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CHARACTERIZATION OF ACTIVE CARBONS

REPORT NO. RD.387-R

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

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CHARACTERISATION OF ACTIVE CARBONS

(Report No. RD.387-R)

SUMMARY AND CONCLUSIONS

The nitrogen adsorption isotherms of a range of activated carbons have been measured and used to deduce surface areas and approximate pore sizes. Attempts have been made to relate these properties to the filtrational performance of the carbons in cigarette filters.

There is a good correlation between the surface area values of the carbons tested and their adsorption coefficients for aldehydes in cigarette smoke as measured in filtrational experiments. However, for hydrogen cyanide the correlation is less pronounced, because the filtration is influenced by other properties of the carbons, such as the chemical composition, state of subdivision, bulk density, and pore size.

It is proposed to extend this study to include the measurement of adsorption isotherms for adsorbates other than nitrogen. An investigation of the effects of the other variables will also be undertaken.

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