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SMOKING COMPOSITION

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The present invention relates generally to improved smoking compositions and more particularly to improved smoking compositions which have certain beneficial effects upon a smoker's physiological system.

The physiological effects of smoking tobacco have been investigated quite extensively in recent years. Such investigations clearly show that the nicotine in tobacco is harmful to smokers. It has been demonstrated, for example, that the inhalation of nicotine in tobacco smoke has a pronounced effect upon the cardio-vascular system of the smoker. The inhalation of the nicotine establishes a condition of vaso-constriction in the blood vessels of the smoker and particularly in the blood vessels within and surrounding the heart. At times, such constriction of the blood vessels around the heart is sufficiently severe to produce spasms or irregular muscular contractions of the heart. This vaso-constriction of the blood vessels is often accompanied by an acceleration of the heart rate and concomitant rise in systolic and diastolic blood pressure.

Another physiological effect produced by the nicotine in tobacco smoke is an increase in gastric acidity in the smoker. This effect is particularly pronounced in persons who are suffering from peptic ulcers.

The inhalation of nicotine in tobacco smoke also appears to have an aggravating effect on various diseases such as thromboangitis obliterans (Buerger's disease), angina pectoris, and other manifestations of coronary artery disease. It appears that the effect of nicotine in tobacco smoke on these conditions is that of a contributory or aggravating agent rather than as the primary cause of these diseases.

While various attempts have been made by tobacco manufacturers to eliminate the amount of nicotine which would be inhaled by a smoker, none have proven completely successful. These attempts may be divided into two groups: (1) attempts to extract the nicotine from the tobacco, and (2) attempts to remove the nicotine from the smoke by means of a suitable filter. None of the so-called de-nicotinized tobacco which has been commercially produced has reduced the nicotine content of the tobacco by a sufficient extent to avoid the harmful effects of nicotine. Also discouraging is the fact that commercially available filters which do not destroy the taste or seriously retard the passage of the smoke reduce the nicotine content in the smoke so slightly that their physiological effects on the smoker are altered only to an insignificant extent.

The present invention is based upon the knowledge that the harmful effects of nicotine-containing tobacco are due in part to the vaso-constriction upon the cardiovascular system. This vaso-constriction may be counteracted by the addition of controlled amounts of the vitamin niacin (nicotinic acid); pyridine-3-carboxylic acid. When niacin is effectively assimilated as a vapor in the smoke produced by burning tobacco to which niacin has been added, it has a vaso-dilating action which helps to counteract the vaso-constriction of nicotine.

Additional beneficial effects may be obtained when the

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vitamin niacin is combined with rutin (3,3',-4', 5,7- penta-hydroxyflavone-3 rutinoside), a compound which is considered effective in reducing and preventing capillary fragility.

Niacin and rutin may also be incorporated in a smoking composition which is made from vegetable materials other than nicotine-containing tobacco and de-nicotinized tobacco. Since such a smoking composition may be completely free of nicotine, the harmful physiological effects which are usually caused by nicotine would, of course, no longer be produced when the smoking composition was smoked. However, such a smoking composition when smoked may have a beneficial effect on the physiological system of the smoker because of the niacin and rutin in the smoking composition. These substances generally cause a dilation of the blood vessels and reduce or prevent the capillary fragility of the blood vessels of the smoker with a resultant relaxation of tension and an overall pleasant feeling.

The objects of the present invention are to provide a smoking composition which will not have a vaso-constricting effect on a smoker's physiological system; to provide an improved smoking composition which eliminates most of the harmful effects of ordinary nicotine-containing tobacco products; to provide an improved smoking composition from vegetable materials other than nicotine-containing tobacco; to provide an improved smoking composition which has beneficial effects on a smoker's physiological system; to provide an improved smoking composition which is naturally free of nicotine; to provide an improved smoking composition which has a taste, texture and aroma closely resembling that of nicotine-containing tobacco but which produces none of the harmful effects normally caused by the nicotine in tobacco; and to provide a smoking composition which does not have a vaso-constricting effect on the cardio-vascular system of the smoker and which usually reduces or prevents capillary fragility.

