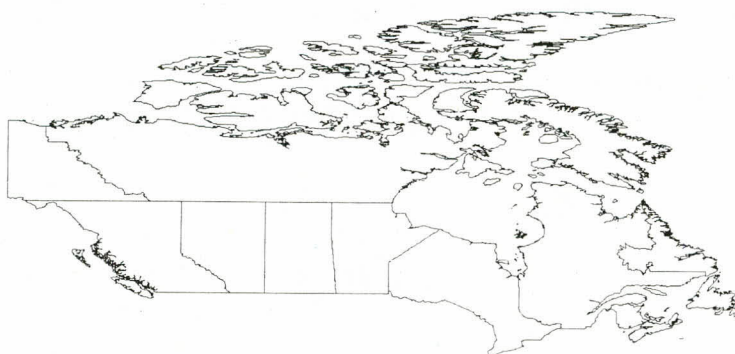


B2

**Final Report
Investigating the Impact of
New "Light" and "Mild" Related
Messages on Cigarette
Packages**



***Prepared for
HEALTH CANADA
Tobacco Control Programme
Healthy Environments and Consumer Safety***

Contract #: H4133-041674/001/CY HC POR 04-68

April, 2005

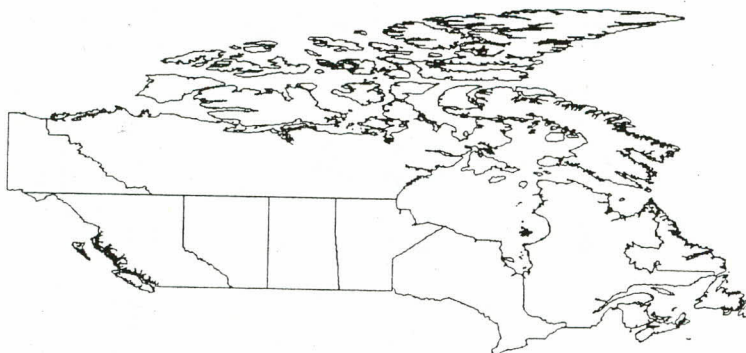
LES ÉTUDES DE MARCHÉ CRÉATEC +

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Rapport final
Étude des effets des nouvelles
misés en garde contre les
cigarettes « légères » et
« douces » apposées sur les
paquets de cigarettes



Préparé pour
SANTÉ CANADA
Programme de la lutte au tabagisme
Santé environnementale et sécurité des consommateurs

N° de contrat : H4133-041674/001/CY HC POR 04-68

Avril 2005

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1. SOMMAIRE

1.1 BUT DE L'ÉTUDE

- Cette étude visait à fournir à Santé Canada des données quantitatives sur les effets des informations fournies sur les paquets de cigarettes relativement aux descripteurs de cigarettes « légères » et « douces » (L et D), ainsi que sur les connaissances, les attitudes et le comportement des fumeurs. Nous avons examiné quatre scénarios informationnels (A, B, C et D). Les résultats peuvent servir à orienter les décisions futures concernant les mises en garde (MEG) contre la nocivité du tabac et les encarts contenant des informations sur la santé.
- En utilisant les MEG actuelles avec le descripteur comme mesure de contrôle (**scénario D** informationnel dans le rapport), nous avons mesuré les effets sur les connaissances, les attitudes et le comportement des fumeurs pour chacun de ces trois nouveaux scénarios et (ou) options, à l'aide de mesures objectives sur les effets (avant et après exposition), ainsi que de mesures subjectives (opinion sur la valeur informative des outils exprimée directement par les fumeurs) :
 1. Un nouveau concept de MEG contre les cigarettes L et D, avec descripteur (**scénario A** dans le rapport)
 2. Un nouveau concept d'encart relatif aux cigarettes L et D (**scénario B** dans le rapport)
 3. L'approche des MEG actuelles, sans toutefois y ajouter de descripteur, comme si les paquets de cigarettes actuels étaient vendus sans le descripteur « Légères » ou « Douces » (**scénario C** dans le rapport)

1.2 MÉTHODE

Plan

- Pour cette étude, nous avons utilisé une approche expérimentale consistant à exposer les répondants à divers stimuli qui ont servi à mesurer leurs réactions selon un protocole précis. Nous avons ensuite déduit les résultats de l'analyse des réactions aux stimuli, pas de l'analyse des opinions exprimées directement par les répondants.
- Nous nous sommes servis d'un protocole expérimental de 4 x 2 : l'exposition à l'information était le seul facteur intrarépondants. Les quatre scénarios informationnels (les 3 nouveaux scénarios et le scénario témoin) ainsi que les deux versions linguistiques du message étaient les deux facteurs interrépondants.
 - Dans n'importe lequel des quatre groupes expérimentaux (les quatre scénarios informationnels), les répondants ont été exposés à une seule maquette de scénario informationnel (MEG ou encart).

- Dans n'importe lequel des trois groupes expérimentaux exposés aux MEG, nous avons utilisé trois MEG en procédant à une rotation systématique entre les répondants pour veiller à ce que les résultats ne soient pas « déterminés par l'exemple ».
- Les rotations intégrées aux dix versions du questionnaire garantissaient que chaque MEG et l'encart avaient les mêmes chances d'exposition sur le plan statistique.
- Pour toutes les maquettes de MEG, la même marque populaire (DuMaurier) figurait sur les 50 % de la surface du paquet de cigarettes habituellement réservés à la marque du produit.

Mesures de l'effet

- Afin de mesurer l'effet éventuel de chacun des trois nouveaux scénarios, nous avons utilisé des mesures objectives et subjectives.
 - Les conclusions relatives aux effets des nouveaux scénarios étaient fondées sur les mesures objectives; nous nous sommes servis des mesures subjectives uniquement afin de fournir un contexte dans lequel inscrire les résultats.
- Les mesures objectives consistaient en 28 critères ou attributs visant à évaluer l'effet de chaque scénario sur cinq éléments :
 1. Force perçue du produit/profil sensoriel (5)
 2. Image du produit/caractères particuliers (12)
 3. Connaissance de la distinction entre les cigarettes L-D et ordinaires (5)
 4. Croyances au sujet de la consommation de cigarettes L et D (3)
 5. Intentions de comportement (3).
- Pour chaque mesure objective, nous avons calculé les différences avant et après l'exposition aux maquettes de scénarios informationnels, et vérifié la signification statistique des écarts par rapport à l'approche actuelle/témoin.
 - Chaque répondant a répondu à la même série de 28 critères avant et après avoir été exposé à un scénario.
 - Les « effets des nouveaux scénarios informationnels » étaient les écarts par rapport au scénario témoin, calculés à l'aide des glissements d'échelle observés après l'exposition (comparaison des différences avant et après l'exposition).
- Les mesures subjectives de l'effet (9) étaient les opinions (que les répondants ont exprimées directement) sur neuf aspects concernant la valeur informative des outils d'information utilisés.
- Nous avons également calculé les différences des mesures subjectives de l'effet par rapport au scénario actuel/témoin et en avons vérifié la signification statistique.

Vérification statistique

- Nous avons utilisé des normes strictes pour décider s'il fallait ou non qualifier de statistiquement significatif » un écart ou une différence par rapport au scénario témoin. Pour mériter cette étiquette :
 - L'erreur de type I des tests d'étendue univariés et conservateurs de Scheffé pour des comparaisons multiples était fixée à 0,05.
 - Les tests T univariés pour les comparaisons jumelées devaient avoir eu une erreur de type 1 inférieure à 0,01, avec un intervalle de confiance de 95 %.
 - En outre, nous avons soumis les mesures objectives à l'analyse de variance à plusieurs variables (de Manova) pour corroborer les conclusions tirées de l'analyse univariée.
- Enfin, il fallait remplir deux conditions pour conclure qu'un nouveau scénario informationnel avait eu un effet significatif :
 1. L'écart d'un nouveau scénario informationnel par rapport au scénario témoin devait être statistiquement significatif dans l'échantillon total (sous-échantillons français et anglais combinés);
 2. L'écart significatif dans l'échantillon total devait être corroboré dans les sous-échantillons linguistiques (cohérence).

Échantillon et cadre expérimental

- Un total de N=1 229 fumeurs (âgés de 18 ans et plus) de cigarettes fabriquées, dont l'emballage portait les mentions L et D, ont participé à l'étude du 14 au 25 mars 2005.
 - N=611 participants ont répondu dans la version anglaise, et N=618 dans la version française des scénarios informationnels.
 - N=150 entrevues (environ) ont été menées par groupe expérimental et version linguistique de chacun des scénarios.
- Les données ont été recueillies dans dix centres commerciaux (5 dans des régions anglophones partout au Canada, et 5 dans des régions francophones du Québec).
 - N=120 (environ) entrevues ont été menées dans chacun des dix centres commerciaux (n=30 par groupe expérimental).
 - Le questionnaire (auquel il fallait consacrer 25 minutes) a été élaboré à partir d'études expérimentales préalables sur les MEG, effectuées pour Santé Canada. Plusieurs échelles étaient autogérées, et certaines étaient celles que l'industrie du tabac utilise communément afin de tester les produits et le positionnement pour les marques de cigarettes « à faible émission ».

Limites

- Comme toutes les études réalisées en laboratoire, cette étude souffre des limites génériques découlant de l'exposition forcée à des documents, du fait que l'on sacrifie la validité externe à la validité interne¹.
 - Il est possible que, dans des conditions naturelles d'examen, les fumeurs décident uniquement de s'exposer à l'information qu'ils choisissent.
 - Cette possibilité s'applique essentiellement à l'encart, et dans une mesure bien moindre aux MEG. Par conséquent, les effets significatifs de « réduction de la confusion au sujet des cigarettes L et D » observés pour l'encart peuvent se concrétiser ou ne pas se matérialiser dans un cadre naturel (la vie réelle), en fonction de l'aptitude de l'encart à attirer l'attention et à motiver la lecture.

1.3 CONFUSION DES FUMEURS CONCERNANT LA DISTINCTION ENTRE LES CIGARETTES L-D ET ORDINAIRES

- Les mesures prises avant l'exposition quant aux croyances, à la force perçue et à la connaissance de la distinction entre les cigarettes L-D et ordinaires ont confirmé les résultats d'études antérieures sur l'influence trompeuse de l'indicateur L et D (voir les tableaux qui suivent).
- Les mesures préalables à l'exposition ont révélé que de nombreux fumeurs de cigarettes L et D visés par l'étude :
 - partageaient l'opinion que les cigarettes L et D étaient moins fortes/moins dangereuses pour la santé que les cigarettes ordinaires;
 - déclaraient qu'ils fumaient des cigarettes L et D dans l'espoir de réduire les dangers du tabagisme. Les tableaux qui suivent présentent les principaux résultats des mesures prises avant l'exposition aux scénarios informationnels relatifs à la connaissance, aux croyances et à la force perçue des cigarettes L et D.

¹ Lorsque nous menons des études expérimentales, nous visons à déterminer l'enchaînement des causes et des effets entre les variables indépendantes et dépendantes.

La **validité interne** liée à la recherche expérimentale fait référence au niveau de qualité de l'exécution de l'étude (plan de recherche, définitions opérationnelles utilisées, modes de mesure des variables, ce qui a été/n'a pas été mesuré, etc.), ainsi qu'au degré de confiance auquel il est possible de conclure que le changement survenu dans la variable dépendante est attribuable uniquement à la variable indépendante, pas à des variables externes. La validité interne répond à cette question : « Est-ce vraiment l'exposition aux scénarios informationnels qui a causé la différence entre les moyennes/variances des mesures objectives dans les groupes expérimentaux et témoin ? »

La **validité externe** d'une étude indique la mesure dans laquelle on peut étendre/appliquer les résultats de cette étude (qu'elle soit descriptive ou expérimentale) à d'autres personnes ou milieux. (Pour plus de précisions, lisez : Campbell, D. T., & Stanley, J. C. (1966). *Experimental and quasi-experimental designs for research*. Chicago: Rand McNally).

- On observe les effets significatifs suivants en se fondant sur des tests multivariés et univariés, ainsi que sur la cohérence des résultats obtenus dans les deux versions linguistiques des outils d'information :

1. Huit des 28 mesures objectives (différences avant et après l'exposition) révèlent l'existence d'un écart significatif par rapport au scénario témoin, au moins pour un nouveau scénario.
2. Tous les effets objectifs significatifs indiquent qu'une réduction de la confusion des fumeurs concernant la distinction entre les cigarettes L-D et ordinaires a eu lieu après l'exposition à au moins un nouvel outil d'information.
3. Tous les effets objectifs significatifs ont peu d'ampleur. L'écart significatif le plus important découvert dans l'échantillon total représente 7 % des points d'échelle utilisés.
 - Ces résultats sous-entendent que les nouveaux scénarios informationnels qui ont eu des effets significatifs dans cette étude expérimentale peuvent nécessiter d'autres mesures de soutien pour se concrétiser dans un contexte naturel.
4. La plupart des effets objectifs significatifs observés portent sur la connaissance de la distinction entre les cigarettes L-D et ordinaires. Ils sont suivis des effets sur le profil sensoriel des cigarettes L et D, et d'un effet sur les intentions de comportement.
5. On ne signale aucun effet objectif significatif pour n'importe quel nouveau scénario sur les croyances concernant la consommation de cigarettes L et D ou les caractéristiques particulières du produit utilisé pour ces cigarettes.
 - Ces résultats confirment que les croyances au sujet de la consommation de cigarettes L et D sont ancrées tellement profondément qu'il sera peut-être nécessaire de prendre d'autres mesures à l'appui des nouveaux scénarios informationnels pour permettre à leurs effets significatifs de se concrétiser dans un contexte naturel et de se traduire par un changement d'attitude.
6. Le scénario B, l'encart, est le seul nouveau scénario qui a eu des effets objectifs très significatifs sur la connaissance de la distinction entre les cigarettes L-D et ordinaires et sur le profil sensoriel des cigarettes L et D.
7. Même si les trois nouveaux scénarios ont tous eu un effet objectif significatif sur l'intention comportementale de cesser de fumer, on observe l'effet le plus significatif pour les nouveaux scénarios A (MEG contre les cigarettes L et D avec descripteur) et C (MEG actuelles sans descripteur).
 - Les résultats obtenus pour le scénario A indiquent que les nouvelles MEG contre les cigarettes L et D ont réussi à réduire l'attrait du tabagisme, même si le descripteur L et D figurait sur leur emballage.
 - Les résultats obtenus pour le scénario C donnent à entendre que le descripteur L et D, associé aux MEG actuelles, entretient la confusion dans

l'esprit des fumeurs concernant la distinction entre les cigarettes L-D et ordinaires.

