IWH/BP/46C 27th June, 1961.

J. E. de Souza, Esq.,
The Imperial Tobacco Company of Canada Ltd.,
P.O. Box 6500,
MONTREAL,
Canada.

Dear John,

Thank you for your letter of the 16th June concerning the simultaneous tar and nicotine determination. We have not used the Snell procedure for nicotine estimations a sufficient number of times to be able to tell whether or not discrepancy occurs.

Our own dual assay is carried out in the following manner, smoke from five cigarettes is collected, either electrostatically or by Cambridge filter. The collected smoke is dissolved in 100 mls. of methanol and 2 x 20 ml. aliquots used for the normal tar estimation. For nicotine estimation another 20 ml. aliquot is placed in a beaker together with sulphuric acid (2 Normal, 5 ml.) and water (10 mls.), and evaporated in a steam bath to approximately 10 ml. volume; this removes the methanol. The residual acid solution is then washed into our nicotine distillation unit which comprises a large boiling tube attached to a condenser, receiver and steam head (I believe you saw this during your visit). The solution is then steam distilled collecting a minimum of 100 ml. distillate. The nicotine solution is then made alkaline and distilled in the normal fashion. Using the spectrophotometer assay our results by the above procedure agree reasonably well with our normal nicotine method, of which you have full information.

I do not think we have any more information we can give you, but would suggest you try sulphuric acid in place of hydrochloric acid as originally used in the Snell procedure. If there are any other details you require please let me know.

Kind regards,

Yours sincerely,

c.c. H. D. Anderson, Esq.

I. W. Hughes