Lorillard
TOBACCO COMPANY

MEMORANDUM

May 5, 1993

TO: M. S. Ireland

FROM: A. Prakash, R. M. Striegel

SUBJECT: Comparison Analysis of 09-57-46 100MM Extruded Cigarette With a Modified Kent III Ultra Light 100MM Control Cigarette. (PROJECT 451 CMP)

Introduction

Samples of an extruded cigarette identified as 09-57-46 made on February 2, 1993 were submitted by Dave Smart for analysis. The air dilution holes on these cigarettes were taped closed as received. A control cigarette of Kent Ultra Light 100MM modified to deliver an air dilution of between 90% and 95% was also submitted. These cigarettes were analyzed with the dilution holes open.

Phenol Analysis

The mainstream smoke of both cigarettes was analyzed for phenols. Cigarettes were smoked to the standard butt length and the particulate phase collected on a cambridge pad. The pad was extracted with acetone and diluted with equal volumes of 6% aqueous acetic acid, and analyzed by HPLC (1).

Discussion

Results of the phenol analyses are presented in Table 1. A review of the data indicates lower analyte deliveries for the extruded cigarettes. The extremely low delivery levels of these cigarettes required an unusual number of cigarettes to be burned per cambridge pad. Due to the limited availability of these cigarettes and also their extremely low tar values the results cannot be concluded.

Main Stream Gas Phase Analysis

Gas Phase analyses for both the 100MM extruded cigarette and the control Kent III Ultra Light 100MM were performed. The cigarettes were smoked using a standard puff volume of 35 mL, a 2 second puff duration and a one minute pause between puffs. A single puff was sampled when the burn line passed a point 35mm from the tipping paper. An unusually large gas phase sample loop of 2mL was used for this analysis. A sample loop of 0.25mL is normally used. Experimental conditions have previously been reported (2).