Further objects and advantages of the invention will become apparent from the following description of the invention.

The most important ingredient in the improved smoking composition is the vitamin niacin and it has been determined that the minimum amount of niacin required to help achieve the desired effects is about 0.1 percent by weight of the entire smoking composition. The niacin content may be substantially higher than this minimum amount, but in most cases, the additional cost of the niacin and the difficulty in introducing large amounts of niacin into the smoking composition do not justify the use of such larger amounts. As a practical matter, the niacin content in substantially all instances will be within the range of from about 0.1 to about 2.5 percent by weight of the entire smoking composition.

The minimum amount of rutin which should be added to help produce the desired effect is also about 0.1 percent by weight of the entire smoking composition, and in substantially all instances will be within the range of from about 0.1 to about 2.5 percent by weight of the entire smoking composition.

The inclusion of the stated amounts of niacin has been found to be effective regardless of whether the smoking composition contains nicotine-containing tobacco or other vegetable products which are nicotine-free. However, inasmuch as the nicotine in smoking compositions is undesirable it is preferable to employ as the major ingredient of the smoking composition a mixture of various leafy fibers derived from herbs and other types of nicotine-free vegetable matter. Naturally, such vegetable matter to be useful in this smoking composition should have a desirable texture, appealing aroma and should burn at an acceptable rate.

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Particularly effective results have been obtained from the use of a mixture of sage, nasturtium, coltsfoot, and soy fibers. However, in addition to or in place of these four ingredients, fibers from the following vegetable species can be employed:

Beet leaves	<i>Fatsia japonica</i>
Groundsell	Bebeeru tree leaves
Rhubarb	Dutch rose leaves
Stinging nettle	Melon tree folia
Sorrel	Candelilla plant
Prickly broom	Cabbage leaves
Oak leaves	Lettuce leaves
Angostura	<i>Calendula officinallis</i>
Cascarilla	<i>Mentha piperita</i> leaves
Mamey	<i>Drosera rotundifolia</i>
Silkana	Caricaceae family
Anona	<i>Cassia senna</i> (Indian)
Star apple	<i>Crocus sativa</i> (French or Spanish)
Leaves <i>Robinia pseudoacacia</i>	
Folia <i>Adonis vernalis</i>	<i>Vanilla planifolia</i>
Wormwood leaves	<i>Verba mate</i> leaves
Angelica	<i>Marrubium vulgare</i> leaves
Comfrey	Zea maize
Mallow	Leaves of melilot (yellow)
Ox tongue	<i>Trilisa odoratissima</i>
Chestnut	Cypripedium flower
Eucalyptus	Flag lily
Golden-regen	Spinach leaves
Maple leaves	Corn silk
Patchouli	Carrot tops
Rose leaves	<i>Carica folia</i>
Sapodilla	Sweet elder flower
Ceriman	Chamomile leaves (Spanish)
Soursop	
Guava	<i>Cassia fistula</i>
Folia <i>Asimina triolba</i>	<i>Carthamaus tinctorius</i>
Althea leaves	Paraguay tea leaves
<i>Ferula sumbul</i>	<i>Ilex paraguensis</i>
<i>Aralia spinosa</i>	<i>Humulus lupulus</i>
Passifloraceae leaves	Ethovan or vanirome

The nicotine-free smoking composition of the present invention can be made in generally the same manner as that employed in the manufacture of ordinary nicotine-containing tobacco. Generally, this consists of curing the vegetable material, sub-dividing the vegetable material into fibers of the proper size, and then "casing" the fibrous material. The casing process consists of spraying an aqueous solution or suspension of flavoring materials, aromatics, sweeteners, coloring agents, additives such as niacin and rutin and humectants onto the fibrous mixture. The casing process is carried out until the moisture content of the mixture reaches a value of from about 40 to 45 percent.

