tobacco mixture rather than leaf tobacco, although it may contain a low amount of leaf. In this context, the amount of nicotine can also be varied which allows the users to control their nicotine uptake. In this context, a source of nicotine means any substance capable of releasing nicotine when heated. Such a substance does not necessarily have to be tobacco, but the nicotine can be extracted from tobacco and dosed in the foam. In order to provide reasonable nicotine levels, the amount of nicotine in dry basis of the aerosol generating substrate is preferably between 0.1 and 10 wt. %, and preferably between 0.1 and 4 wt. %. Production of the aerosol generating substrate, which can be circular cylindrical and can be called a plug, can be particularly efficient by providing the first and at least one second aerosol generating portions as co-extrudates and/or concentrically.

[0012] In order to provide a stable foam which is, as a consequence, particularly unlikely to leak, at least one aerosol generating portion preferably comprises a foam forming agent and/or a foam stabilizing agent.

[0013] Preferred foam forming agents, hereafter also referred in short as "gum", are selected from the group

consisting of agar, gellan gum, lecithin, polyglycerol esters of fatty acids, glycerol esters of fatty acids, sorbitan esters of fatty acids, and/or mixtures thereof, without being limited thereto. The amount of foam forming agent is preferably comprised between 1 and 15 wt. % of the foam, more preferably between 2 and 10 wt. %, most preferably between 3 and 8 wt. % of the foam.

[0014] Preferred foam stabilizing agents are selected from the group consisting of cellulose gum, hydroxyalkylated carbohydrates, derivatives thereof, and mixture thereof and/or comprise cellulose gum, in particular carboxymethylcellulose (CMC) or derivatives thereof (also referred as "binder" in the present application) and/or cellulose fiber. Derivatives of CMC may be salt thereof, preferably alkali metal salts such as sodium and/or potassium salts. Cellulose fibre as the foam stabilizing agent is preferably present in an amount between 5 wt. % and 15 wt. % of the foam. The amount of foam stabilizing agent is preferably comprised between 5 and 30 wt. % of the foam, preferably between 8 and 28 wt. %. In a possible example, the foam stabilizing agent comprises a ratio of about 1:1 of cellulose fibre and carboxymethylcellulose in the foam. In another example, the foam stabilizing agent comprises only carboxymethylcellulose and no cellulose fibre in the foam.

[0015] In first tests, an amount of at least 40 wt. %, preferably at least 50 wt. %, most preferably at least 60 wt. %, of at least one aerosol generating portion as well as propylene glycol, glycerin or a combination thereof have proven beneficial with regard to the aerosol forming agent.

[0016] Small amount of water and/or an acid and/or an ester, e.g. diacetin, may be contained in the foam. In preferred example, the foam may comprise water in an amount of 0-15 wt. % of the weight of the foam, e.g., 9-10 wt. %.

[0017] The first aerosol generating portion preferably contains tobacco powder. More preferably, the first aerosol generating portion is a processed tobacco mixture. The amount of tobacco powder is preferably of at least 50 wt. % of the first aerosol generating portion. In an example, the first aerosol generating portion is a tobacco foam. An advantage of the tobacco foam is that it can easily be extruded or co-extruded with the second aerosol generating portion which is also a foam or foam.

[0018] Preferred (non-tobacco) flavouring agents foam are selected amongst the list of: menthol, natural and/or artificial plant flavour (e.g., peppermint, berry, fruit, root or nut), animal, enzymatic or microbiological origin flavour, sweet-like, alcoholic or dessert-like flavour (e.g. chocolate, cookie dough, peanut butter, carrot cake, marshmallow, butter popcorn, prosecco, red wine, rum, jelly bean, Guinness, bourbon, honey, toffee, praline, butterfinger, brown bread etc.) and combinations thereof. As regards the amount of flavouring agent, it is currently preferred to have this with 0.2 to 18 and preferably 0.6 to 13 wt. %.

[0019] As regards preferred recipes, the non-tobacco aerosol generation portion comprises:

[0020] an amount of 60 to 70, preferably about 63 to 68 wt. % of aerosol forming agent,

[0021] 5-10 wt. water, preferably about 9 wt. % purified water,

[0022] 1-6 wt. % gum, preferably about 4.5 wt. % gum and

[0023] 8-20 wt. binder, preferably about 18 wt. % binder.