8. On estime que les nouveaux scénarios B (encart) et A (nouvelles MEG avec descripteur) sont sensiblement plus informatifs (mesures subjectives) que le scénario témoin D (MEG actuelles avec descripteur).

9. Quant à la valeur informative perçue, il n'existait aucune différence entre les MEG actuelles accompagnées du descripteur L et D (scénario témoin D) ou non accompagnées de ce descripteur (nouveau scénario C).

— Ces résultats semblent indiquer que le descripteur L et D n'a pas été reconnu comme un élément d'information sur les cigarettes légères et douces.

- Dans l'ensemble, les résultats révèlent que l'encart (scénario B) a pu modifier la connaissance préalable des fumeurs concernant les cigarettes L et D de façon à réduire l'écart quant à la perception des aspects plus atténués/plus sûrs de ces cigarettes soi-disant « légères » et « douces », et que les fumeurs de cigarettes L et D qui ont participé à l'étude ont reconnu nettement la valeur informative de cet encart.
 - En bref, grâce aux effets objectifs que l'encart a eus sur la connaissance et les perceptions, le pouvoir informatif de l'encart a été démontré dans cette étude expérimentale et reconnu par les répondants.
- Toutefois, les nouvelles MEG accompagnées du descripteur L et D se sont avérées plus persuasives que l'encart (effet objectif sur l'intention comportementale d'arrêter de fumer), même si leur pouvoir informatif était moindre, quoique significatif.
- Une analyse de correspondance reliant tous les effets objectifs et subjectifs significatifs a confirmé l'incidence distincte des nouveaux scénarios et indiqué en outre que l'option idéale consisterait à combiner les nouvelles MEG et le nouvel encart relatifs aux cigarettes L et D si le descripteur L et D continuait de figurer sur les emballages qui présentent les MEG actuelles.

1.5 EFFETS DES NOUVEAUX SCÉNARIOS SUR LA CONNAISSANCE

- Le prochain tableau résume les résultats de l'analyse statistique des écarts entre les nouveaux scénarios et le scénario témoin en ce qui a trait à la connaissance des répondants concernant la distinction entre les cigarettes L-D et ordinaires.
- Comme on peut le voir, c'est l'encart sur les cigarettes L et D (scénario B) qui a eu la plus forte incidence sur la connaissance préalable. Il a nettement rapproché les cigarettes L et D des cigarettes ordinaires en ce qui concerne :
 - les niveaux de nicotine
 - les quantités de goudron
 - le risque de décès
 - les dangers pour la santé.
- Les MEG accompagnées du descripteur L et D (scénario A) ont élevé les niveaux de nicotine perçus contenus dans les cigarettes L et D, mais cet effet n'était significatif que dans le cadre du test T moins rigoureux à $P < 0,05$.
- Les MEG actuelles non accompagnées du descripteur (scénario C) ont accru le risque perçu de décès attribuable à la consommation de cigarettes L et D, mais cet effet n'était significatif que dans le cadre du test T moins rigoureux à $P < 0,05$.

- Même s'il n'est pas très significatif, cet écart entre le scénario C et le scénario témoin D (MEG actuelles avec descripteur) était l'hypothèse selon laquelle le descripteur L et D figurant sur les emballages de cigarettes est une mention destinée à rassurer qui est trompeuse et prête donc à confusion.

EFFETS DES NOUVEAUX SCÉNARIOS SUR LA CONNAISSANCE

Connaissance de la distinction entre les cigarettes L-D et ordinaires	Scénario A Nouvelles MEG avec descripteur	Scénario B Encart	Scénario C MEG actuelles sans descripteur
Niveaux de nicotine	▲	●	NS
Quantités de produits chimiques et d'additifs	NS	NS	NS
Quantités de goudron	NS	●	NS
Danger pour la santé	NS	■	NS
Risque de décès	NS	●	▲

● Test de Scheffé significatif à $P < 0,05$

■ Test T significatif à $P < 0,01$

▲ Test T significatif à $P < 0,05$

NS non significatif

1.6 EFFETS DES NOUVEAUX SCÉNARIOS SUR LE PROFIL SENSORIEL (FORCE PERÇUE)

- Le prochain tableau regroupe les résultats de l'analyse statistique des écarts entre les nouveaux scénarios et le scénario témoin quant à la force perçue des cigarettes L et D.
- Comme on peut le constater, seul l'encart (scénario B) a eu des effets significatifs. Il a été le seul nouveau scénario en mesure d'exercer une influence (plus grande qu'on le croyait auparavant) sur la force perçue des cigarettes L et D quant à :
 - l'effort accru pour tirer une bouffée satisfaisante d'une cigarette;
 - la plus forte sensation de la fumée dans la gorge;
 - l'accroissement de la toxicité et des effets nocifs.

EFFETS DES NOUVEAUX SCÉNARIOS SUR LE PROFIL SENSORIEL

Attributs sensoriels	Scénario A Nouvelles MEG avec descripteur	Scénario B Encart	Scénario C MEG actuelles sans descripteur
Effort pour fumer/tirer une bouffée	NS	●	NS
Goût/saveur	NS	NS	NS
Satisfaction initiale	NS	NS	NS
Sensation de la fumée dans la gorge	NS	●	NS
Toxicité	NS	▲*	NS

* Comme l'encart a eu des effets très significatifs sur la connaissance (quantités et niveaux plus élevés de nicotine, de produits chimiques, de goudron, etc.), cet effet sur le profil sensoriel

(toxicité perçue) a également été considéré comme très significatif dans l'interprétation des résultats.

- Test de Scheffé significatif à $P < 0,05$
- Test T significatif à $P < 0,01$
- ▲ Test T significatif à $P < 0,05$
- NS non significatif

1.7 EFFETS DES NOUVEAUX SCÉNARIOS SUR LES INTENTIONS DE COMPORTEMENT

- Le prochain tableau résume les résultats de l'analyse statistique des écarts entre les nouveaux scénarios et le scénario témoin sur les intentions de comportement des répondants.
- Comme on peut le voir, les nouveaux scénarios ont tous les trois réduit l'attrait de fumer des cigarettes L et D : plus de répondants ont fait part de l'intention de cesser de fumer après avoir été exposés aux renseignements qui leur étaient présentés.
 - Cet effet était très significatif pour les MEG, avec ou sans descripteur sur l'emballage des cigarettes (scénarios A et C), alors que pour l'encart, il n'était significatif que dans le cadre du test T moins rigoureux, à $P < 0,05$.
 - Ces résultats sous-entendent que les MEG sont plus convaincantes que l'encart.
 - En outre, ces résultats concernant l'effet des MEG actuelles sans descripteur étayent l'hypothèse selon laquelle le descripteur L et D sème la confusion dans l'esprit des fumeurs en différenciant les L et D des cigarettes ordinaires.

EFFETS DES NOUVEAUX SCÉNARIOS SUR LES INTENTIONS DE COMPORTEMENT

Intentions de comportement	Scénario A Nouvelles MEG avec descripteur	Scénario B Encart	Scénario C MEG actuelles sans descripteur
Passera des cigarettes L et D aux cigarettes ordinaires	NS	NS	NS
Arrêtera de fumer	●	▲	●
Réduira sa consommation de cigarettes	NS	NS	NS

- Test de Scheffé significatif à $P < 0,05$
- Test T significatif à $P < 0,01$
- ▲ Test T significatif à $P < 0,05$
- NS non significatif

1.8 RÉSULTATS SOMMAIRES DE LA VÉRIFICATION STATISTIQUE DE TOUS LES EFFETS OBJECTIFS

- Le tableau suivant regroupe les résultats de la vérification statistique de tous les 28 effets objectifs (écarts par rapport au scénario témoin) des nouveaux scénarios informationnels.

RÉSULTATS SOMMAIRES DE LA VÉRIFICATION STATISTIQUE DES EFFETS OBJECTIFS DES NOUVEAUX SCÉNARIOS

Attributs	Scénario A Nouvelles MEG avec descripteur	Scénario B Encart	Scénario C MEG actuelles sans descripteur
Connaissance de la distinction entre les cigarettes L-D et ordinaires			
Niveaux de nicotine	▲	●	NS
Quantités de produits chimiques et d'additifs	NS	NS	NS
Quantités de goudron	NS	●	NS
Danger pour la santé	NS	■	NS
Risque de décès	NS	●	▲
Profil sensoriel / force perçue des cigarettes L et D			
Effort pour fumer/tirer une bouffée	NS	●	NS
Goût/saveur	NS	NS	NS
Satisfaction initiale	NS	NS	NS
Sensation de la fumée dans la gorge	NS	●	NS
Toxicité	NS	▲*	NS
Intention de comportement			
Passera des cigarettes L et D aux cigarettes ordinaires	NS	NS	NS
Arrêtera de fumer	●	▲	●
Réduira sa consommation de cigarettes	NS	NS	NS
Traits caractéristiques du fumeur de cigarettes L et D			
Aventureux/très prudent	NS	NS	NS
Altruiste/égoïste	NS	NS	NS
Insouciant/soucieux de sa santé	NS	NS	NS
Aisé/pauvre	NS	NS	NS
Soucieux de son image/débraillé	NS	NS	NS
Sérieux/décontracté	NS	NS	NS
Meneur/suiveur	NS	NS	NS
Très instruit/peu instruit	NS	NS	NS
Maître de sa destinée/fataliste	NS	NS	NS
Effrayé par la mort/non préoccupé par la mort	NS	NS	NS
Discipliné/désordonné	NS	NS	NS
Rebelle/conformiste	NS	NS	NS
Croyances au sujet de la consommation de cigarettes L et D			
Elles réduisent les risques du tabagisme sans que les fumeurs doivent réellement cesser de fumer	NS	NS	NS

Attributs	Scénario A Nouvelles MEG avec descripteur	Scénario B Encart	Scénario C MEG actuelles sans descripteur
Elles réduisent la quantité de goudron inhalée comparativement à celle contenue dans les cigarettes ordinaires	NS	NS	NS
Elles réduisent le risque pour la santé comparativement à celui que posent les cigarettes ordinaires	NS	NS	NS

* Comme l'encart a eu des effets très significatifs sur la connaissance (quantités et niveaux plus élevés de nicotine, de produits chimiques, de goudron, etc.), cet effet sur le profil sensoriel (toxicité perçue) a également été considéré comme très significatif dans l'interprétation des résultats.

- Test de Scheffé significatif à $P < 0,05$
- Test T significatif à $P < 0,01$
- ▲ Test T significatif à $P < 0,05$
- NS non significatif

1.9 VALEUR INFORMATIVE DES SCÉNARIOS

- Le prochain tableau résume les résultats portant sur la valeur informative perçue des nouveaux scénarios testés (mesures subjectives).
- Comme on peut le voir, les MEG actuelles sans descripteur (scénario C) ont suscité les mêmes perceptions que les MEG actuelles avec descripteur (scénario témoin) et n'ont donc pas été jugées plus informatives.
 - Ces résultats indiquent que les répondants n'ont pas reconnu la présence du descripteur L et D comme un élément d'information sur les cigarettes L et D.
 - Toutefois, nous avons observé dans les mesures objectives que la présence du descripteur L et D a eu des effets objectifs (entretenir la confusion dans l'esprit des fumeurs).
- Dans l'ensemble, les répondants ont reconnu que les scénarios B et A (qui donnent tous les deux des informations sur les cigarettes L et D) fournissaient plus de renseignements sur les cigarettes L et D que le scénario témoin.
- Le scénario B (encart) a obtenu les meilleures notes en ce qui a trait à la valeur informative globale et il s'est également avéré significatif à l'égard de cinq attributs particuliers de la valeur informative :
 - Exactitude de l'information
 - Crédibilité de l'information
 - Applicabilité de l'information sur le plan personnel
 - Informer au sujet des effets sur la santé
 - Fournir de nouvelles informations

- Le scénario A (MEG avec descripteur), bien que perçu comme étant moins informatif que l'encart, s'est, globalement, avéré significatif à l'égard de ces attributs :
 - Exactitude de l'information
 - Crédibilité de l'information
 - Applicabilité de l'information sur le plan personnel
 - Informer au sujet des effets sur la santé
 - Réduire l'attrait de fumer

ÉCART EN POURCENTAGE ENTRE LA VALEUR INFORMATIVE DES NOUVEAUX SCÉNARIOS ET DU SCÉNARIO TÉMOIN

	Scénario A Nouvelles MEG avec descripteur	Scénario B Encart	Scénario C MEG actuelles sans descripteur
Globalement – vous renseigne sur les effets que la consommation de cigarettes L et D a sur la santé	+14 %*	+25 %	NS
1. Cette mise en garde contient des informations exactes sur les cigarettes légères ou douces	+16 %	+16 %	NS
2. L'information que cette mise en garde fournit sur les cigarettes légères ou douces est crédible	+9 %	+13 %	NS
3. Cette mise en garde donne des informations pertinentes pour moi sur les effets que la consommation de cigarettes légères ou douces a sur la santé	+17 %	+19 %	NS
4. Cette mise en garde réduit l'attrait de fumer	+11 %	NS	NS
5. Cette mise en garde m'incite à vouloir arrêter de fumer	NS	NS	NS
6. Cette mise en garde m'incite à vouloir fumer moins	NS	NS	NS
7. Cette mise en garde me donne des informations dont je n'avais pas connaissance au sujet des cigarettes légères ou douces	NS	+17 %	NS
8. Cette mise en garde m'a choqué	NS	NS	NS

* LIRE : Le scénario A a obtenu, quant à la valeur informative globale, une note moyenne qui dépassait de 14 % celle du scénario témoin, et cette valeur informative accrue était significative à $F < 0,05$. Seuls les écarts significatifs figurent dans le tableau.

