

S U M M A R Y .

This report contains an account of the work done in continuing the investigation of the effect of physical properties of cigarettes on their smoking characteristics, the initial stages of which were reported in our Report No. RD 61/66.

Relationships have been evaluated between

Cigarette Weight and Pressure Drop.
Cigarette Weight and Smoulder Rate.
Pressure Drop and Smoulder Rate.
Moisture Content and Smoulder Rate.
Moisture Content and Pressure Drop.

While these relationships hold for homogeneous batches of cigarettes large and unexplained differences occur between batches.

It has again been demonstrated that smoking characteristics are materially affected by the smoulder rates of the cigarettes and that there is a 'critical point' beyond which a marked change occurs. Rembrandt Virginia-type cigarettes are above and U.T.C.'s cigarettes are below this point.

It has been shown that it is possible to modify U.T.C.'s cigarettes by the use of low combustibility paper so as to raise the smoulder times to be above the critical point mentioned above and that these cigarettes have very much improved organoleptic qualities even when they are tested at a lower weight.

It is concluded that further tests using lower combustibility papers can produce profound changes in cigarette qualities and unit costs.

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