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TOBACCO

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This invention relates to tobacco and has for an object the provision of a tobacco composition having an improved aroma and flavor.

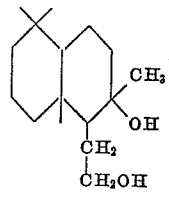
It is well known in the tobacco art that the domestic tobaccos which are exemplified by burley, Maryland, flue-cured, bright leaf or Virginia tobaccos are low in flavor as compared with the so-called oriental or aromatic tobaccos which are imported from Turkey, Greece, Bulgaria, Yugoslavia, Rhodesia and Russia. Accordingly, it has been common practice in the tobacco industry to prepare blends of domestic and oriental tobaccos in order to provide cigarettes which have desired flavoring and aroma characteristics. Accordingly, it is a further object of this invention to provide a domestic tobacco which has an enhanced flavor and aroma.

An additional object of this invention is to provide a tobacco which has been treated in such a manner as to impart a desired cedarlike odor which is pleasing to the smoker.

A further object of the invention is the provision of a domestic type tobacco having added thereto a chemical compound which imparts a pleasing cedarlike odor to the tobacco which becomes particularly apparent during smoking.

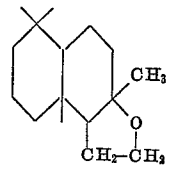
Further and additional objects will appear from the following description and the appended claims.

In accordance with one embodiment of this invention, a domestic tobacco is provided to which has been added a small amount of a compound selected from the group consisting of (I) 2-hydroxy-2,5,5,8a-tetramethyl-1-(2-hydroxyethyl)-decahydronaphthalene and (II) dodecahydro - 3a,6,6,9a - tetramethylnaphtho[2,1-b]furan. The chemical structure of the above referred to compound I may be represented by the following formula:



(I)

The chemical structure of the above referred to compound II may be represented by the following formula:



(II)

Compound I (a glycol) and compound II (a cyclic ether) are closely related to each other since compound II is prepared by dehydration and attendant cyclization of compound I as will be understood. Both compounds I and II are chemically related to sclareol which is a compound contained in the leaves of *Salvia sclarea*.

Ruzicka et al., Helv. Chim. Acta, 25, 621 (1942) have disclosed a procedure for preparing 2-hydroxy-2,5,5,8a-tetramethyl-decahydronaphthaleneacetic acid from sclareol. It has been found that this acid may be reduced with lithium aluminum hydride to form compound I having a melting point of 132–133° C. This compound may then be dehydrated by conventional procedures to form compound II having a melting point of 75–76° C. Compounds I and II having the above indicated melting points and their method of preparation have also been described by Hinder et al., Helv. Chim. Acta, 36, 1995 (1953). It will be apparent from a consideration of the structural formulae for compounds I and II that certain diastereoisomers are possible. The preparation of such diastereoisomers is described by Lucius, Angew. Chem., 68, 247 (1956). One diastereoisomer of compound I has a melting point of 138–139° C. and the corresponding ether (compound II) is a liquid having a refractive index of n_D^{25} 1.5028. Another diastereoisomer of compound I has a melting point of 168.5–169° C. and the corresponding ether (compound II) is a solid and has a melting point of 77–79° C. These several diastereoisomers of compounds I and II are included within the scope of this invention since they all impart the desired pleasing flavor and aroma to the tobacco, particularly during smoking.

In accordance with this invention, the selected additive is added to tobacco in amounts to provide a tobacco in which is dispersed about 0.01 to about 1.0 percent by weight of the additive. Preferably the amount of additive is between 0.05 and about 0.3 percent by weight in order to form a tobacco having a desired flavoring and aroma. The additive may be applied in any suitable manner and preferably in the form of a liquid solution or suspension by spraying, dipping or otherwise. The additive may be incorporated at any step in the treatment of the tobacco but is preferably added after aging, curing and shredding and before the tobacco is formed into cigarettes. Likewise it will be apparent that only a portion of the tobacco need be treated, and the thus treated tobacco may be blended with other tobaccos before the cigarettes are formed. In such case the tobacco treated may have the additive in excess of the amounts above indicated so that when blended with other tobaccos the final product will have the percentage within the indicated range.