[0024] Alternatively, the aerosol generation portion comprises:

[0025] 1 an amount of 60 to 70 wt. %, preferably about 63 to 68 wt. % of aerosol forming agent,

[0026] 5-10 wt. water, preferably about 9 wt. % purified water,

[0027] 1-6 wt. % gum, preferably about 4.5 wt. % gum,

[0028] 8-20 wt. binder, preferably about 11 wt. % binder and

[0029] 8-15 wt. % cellulose fiber, preferably about 12 wt. % cellulose fiber.

[0030] In those recipes above, the gum is more preferably gellan gum and/or the binder is preferably carboxymethylcellulose and derivatives.

[0031] The addition of cellulose fiber is particularly advantageous to maintain the integrity of the shape during heating, as it does not "melt"—although it is a biopolymer—but merely undergoes decomposition, meaning charring (formation of double bond C—C) and degradation, but only at relatively high temperatures.

[0032] The first aerosol generating portion or tobacco portion may comprise homogenized tobacco material being formed of a processed tobacco mixture. The mixture may comprise tobacco powder, aerosol forming agent (e.g., glycerol), binder (e.g., guar gum) and optionally cellulose pulp. For example, the tobacco mixture comprises 50 wt. %-80 wt. % tobacco powder, 8 wt. %-15 wt. % aerosol forming agent, 1 wt. %-10 wt. % binder, 0% wt.-10% wt. cellulose pulp.

[0033] As already mentioned, in order to extend the flavour release over time and at the same time keep a certain intensity, flavour release from the first and at least one second aerosol generating portion is preferably adapted to be staggered time-wise. This adaptation is promoted by an adjacent arrangement of the first and second aerosol generating portions in particular wherein the portions are arranged, e.g. in successive adjacent layers, in a transverse direction of the article and/or air flow. In particular, a coaxial arrangement of the first and second aerosol generating portions, such as by superimposed tubular layers, is found particularly advantageous to a staggered flavour release.

[0034] The aerosol generating article described herein contains the above-described substrate wrapped in a wrapper. The article can further comprise a mouthpiece downstream of the aerosol generating substrate, which can also be contained in the wrapper. Further, the mouthpiece can comprise a filter and a spacing and/or cooling element provided between the aerosol generating substrate and the filter. The wrapper can for example be made from a cigarette paper and can be metallized or not. In either case, it can be designed to avoid scorching of the foam, which can also be called an e-mousse as it is a foam used with an electronic cigarette.

[0035] As regards the filter provided in the mouthpiece, this can be adapted to provide a relatively low, in any case, acceptable pressure drop, so that flavouring intensity and nicotine yield remain optimal. Additionally, the presence of the spacing and/or cooling element will, firstly, cool the generated aerosol, so that aerosol having an uncomfortably high temperature is prevented from entering the user's mouth. Moreover, by means of the spacing element the article according to the present invention can be provided with a size adapted to well-established aerosol generating devices, with which the article can be used. Due to the fact that the article described herein can be used with present

aerosol generating devices, the users have the advantage that a single device is sufficient and only one device has to be maintained.

[0036] When the spacing and/or cooling element is a hollow paper tube, this contributes to compostability of the article as a whole. This also applies to the preferred measure of providing the article with a paper filter.

[0037] As regards the length of the spacing and/or cooling element, 10 to 25 and preferably 18 to 22 mm are currently preferred.

[0038] Whereas the aerosol generating substrate can have any appropriate extension, it will keep the article described herein compact, when the aerosol generating substrate extends from the upstream end towards the downstream end of the article. A preferred total length of the article is also between 50 mm and 70 mm, more preferably between 55 mm and 65 mm, even more preferably 58 mm to 62 mm; wherein the aerosol generating substrate or plug is preferably about 15 mm to 25 mm and the filter is preferably about 15 mm to 25 mm.

[0039] As regards the form of the aerosol generating article, a cylinder or slab are preferred as they are easy to manufacture.

[0040] Further, although at least two aerosol generating portions are provided and can for example be formed coaxial, one or more hollow tubes can be provided in the aerosol generating substrate. In this case, the two aerosol generating portions can be provided as two superimposed layers of aerosol generating material surrounding a central hollow tube. A hollow tube leads to the advantage that the heat flow through the hollow can extract more flavour and nicotine as compared to heat flowing through a cylindrical rod, in which the foam or mousse is essentially a single semi-solid element. The effect of allowing more flavour and nicotine to be extracted from the foam is further enhanced by a plurality of longitudinal through-passages, channels or holes essentially extending through the entire substrate, which can also be called a plug. This effect can also be achieved by providing the aerosol generating substrate in the form of plural discrete pieces, such as beads or small elements, into which the foam or mousse is fragmented. These elements can have essentially the same or different shapes and/or sizes. For example, the elements may have a size of one or two millimetres.