NS non significatif

1.10 PROJECTION DES EFFETS DES NOUVEAUX SCÉNARIOS

- Pour aider les lecteurs à visualiser les effets significatifs qu'ont eus les nouveaux scénarios, nous avons effectué une analyse de correspondance entre les nouveaux scénarios et les 14 attributs (8 objectifs et 6 subjectifs) qui ont été influencés d'une manière significative par au moins un scénario.
 - Comme nous n'avons observé aucun effet objectif significatif pour n'importe quel nouveau scénario relatif aux croyances concernant la consommation de cigarettes L et D ou les caractéristiques particulières du produit, aucun de ces attributs n'a été inclus dans la projection.
- En nous fondant sur le positionnement des nouveaux outils d'information dans le domaine des effets, nous pouvons étayer les deux hypothèses suivantes (voir la carte, page 16) :
 1. Le retrait du descripteur L et D des emballages de cigarettes présentant les MEG actuelles (scénario C) a eu tendance à modifier la connaissance préalable des fumeurs en ce qui concerne les quantités de nicotine et de goudron contenues dans les cigarettes L et D comparativement aux cigarettes ordinaires, et à accroître la perception des fumeurs quant aux dangers que la consommation de cigarettes L et D pose pour la santé.
 - Toutefois, cet effet du scénario C n'était pas statistiquement significatif. Il faudrait donc le considérer uniquement comme une tendance distincte de ce scénario lorsque tous les écarts significatifs de tous les nouveaux scénarios sont pris en compte. Comme le scénario C a exercé une influence significative sur l'intention de cesser de fumer, cette tendance mérite d'être signalée car il peut s'agir d'un progrès par rapport à l'approche actuelle.
 2. La meilleure option consisterait à combiner les nouvelles MEG et le descripteur L et D (scénario A) en ajoutant le nouvel encart sur les cigarettes L et D (scénario B), étant donné que leurs effets objectifs semblent se renforcer ou se compléter mutuellement, et que les fumeurs de cigarettes L et D reconnaissent que ces deux scénarios sont plus informatifs que l'approche actuelle.
 - Ce scénario combiné réduirait la confusion au sujet de la force des cigarettes L et D (un effet significatif de l'encart relatif aux cigarettes L et D, mais pas des MEG avec ou sans descripteur), et accroîtrait la propension à arrêter de fumer (un effet très significatif des MEG - avec ou sans descripteur -, quoique moins significatif pour l'encart relatif aux cigarettes L et D).
- Dans l'ensemble, la projection confirme que c'est l'encart qui a le plus influencé la connaissance préalable et le profil sensoriel à l'égard des cigarettes L et D, et que les nouvelles MEG contre les cigarettes L et D étaient plus convaincantes et plus susceptibles de se traduire par un changement d'attitude.

1.11 CONCLUSION

- Les protocoles expérimentaux ont pour principal avantage de permettre de maîtriser le contexte dans lequel s'inscrit le sujet de recherche. De ce fait, il est possible d'attribuer les effets aux documents d'essai plutôt qu'à des facteurs non contrôlés. Ces protocoles présentent toutefois l'inconvénient d'utiliser une méthode d'exposition forcée, qui requiert un traitement de l'information (les personnes prêtent plus d'attention aux documents qu'elles ne leur en accorderaient habituellement). Plus les effets sont faibles, moins ils ont de chances d'être observés dans un contexte naturel ou de vie réelle.
 - Il faudra peut-être prendre d'autres mesures à l'appui des outils d'information testés pour veiller à ce que leurs effets se concrétisent dans un contexte naturel.
- Cela dit, la présente étude expérimentale a démontré que les nouvelles informations sur les cigarettes L et D incluses dans et figurant sur les paquets de cigarettes peuvent réduire la confusion des fumeurs quant aux caractéristiques des cigarettes L et D comparativement aux cigarettes ordinaires en modifiant leur connaissance préalable et leur perception de la force du produit, et en réduisant l'attrait de la consommation de cigarettes L et D.

CARTE DES 14 EFFETS SIGNIFICATIFS DES NOUVEAUX SCÉNARIOS

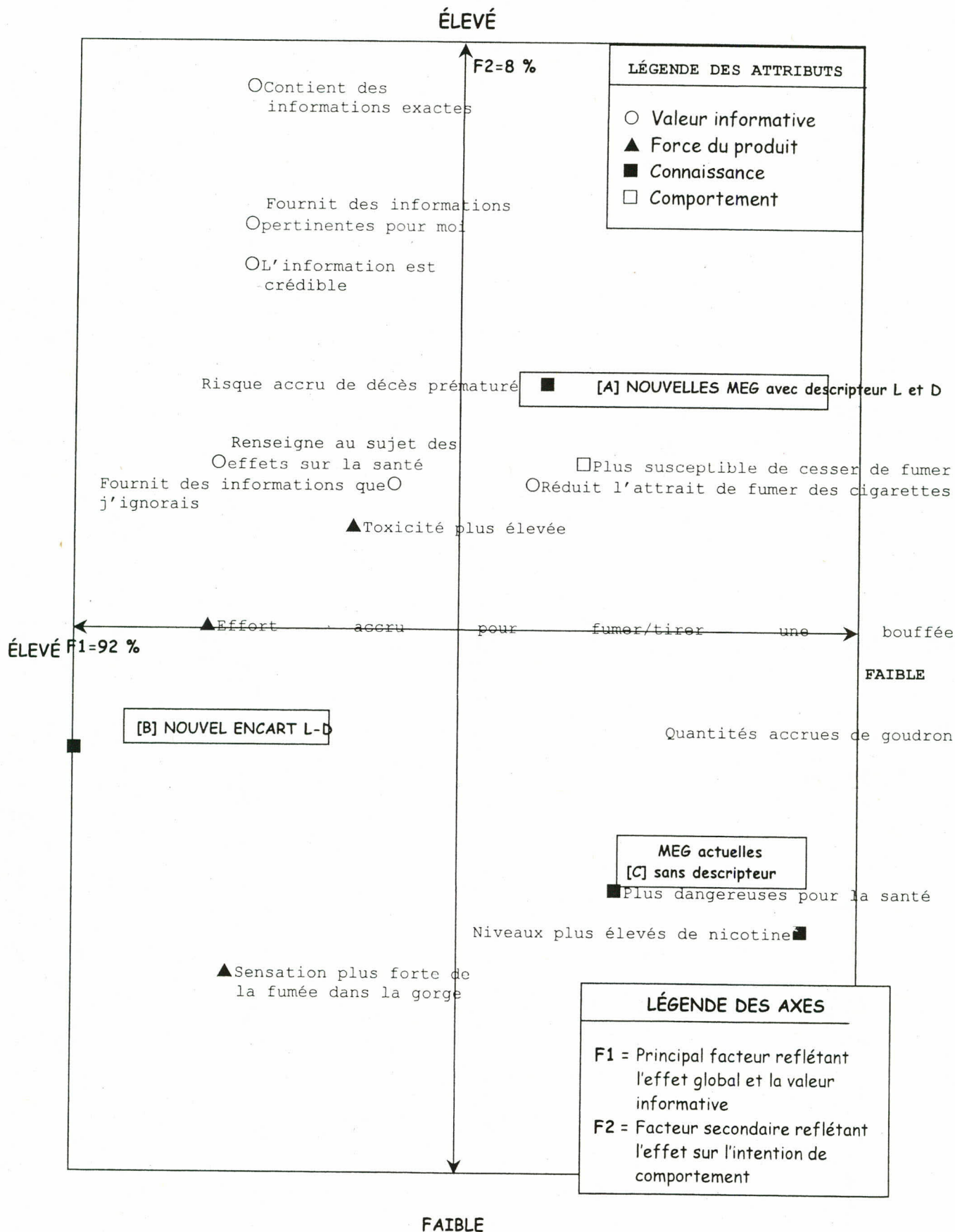


TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY	1
1.1	PURPOSE OF THE STUDY	1
1.2	METHOD.....	1
1.3	SMOKERS' CONFUSION ABOUT L&M VS. REGULAR CIGARETTES.....	4
1.4	OVERVIEW OF FINDINGS.....	5
1.5	EFFECTS OF NEW SCENARIOS ON KNOWLEDGE	7
1.6	EFFECTS OF NEW SCENARIOS ON SENSORY PROFILE (PERCEIVED STRENGTH)	8
1.7	EFFECTS OF NEW SCENARIOS ON BEHAVIOURAL INTENTIONS	9
1.8	SUMMARY RESULTS OF STATISTICAL TESTING OF ALL OBJECTIVE EFFECTS	9
1.9	INFORMATIVE VALUE OF SCENARIOS	11
1.10	MAPPING OF THE NEW SCENARIOS' EFFECTS	12
1.11	CONCLUSION	13
2.	BACKGROUND	15
3.	RESEARCH OBJECTIVES	16
4.	MATERIAL TESTED	18
5.	TARGET POPULATION	19
6.	METHODOLOGY	19
6.1	INTERVIEW METHOD.....	19
6.2	EXPERIMENTAL DESIGN	20
6.3	SAMPLING.....	22
6.4	SAMPLE SIZE	22
6.5	LOCATION OF THE EXPERIMENTS.....	22
6.6	QUESTIONNAIRE	22
6.7	FIELD PROCEDURES	24
6.8	CODING AND DATA ENTRY PROCEDURES	24
6.9	STATISTICAL ANALYSIS	24

TABLE OF CONTENTS

(Continued)

7.	DETAILED RESULTS.....	27
7.1	MEASURING EFFECTS AND PRESENTATION OF FINDINGS	28
7.1.1	<i>Measuring Effects</i>	28
7.1.2	<i>Presenting and Testing Effects</i>	29
7.1.3	<i>Example of Calculations</i>	31
7.2	CHARACTERISTICS OF THE WEIGHTED SAMPLE.....	33
7.3	EFFECTS OF NEW SCENARIOS ON KNOWLEDGE	35
7.3.1	<i>Univariate Analysis</i>	35
7.3.2	<i>Multivariate Analysis.....</i>	37
7.3.3	<i>Conclusion.....</i>	41
7.4	EFFECTS OF NEW SCENARIOS ON BELIEFS.....	42
7.4.1	<i>Univariate Analysis</i>	42
7.4.2	<i>Multivariate Analysis.....</i>	43
7.4.3	<i>Conclusion.....</i>	47
7.5	EFFECTS OF NEW SCENARIOS ON SENSORY PROFILE	48
7.5.1	<i>Univariate Analysis</i>	48
7.5.2	<i>Multivariate Analysis.....</i>	50
7.5.3	<i>Conclusion.....</i>	54
7.6	EFFECTS OF NEW SCENARIOS ON PRODUCT PERSONALITY	55
7.6.1	<i>Univariate Analysis</i>	55
7.6.2	<i>Multivariate Analysis.....</i>	57
7.6.3	<i>Conclusion.....</i>	61
7.7	EFFECTS OF NEW SCENARIOS ON BEHAVIOURAL INTENTIONS.....	62
7.7.1	<i>Univariate Analysis</i>	62
7.7.2	<i>Multivariate Analysis.....</i>	64
7.7.3	<i>Conclusion.....</i>	68
7.8	PERCEIVED INFORMATIVE VALUE OF SCENARIOS.....	69
7.8.1	<i>Overall Informative Value.....</i>	69
7.8.2	<i>Accuracy of Information About L&M cigarettes</i>	70
7.8.3	<i>Believability of Information About L&M Cigarettes.....</i>	70
7.8.4	<i>Personal Relevance of Information About L&M Cigarettes</i>	70
7.8.5	<i>Making Smoking Less Attractive</i>	71
7.8.6	<i>New Information Learned</i>	71
7.8.7	<i>Other Attributes of Informative value.....</i>	71
7.8.8	<i>Conclusion.....</i>	72
7.9	MAPPING OF THE NEW SCENARIOS' EFFECTS.....	73
7.9.1	<i>Introduction.....</i>	73
7.9.2	<i>Data Analyzed.....</i>	73
7.9.3	<i>Interpretation of the Map</i>	74

TABLE OF CONTENTS

(Continued)

8.	SUMMARY TABLES.....	78
TABLE 1	CHARACTERISTICS OF THE WEIGHTED SAMPLE	81
TABLE 2	COMPARABILITY OF OVERALL EXPERIMENTAL GROUPS.....	82
TABLE 3	COMPARABILITY OF ENGLISH EXPERIMENTAL GROUPS.....	83
TABLE 4	COMPARABILITY OF FRENCH EXPERIMENTAL GROUPS	83
TABLE 5	PRE-EXPOSURE KNOWLEDGE OF L&M VS. REGULAR CIGARETTES	84
TABLE 6	PRE-EXPOSURE BELIEFS ABOUT SMOKING L&M VS. REGULAR CIGARETTES	85
TABLE 7	PRE-EXPOSURE PERCEIVED STRENGTH OF L&M CIGARETTES	85
TABLE 8	PRE-EXPOSURE PERCEIVED PERSONALITY TRAITS OF L&M CIGARETTES.....	86
TABLE 9	PRE-EXPOSURE BEHAVIOURAL INTENTIONS.....	87
TABLE 10	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS EFFECTS – SUMMARY OF STATISTICAL TESTING ON L&M KNOWLEDGE ATTRIBUTES –	88
TABLE 11	EFFECTS OF INFORMATION TOOLS (TOTAL) – DIFFERENCES AND DEVIATIONS ON L&M KNOWLEDGE ATTRIBUTES –	89
TABLE 12	EFFECTS OF <u>ENGLISH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON L&M KNOWLEDGE ATTRIBUTES –	90
TABLE 13	EFFECTS OF <u>FRENCH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON L&M KNOWLEDGE ATTRIBUTES –	91
TABLE 14	RAW SCORES ON L&M KNOWLEDGE ATTRIBUTES (TOTAL).....	92
TABLE 15	RAW SCORES ON L&M KNOWLEDGE ATTRIBUTES	93
TABLE 16	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS – SUMMARY OF STATISTICAL TESTING ON L&M BELIEFS ATTRIBUTES –	94
TABLE 17	EFFECTS OF INFORMATION TOOLS (TOTAL) – DIFFERENCES AND DEVIATIONS ON L&M BELIEFS ATTRIBUTES –	95
TABLE 18	EFFECTS OF <u>ENGLISH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON L&M BELIEFS ATTRIBUTES –	96
TABLE 19	EFFECTS OF <u>FRENCH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON L&M BELIEFS ATTRIBUTES –	97
TABLE 20	RAW SCORES ON L&M BELIEFS ATTRIBUTES (TOTAL).....	98
TABLE 21	RAW SCORES ON L&M BELIEFS ATTRIBUTES	99
TABLE 22	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS – SUMMARY OF STATISTICAL TESTING ON SENSORY ATTRIBUTES –	100
TABLE 23	EFFECTS OF INFORMATION TOOLS (TOTAL) – DIFFERENCES AND DEVIATIONS ON SENSORY ATTRIBUTES –	101
TABLE 24	MAIN EFFECTS OF <u>ENGLISH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON SENSORY ATTRIBUTES –	102

