SUMMARY

Accordingly, the present disclosure~~invention~~ relates to a special, highly efficient cigarette filter, which has the advantages of the solutions belonging to the state of the art, but at the same time eliminates their drawbacks to the most possible extent. In addition, the present disclosure~~invention~~ relates to the development of a cigarette filter with which chemiluminescence can be reduced.

Surprisingly it was found that if certain natural substances mentioned below are applied in the cigarette filter, the aim of the present disclosure~~invention~~ can be easily and successfully achieved.

In an aspect, there is provided a special cigarette filter eliminating genotoxicity (SCE, FACS) exhibiting high antioxidant capacity, significantly decreasing the amount of Po^{210}, decreasing the amount of polycyclic aromatic hydrocarbons (PAH), especially benzo(a)pyrene, lowering the amount of heavy metal elements and for the filtration of toxic gas fumes and reducing the amount of free radicals in the cigarette smoke wherein the filter mentioned contains, in addition to the common components of known cigarette filters $AlOOH.H_2O$, and/or Al_2O_3 and/or silicoaluminate; grape pip and skin grist as antioxidant; and optionally astaxanthin and/or cranberry as further antioxidants.

DETAILED DESCRIPTION

In our studies it was found that reduction of the amount of free radicals, nicotine, tar, benzo(a)pyrene and other harmful substances can be realized most successfully, if a combination of polyphenol antioxidants is used in the filters. In the present invention grape pip and skin grist is used in the filters as antioxidant. Further in the filters astaxanthin and/or cranberry are used as antioxidants.

The grape pip and skin grist can be used alone or more preferably in admixture with other components mentioned below.

The astaxanthin is a naturally occurring carotinoid pigment, which has strong antioxidant activity. In addition astaxanthin has strong free radical removing activity, and protects against lipid peroxidation, oxidative damage of the LDL cholesterol, the cell membranes, the cells and the tissues. The antioxidant capacity of astaxanthin is 40 times higher than that of the beta-carotin, and 1000 times higher than that of the vitamin E. The astaxanthin can be prepared for example from microalgae or salmon, and in many countries it is on the market as nutrient supplement; it doesn't contain substances harmful for the health. The astaxanthin can be obtained from the company AHD International LLC (Atlanta, US). The astaxanthin can be used