

SUMMARY

This study investigated the interaction between cigarette design and smoker behaviour and their influence on delivery. This was accomplished by assessing the influence of smoker behaviour on both the total and puff-by-puff deliveries of two cigarettes of similar total tar delivery but different subjective characteristics.

Discussed in this report is a method for the determination of smoking behaviour changes on a per puff basis, their effect on cigarette delivery and the influence on smoker preference.

In general, it was found that:

- 1) although the human mouth deliveries were greater than the deliveries under standard machine conditions, human T:N and CO:T ratios were in close agreement with machine delivery ratios.
- 2) there was a trend for human mouth deliveries and smoking parameters to decrease as the cigarette was smoked.
- 3) behavioural changes during a switching exercise were more evident on a per puff basis than on a total cigarette basis.
- 4) the degree to which smokers changed their behaviour and the degree to which cigarette delivery was affected by these changes and appeared to influence product acceptability.
- 5) certain subjective characteristics such as irritation and draw effort can be associated with the objective smoking parameters - flow rate, interval and per puff T/N ratios.

KEYWORDS: SMOKER-PRODUCT INTERACTIONS
HUMAN SMOKING BEHAVIOUR
SUBJECTIVE-OBJECTIVE RELATIONSHIPS

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