TABLE OF CONTENTS

(Continued)

TABLE 25	MAIN EFFECTS OF <u>FRENCH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON SENSORY ATTRIBUTES –	103
TABLE 26	RAW SCORES ON SENSORY PROFILE (TOTAL)	104
TABLE 27	RAW SCORES ON SENSORY PROFILE	105
TABLE 28	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS (TOTAL) – SUMMARY OF STATISTICAL TESTING ON PRODUCT PERSONALITY ATTRIBUTES –	106
TABLE 29	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS – SUMMARY OF STATISTICAL TESTING ON PRODUCT PERSONALITY ATTRIBUTES –	107
TABLE 30	EFFECTS OF INFORMATION TOOLS (TOTAL) – DIFFERENCES AND DEVIATIONS ON PRODUCT PERSONALITY ATTRIBUTES –	108
TABLE 31	EFFECTS OF <u>ENGLISH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON PRODUCT PERSONALITY ATTRIBUTES –	109
TABLE 32	MAIN EFFECTS OF <u>FRENCH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON PRODUCT PERSONALITY ATTRIBUTES –	110
TABLE 33	RAW SCORES ON PRODUCT PERSONALITY PROFILE (TOTAL)	111
TABLE 34	RAW SCORES ON PRODUCT PERSONALITY PROFILE	113
TABLE 35	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS – SUMMARY OF STATISTICAL TESTING ON BEHAVIOURAL ATTRIBUTES –	115
TABLE 36	EFFECTS OF INFORMATION TOOLS (TOTAL) – DIFFERENCES AND DEVIATIONS ON BEHAVIOURAL ATTRIBUTES –	116
TABLE 37	EFFECTS OF <u>ENGLISH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON BEHAVIOURAL ATTRIBUTES –	117
TABLE 38	MAIN EFFECTS OF <u>FRENCH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON BEHAVIOURAL ATTRIBUTES –	117
TABLE 39	RAW SCORES ON BEHAVIOURAL ATTRIBUTES (TOTAL)	118
TABLE 40	RAW SCORES ON BEHAVIOURAL ATTRIBUTES	119
TABLE 41	PERCEIVED INFORMATIVENESS OF INFORMATIONAL TOOLS (TOTAL)	120
TABLE 42	PERCEIVED INFORMATIVENESS OF INFORMATIONAL TOOLS	121

APPENDIX 1 - QUESTIONNAIRE (English and French version)

APPENDIX 2 - NEW L&M HWMs WITH DESCRIPTOR (Scenario A)

APPENDIX 3 - NEW L&M INSERT (Scenario B)

APPENDIX 4 - CURRENT HWMs WITHOUT DESCRIPTOR (Scenario C)

APPENDIX 5 - CURRENT HWMs WITH DESCRIPTOR (Control – Scenario D)

1. EXECUTIVE SUMMARY

1.1 PURPOSE OF THE STUDY

- This study was designed to provide Health Canada with quantitative data regarding the impact of information used on cigarette packages with respect to "light" and "mild" (L&M) cigarette descriptors on smokers' knowledge, attitudes and behaviour. Four informational scenarios (A, B, C and D) were investigated. The results may be useful to guide future decisions regarding health warning messages (HWM) and health information inserts.
- Using the Current HWMs with descriptor as a control measure (referred in the report as informational **scenario D**), the impact on smokers' knowledge, attitudes and behaviour was measured for each of the following 3 new scenarios / options, using objective measures of impact (pre and post exposure) as well as subjective measures (opinion about the informative value of tools as stated directly by smokers):
 1. A new concept of L&M related HWMs with descriptor (referred in the report as **scenario A**)
 2. A new concept of L&M related Insert (referred in the report as **scenario B**)
 3. The Current HWM approach but without descriptor, as if current cigarette packages were sold without the "Light" or "Mild" descriptor (referred in the report as **scenario C**)

1.2 METHOD

Design

- This study applied an experimental approach in which the respondents were exposed to differing stimuli to which their reactions were measured according to a precise protocol. The study's findings were thus inferred by analysis of reactions to stimuli, and not by analysis of opinions expressed directly by the respondents.
- A 4 x 2 experimental design was used: exposure to information was the only within-respondents factor. The four informational scenarios (3 new and the control) and the two message language versions were the two between-respondents factors.
 - In any of the four experimental groups (the four informational scenarios), respondents were exposed to only one mock-up illustration of one informational scenario (HWM or insert).
 - In any of the three experimental groups exposed to HWMs, three HWMs were used and systematically rotated between respondents to ensure findings would not be "example-specific".

- Rotations incorporated in the ten versions of the questionnaire ensured that each HWM and the insert had a statistically equal opportunity of exposure.
- On all mock-ups of HWMs, the 50 percent of the cigarette package surface usually reserved for product branding purposes featured the same popular brand (DuMaurier).

Measures of impact

- To measure the effect of each of the three new scenarios, if any, objective as well as subjective measures of impact were used.
 - Conclusions about the effects of the new scenarios were based on the objective measures; the subjective measures were used only to provide some context to the findings.
- The objective measures were 28 criteria or properties aimed at assessing the impact of each scenario on five constructs:
 1. Perceived product strength/sensory profile (5)
 2. Product image/personality traits (12)
 3. Knowledge of L&M vs. regular cigarettes (5)
 4. Beliefs about smoking L&M cigarettes (3)
 5. Behavioural intentions (3)
- Differences prior to and after exposure to the mock-ups of the informational scenarios were calculated for each objective measure, and deviations from the current/control approach were tested for statistical significance.
 - The same series of 28 criteria were filled out by each respondent prior to exposure to a scenario and after.
 - "Effects of the new informational scenarios" were the deviations from the control, using the scale slides observed after exposure (pre vs. post differences).
- The subjective measures of impact (9) were opinions (directly stated by respondents) on nine aspects regarding the informative value of the information tools used.
- Differences of the subjective measures of impact from the current/control scenario were also calculated and tested for their statistical significance.

Statistical Testing

- Strict standards were used to decide whether to call a difference or a deviation from the control scenario "statistically significant". In order to earn this label:
 - The type I error of the conservative univariate Scheffé range tests for multiple comparisons was set at 0.05.
 - Univariate T-tests for paired comparisons must have had a type I error of less than 0.01, with a 95 percent confidence interval.
 - In addition, multivariate analysis of variance (Manova) was performed on the objective measures to corroborate conclusions drawn from univariate analysis.
- Finally, to conclude that a new informational scenario had a significant effect, two conditions had to be met:
 1. The deviation of a new informational scenario from the control scenario had to be statistically significant in the total sample (English and French sub-sample combined); and,
 2. The significant deviation in the total sample had to be corroborated in linguistic sub-samples (consistency).

Sample and experimental setting

- A total of N=1,229 smokers (18 years and over) of manufactured cigarettes with the L&M descriptor on the package participated in the study, between March 14 and 25, 2005.
 - N=611 were completed with the English version and N=618 with the French version of the informational scenarios.
 - N=150 interviews (approximately) were completed per experimental group and per linguistic version of each of the scenarios.
- Data were collected in ten shopping malls (5 English across Canada and 5 French in Quebec).
 - N=120 (approximately) interviews were completed in each of the ten shopping malls (n=30 per experimental group).
 - The questionnaire (25 minutes in length) was built on previous experiments conducted for Health Canada on HWMs. Several scales were self-administrated and some were those used by the tobacco industry on a common basis to conduct product and positioning tests for "low yield" brands.

Limitations

- As for all laboratory studies, this study suffers from the generic limitations of forced exposure to material in that the external validity is sacrificed at the cost of internal validity.¹
 - It is possible that under natural viewing conditions smokers will only choose to expose themselves to information of their choice.
 - This possibility applies essentially to the insert, and to a much lesser extent to the HWMs. Therefore, the significant "reduced L&M confusion" effects observed for the insert may or may not materialize in a natural setting (real life), depending on its ability to attract attention and motivate reading.

1.3 SMOKERS' CONFUSION ABOUT L&M VS. REGULAR CIGARETTES

- Measures taken prior to exposure on beliefs, perceived strength and knowledge of L&M vs. regular cigarettes substantiated past studies regarding the misleading influence of the L&M descriptor (see Tables below).
- Pre-exposure measures indicated that many of the L&M smokers surveyed:
 - shared the perception that L&M cigarettes are weaker/safer than regular cigarettes;
 - reported they smoked L&M cigarettes in the hope that they would reduce the risks of smoking. The tables below show the main results of the measures taken before exposure to the informational scenarios, on knowledge, beliefs and perceived product strength of L&M cigarettes.

¹ When we conduct experiments, our goal is to demonstrate cause and effect relationships between the independent and dependent variables.

Internal validity associated with experimental research refers both to how well the study was run (research design, operational definitions used, how variables were measured, what was/wasn't measured, etc.), and how confidently one can conclude that the change in the dependent variable was produced solely by the independent variable and not extraneous ones. Internal validity answers the question, "Was it really the exposure to the informational scenarios that caused the difference between the means/variances of the objective measures in the control and experimental groups?"

The extent to which a study's results (regardless of whether the study is descriptive or experimental) can be generalized/applied to other people or settings reflects its **external validity**. (For more details read: Campbell, D. T., & Stanley, J. C. (1966). *Experimental and quasi-experimental designs for research*. Chicago: Rand McNally).

PRIOR KNOWLEDGE OF AND BELIEFS ABOUT L&M VS. REGULAR CIGARETTES

	Total (1,229) %	English (611) %	French (618) %
KNOWLEDGE – % saying L&M cigarettes have/are lower/less*			
• Levels of nicotine	49	52	46
• Amounts of tar	46	52	41
• Amounts of chemicals and additives	38	42	35
• Harmful to health	25	27	20
• Risk of dying	19	25	15
BELIEFS – % saying they smoke L&M cigarettes because they believe they reduce**			
• The risks of smoking	21	26	17
• The amount of tar you inhale	34	40	28
• The risk to your health	22	25	19

* 5-point scale used where "1" means much higher/more, "2" somewhat higher/more, "3" same level/amount, "4" somewhat lower/less and "5" much lower/less. Only bottom 2 box scores (4 and 5) are reported.

** Dichotomous scale used (yes/no). Only "yes" percentages are reported.

PRE-EXPOSURE PERCEIVED STRENGTH OF L&M CIGARETTES

% saying it happens when you smoke L&M cigarettes	Total (1,229) %	English (611) %	French (618) %
▪ Draw effort / pull			
– Hard	18	20	16
– Easy	47	40	54
▪ Taste / flavour			
– Pleasant	52	50	55
– Unpleasant	15	16	14
▪ Initial satisfaction			
– High	41	40	41
– Low	22	18	25
▪ Throat catch / hit			
– High	23	26	21
– Low	43	35	50
▪ Toxicity			
– High	58	51	66
– Low	13	14	12

N.B. Top 2 box scores (ex. hard) or bottom 2 box scores (ex. easy) of 5-point semantic differential scale used.

1.4 OVERVIEW OF FINDINGS

- Based on multivariate and univariate testing, as well as consistency of findings across linguistic versions of the information tools, the following significant effects were observed:

1. Eight of the 28 objective measures (pre vs. post exposure differences) registered a significant deviation from the control scenario, for at least one new scenario.
2. All significant objective effects showed that a reduction of smokers' confusion about L&M cigarettes vs. regular cigarettes occurred after exposure to at least one new information tool.
3. All significant objective effects were of small amplitude. The largest significant deviation found in the total sample represented 7 percent of the scale points used.
 - These findings suggest that the new informational scenarios that had significant effects in this experimental design may need additional support to materialize in a natural context.
4. Most of the significant objective effects were observed on knowledge of L&M vs. regular cigarettes, followed by effects on sensory profile of L&M cigarettes and one effect on behavioural intentions.
5. No significant objective effects were observed for any new scenarios with regard to beliefs about smoking L&M cigarettes or product personality traits of L&M cigarettes.
 - These findings confirm that beliefs about smoking L&M cigarettes are so strongly entrenched that the new informational scenarios may need additional support if their significant effects are to materialize in a natural context and translate into behavioural change.
6. Scenario B, the insert, was the only new scenario to have highly significant objective effects on knowledge of L&M vs. regular cigarettes and on the sensory profile of L&M cigarettes.
7. All three new scenarios had a significant objective effect on the behavioural intention to quit smoking, but the highest significant effect was observed for new scenarios A (L&M HWMs with descriptor) and C (current HWMs without descriptor).
 - Findings for scenario A suggest that new L&M HWMs had the ability to make smoking less attractive, even if their packaging displayed the L&M descriptor.
 - Findings for scenario C suggest that the L&M descriptor associated with current HWMs supports smokers' confusion about L&M vs. regular cigarettes.
8. The new scenarios B (insert) and A (new HWMs with descriptor) were perceived as significantly more informative (subjective measures) than the control scenario D (current HWMs with the descriptor).

9. There was no difference in perceived informative value between current HWMs with (control scenario D) or without (new scenario C) the L&M descriptor.

