

Project No: T-1320

Project Title: Evaluation of Player's Filter Cigarettes using different Cigarette Papers.

Object: To reduce Canadian Tar levels of Player's Filter cigarettes to 20 mg or lower and to maintain a nicotine level of 1.3 - 1.35 mg. without perceptibly altering the subjective smoking characteristics.

Personnel Involved: R.R. Smith, M.T. Schiff.

1st Quarter 1971: Previous work in this area indicated that either the 21P or 12P cigarette papers would be of assistance in achieving the objective but with some modifications to the leaf recipe with respect to tar and nicotine in the first instance or to nicotine only in the second case. Since no subjective evaluations had been carried out previously, a repeat test of the two papers on Player's Filter recipe was carried out.

Analytical results confirmed that 12P paper met the analytical requirements for Canadian tar whilst 21P paper did not: both failed to achieve the nicotine levels required. Subjectively, neither paper had any important effect on the subjective properties investigated i.e. impact, irritation to mouth, lips tongue, throat and nose or to the quantity or quality of taste provided. As a result, it was felt that 12P paper should be chosen as the area in which leaf modifications should be made to raise the nicotine level yet maintain the tar yields.

2nd Quarter 1971: A modified leaf recipe (LB80) was brought through as a test sample comprising minor grade substitutions within the same plant position. Analytically, the absolute nicotine results were poor compared to the current Player's filter cigarette and showed no improvement in increasing smoke nicotine.

Subjectively, the sample was perceived as different to the control i.e. less harsh to the lips, tongue, throat and nose though not different in quantity or quality of taste provided.

It was apparent that a more drastic approach to the question of leaf nicotine content was needed. To this end, 2 samples were made based on the previous LB80 recipe but, in the first instance one contained no PCL, i.e. 88% strip blend +12% CRS, the second had the normal PCL percentage replaced with 2 additional grades, i.e. a 32 hogshead operation. Both these samples, using 12P paper yielded nicotine levels consistent with regular Player's Filter yields and Canadian tar levels just below 20 mg. Moreover the TP_N/nicotine ratio improved by 16%.

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Project I-1320 (con't.)

A third experimental recipe, which contained a higher percentage of riper grades, also reached the objective of under 20 mgs Canadian tar and 1.30 mg nicotine.

Subjective evaluation of the three experimental samples and a control involved in this investigation indicated no perceptible differences among them for the properties mentioned previously.

Project terminated.

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