

ONLY THE TITLE PAGE AND THE SUMMARY PAGE ARE HELD ON THIS FILE

THE FULL REPORT CAN BE SEEN ON APPLICATION TO CENTRAL FILING

LIMITS OF SENSORY DISCRIMINATION IN CARBON FILTER-
TIPPED VIRGINIA CIGARETTES

REPORT NO. RD. 352-R

30.9. 1965

AUTHORS: D. J. Wood
W. B. Fordyce

ISSUED BY: D. G. Felton

PROJECT NO: 3500

DISTRIBUTION:

	Copy No.
D.S.F. Hobson, Esq.,	" 1
R.P. Dobson, Esq.	" 2
K.E. Haines, Esq.	" 3
Sir Charles Ellis	" 4
Dr. S.J. Green	" 5
J.H. Maslen, Esq.	" 6
W.M. Gilliam, Esq.	" 7
R.A. Boothroyd, Esq.	" 8
Dr. R.B. Griffith	" 9, 10, 11
L.C. Laporte, Esq.	" 12, 13, 14
W. W. Reid, Esq.	" 15, 16
Herrn E. Schring	" 17, 18, 19
E.C. Fieldsend, Esq.	" 20, 21, 22
R. & D.E. Library	" 23, 24
R. & D.E. File No. 463-11	" 25

COPY NO: 15

File 463-11

100057868

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

DJW/NEP/CAL/46B-11

30th September 1965

LIMITS OF SENSORY DISCRIMINATION IN CARBON FILTER-TIPPED
VIRGINIA CIGARETTES

(Report No. RD.554-R)

SUMMARY

Cigarettes (State Express K.S. tobacco sections) with varying amounts of granular carbon in the filter were assessed for filtration efficiency (based on volatile aldehydes); they were also submitted to (a) triangular smoke testing for difference detection, and (b) evaluation of certain sensory characteristics.

Two smoke panels were used; the first (for test (a) above), a difference panel of 15 smokers, chiefly of plain cigarettes, found 50 mg, but not 30 mg, of granular high activity carbon detectable at 95% Confidence Limits, based on a triangular test made on one cigarette sample per panel member. The second panel of three persons, including two non-smokers and accustomed to the descriptive evaluation of different smoke types, found the limit of detection to lie between 10 and 30 mg.

These results indicate that the level of discrimination depends on the test procedure used, and on the constitution of the panel. They should therefore be taken to show that the level of carbon detectable by the ordinary smoker is fairly low. Further, since 50 mg carbon of high activity are required to remove some 45% of most vapour phase constituents, it appears that, for Virginia cigarettes, the lower limit of detection lies below the weight required for a significant chemical effect.

10005/869

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

BJW/MB/CAL/463-11

30th September 1965

LIMITS OF SENSORY DISCRIMINATION IN CARBON FILTER-TIPPED
VIRGINIA CIGARETTES

(Report No. RD.354-R)

SYNOPSIS

Cigarettes (State Express K.S. tobacco sections) with varying amounts of granular carbon in the filter were assessed for filtration efficiency (based on volatile aldehydes); they were also submitted to (a) triangular smoke testing for difference detection, and (b) evaluation of certain sensory characteristics.

Two smoke panels were used; the first (for test (a) above), a difference panel of 15 smokers, chiefly of plain cigarettes, found 50 mg, but not 30 mg, of granular high activity carbon detectable at 95% Confidence Limits, based on a triangular test made on one cigarette sample per panel member. The second panel of three persons, including two non-smokers and accustomed to the descriptive evaluation of different smoke types, found the limit of detection to lie between 10 and 30 mg.

These results indicate that the level of discrimination depends on the test procedure used, and on the constitution of the panel. They should therefore be taken to show that the level of carbon detectable by the ordinary smoker is fairly low. Further, since 50 mg carbon of high activity are required to remove some 45% of most vapour phase constituents, it appears that, for Virginia cigarettes, the lower limit of detection lies below the weight required for a significant chemical effect.

100057870