- These findings suggest that the L&M descriptor was not acknowledged as an informative feature about L&M cigarettes.

- Overall, the findings indicated that the insert (scenario B) had the ability to change the previous knowledge smokers had of L&M cigarettes, to reduce the perception gap about the weaker/safer aspects of these so-called "light" and "mild" cigarettes and that its informative value was well acknowledged by the smokers of L&M cigarettes surveyed.
 - In summary, because it had objective effects on knowledge and perceptions, the informative power of the insert was demonstrated in this experiment and acknowledged by respondents.
- However, the new HWMs with the L&M descriptor emerged as more persuasive than the insert (objective effect on the behavioural intention to quit smoking), even if its informative power was lower, albeit significant.
- A correspondence analysis relating all significant objective and subjective effects confirmed the distinct impact of the new scenarios and further suggested that the ideal option would be a combination of new L&M HWMs and the new L&M insert, should the L&M descriptor not be removed on packages with current HWMs.

1.5 EFFECTS OF NEW SCENARIOS ON KNOWLEDGE

- The next table summarizes the results of statistical analysis of the deviations of the new scenarios from the control scenario on respondents' knowledge of L&M vs. regular cigarettes.
- As can be seen, the L&M insert (scenario B) had the strongest impact on previous knowledge. It clearly brought L&M cigarettes closer to regular cigarettes in terms of:
 - levels of nicotine
 - amounts of tar
 - risk of dying
 - harmfulness to health
- HWMs with the L&M descriptor (scenario A) increased the perceived levels of nicotine contained in L&M cigarettes, but this effect was significant only with the less stringent T-test at $P < 0.05$.
- Current HWMs without descriptor (scenario C) increased the perceived risk of dying from smoking L&M cigarettes, but this effect was significant only with the less stringent T-test at $P < 0.05$.
 - Although not highly significant, this deviation of scenario C from the control scenario D (current HWMs with descriptor) supports the hypothesis that the L&M descriptor on cigarette packages is a false reassurance and, therefore, a source of confusion.

EFFECTS OF NEW SCENARIOS ON KNOWLEDGE

Knowledge of L&M vs. regular cigarettes	Scenario A New HWMs with descriptor	Scenario B Insert	Scenario C Current HWMs without descriptor
Levels of nicotine	π	☆	NS
Amounts of chemicals and additives	NS	NS	NS
Amounts of tar	NS	☆	NS
Harm to health	NS	▣	NS
Risk of dying	NS	☆	π

☆ *Scheffé test significant at $P < 0.05$*

▣ *T-test significant at $P < 0.01$*

π *T-test significant at $P < 0.05$*

NS *not significant*

1.6 EFFECTS OF NEW SCENARIOS ON SENSORY PROFILE (PERCEIVED STRENGTH)

- The next table consolidates the results of statistical analysis of the deviations of the new scenarios from the control scenario in terms of the perceived strength of L&M cigarettes.
- As can be seen, only the insert (scenario B) had significant effects. It was the only new scenario able to influence (stronger than previously thought) the perceived strength of L&M cigarettes in terms of:
 - higher effort for drawing cigarettes to get a satisfactory puff;
 - harder throat catch/hit as the smoke contacts the throat; and,
 - higher toxicity, harmful effects.

EFFECTS OF NEW SCENARIOS ON SENSORY PROFILE

Sensory attributes	Scenario A New HWMs with descriptor	Scenario B Insert	Scenario C Current HWMs without descriptor
Draw effort/pull	NS	☆	NS
Taste/flavour	NS	NS	NS
Initial satisfaction	NS	NS	NS
Throat catch/hit	NS	☆	NS
Toxicity	NS	π^*	NS

* *Because the insert had highly significant effects on knowledge (increased levels of nicotine, amounts of chemicals, amounts of tar, etc.), this effect on sensory profile (perceived toxicity) was also considered as highly significant in the interpretation of findings.*

☆ *Scheffé test significant at $P < 0.05$*

▣ *T-test significant at $P < 0.01$*

π *T-test significant at $P < 0.05$*

NS *not significant*

1.7 EFFECTS OF NEW SCENARIOS ON BEHAVIOURAL INTENTIONS

- The next table summarizes the results of statistical analysis of the deviations of the new scenarios from the control scenario on respondents' behavioural intentions.
- As can be seen, all three new scenarios made smoking L&M cigarettes less attractive: more respondents reported the intention to quit smoking after exposure to their respective information.
 - This effect was highly significant for HWMs, with or without descriptor on cigarette packages (scenarios A and C) but, for the insert, it was significant only with the less stringent T-test at $P < 0.05$.
 - These findings suggest that HWMs are more convincing than the insert.
 - Also, these findings regarding the effect of current HWMs without descriptor substantiate the hypothesis that the L&M descriptor supports smokers' confusion about L&M vs. regular cigarettes.

EFFECTS OF NEW SCENARIOS ON BEHAVIOURAL INTENTIONS

Behavioural intentions	Scenario A New HWMs with descriptor	Scenario B Insert	Scenario C Current HWMs without descriptor
Will switch from L&M to regular	NS	NS	NS
Will quit smoking	★	π	★
Will reduce smoking	NS	NS	NS

★ Scheffé test significant at $P < 0.05$

▣ T-test significant at $P < 0.01$

π T-test significant at $P < 0.05$

NS not significant

1.8 SUMMARY RESULTS OF STATISTICAL TESTING OF ALL OBJECTIVE EFFECTS

- The next table consolidates the results of statistical testing of all 28 objective effects (deviations from control) of the new informational scenarios.

SUMMARY RESULTS OF STATISTICAL TESTING OF
NEW SCENARIOS' OBJECTIVE EFFECTS

Attributes	Scenario A New HWMs with descriptor	Scenario B Insert	Scenario C Current HWMs without descriptor
Knowledge of L&M vs. regular cigarettes			
Levels of nicotine	π	★	NS
Amounts of chemicals and additives	NS	NS	NS
Amounts of tar	NS	★	NS
Harm to health	NS	▣	NS

Attributes	Scenario A New HWMs with descriptor	Scenario B Insert	Scenario C Current HWMs without descriptor
Risk of dying	NS	★	π
Sensory profile / perceived strength of L&M cigarettes			
Draw effort/pull	NS	★	NS
Taste/flavour	NS	NS	NS
Initial satisfaction	NS	NS	NS
Throat catch/hit	NS	★	NS
Toxicity	NS	π*	NS
Behavioural intention			
Will switch from L&M to regular	NS	NS	NS
Will quit smoking	★	π	★
Will reduce smoking	NS	NS	NS
Personality traits of L&M cigarettes			
Risk-takers / Very prudent	NS	NS	NS
Concerned for others / Selfish	NS	NS	NS
Health negligent / Health conscious	NS	NS	NS
Financially secure / Poor	NS	NS	NS
Image conscious / Sloppy	NS	NS	NS
Straight / Cool	NS	NS	NS
Leader / Follower	NS	NS	NS
Higher education / Low education	NS	NS	NS
In control of their destiny / Fatalists	NS	NS	NS
Afraid of death / Do not worry about the death	NS	NS	NS
Disciplined / Disorganised	NS	NS	NS
Rebellious / Follow the rules	NS	NS	NS
Beliefs about smoking L&M cigarettes			
They reduce the risks of smoking without having to actually give up smoking	NS	NS	NS
They reduce the amount of tar you inhale compared to <u>regular</u> cigarettes	NS	NS	NS
They reduce the risk to your health compared to <u>regular</u> cigarettes	NS	NS	NS

* Because the insert had highly significant effects on knowledge (increased levels of nicotine, amounts of chemicals, amounts of tar, etc.), this effect on sensory profile (perceived toxicity) was also considered as highly significant in the interpretation of findings.

★ Scheffé test significant at $P < 0.05$

□ T-test significant at $P < 0.01$

π T-test significant at $P < 0.05$

NS not significant

1.9 INFORMATIVE VALUE OF SCENARIOS

- The next table summarizes the results regarding the perceived informative value of the new scenarios tested (subjective measures).
- As can be seen, the current HWMs without descriptor (scenario C) elicited the same perceptions as the current HWMs with descriptor (control) and therefore were not acknowledged as more informative.
 - These findings suggest that the presence of the L&M descriptor was not acknowledged by respondents as an informative feature about L&M cigarettes.
 - However, we observed in the objective measurements that the presence of the L&M descriptor had objective effects (keeps smokers' confusion alive).
- Overall, both scenario B and A (both containing L&M related information) were acknowledged as more informative about L&M cigarettes than the control scenario.
- Scenario B (insert) got the highest ratings of overall informative value and also tested significant on five specific attributes of informative value:
 - Accuracy of information
 - Believability of information
 - Personal relevance of information
 - Informs about health effects
 - *Provides new information*
- Scenario A (HWMs with descriptor), although perceived as less informative than the insert, overall, tested significant on:
 - Accuracy of information
 - Believability of information
 - Personal relevance of information
 - Informs about health effects
 - *Makes smoking less attractive*

As can be seen, the current HWMs without descriptor (scenario C) elicited the same perceptions as the current HWMs with descriptor (control) and therefore were not acknowledged as more informative.

→ These findings suggest that the presence of the L&M descriptor was not acknowledged by respondents as an informative feature about L&M cigarettes.

→ However, we observed in the objective measurements that the presence of the L&M descriptor had objective effects (keeps smokers' confusion alive).

- Overall, both scenario B and A (both containing L&M related information) were acknowledged as more informative about L&M cigarettes than the control scenario.

- Scenario B (insert) got the highest ratings of overall informative value and also tested significant on five specific attributes of informative value:

- Accuracy of information
- Believability of information
- Personal relevance of information
- Informs about health effects
- *Provides new information*

- Believability of information

→ Personal relevance of information

- Informs about health effects

→ Provides new information

- Scenario A (HWMs with descriptor), although perceived as less informative than the insert, overall, tested significant on:

- Accuracy of information
- Believability of information
- Personal relevance of information
- Informs about health effects
- *Makes smoking less attractive*

→ Believability of information

→ Personal relevance of information

- Informs about health effects

→ *Makes smoking less attractive*

PERCENT DEVIATION OF NEW SCENARIOS' INFORMATIVE VALUE FROM THE CONTROL SCENARIO

	Scenario A New HWMs with descriptor	Scenario B Insert	Scenario C Current HWMs without descriptor
Overall – informs you about the health effects of smoking L&M cigarettes	+14%*	+25%	NS
1. This warning message contains accurate information about light or mild cigarettes	+16%	+16%	NS

	Scenario A New HWMs with descriptor	Scenario B Insert	Scenario C Current HWMs without descriptor
2. The information that this warning message provides about light or mild cigarettes is believable	+9%	+13%	NS
3. This warning message provides information about the health effects of smoking light or mild cigarettes that is relevant to me	+17%	+19%	NS
4. This warning message makes smoking seem less attractive	+11%	NS	NS
5. This warning message makes me want to quit smoking	NS	NS	NS
6. This warning message makes me want to smoke less	NS	NS	NS
7. This warning message gives me information I did not know about light or mild cigarettes	NS	+17%	NS
8. This warning message shocked me	NS	NS	NS

* *READ: Scenario A obtained an average rating of overall informative value 14 percent higher than the control scenario and this increased informative value was significant at $F < 0.05$. Only significant deviations are shown in the table.*

NS not significant

1.10 MAPPING OF THE NEW SCENARIOS' EFFECTS

- To help visualize the significant effects the new scenarios had, we performed a correspondence analysis between the new scenarios and the 14 attributes (8 objective and 6 subjective) significantly influenced by at least one scenario.
 - As no significant objective effects were observed for any new scenarios with regard to beliefs about smoking L&M cigarettes or product personality traits, none of these attributes were included in the mapping.
- Based on the positioning of the new information tools in the sphere of effects, we can substantiate the following two hypotheses (see map on page 14):
 - The removal of the L&M descriptor from cigarette packages using the current HWMs (scenario C) had the tendency to change the previous knowledge smokers had of the nicotine and tar content of L&M vs. regular cigarettes, and increase smokers' perception of the health risks of smoking L&M cigarettes.
 - However, this effect for scenario C was not statistically significant and should be considered only as a distinct tendency of this scenario when all significant deviations of all new scenarios are considered. Because scenario

C significantly influenced the intention to quit smoking, this tendency is worth noting as it may be an improvement over the current situation.

2. A combination of new HWMs with the L&M descriptor (scenario A) plus the new L&M insert (scenario B) would be the best option, because their objective effects seem to reinforce or complement each other and because they were both acknowledged by L&M smokers as more informative than the current situation.