Following the casing process, the mixed mass is shredded further to produce strands of suitable size for the manufacture of cigarettes. This stranded mixture is then aged or ripened and resprayed to a slight extent with the casing mixture. In the case of pipe tobacco, the aged mass of stranded material may be pressed into blocks and then sliced into desired sizes.

A typical casing material useful for the purpose of the present invention may include the following ingredients:

	Parts by weight
Lupulin	2.50
Maple sugar	2.50
Caramel	12.50
Licorice root	5.00
Rutin	5.00
Niacin	5.00
Glycerol	30.00
Distilled H ₂ O	62.50
	125.00

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The following aromatics, flavoring agents, sweeteners, coloring agents, and humectants may be added or substituted for those in the specific example:

5	Honey	Molasses
	Sucrose	Propylene glycol
	Mapeline	Apple juice
	Vanillin	Apple cider
	Coumarin	Essential oils
	Vanilla bean	Anise
10	Fruit flavors	Juniper
	Tragacanth	Clove
	Gum arabic	Angelica
	Gum karaya	Prune juice
15	Gum resins	Tonka bean

The following specific example illustrates the manner of preparing the new smoking composition:

Example

20 The vegetable fibers or herbal ingredients (which were previously cured) used in the smoking composition consisted of a mixture of:

	Parts by weight
Sage	131.25
25 Nasturtium	350.00
Coltsfoot	87.50
Soy fibers	306.25
	875.00

30 The above mixture was placed in a hollow rotating cylinder having tumbling vanes, and the mixture was tumbled so as to secure a homogeneous mixture. Following the tumbling the mixture was sprayed with a casing material. The particular casing material employed was that given in the previous table, with the indicated proportions by weight in the same units as that given for the vegetable ingredients. The introduction of the casing material was continued until the moisture content of the mixture reached from about 40 to 45 percent.

40 The mixed vegetable fibers containing the casing were then shredded and passed into a warm room where the mixture was kept until the moisture content was reduced to approximately 12.5 percent. The mixture was then placed in drums and ripened for a period in excess of four months. When fully ripened, the mixture was spread out and again sprayed with a slight amount of the casing material of the same composition as previously used. The mixture was then ready for making into cigarettes.

45 If a pipe mixture is desired, the mixture after ripening may be placed into a press and compressed into blocks or tablets. The blocks are then fed into a slicer where they are cut into slices, each slice containing an amount sufficient to fill the bowl of an average pipe.

50 The same general type of procedure is employed when manufacturing cigarettes which include nicotine-containing tobacco leaves except that the amount of niacin is preferably increased in order to compensate for the presence of nicotine in the tobacco.

As previously set forth, the beneficial effects of the niacin may be realized whether or not the vegetable matter in the smoking product contains nicotine. If it does, the niacin appears to counteract the vaso-constriction caused by the presence of the nicotine. If the product does not contain nicotine, the presence of niacin is nevertheless beneficial because it may cause the blood vessels of the smoker to dilate with resultant relaxation of tension in the smoker. The addition of rutin in the smoking composition increases the beneficial properties of the composition since it usually prevents capillary fragility of the blood vessels of the smoker.

It will be evident that various modifications can be made in the above described smoking compositions with-

out departing from the scope of the present invention.

I claim:

1. A smoking composition comprising a mixture of vegetable fibers, niacin, and rutin, the niacin and rutin each being present in amounts of at least about 0.1 percent by weight of said composition. 5

2. A smoking composition comprising a mixture of nicotine-free vegetable fibers, niacin, and rutin, the amount the niacin and the rutin each being in the range of from about 0.1 to 2.5 percent by weight of said composition. 10

3. A smoking composition comprising a mixture of nicotine-free herb fibers, niacin, and rutin, the amount of the niacin and the rutin each being in the range of from about 0.1 to 2.5 percent by weight of said composition. 15

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