In accordance with one specific example of this invention, an aged, cured and shredded burley tobacco is sprayed with a one percent ethyl alcohol solution of the above described cyclic ether (compound II) having a melting point of 75–76° C. in an amount to provide a tobacco composition containing 0.15 percent by weight of the additive on a dry basis. Thereafter the alcohol is removed by evaporation and the tobacco is manufactured into cigarettes by the usual techniques. It has been found that the cigarette when treated as indicated has a desired and pleasing cedarlike odor which is detectable to some extent when the cigarette is in its package but which is particularly detectable and pleasing in the main and side smoke streams when the cigarette is smoked. A similar product may be prepared by employing compound I or any of the diastereoisomers in the manner indicated and a tobacco product having similar desired properties results therefrom.

It will be particularly apparent that the manner in which the additive is applied to the tobacco is not particularly important since, as indicated, it may be done in the form of spraying or dipping, utilizing suitable suspensions or solutions of the additive. Thus water or volatile organic solvents, such as alcohol, ether, acetone, volatile hydrocarbons and the like, may be used as

the carrying medium for the additive while it is being applied to the tobacco. Also, other flavor and aroma producing additives, such as those disclosed in Jones United States Patent No. 2,766,145, may be incorporated into the tobacco with the additive of this invention. In addition it will be apparent that mixtures of any or all of the herein described compounds may be used in the tobacco if desired, the total concentration preferably being within the stated range of 0.01 to 1.0 percent (most preferably between 0.05 and 0.3 percent) based on the weight of the tobacco in the product to be smoked.

While this invention is particularly useful in the manufacture of cigarette tobacco, it is also suitable for use in connection with the manufacture of pipe tobacco, cigars and other tobacco products.

While a particular embodiment of this invention is shown above, it will be understood, of course, that the invention is not to be limited thereto, since many modifications may be made, and it is contemplated, therefore, by the appended claims, to cover any such modifications as fall within the true spirit and scope of this invention.

I claim:

1. A tobacco having added thereto a small amount of a compound selected from the group consisting of 2-hydroxy - 2,5,5,8a - tetramethyl - 1 - (2 - hydroxyethyl)-decahydronaphthalene and dodecahydro-3a,6,6,9a-tetramethyl-naphtho[2,1-b]furan.

2. The tobacco recited in claim 1 wherein the additive is 2 - hydroxy - 2,5,5,8a - tetramethyl - 1 - (2-hydroxyethyl)-decahydronaphthalene.

3. The tobacco recited in claim 1 wherein the additive is dodecahydro - 3a,6,6,9a - tetramethyl - naphtho[2,1 - b] furan.

4. A smoking tobacco having added thereto between about 0.01 and 1.0 percent by weight of an additive selected from the group consisting of 2-hydroxy-2,5,5,8a-tetramethyl - 1 - (2 - hydroxyethyl) - decahydronaphthalene and dodecahydro-3a,6,6,9a-tetramethyl-naphtho[2,1-b]furan.

5. A process for improving smoking tobacco which comprises admixing therewith a small amount of an additive selected from the group consisting of 2-hydroxy-2,5,5,8a - tetramethyl - 1 - (2 - hydroxyethyl) - decahydronaphthalene and dodecahydro - 3a,6,6,9a - tetramethyl-naphtho[2,1-b]furan.

6. A process for improving tobacco which comprises admixing therewith a small amount of an additive selected from the group consisting of 2-hydroxy-2,5,5,8a-tetramethyl - 1 - (2 - hydroxyethyl) - decahydronaphthalene and dodecahydro - 3a,6,6,9a - tetramethylnaphtho[2,1-b] furan, said additive being applied in the form of a liquid solution.

7. A process for improving tobacco which comprises admixing therewith a small amount of an additive selected from the group consisting of 2-hydroxy-2,5,5,8a-tetramethyl - 1 - (2 - hydroxyethyl) - decahydronaphthalene and dodecahydro-3a,6,6,9a-tetramethylnaphtho[2,1-b]furan, said additive being applied in the form of a liquid suspension.

No references cited.