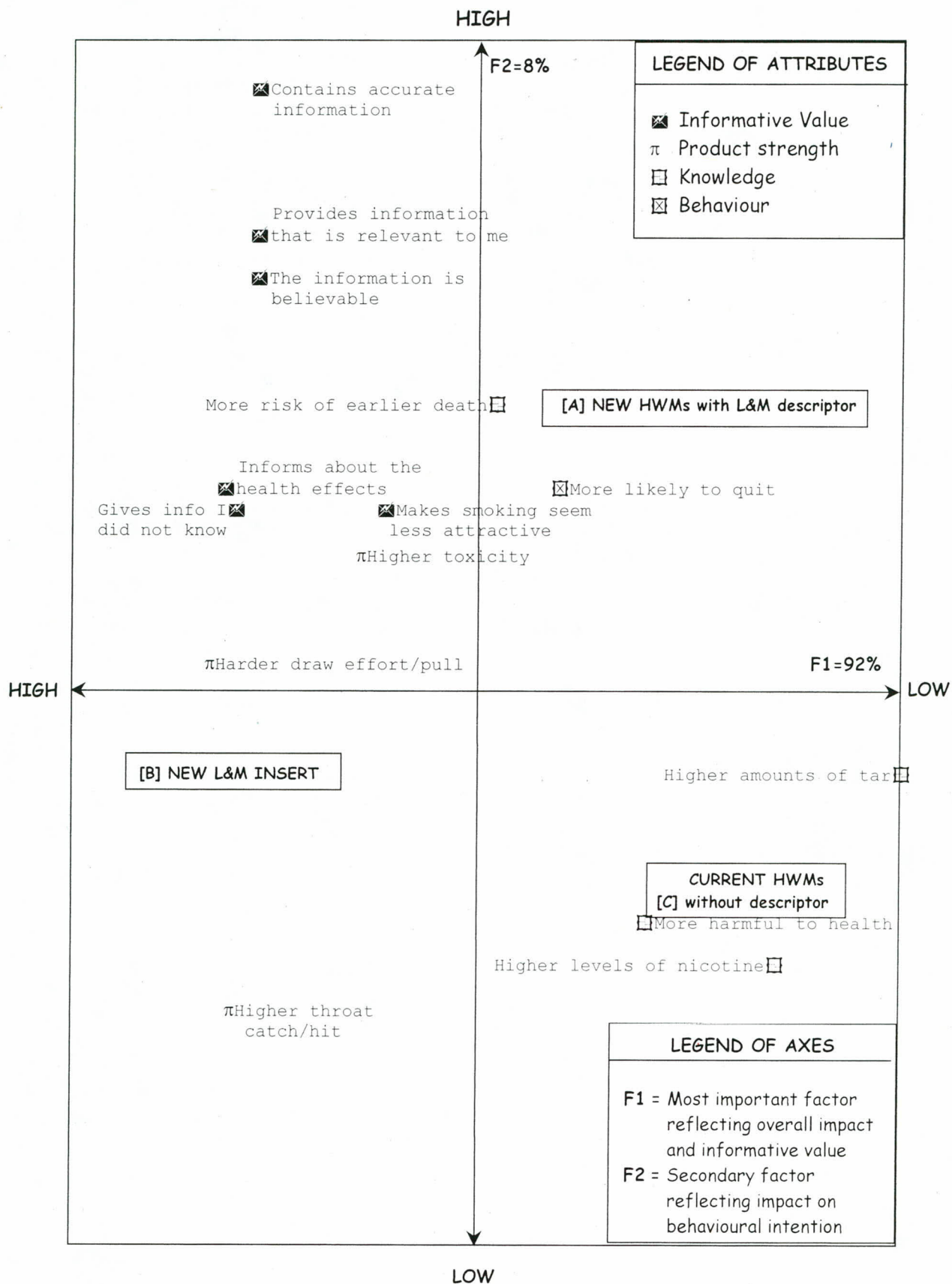
- This combined scenario would reduce confusion about the strength of L&M cigarettes (a significant effect of the L&M insert but not of the HWMs with or without descriptor) and increase the propensity to quit smoking (a highly significant effect of the HWMs (with or without descriptor) but less significant for the L&M insert).

- Overall, the mapping confirmed that the insert had the most influence on previous knowledge and sensory profile of L&M cigarettes and that the new L&M related HWMs were more convincing, more likely resulting in behavioural change.

1.11 CONCLUSION

- The greatest advantage of experimental designs is the control over the context in which the object of investigation appears. Because of this, it is possible to attribute the effects to the test material rather than uncontrolled factors. The downside with experimental designs is that it is a forced exposure method, which forces the processing of information (people pay more attention to the material than they would normally). The smaller the effects, the less likely they are to be observed in natural or real-life situations.
 - The types of information tools tested may need additional support to ensure their effects materialize in a natural context.
- That being said, this experiment demonstrated that new L&M related information in and on cigarette packages can reduce smokers' confusion about the properties of L&M vs. regular cigarettes by changing their previous knowledge and perceived product strength, and making smoking L&M cigarettes less attractive.

MAP OF 14 SIGNIFICANT EFFECTS OF NEW SCENARIOS



2. BACKGROUND

INTRODUCTION

- Over 45,000 Canadians die every year as a result of illness caused by using tobacco, making it the most pressing public health issue in the country.
- In recent years, Health Canada has conducted a range of surveys and studies on "light" or "mild" descriptors and cigarettes, indicating that the descriptor means a safer / healthier cigarette to a substantial proportion of smokers.
 - Other surveys have also shown that many smokers remain confused about the actual content of so-called "light" cigarettes.
 - Thus it has been found that many smokers think that "L&M" cigarettes deliver less tar and nicotine and that, in general, they are less harmful and help people to quit smoking.²

THE "LIGHT" OR "MILD" DESCRIPTOR

- "Light" cigarettes were introduced in the 1960s in response to the numerous epidemiological studies in the 1950s that demonstrated a link between lung cancer and smoking.
 - In the year 2004, so called "light" or "mild" cigarettes accounted for 52 percent of all manufactured cigarettes sold in Canada.
- In recent decades, other industries have also begun to market product lines labelled "light" — for example, "light" foods and "light" beer. The labels on these products follow regulated standards, and their meaning is well defined, which assures consumers that a food labelled "light" generally represents a healthier choice. In this context, it has become natural for consumers to think that the extension of "light" labelling to tobacco products offers them the same guarantees, but, unfortunately, it does not.
- As the tobacco industry itself admits, the "light" label is used for product positioning and does not necessarily have any objective connection to information on toxic substances printed on cigarette packages. It is also well documented that the tar and nicotine content of a "light" cigarette, as measured by laboratory instruments, does not correspond to the content to which consumers are ultimately exposed.

² "Beliefs about 'Light' and 'Ultra Light' Cigarettes and Efforts to Change those Beliefs: An Overview of Early Efforts and Published Research", Kozlowski, Lynn T.; Pillitteri, Janine L.; Tobacco Control 2001; "Smokers' Beliefs about 'Light' and 'Ultra Light' Cigarettes", Shiffman; Paul; Pillitteri, Janine L.; Burton, Steven L.; Rohay, Jeffrey M.; Gitchell, Joe G.; Tobacco Control 2001; "Do 'Light' Cigarettes Undermine Cessation?", Hughes, John R., Tobacco Control 2001.

PURPOSE OF THE STUDY

- The overall purpose of this research was to provide Health Canada with quantitative data regarding the impact of information used on cigarette packages with respect to "light" and "mild" (L&M) cigarette descriptors on smokers' knowledge, attitudes and behaviour. The results may be useful to guide future decisions regarding health warning messages (HWM) and health information inserts.
- Using the Current HWMs with descriptor as a control measure, the impact on smokers' knowledge, attitudes and behaviour was measured for each of the following 3 new scenarios/options, using objective measures of impact (pre and post exposure) as well as subjective measures (opinion about the informative value of tools as stated directly by smokers):
 1. A new concept of L&M related HWMs with descriptor
 2. A new concept of L&M related Insert
 3. The Current HWM approach but without descriptor, as if current cigarette packages were sold without the "Light" or "Mild" descriptor.

3. RESEARCH OBJECTIVES

- Using objective measures as well as subjective measures, Health Canada wanted to compare the impact of three new scenarios/options to inform smokers through cigarette packages, using a fourth scenario, the current HWM approach with the L&M descriptor, as a benchmark (**control scenario D**).
- The three new scenarios were:
 1. **Scenario A:** a new concept of L&M related HWMs with the L&M descriptor on cigarette packages; and,
 2. **Scenario B:** a new concept of an L&M related insert;
 3. **Scenario C:** the current HWM approach without the L&M descriptor.
- For the purpose of this study:
 - L&M related information is information displayed outside (HWMs) or inside cigarette packages (health information messages) that directly addresses the health effects or issues associated with cigarettes sold with the "light" or "mild" package descriptors.
 - Objective measures of impact of the new scenarios are differences/scale slides between pre and post exposure, and their deviations from the control scenario.
 - Subjective measures of impact are opinions about the informative value of scenarios as perceived and directly stated by respondents.

OBJECTIVE MEASURES

- The following five constructs were used for the objective measures:
 1. Perceived product strength/sensory profile
 2. Product image/personality traits
 3. Knowledge of L&M cigarettes compared to regular cigarettes
 4. Beliefs about smoking L&M cigarettes
 5. Behavioural intentions
- More precisely, the following 28 criteria or properties were used to assess the impact:
 - **Sensory profile / perceived product strength – 5 attributes**
 1. Draw effort/pull
 2. Taste pleasantness
 3. Initial satisfaction
 4. Throat catch / hit
 5. Toxicity
 - **Product image / personality traits – 12 attributes**
 1. Health conscious / health negligent
 2. Image conscious (concerned about his/her image) / sloppy
 3. Cool / straight
 4. Leader / follower
 5. Disciplined / disorganised
 6. Rebellious / follows the rules
 7. Higher education / lower education
 8. In control of their destiny / fatalist
 9. Risk-taker / very prudent
 10. Concerned for others / selfish
 11. Financially secure / poor
 12. Afraid of death / does not worry about death
 - **Knowledge of L&M vs. regular cigarettes – 5 attributes**
 1. Level of nicotine
 2. Amount of chemicals and additives
 3. Amount of tar
 4. Harmfulness to health
 5. Risk of dying from smoking
 - **Beliefs about smoking L&M cigarettes – 3 attributes**
 1. Reduces the risks of smoking without having to give up smoking
 2. Reduces the amount of tar inhaled
 3. Reduces the risk to your health

→ Behavioural intentions – 3 scales

1. Intention to switch from L&M to regular cigarettes
2. Intention to reduce the number of cigarettes smoked
3. Intention to quit smoking

SUBJECTIVE MEASURES

- In addition, Health Canada wanted to get first-hand feedback (opinions of smokers) on the informative value of the tools used (as perceived and stated directly by smokers).
- The following 9 informational aspects were used for the subjective measures:
 1. Overall informative value
 2. Accuracy
 3. Believability
 4. Relevance
 5. Newness
 6. Making smoking less attractive
 7. Making me want to smoke less
 8. Making me want to quit smoking
 9. Shocking

4. MATERIAL TESTED

(Mock-ups supplied by Health Canada for testing are appended to this report).

MOCK-UPS OF HWMS

- Based on results from past research, Health Canada developed a series of "light" and "mild" health warning message mock-ups (L&M HWMs) for research purposes. For the purpose of this study, the following mock-ups were selected:
 - Three English and three French L&M HWMs with descriptor; and,
 - Three current HWMs with and without descriptor.
 - The English and French HWM mock-ups were flat and printed on cardstock, sized at 4 inches by 3 inches, imitating an actual 25-cigarette pack size, with the HWM taking up the top 50% of the surface area and the brand name occupying the bottom 50% of the surface area.
 - The English and French mock-ups were identical linguistic versions of the same HWMs.

MOCK-UP OF INSERT

- In addition, also for research purposes, Health Canada developed one bilingual cigarette pack insert (health information message) mock-up.

→ The insert mock-up resembled a leaflet which measured approximately 2 inches by 3.5 inches with the English health information message on one side and the French health information message on the other.

- For further information on current health warning messages and health information messages found on cigarette packaging, please refer to the following link: <http://www.hc-sc.gc.ca/hecs-sesc/tobacco/legislation/warnings/warnings.html>.

5. TARGET POPULATION

- This study targeted smokers of cigarettes with "light" or "mild" descriptors, 18 years of age and over.
 - The prevalence of smokers of cigarettes with "light" or "mild" descriptors (aged 18 and above) is approximately 12-13 percent of the Canadian population (2003 Annual Canadian Tobacco Use Monitoring Survey).

6. METHODOLOGY

6.1 INTERVIEW METHOD

- All data was collected face-to-face. Interviews averaged 25 minutes in length, allowing for the targeted smokers to actually see the mock-ups, to provide their impressions before and after exposure to HWMs or inserts, and to provide their opinion of the informative value of these information tools.
- The face-to-face interview setting selected for this study was shopping mall intercept, which:
 - Provided the best information value for the budget available with a low-incidence target population.
 - Has proven to be a reliable setting in previous studies based on an experimental design.
 - Provided an appropriate setting to apply and control uniformly-complex interview protocols, such as for this study.
 - Is widely used for research designs primarily focussed on comparability of sub-groups rather than on representativeness of an overall sample.

- The questionnaire was administered according to a precise experimental plan designed to balance:
 - The two health information tools (HWM and insert);
 - The two official languages / versions of the information tools.
- Each respondent received a \$10 incentive at the end of the interview for their time.

6.2 EXPERIMENTAL DESIGN

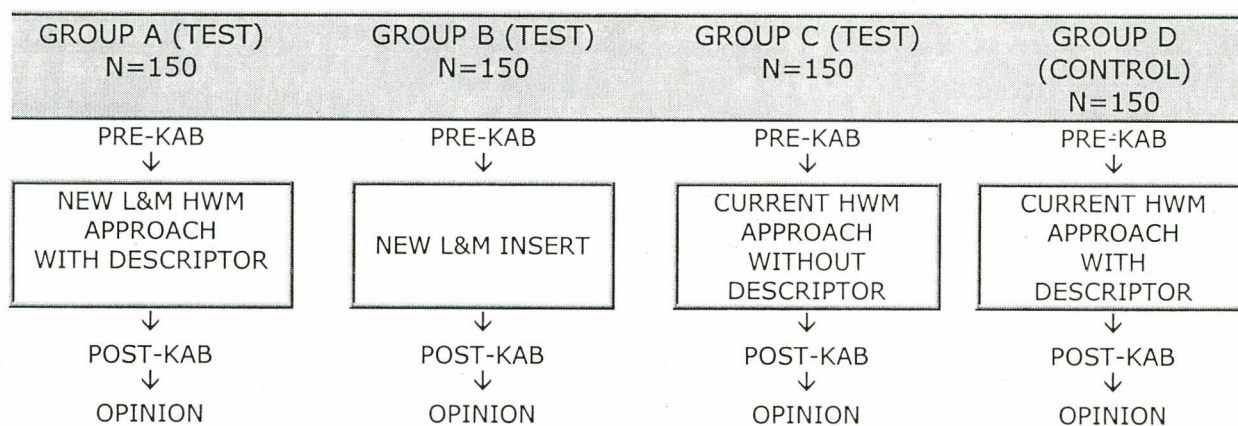
- *Note that because previous research provided evidence that a French version of the same English HWM may have a different resonance, each set of information tools was considered a distinct set and therefore required a distinct sample and separate analyses. What follows describes the approach that was applied to each set of information tools / linguistic sample.*
- *Analysis was first conducted on the combined (English and French) total sample and then findings were verified in each of the two linguistic sub-samples.*
- This study differed from conventional public opinion research in the following ways:
 1. This study applied an experimental approach in which the respondents were exposed to differing stimuli to which their reactions were then measured according to a precise protocol. The study's findings were thus inferred by analysis of reactions to stimuli, and not by analysis of opinions expressed directly by the respondents.
 2. This study applied a set of perceptual scales and variables used in past experiments conducted by Health Canada, several of which are used by the tobacco industry on a common, standardized basis to conduct product and positioning tests for "low yield" brands.
- Each respondent was exposed to one of four main exposure sequences (scenarios), presented in the next table.
 - Each sequence differed only by the type of information tool tested.
 - The exposure sequence (scenario tested) was rotated between respondents.
 - In any exposure sequence, respondents were exposed to only one mock-up illustration of the information tool (HWM or insert).
 - In order to reasonably typify or represent an HWM approach, whether current or L&M related, three HWMs were used in the experiment and systematically rotated between respondents.
 - Each measure associated with a HWM approach was the average produced by the three HWMs randomly selected to represent this approach.
 - This ensured that findings applied to the HWM approach as an information tool (they were "generic", not "example-specific").