[0041] The filter may be a paper filter or a filament tow filter. A paper filter may be a wrapped gathered sheet of paper. In order to provide a comfortable vaping experience, in particular to not prejudice flavour intensity and nicotine release, the filter has a pressure drop preferably less than 5, more preferably less than 3 and most preferred equal to or less than 2.5 mm H2O/mm are advantageous. The highest of these values allows an acetate filter to be used, and a paper filter can achieve the lower values. The pressure drop is determined under standard conditions defined by Coresta Recommended Method No. 41 (2007) and Coresta Guide No. 4 (**2019**).

[0042] In this context, paper sheet of the paper filter with a basis weight of 20 to 40 g/m^2 has proven beneficial. In connection with a filament tow filter such as a cellulose acetate filter, which can be used alternatively or in addition to a paper filter, the filament tow has a denier per filament above 6, preferably at most 8 or less and a total denier below 40,000, preferably equal to 30,000 or less is preferred in order to provide the filter with an acceptably low pressure drop. The filter may possibly contain a breakable capsule containing flavouring agent (e.g., fragrance, aromas dispersed in a lipophilic solvent) for release of flavour on demand such as described in EP1906775.

[0043] As will be apparent from above, the article described herein will preferably be used together with an aerosol generating system comprising an aerosol generating device for insertion of the article and heating the aerosol generating substrate. The device will typically comprise a chamber for receiving at least the aerosol generating substrate at a heater configured for heating the substrate in the chamber and for generating aerosol from the substrate passing through the filter when air is drawn through the substrate. The heater can for example be an external tube heater and/or a combination of an induction coil outside the article and susceptors within the article adapted to be heated by the induction coil.

[0044] The invention further provides a method for producing the aerosol generating device described herein wherein at least two aerosol generating portions are coextruded, wherein preferably at least one second aerosol generating portion is a flavoured foam, preferably tobacco free, and the first aerosol generating portion comprises tobacco material, preferably is a processed tobacco mixture, most preferably a tobacco foam.

[0045] Finally, a novel method for releasing aerosol is presented, in which first and second flavourants are adapted to be released in a staggered manner, time-wise, in particular a method for releasing aerosol from an heat-not-burn aerosol generating substrate or article in an electrical aerosol generating device is described, wherein upon heating of the article in the device, the first and at least second flavourants from the first and at least one second aerosol generating portion release flavour in a staggered manner time-wise.

[0046] Finally, any features mentioned above or below with regard to the aerosol generating substrate, article, method for producing the substrate and/or methods for releasing aerosol only, are equally applicable to the other subject matter of the present disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0047] Hereinafter, the invention will be described with reference to nonlimiting examples and the drawings, in which

[0048] FIG. **1** shows a perspective view of a first embodiment of the article,

[0049] FIG. **2** is a diagram illustrating flavour release over time according to the article of the invention,

[0050] FIG. **3** shows a further embodiment of the article of the invention in a cross-section, and

[0051] FIG. **4** schematically shows a device for co-extruding two aerosol generating portions.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0052] As can be taken from FIG. **1**, the article **10** described herein is typically circle cylindrical and essentially has three sections, which can have approximately the same length each: A foam or mousse section **12**, which can also be called a plug, a paper tube **14** constituting a spacing and/or cooling element and a filter **16** located at the mouth end of the article, through which vapor including flavour is released to the user during vaping. The sections are essen-

tially attached by a paper wrapper, including in particular a tipping paper. A ventilation zone (not shown) may be provided such as by at least one row of ventilation holes through the wrapper, filter and/or paper tube. As per its formulation, the foam has open cell structure (i.e., cells communicating with each other to form a porous 3D network). In the embodiment shown, the plug **12** is surrounded by a heating element **18**, which can for example be a heater tube. As indicated by the arrows A, when heated air flows through the article by applying underpressure at the mouth end, the heat flow will extract flavours and optionally nicotine from the plug, firstly from a first aerosol generating portion **28** and deliver it to the user.

[0053] This is enhanced by a second aerosol generating portion **20**, which is preferably at the center of the plug **12** as shown in FIG. **3** for plural second aerosol generating portions and can have, when a single second aerosol generating portion is present, a diameter approximately one third of the plug's diameter. These one or more second aerosol generating portions **20** do not necessarily have to extend fully aligned with the axial or longitudinal direction of the plug typically having a cylindrical shape. Rather, they can extend at an angle to the longitudinal direction and can comprise one or more curves or bends along their extension. In a possible mode, a hollow tube, e.g., paper tube, may further be inserted in the plug to form a central air flow path and the two or more aerosol generating portions are overlaid on the tube (not shown). As a result of the surface of the through hole with the foam, the heat flow is increased, and more flavour and nicotine can be extracted.

