



Group Research & Development Centre,
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DR M.A.H. RUSSELL'S "SAFER CIGARETTE" STUDY

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SUMMARY AND CONCLUSIONS

An experiment, carried out in conjunction with Dr. M.A.H. Russell of the Addiction Research Unit, London, has been completed. A panel of 25 smokers, recruited from smokers in S.E. London, smoked their own brand, a control cigarette and one of two experimental cigarettes. One of the experimental cigarettes was a conventional low delivery design (0.7 mg nicotine, 11 mg PMWNF, 13.6 mg TPM) and the other a cigarette with a low tar to nicotine ratio (1.2 mg nicotine, 10.2 mg PMWNF, 12.4 mg TPM).

Blood samples were taken from the smokers by Dr. Russell. The smokers who changed to the conventional low delivery cigarette had blood plasma nicotine levels 28% lower and blood carboxyhaemoglobin levels 5% lower than when they smoked their own brands. The smokers of the low tar to nicotine ratio cigarette had blood plasma nicotine levels 20% higher and carboxyhaemoglobin levels 42% lower than when they smoked their own brands.

These data are broadly consistent with results obtained by puff duplication of some of the records obtained in this test. These show that the subjects who changed to the conventional low delivery cigarette

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took 25% less nicotine, 24% less TPM, 16% less carbon monoxide and 7% more smoke (by volume) when compared with their usual brands. The smokers of the low tar to nicotine ratio cigarette took the same weight of nicotine, 49% less TPM and 72% less carbon monoxide as they took from their usual brands, but took 66% more smoke (by volume).

The results obtained for the low tar to nicotine ratio cigarettes, as smoked by this panel conform to Dr. Russel's criteria for a "safer" cigarette (e.g. low delivery of tar and reduced carboxyhaemoglobin levels). However, further development of this particular low tar to nicotine ratio cigarette would be necessary to make it more generally acceptable to smokers. This cigarette appears to have deficiencies in taste and flavour, possibly associated with the very high level of ventilation used.

We have a number of criticisms to make of Dr. Russell's experimental design and procedures and recommendations are made that would improve the precision with which the results from a similar test could be obtained and interpreted.

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