- For the purpose of this study, the 50% of the cigarette package surface usually reserved for product branding purposes featured the same popular brand (DuMaurier).
- One illustration for the insert was used for testing this informational scenario B.
- Because the insert contained more information than any one HWM alone, and presented more than one idea, this made it less "example specific" than any single HWM.
- Overall, each scenario / option was treated equally at the level of the respondent, because each respondent was exposed to only one illustration of the scenario / option tested in its experimental group.
- Differences prior to and after exposure to the mock-up tested were classified as the objective measures of impact, and opinions on its informative value were classified as the subjective measures of impact.
- The following table presents the four main exposure sequences used for each of the two linguistic populations. Symbols used to illustrate the sequences of exposure and interviewing are presented first.

SYMBOLS USED TO ILLUSTRATE THE FOUR EXPOSURE SEQUENCES (SCENARIOS TESTED)

KAB	=	Knowledge, attitudes and behaviour, same set before and after exposure (objective measures)
L&M HWMs	=	"Light" and "Mild" related HWMs (test messages – 3 English and 3 French)
HWMs	=	Current HWMs
INSERT	=	Insert (health information message)
OPINION	=	Opinion on the informative value of mock-ups (subjective measures)
WITH / WITHOUT	=	Mock-ups of HWMs with or without the L&M descriptor

MAIN EXPOSURE SEQUENCES



Rotations incorporated in the 10 versions of the questionnaire (A1/A2/A3, B, C1/C2/C3, D1/D2/D3) ensured that each HWM had a statistically equal opportunity of exposure.

6.3 SAMPLING

- A quota (convenience) sample of the target population, with a 50 / 50 split between English and French-speaking smokers and between males and females, was selected in shopping malls.

6.4 SAMPLE SIZE

- A total of N=1,229 interviews were completed, distributed equally across ten shopping malls and the two linguistic versions of the material.
 - N=611 interviews were completed for the English version of the material;
 - N=618 interviews were completed for the French version of the material;
 - Approximately N=150 interviews were completed per experimental group (scenario) and per linguistic version of each of the scenarios.
- It is important to note that the size of this experiment was comparable to what the tobacco industry generally uses in its image and product tests, as well as what has been used in previous TCP mall intercept studies.
 - The magnitude of the completed sample size was not made exaggeratedly large in order to make minimal differences significant.

6.5 LOCATION OF THE EXPERIMENTS

- Approximately N=120 interviews were completed in each of the following ten locations:

French speaking

- Montreal
- Sherbrooke
- Chicoutimi
- Québec
- Trois-Rivières

English speaking

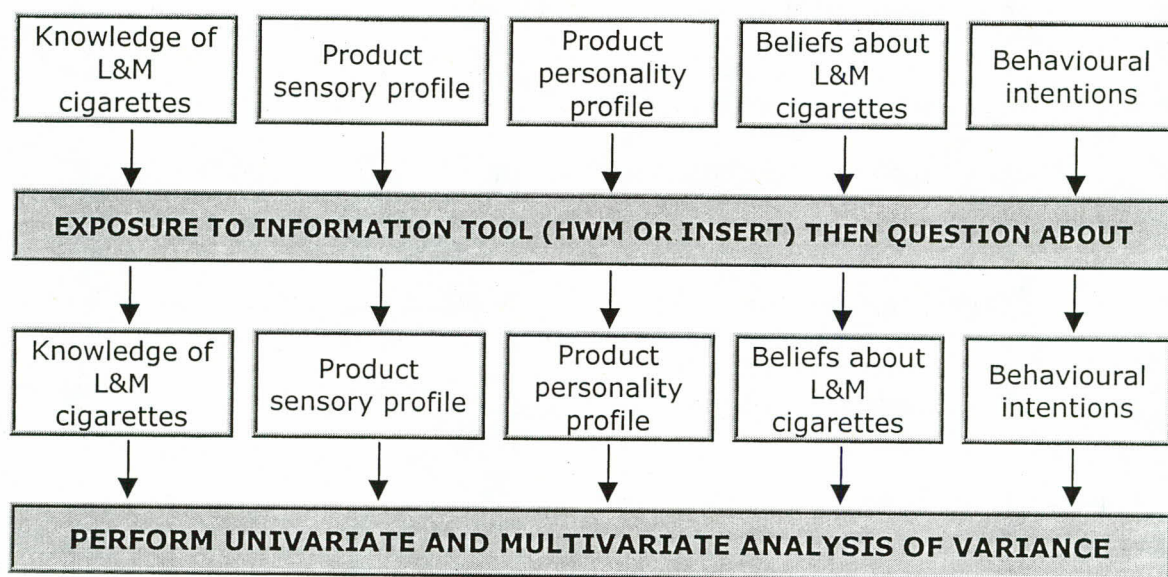
- Toronto
- Halifax
- Vancouver
- Calgary
- Winnipeg

6.6 QUESTIONNAIRE

- The questionnaire was designed in French and English by Créatec and was built on previous experiments conducted for Health Canada on HWMs. The average interview was approximately 25 minutes in length (see Appendix 2).
- To minimize bias, the experiment used a total of ten versions of the questionnaire.
- In all cases, the respondents were asked for their knowledge of L&M vs. regular cigarettes before being asked for their beliefs and impressions about the sensory profile and product personality of L&M cigarettes.
- The questionnaire was pre-tested with 16 Anglophones (4 for each main sequence of questionnaire) and 16 Francophones. Pre-test interviews were not included in the final sample.

Before and After Measures (Objective Measures)

- A series of 28 scales or attributes were administered before and after respondents were exposed to the material (HWM or insert), to assess its impact (see page 15 of Background section).
- Analysis of variance (univariate and multivariate) was the method of analysis used for the before / after data.
- The following diagram illustrates the process that was used to gather and analyze the data to test the impact (objective measures) of each of the scenarios/options.



Mapping the Impact (Objective Measures) of Scenarios/options

- To validate and help visualize the impact of the information tools associated with the new scenarios/options, a correspondence analysis was conducted and a map produced.
 - The mapping showed the positioning of the 3 new information tools and the objective measures of impact which tested as significant (14). (See map on page 77)

Opinion on the Informative Value of the Material Tested (Subjective Measures)

- To get formal feedback on each type of information tool that was tested, TCP provided a set of opinion questions that measured the perceived informative value of each of the information tools (agree/disagree statements about the material).
- Analysis of variance was the method of analysis used for the opinion data.

6.7 FIELD PROCEDURES

- About 30 interviewers attended a briefing session and a simulated interview.
- The interviews were distributed across ten shopping malls and were completed between March 14 and 25, 2005.
- A supervisor was always present at each interview site to validate the accuracy of each interviewer's work.
- During the week following completion of the field interviews, a follow-up validation was done on 10% of all the interviews, by telephone. In each telephone call, a few socio-demographic questions were verified.

6.8 CODING AND DATA ENTRY PROCEDURES

- There were no open-ended questions in the survey.
- The data-entry procedure consisted of the following steps:
 - quick review of the questionnaires to detect any obvious inconsistencies;
 - programming of the questionnaires into a data entry software module;
 - data entry; and,
 - logical validation of all responses.

6.9 STATISTICAL ANALYSIS

- Weightings were applied to the distribution of men and women, the exposure rotations to the stimuli, the shopping malls, and respondents' age. After weighting, banner tables of the responses were produced.

UNIVARIATE STATISTICAL TESTING

- The purpose of testing is to draw conclusions about the population based on results observed in a random sample. In order to perform a statistical test it is necessary to make certain assumptions about the data. Parametric tests, the same as those used in this study, assume groups are from a normal population and have equal variances. However, in many tests not all of these assumptions are equally important. Moderate violations of some assumptions may not always be serious.
 - For example, the T-test for equality of means is much less sensitive to departures from normality than the F-test for equality of variances.
 - In many instances, large sample sizes protect against moderate violations of the normality and equality of variance assumptions.
 - In addition, even if variances appeared to be different but the sample sizes in all groups are similar, there would be no cause for alarm since the F-test is not particularly sensitive to violations of equality of variance under such conditions.

- Finally, it should be noted that if samples are taken from a normal population, the sampling distribution of the sample mean would also be normal. Even when samples have been taken from a non-normal population, the distribution of the sample means would be approximately normal in sufficiently large samples.
- As mentioned previously, the sample sizes of this experiment were typical of what the tobacco industry generally uses and are not considered too large or too small, but sufficiently large, from a statistical point of view.
- However, larger sample sizes have a tendency to inflate some measures of statistical significance and may lead to false conclusions about effects and strength of associations, as smaller confidence intervals do. Some statistical tests are particularly susceptible to this, such as the Chi-square measure of association and the T-test of differences between means.
- Therefore, strict standards were used to decide whether to call a relationship or a difference "statistically significant". In order to earn this label, T-tests and Manova tests must have had a probability of a type I error of less than 0.01, with a 95% confidence interval. For the Scheffé range tests, the type I error was set at .005.
- In addition, significant deviations from the control scenario found in the total sample should be consistent (same direction) if not statistically significant in both linguistic sub-samples.
- Three types of statistical tests were performed (at a 95% confidence level) on the observed differences and deviations from the control scenario between the responses before vs. after exposure to the material.
- Univariate Scheffé range tests for multiple comparisons.
 - This method is conservative for paired comparisons of means. Because this test sets up more stringent criteria for declaring differences significant than the usual T-test, it protects against calling too many differences significant and determines the differences which are the most likely to be truly significant.
 - Therefore, to draw our conclusions, we first looked at the Scheffé tests.
- Univariate T-tests for paired comparisons.
- Multivariate Manova F-tests (Pillais, Hotellings, Wilks and Roys).
- In this report, the term "*significant differences*" means that the observed differences were probably "real" and not due to chance.

MULTIVARIATE ANALYSIS

- Multivariate analysis of variance (Manova) is a very flexible analytical method that can be applied to a variety of experimental designs, including the present one. The particular Manova model used in this study was the "*doubly multivariate repeated measures design*":

- the dependent variables (28) were the responses on the scales measuring the impact on Knowledge, Attitude and Behaviour (KAB);
 - exposure (pre vs. post) was the only within-subjects factor; therefore, data had to be organized in the "*multivariate rather than the univariate setup*" before analysis;
 - the new information tools (3) and genders (2) were the between-subjects factors; and,
 - there were no covariates.
- The model was multivariate in two senses: first, because the same scale (for example, a particular sensory profile attribute) was evaluated twice by the same respondent (before and after exposure); and second, because each respondent evaluated several scales in the same set (for example, the 5 attributes in the sensory profile).
 - In addition to the univariate tests, 30 Manova analyses were performed:
 - one analysis for the total sample; each of the two linguistic versions; and, each of the five sets of criteria (sensory profile, product personality, knowledge, beliefs, behaviour).

CORRESPONDENCE ANALYSIS

- As a general rule, correspondence analysis is a statistical method used specifically for the multivariate analysis of a rectangular table (e.g., scenarios/options and measures of impact) with numerical values so large that they prevent rapid assimilation of the information contained in the data set.
- The program allowed mapping to be performed on the same factor axes of the scenarios/options and the objective measures of impact.
- The basic principles for interpretation of a perceptual map obtained by correspondence analysis are:
 - a) Some degree of proximity between two scenarios/options means that the characteristics of the two scenarios/options are correlated to some degree, especially as the scenarios/options points become more distant from the point of origin.

The position of a point on a factor axis is the correlation coefficient of this scenario / option with the corresponding factor; thus, points located in the centre frame at the origin are not significantly correlated with the factors.
 - b) Proximity between two impact measures means that these two measures are correlated.
 - c) Finally, proximity between a scenario / option and an impact measure signifies, on average, that this impact is distinctive to this scenario / option.

7. DETAILED RESULTS

7.1 MEASURING EFFECTS AND PRESENTATION OF FINDINGS

This section provides the reader with some key definitions and concepts used throughout the report.

In addition, a concrete example is presented to illustrate calculations and concepts.

7.1.1 MEASURING EFFECTS

- Effects of exposure to scenarios were the differences between scores on the Knowledge, Attitude and Behaviour (KAB) scales before and after exposure to the information tools.
 1. These effects were scale slides immediately measured after exposure to the information tools.
- Effects of the new scenarios were measured by comparing effects of exposure to the new information tools with those of the control scenario.
 1. These effects were deviations of the new scenarios from the control scenario of the differences pre- vs. post-exposure (differential effect of exposure).
- Effects were examined in the total sample as well as for each linguistic version of each of the information tools.
- To analyze and report findings, a model of variance analysis was designed to address the purpose of the study. As stated in Section-3 – *Research Objectives* – the primary objective of this study was to compare the impact of new L&M related information that could be used on cigarette packages.
- To conclude that a new informational scenario had a significant impact, two conditions had to be met:
 1. The deviation of a new informational scenario from the control scenario had to be statistically significant in the total sample; and,
 2. The significant deviation in the total sample had to be corroborated in linguistic sub-samples (consistency).
- Consequently, we selected the following approach for calculating and testing effects of the informational scenarios (see diagram on page 30).

