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THE SYNTHESIS AND EVALUATION OF
POLY(VINYLANTHRA) AS A POTENTIAL
FILTER ADDITIVE

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Research & Development Establishment,
British-American Tobacco Co. Ltd.,
SOUTHAMPTON.

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THE SYNTHESIS AND EVALUATION OF POLY(VINYLAMINE) AS
A POTENTIAL FILTER ADDITIVE

(Report No. RD.426-R)

SUMMARY AND CONCLUSIONS

Samples of poly(vinylamine), of various molecular weights, have been synthesised and tested as filter additives for the selective filtration of volatile aldehydes in cigarette smoke. From the results of this evaluation it is concluded that:-

1. In common with the other polyamines already tested, the poly(vinylamine) samples, when added to either paper or cellulose acetate filters, are ineffective for the filtration of the aldehydes. Theoretical considerations indicate, however, that this lack of activity may be due to the physical nature of the polymer and not to its intrinsic chemical nature. Consequently, it is proposed to carry out a limited amount of work with the aim of synthesising amino derivatives of pentaerythritol, mannitol and hexamethylbenzene, since it is felt that these compounds might be more successful as filter additives for the removal of aldehydes.

2. In common with other polyamines, the poly(vinylamine) samples are effective for aldehydes, when water is also added to the filter. This improvement in filtration resulting from the presence of the water on the filter has already been noted from other work on selective filtration in R. & D.E., and efforts are at present being made to understand and capitalise on this effect.

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