[0054] As indicated by arrows B, heat is not only transferred to the aerosol generating portions by heated air flow through the plug indicated by arrows A, but heat is also transferred laterally or radially. In this manner, tobacco flavour is first released in the radially outer, first aerosol generating portion (**28**) and after a certain period of time, a secondary, typically non-tobacco flavour is released next.

[0055] The staggered release of flavor is indicated in FIG. **2**, in which the tobacco flavour and optionally nicotine is released relatively intensively within a short amount of time and is still at a high and relatively constant level after reaching a certain peak. Moreover, one or more secondary flavours are released at later, preferably staggered points in time with a similar flavour intensity over time, so that the flavour can be both intensified and diversified. In particular, each aerosol generating portion provides a relatively sustained release with a peak and a decrease. The decrease is advantageously compensated by a peak of a second aerosol generating portion. The advantage is to maintain the release of volatiles high and as constant as possible during the overall vaping operation so that no drop of flavour or taste is perceivable.

[0056] FIG. **3** shows an example of a plug **12** having plural aerosol generating portions which are essentially provided concentrically. It should be noted that the centre of the plug can remain hollow and for this can be occupied, e.g., by a hollow paper tube.

[0057] FIG. **4** shows a coextruding device **22**, in which the e-mousse **24** providing a second flavour is essentially fed inside a tobacco containing blend **26** supplied by a feeding pump of the device **22**, so that essentially the plug **12** of the embodiment shown in FIG. **1** can be produced.

EXAMPLES

[0058] An aerosol generation substrate was prepared by co-extrusion of a e-mousse in a tobacco blend (tobacco foam) using the co-extruder represented in FIG. **4**. The e-mousse is prepared by mixing the ingredients in a blender before forcing it in the extruder (via a second extruder or piston) before the co-extruding nozzle.

Several recipes for the e-mousse were produced in particular:

	Ratio (wt. %)		
	Example 1	Example 2	Example 3
E-liquid	68.2	63.4	63.4
Purified water	9.1	9.1	9.1
Gellan Gum (Ceroga Roeper 70f) Cas no. 71010-52-1	4.5	4.5	4.5
Cellulose fiber (Alba fiber or MCC)	—	12.0 Alba Fiber	12.0 MCC
Carboxymethylcellulose sodium Binder(Ceroga Roeper 4550C) Cas no. 9004-32-4	18.2	11.0	11.0

[0059] The e-liquid was PG/VG in a 1:1 ratio and contained flavouring agents and/or nicotine. The amount of flavouring agent can be between 0.5% and 14 wt. %, preferably 3 wt. % and 14 wt. % relative to the weight of the e-mousse. The e-mousse may also contain nicotine in an amount between 0.45 wt. % and 3.4 wt. %, most preferably 1.14 wt. %.

[0060] Different tobacco blends were tested according to the following recipes (as per WO2020002607). The tobacco blend is preferably prepared by mixing the ingredients in a blender before introducing it at the entry of the extruder or, alternatively by introducing the ingredients in a staggered manner in different sections of the extruder.

(in wt. %)	Blend 1	Blend 2	Blend 3
Tobacco powder	21.5	33.0	16.5
Propylene glycol (PG)	24.0	16.0	28.0
Glycerine (G)	36.0	24.0	42.0
Purified water	3.5	3.75	1.88
Gellan gum (Ceroga Roeper 70f) Cas no. 71010-52-1	4.5	6.75	3.37
Carboxymethylcellulose sodium Binder (Roeper Ceroga 4550C) Cas no. 9004-32-4	10.5	16.5	8.25
Total	100.00	100.00	100.00

Melting Resistance of e-Mousse:

[0061] Small cylinders of e-mousse (recipes of examples 1 to 3) of 7 mm in diameter and 10 mm in length were produced and placed in an oven at a temperature of 200° C. for 60 seconds. A visual observation of the bodies after cooling to ambient temperature shows some browning but no significant change of shape and no variation of volume higher than 10%. In example 1, the high amount of binder prevents the material from melting. In examples 2 and 3, the amount of binder and cellulose also prevents the material from melting.

