

U.S.A.
INTER-OFFICE CORRESPONDENCE
RICHMOND, VIRGINIA

To: Mr. D. G. Michels
From: W. R. Harvey
Date: July 23, 1970
Subject: Identification and Estimation of Succinic and Fumaric Acids
in Lactate Cased Filler

1501
JLT
Casing

In a recent publication in Tobacco Science (1), fumaric and succinic acids are listed as some of the pyrolysis products of sodium lactate and malic acid. Since lactic acid is being used in the casing of some experimental blends, an investigation was made to see what effect, if any, lactic acid would have on the formation of fumaric and succinic acids during the smoking.

With the P.M. Multifilter as a control, cigarettes with sodium and potassium lactate in the casing were smoked and the TPM collected.

The methyl esters were prepared as in our standard procedure for organic acids (2). G. C. analysis showed two inflections on the shoulders of an unidentified peak. These inflections corresponded to the retention times of fumaric and succinic methyl esters. The relative intensities of the inflections on the control cigarette and those treated with the sodium and potassium lactate showed no difference. The estimated concentration of fumaric and succinic acids were 15 µg/cigt in all cases.

References

- (1) Geisinger, K. R., T. C. Jones and I. Schmeltz. Tobacco Science, 14, 89-90, 1970.
(2) Analytical Services Division Methods Manual, Method E-28a.

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