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FURTHER ASPECTS OF FILTERS CONTAINING PEI

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FURTHER ASPECTS OF FILTERS CONTAINING PEI

(Report No. RD.436-R)

SUMMARY AND CONCLUSIONS

An examination has been made of factors which affect the selective filtrational performance of paper and cellulose acetate filters impregnated with polyethyleneimine. These include effects associated with changes in filter length, concentration of PEI and filtration efficiency for particulate material. The results are summarised in Section 1 and simple rules and equations are given as a guide for predicting filtration efficiencies for the design of single or multiple filters.

Aging studies, carried out on paper and cellulose acetate filters containing PEI, showed that no significant changes in filtration efficiencies occur during a three month test period. Similar conclusions were drawn in the case of cellulose acetate filters impregnated with (a) PEI and triacetin and (b) PEI and polyethylene glycol.

The effects of changing the tobacco type, the cigarette burn length and butt length have also been investigated.

Other commercially available materials containing PEI, which have been examined have no advantages over Polymin P.

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