1. An aerosol generating substrate for a non-combustion aerosol generating device comprising:

a first aerosol generating portion and at least one second aerosol generating portion positioned adjacent to the first aerosol generating portion, wherein the first and second aerosol generating portions contain an aerosol generating agent, and respectively first and second flavourants which are different from each other,

wherein at least one of the first and second aerosol generating portion is a foam containing non-tobacco flavourant and wherein the foam is configured to produce aerosol upon heating and wherein the foam is not meltable under conditions of aerosol generation at a temperature within a heating temperature range of the aerosol generating device and wherein the heating temperature range is between 180° C. and 350° C., and

wherein the foam comprises a foam-forming agent selected from the group consisting of agar, gellan gum, lecithin, polyglycerol esters of fatty acids, glycerol esters of fatty acids, sorbitan esters of fatty acids, and/or mixtures thereof.

2. The aerosol generating substrate according to claim **1**, wherein the heating temperature range is 200° C., and preferably 230 320° C.

3. The aerosol generating substrate according to claim **1**, wherein the first aerosol generating portion is a foam containing tobacco material and/or a non-tobacco flavouring agent.

4. The aerosol generating substrate according to claim **1**, wherein the first aerosol generating portion and at least one second aerosol generating portions are co-extrudates and/or concentrically arranged.

5. The aerosol generating substrate according to claim **1**, wherein the foam of the first and/or at least one second aerosol generating portions contained in the aerosol generating substrate comprises a foam stabilizing agent.

6. The aerosol generating substrate according to claim **4**, wherein the foam-stabilizing agent is selected from the group consisting of cellulose gum, hydroxyalkylated carbohydrates, derivatives thereof, and mixture thereof.

7. The aerosol generating substrate according to claim **6**, wherein the foam stabilizing agent comprises cellulose gum, or derivatives thereof and/or cellulose fiber.

8. The aerosol Aerosol-generating substrate according to claim **1**, wherein the aerosol forming agent in the first and/or at least one second portion is in an amount of at least 40 wt. %.

9. The aerosol generating substrate according to claim **1**, wherein the first aerosol generating portion contains tobacco powder.

10. The aerosol generating substrate according to claim **1**, wherein the second aerosol generating portion contains a non-tobacco flavouring agent selected amongst the list of: menthol, natural and/or artificial plant flavour, animal, enzymatic or microbiological origin flavour, sweet-like, alcoholic or dessert-like flavour and combinations thereof.

11. The aerosol generating substrate according to claim **1**, wherein the first and at least one second aerosol portion are in a coaxial arrangement such that upon heating, flavour release from the first and at least one second aerosol generating portion is adapted to be staggered time-wise.

12. A heat-not-burn aerosol generating article comprising an aerosol generating substrate according to claim **1**, wherein the substrate is wrapped by an outer wrapper.

13. The heat-not-burn aerosol generating article of claim **12**, it further comprising a filter and a spacing/cooling portion between the filter and the aerosol generating substrate.

14. A method for producing an aerosol generating substrate for a non-combustion aerosol generating device comprising a first aerosol generating portion and at least one second aerosol generating portion positioned adjacent to the first aerosol generating portion, wherein the first and second aerosol generating portions contain an aerosol generating agent, and respectively first and second flavourants which are different from each other, wherein at least one of the first and second aerosol generating portion is a foam containing non-tobacco flavourant and wherein the foam is configured to produce aerosol upon heating and wherein the foam is not meltable under conditions of aerosol generation at a temperature within a heating temperature range of the aerosol generating device and wherein the heating temperature range is between 180° C. and 350° C., wherein the first and at least one second aerosol generating portion are coextruded.

15. The aerosol generating substrate according to claim **5**, wherein the foam-stabilizing agent is selected from the group consisting of cellulose gum, hydroxyalkylated carbohydrates, derivatives thereof, and mixture thereof.

16. The aerosol generating substrate according to claim **7**, wherein the foam stabilizing agent comprises carboxymethylcellulose ("CMC").

17. The aerosol generating substrate according to claim **8**, wherein the aerosol forming agent in the first and/or at least one second portion comprises propylene glycol, glycerin or a combination thereof.

18. The aerosol generating substrate according to claim **1**, wherein the first aerosol generating portion contains a processed tobacco mixture or a tobacco foam.

19. The aerosol generating substrate according to claim **10**, wherein the dessert-like flavour includes one or more of chocolate, cookie dough, peanut butter, carrot cake, marshmallow, butter popcorn, prosecco, red wine, rum, jelly bean, Guinness, bourbon, honey, toffee, praline, butterfinger, or brown bread.

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