

Filter Cigarette with a Tobacco filter

The invention relates to a filter cigarette with a tobacco filter and a method of manufacturing such a filter cigarette.

It has been known for a long time that tobacco can also be used as filter material for smoking products. Compared with other customary filter materials such as cellulose (paper) or cellulose acetate, however, tobacco has a clearly lower retention capacity for condensate and nicotine with the same drawing resistance. Moreover, it is not easy, when using customary tobacco mixtures as used for cigarettes, to achieve such drawing resistances as are usual for cellulose filters or filters made of cellulose acetate, i.e. which lie between 50 and 100 mmWC for a filter length of e.g. 21 mm.

To overcome this disadvantage, various solutions have already been suggested, one being to manufacture the filter part from cut rolled stem tobacco. However, this results in a poor taste. Another proposal was to make the filter section from expanded tobacco, but this only resulted in a very low retention capacity and thus an unsatisfactory filter effect. Finally, very finely cut tobacco has also been proposed as a filter element; however, this cannot be processed on customary machines and would thus lead to high filter costs.

The object of the invention is therefore to make a filter out of tobacco for smoking products which does not have the disadvantages mentioned in the state of the art.

This object is achieved by a filter cigarette with a tobacco filter comprising the following features: a tobacco strand enclosed by a cigarette paper; wherein the tobacco mixture of the tobacco strand contains a proportion of 15 to 30% of cut medium

cut rolled stem; and the smoke condensate yield of the tobacco strand is between 15 and 19 mg condensate for a strand length of 63 mm and a smoking length of 55 mm; with a filter manufactured from aromatic tobaccos with a drawing resistance between 50 and 100 mmWC at a length of 21 mm; and with a filter ventilation zone running in circumferential direction; wherein the degree of filter ventilation is 30 to 70% and which is characterized in that the filter tobacco is manufactured without using medium cut rolled stem and without reconstituted tobacco with a width of cut of 0.3 to 0.6 mm; and that the filter has a tobacco packing density of 350 to 450 g/cm³.

The achievement thus consists of using aromatic tobacco for the tobacco filter, as the smoke taste is very strongly characterized by the filter material. It has been shown that by a special treatment of the selected tobacco the advantageous taste-improving effect can once more be clearly increased. To this end, the selected tobacco material or parts thereof are subjected to a thermal treatment explained hereafter.

Thermal treatment:

During the tobacco preparation process, the tobacco is raised to a tobacco temperature between 60°C and 150°C, preferably 80°C to 130°C, for a period of between 1 minute and a maximum of 15 minutes. During this time, it is subjected to a relative humidity of 40 to 80%, preferably 50 to 70%. This leads to a significantly improved aroma transfer from the filter tobacco into the smoke passed through. The effect can be selectively influenced and increased by adding suitable casing materials. When a somewhat finer width of cut of 0.3 to 0.6 mm is selected which can still be processed on standard machines (0.7 to 1.0 mm is usual for strand cut tobacco), filter-typical drawing resistances of 50 to 100 mmWC can then be achieved and the retention capacity clearly increased. Such drawing resistances are generally also called "normal" or usual drawing resistances. The retention capacity,

nevertheless still clearly lower compared with usual filter materials for which cellulose acetate reaches approximately 30 to 60%, whereas the range for tobacco filters is only approximately 25 to 35%, can be compensated for by using strand mixtures with clearly reduced condensate potential. This means that tobacco strands are used which, when smoked with a smoking machine, yield approximately 16 mg condensate instead of usually approximately 23 mg condensate. Although such mixtures, which can be manufactured e.g. with a high proportion of cut rolled stem or cheap tobaccos, are not particularly good in terms of taste, the smoke taste surprisingly acquires a pleasant aroma when passing through the tobacco filter.



Patent claims

1. Filter cigarette with a tobacco filter with:
 - a tobacco strand enclosed by a cigarette paper;
 - wherein the tobacco mixture of the tobacco strand contains a proportion of 15 to 30% of cut medium cut rolled stem; and
 - the smoke condensate yield of the tobacco strand is between 15 and 19 mg condensate for a strand length of 63 mm and a smoking length of 55 mm; with
 - a filter manufactured from aromatic tobaccos with a drawing resistance between 50 and 100 mmWC at a length of 21 mm; and with
 - a filter ventilation zone running in circumferential direction; wherein
 - the degree of filter ventilation is 30 to 70%;characterized in that
 - the filter tobacco is manufactured without using medium cut rolled stem and without reconstituted tobacco with a width of cut of 0.3 to 0.6 mm; and
 - that the filter has a tobacco packing density of 350 to 450 g/cm³.
2. Method of manufacturing a filter cigarette according to claim 1, characterized in that the tobacco used to manufacture the tobacco filter is raised to a tobacco temperature between 60 and 150°C, preferably 80 to 130°C, for a period of between 1 minute and a maximum of 20 minutes during the tobacco preparation process, and is subjected to a relative humidity of 40 to 80%, preferably 50 to 70%, during this time.

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