

CENTRAL LABORATORIES
BRITISH TOBACCO COMPANY (AUSTRALIA) LIMITED
SYDNEY

CARBON FILTERS

The Effect of Vermiculite & Bonding Agents on
the Chemical, Biological & Organoleptic Proper-
ties of Cigarette Smoke

June, 1965

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107470060

Research Department,
Central Laboratories,
British Tobacco Co. (Aust) Ltd.,
Sydney, N.S.W.

30th June, 1965

Project WA-400
Report No. WA-7(F)

CARBON FILTERS

The Effect of Vermiculite & Bonding Agents on
the Chemical, Biological & Organoleptic
Properties of Cigarette Smoke

Summary

A chemical, biological and organoleptic evaluation was carried out on the smoke from cigarettes using Churchmans Triple Filter (blend 24) tobacco and having filters made from 100% carbon, 50% carbon 50% vermiculite, and 50% carbon 50% polythene, all in granular beds; and 100% carbon, 50% carbon 50% vermiculite in bonded rods. A cellulose acetate filter was used as a control.

It was found that a granular bed was more efficient than a bonded rod chemically, biologically and organoleptically. It was also found chemically, biologically and, to a lesser extent, organoleptically that vermiculite has an "active extender" effect over and above that of a spacing agent when used with carbon in a granular filter. This effect did not seem to be apparent in the case of a bonded rod containing vermiculite.

Biological activity (as measured by the Paramecium test) showed correlation with sulphydryl binding activity (very highly significant), percentage reduction of total volatiles (very highly significant), percentage total volatile aldehydes (highly significant), and percentage reduction of acrolein (significant).

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