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THE FULL REPORT CAN BE SEEN ON APPLICATION TO CENTRAL FILING

EFFECT OF WATER ON THE SELECTIVE FILTRATIONAL  
PROPERTIES OF CIGARETTE FILTERS

REPORT NO. RD.478-R.

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EFFECT OF WATER ON THE SELECTIVE FILTRATIONAL PROPERTIES  
OF CIGARETTE FILTERS

(Report No. RD.478-R)

SUMMARY

An investigation has been carried out to study the effects of the addition of water to cigarette filters.

Water is a most effective filter additive. It enhances the efficiency of cellulose acetate filters for steam volatile phenols and acids, but has only a small effect on the removal of tar and total nicotine alkaloids.

More spectacular changes are produced when water is added to filters containing polyethyleneimine, e.g., the filtration efficiencies for hydrogen sulphide and volatile aldehydes are raised from around 20% to 80%.

Water also increases the effectiveness of filters for reducing the toxicity of smoke to Paramecium. These effects, together with the observation that the presence of water on the filter does not change the smoke flavour significantly are sufficiently interesting to merit further work. Appreciable amounts of water are required (at least 75 mg/filter) and work will be carried out to find the best means of presenting and retaining water on a filter.

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