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Imperial Tobacco Limited/Limitée



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Dr. R. Penn
British-American Tobacco Co. Ltd.
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Dear Roger,

First of all let me apologize for not writing to you sooner but we have just finished evaluating your flavours. "Gourmet" as a concept and project is still unresolved.

I hope you and your family are well and that your work is progressing favourably. Thank you for your hospitality when we were in England.

As you know by now, I presented your flavour classification to R & D and Marketing and it was very well received. I think it gave us hope that an enormous number of flavours can be cross-sectionally tested. At this stage however, we are still waiting for direction from Marketing regarding Project Gourmet. The type of information we need before proceeding is mainly what tar level(s) we should be working with and what kind of product should be tested externally (overtly flavoured, enhancer, etc.). Until we get this information we are more or less on "hold" although we plan to continue screening "enhancers" internally. Evaluating these flavours takes considerable time if you are going to do it justice. Because my other work load is quite extensive and almost invariably has time restraints I find it very difficult to make adequate allowance for flavour evaluations and can only do so when my other work permits. I hope you will bear with me and that this explains why we have taken so long to evaluate your enhancers.

The enhancers were tested by injecting them into 4 mg. DPM cigarettes (Matinee Extra Mild K.S.) which were smoked against unflavoured control cigarettes. We then tried to find an application level at which the flavour improved the taste without adding any foreign (non-tobacco) notes to the product. Our working definition of improved taste is more taste, better

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taste, or ideally both. In addition we are also careful that the flavoured cigarette does not give a flavoured taste when drawing on the filter prior to lighting, and no foreign cold or sidestream aroma. The aroma of the jars the flavoured cigarettes are kept in is also evaluated as an indicator of what kind of aroma a packaged product would provide.

This initial screening evaluation was carried out by Mike Scherbak and myself.

Following are the results with your P.D.L. flavours:

8385: ✓ Acted like a taste enhancer - increased and improved taste of Peter Jackson Extra Light K.S. (7 mg. tar) at the 0.6% (based on tobacco weight) level. 8385 was the only flavour tested on this brand.

8448: ✓ Did not act like a taste enhancer. Increased taste level at .075% but replaced tobacco taste to a great extent. The taste notes were more obvious but not totally tobacco with some flavoured notes. Mellowed, smoothend smoke resulting in a strength reduction.

8450 (Virginia Enhancer):

✓ Did not act like a taste enhancer. Evaluated down to the 0.4% application level. Exhibited a slight sweet - sour - spicy jar aroma. Mainly resulted in a flat, characterless smoke with virtually no tobacco taste and slight flavoured notes. Reduced irritation with less total taste than the control and therefore less strength.

8459 (Virginia Enhancer):

✓ Acted like a taste enhancer. Provided a slight taste increase and improved taste at the 0.4% level. The smoke was mellowed, sweeter in a natural sense like in good flue-cured tobacco. Good tobacco taste level with a slight strength increase.

8460 (Virginia Enhancer):

✓ Acted like a taste enhancer at 0.2%. Only a very slight flavoured cold taste. Increased taste level and improved taste quality through added high notes without any flavoured notes in the smoke taste.

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8468 (Virginia Enhancer):

✓ Did not act like a taste enhancer. Tested down to 0.1%. Almost totally replaced the tobacco taste in addition to adding slight flavoured notes. No flavoured cold taste but a slight flavoured jar aroma.

8469 (Virginia Enhancer):

✓ Did not act like a taste enhancer. Tested down to 0.1%. Flavour replaced the tobacco taste with sweet-spicy foreign notes. No foreign cold taste but a slightly foreign jar aroma and spicy cold aroma. Smoothened the smoke slightly.

8474 (Bread):

✓ Did not act like a taste enhancer. Tested down to .03% level. Flavoured cigarette provided considerably less tobacco taste than the control with an overall reduction in the taste level. Only slightly "yeasty" at the lower levels for smoke taste, cold aroma and jar aroma. The flavour smoothened the smoke slightly.

8475 (Bread):

✓ Did not act like a taste enhancer. Tried down to .05%. Much the same effect as for 8474 but only more so. At the higher levels (.2 - .7%) smoked very obviously yeasty. At the lower levels produced basically a "nothing" smoke with virtually no tobacco taste. Very flat, slightly dirty and yeasty.

8480 (Cocoa):

✓ Did not act like a taste enhancer. Tried down to 0.025%. At lower levels produced mainly a dirty taste character with a slight cocoa note. No foreign cold taste but a slight cocoa jar aroma and cold aroma.

8481 (Cocoa) & 8482 (Cocoa):

✓ Both acted like taste enhancer at the 0.025% level. They increased the overall taste level of the cigarette with only a slight reduction in tobacco taste. Also these flavours make the smoke fuller and in the case of 8481 mellow and smoother. Some added sweetness. Both flavours left a slight cocoa jar aroma but no foreign notes in the cold aroma, cold taste or smoke taste.

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As you can see from these results, five flavours acted like potential taste enhancers as we define it. These flavours (8385, 8459, 8460, 8481, 8482) are now candidates for more extensive testing with larger panels. Whether these larger panels will consist of experts or naive smokers has not been decided yet, but I am quite sure that the next tests with these flavours will also be conducted internally. After that, the top candidates will be tested externally.

One word of caution about our results. First of all these results are based on the opinion of only two expert smokers. Whether the improvement through these enhancers is significant enough to be detectable to a majority of naive smokers is at this stage debatable. In most cases we only found small differences. The reason I mention this is because it has been my experience that improvements through enhancers don't correlate very highly between expert and naive smokers. When our flavour chemist, A. El Naggat, was here I tested many enhancer flavours for him all of which he felt improved the smoke. Very few of these flavours actually did the job as far as the naive smoker was concerned. Of course at that time our testing regime was different and I don't know whether this discrepancy was due to the flavours or the way we tested them. In any case, I think we should qualify the present results by keeping this in mind.

The other point about these results is that if you compare the initial results appended in Mr. S. Candlish's letter of October 4, 1979 with these results you will note quite a change especially for the "Bread" and "Cocoa" flavours. I thought the Bread flavour might prove to be ideal for our tobacco which has natural bread notes anyway and that Cocoa would be very hard to hide because these flavours were so obvious at the initial levels. As it turned out, the Bread flavours replaced too much tobacco taste and were not as compatible as they seemed at first while two of the Cocoa flavours acted like potential enhancers. I think it just proves once again that it is very difficult to predict the effect of enhancers on our tobacco. Just the same, I hope there are some guidelines for you in these results with respect to further enhancer submissions. We would appreciate it if you could also enclose next time the approximate shelf-life of these flavours since, as you can see, we use them over extended periods of time.

We will smoke cigarettes using the set of flavours with "Ultrax", "Lexale" etc. next, primarily to get an idea about the range of flavoured cigarettes available in the world. When we have finished I will write to you and give you our impressions.

Thanks again for your help Roger, we appreciate it, and I will write to you again when we have more information about Project Gourmet or the Ultrax etc. flavours.

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