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A comparison of the use of two Schweitzer sheets with
PCL.
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Schweitzer has been trying to promote the use of their sheet in Canada. They are particularly interested in selling the type which is designed to convert all stem as well as tobacco waste into sheet. For this reason, it was felt that we should be more conversant with the Schweitzer sheets.

The primary objective of the study described in this communication was to compare our present practice of converting waste into PCL and stem into CRS to that of converting all stem and waste into sheet by the Schweitzer process. As a secondary objective, PCL and Schweitzer sheets made from the same raw materials were compared in blends with the normal level of CRS. In this report, these two types of Schweitzer sheets are identified as type B and type A, respectively.

While the objective of this study was to determine the effect of the use of these materials on the final product, i.e. the cigarette, the properties of the sheets, per se, were examined to permit interpretation of any differences in the properties of the cigarette.

Schweitzer type A sheet and PCL were used at the 10% level in a blend containing 16.5% CRS. Schweitzer type B sheet was used at the 26.5% level with no CRS. The lamina portion of the blend was common to the three samples.

Both Schweitzer sheets were more resistant to flex than PCL. The type B sheet was also superior to type A. The same pattern was

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true for the Ajax shatter test results. As would be expected from these results, the strand lengths of PCL isolated from the manufactured cigarettes were shorter than those of the two Schweitzer sheets although there were no pronounced differences between the latter. The PCL in this study was made with a low level of sodium carboxymethyl cellulose and these properties could be significantly improved by increasing the level of the additive.

The recoveries of the reconstituted tobaccos showed that little or no loss occurred of any of the sheets in the manufacturing operation.

The end stability of the cigarettes containing PCL was at least as good as these containing type A sheet. Cigarettes with type B had better end stability than the other two samples. The filling capacities of the cut sheets were different and were of the order type B > type A > PCL. There were no differences in the filling capacities of the blends containing type A or PCL. The blend containing type B has a somewhat higher value. There were no differences in cigarette firmness.

The cigarettes containing type B sheet has a lower pressure drop than the other two samples.

There were no differences between the samples in deliveries of TPM, nicotine and carbon monoxide.

NMF indices, considered to be related to smoke carcinogenicity, were determined and no differences were found between the three cigar-

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ette samples.

No difference were observed between the samples with respect to subjective smoke acceptability although the sample containing Schweitzer sheet appeared to have somewhat more impact.

Although there were differences in sheet properties, the comparison of cigarette properties would indicate that there are no advantages of using Schweitzer B sheet over out present practice of using both PCL and CRS.

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