Univariate analysis

1. For each of the 28 individual attributes, we first determined the effects of exposure to each of the four informational scenarios.
 - This was the difference between scores before and after exposure to the information tools.

- Statistical significance of this difference was tested for each attribute and for each scenario. The results are included in the Summary Tables section of the report.
2. For each individual attribute, we then compared the effects of exposure to the new scenarios/options against those of the control/current scenario.
- These were the deviations of the new informational scenario's exposure effects from those of the control/current scenario.
 - Statistical significance of these deviations was tested (Scheffé and T-test) for each attribute and each new informational scenario. The results are included in the Summary Tables of this report and interpreted in the Detailed Findings section of the report.

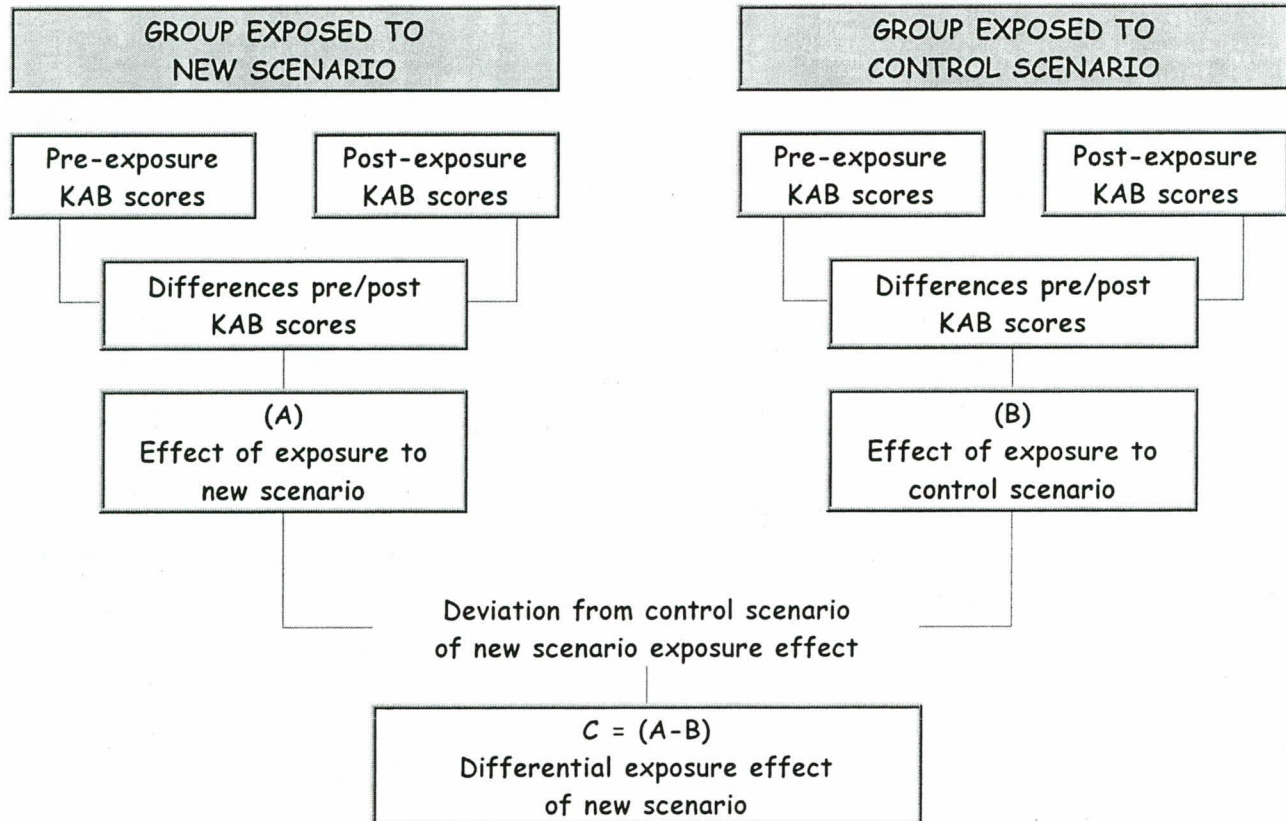
Multivariate analysis

- To verify if each of the three new scenarios had a significant influence on the entire set of attributes used (not only on some individual attributes but on the construct itself), we performed a multivariate analysis of variance (Manova: see Section 6.9 - *Statistical Analysis* - for more detail).
 - Multivariate effects of the three new scenarios were tested.
 - Interaction (multivariate) effects of the new scenarios and gender were also tested.
 - These multivariate findings were used to corroborate / validate conclusions drawn from the univariate analysis.

7.1.2 PRESENTING AND TESTING EFFECTS

- The following diagram illustrates the univariate approach followed to determine, for each individual attribute, the effect of exposure to a scenario and any deviation from the control/current scenario.
- This diagram is followed by a lay-out of a typical table used in this report to present findings on the observed effects (pre/post differences and deviations from the control), for each individual attribute.

HOW IMPACT OF EACH NEW SCENARIO/OPTION
WAS CALCULATED FOR EACH ATTRIBUTE
(UNIVARIATE ANALYSIS)



HOW EXPOSURE EFFECTS WERE TABULATED

KAB attributes	DIFFERENCES PRE- vs. POST-EXPOSURE			
	New scenarios			Control scenario
	<i>New L&M HWMs with descriptor</i>	<i>New L&M insert</i>	<i>Current HWMs without descriptor</i>	<i>Current HWMs with descriptor</i>
	(N)	(N)	(N)	(N)
Attributes	A	A	A	B

HOW DEVIATIONS FROM CONTROL SCENARIO WERE TABULATED

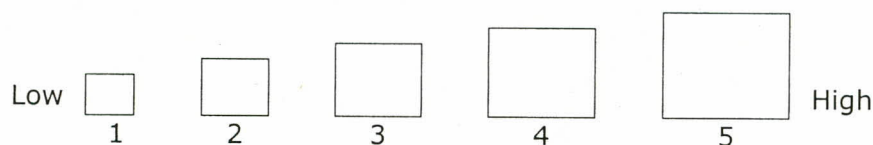
KAB attributes	DEVIATIONS FROM CONTROL SCENARIO		
	<i>New L&M HWMs with descriptor</i>	<i>New L&M insert</i>	<i>Current HWMs without descriptor</i>
Attributes	C	C	C

7.1.3 EXAMPLE OF CALCULATIONS

Sensory Profile

Q1.4 THROAT CATCH / HIT (Low – High)

The short, sharp momentary "kick" or "hit" sensation felt in the lower throat / upper chest region specifically as the smoke of light or mild cigarettes goes down. It is noticed immediately as the smoke contacts the throat and lasts a second or less.



Detailed scores obtained using a 5-point scale

(Total sample – English and French combined – new L&M insert)

	New L&M insert	Current HWMs with descriptor (Control)
➤ Average raw score before exposure	2.60	2.73
➤ Average raw score after exposure	3.00	2.88
➤ Exposure effect of scenario on attribute	A 0.40	B 0.15
➤ Deviation from control (differential exposure effect)	C 0.25	

Sensory Profile attributes	Mean differences between scores before and after exposure		Deviations from Control
	New L&M insert	Control/current	
Throat catch / hit	0.40*	0.15**	0.25***
▪	▪	▪	▪
▪	▪	▪	▪

* *T-test significant at $P < 0.01$*

** *T-test significant at $P < 0.05$*

*** *Scheffé test significant at $P < 0.05$*

Interpretation

- **A = 0.40** means that L&M cigarettes, just after exposure to the L&M related insert, were perceived as harder on the throat than previously thought, because this difference was statistically significant (T-test).
- **B = 0.15** means that L&M cigarettes, just after exposure to the current HWMs with the "light" or "mild" descriptor (control scenario), were not perceived as harder on the throat than previously thought, because this difference was statistically significant only with a T-test at $P < 0.05$.
- **C = 0.25** means that the exposure effect of the L&M related insert was not the same as the exposure effect caused by the control/current scenario because this differential (deviation) was statistically significant (Scheffé test). This new scenario made people think that L&M cigarettes were harder on the throat.

7.2 CHARACTERISTICS OF THE WEIGHTED SAMPLE

- **Table 1** (*in the Summary Tables section*) presents the demographic characteristics and smoking habits of respondents in the total sample and in each of the two linguistic sub-samples.
- In accordance with the quota set for the mall intercepts, the gender split of the sample was almost perfectly equal.
- Education at the university level was lower than for the average Canadian population, which reflects what is known about current smokers.
- Despite the fact that all respondents regularly smoked a L&M brand, not all (86%) considered their usual brand to be L&M.
- Seven out of ten (73%) respondents had a secondary brand.
 - In addition to the basic requirement that all respondents should be regularly smoking a L&M brand, more than half (55%) of the English and one-third (34%) of the French respondents also smoked another L&M (secondary) brand.
- More than half (58%) of the respondents had smoked for more than 10 years and the average number of cigarettes smoked per day was 16.1.
- French and English sub-samples had several significantly different characteristics.
 - These differences were also observed in previous studies but some were more pronounced in this study.
 - Because the data collection took place during a major student strike in Québec, the French sub-sample contained more students (11%) than the English sub-sample (3%), a difference that was reflected in several other demographic variables, such as marital status, age, etc.
 - Overall, English respondents reported:
 - higher family income than French respondents;
 - more often married/living as couple;
 - higher educational attainment;
 - more often working full-time;
 - lower average number of cigarettes smoked per day;
 - lower average age; and,
 - more often DuMaurier Light as their usual and secondary brand.
- Both sub-samples were comparable in terms of:
 - gender;
 - length of time smoking cigarettes on a daily basis;
 - always smoked L&M brands; and,
 - usual brand considered to be L&M.

- **Table 2** (*in the Summary Tables section*) compares the demographic and smoking characteristics of the overall sample (English and French sub-samples combined).
 - No statistically significant differences were observed in the total sample across the four experimental groups who tested the scenarios/options.
 - Therefore, the sub-groups in the total sample who tested the scenarios/options were statistically comparable.
- **Tables 3 and 4** compare the demographic and smoking characteristics of the experimental groups within the English and French sub-samples.
 - Differences across experimental groups within each of the two linguistic sub-samples were not statistically significant.
 - Therefore, the four experimental groups within each of the two linguistic samples were statistically comparable.
- **Tables 5-9** present the pre-exposure measures, respectively, for Knowledge, Beliefs, Sensory Profile, Personality Traits and Behavioural Intentions. Note that:
 - Many respondents shared the perception that L&M cigarettes are weaker/safer than regular cigarettes (see **Tables 5 and 7**);
 - Many respondents said they smoked L&M cigarettes with the hope that they would reduce the risks of smoking (see **Table 6**);
 - A substantial minority of the smokers surveyed had intended to quit smoking (see **Table 9**).

7.3 EFFECTS OF NEW SCENARIOS ON KNOWLEDGE

Effects of the scenarios/options on the respondent's knowledge of L&M vs. regular cigarettes were measured by five attributes related to the chemical substances contained in cigarettes and their harmfulness.

These attributes were measured on a 5-point comparative scale where 1 meant "much higher/more for L&M", 5 "much lower/less for L&M" and 3 was the middle point - "the same/equally for L&M and regular cigarettes".

By comparing the deviations from the control scenario of the differences pre- vs. post-exposure to the information tools, we obtained an objective measurement of the impact of each of the new scenarios/options on the respondent's knowledge of L&M vs. regular cigarettes.

Statistical comparisons against the control scenario were made using:

- *Scheffé comparative tests (univariate) at $P < 0.05$;*
- *T-tests (univariate) at $P < 0.01$ and $P < 0.05$ (if Scheffé test was not significant); and,*
- *Manova (multivariate) F-tests at $P < 0.05$ and $P < 0.01$.*

Table 10 (in the Summary Tables section) summarizes the results of the statistical significance of the effects (deviations) observed in **Tables 11-13**.

Tables 11-13 show the deviations from the control scenario in terms of the mean differences pre- vs. post-exposure, for the total sample and for each of the two linguistic sub-samples.

Tables 14-15 present the detailed raw scores used to calculate differences and deviations.

Interpretation of univariate analysis is presented first, followed by Manova results.

7.3.1 UNIVARIATE ANALYSIS

Total Sample

- Of the three new scenarios, the L&M insert (Scenario B) had the most significant and largest impact on previous knowledge. The other two new scenarios had much more limited effects.
- The L&M insert significantly influenced the previous knowledge smokers had of L&M vs. regular cigarettes on four of the five attributes used (see **Table 10** in the Summary Tables section).
 1. After respondents were exposed to the new L&M related information contained in the insert, they considered L&M cigarettes to be significantly closer to regular cigarettes (rather than safer or weaker) than they previously thought, in terms of:

1. Level of nicotine
 2. Amount of tar
 3. Risk of dying
 4. Harmfulness to health
- The L&M HWMs with descriptor (Scenario A) had only one significant effect, and only with the less stringent T-test at $P < 0.05$.
 1. This scenario increased the perceived levels of nicotine contained in L&M cigarettes, bringing them closer to regular cigarettes.
 - The current HWMs without descriptor (Scenario C) had also only one significant effect and only with the less stringent T-test at $P < 0.05$.
 1. This scenario increased the perceived risk of dying from smoking L&M cigarettes above the level previously thought.
 2. Although not highly significant, this deviation from the control scenario (current HWMs with descriptor) supports the hypothesis that the L&M descriptor is a false reassurance and therefore a source of confusion.
 - Examination of the magnitude of all deviations from the control indicated that even the largest deviation was, in fact, small.
 1. The largest deviation from the control scenario was 0.25 on the 5-point scale used, representing a "scale slide" (scale variation) of 5 percent.

English Sub-Sample

- Only some of the observed deviations from the control scenario were significant, and only with the less stringent T-test at $P < 0.05$.
 1. All three new scenarios increased the perceived risk of dying from smoking L&M cigarettes.
 - Therefore, this effect was found to be highly significant in the total sample for the L&M insert and the L&M HWMs with descriptor and was corroborated for these two new scenarios in the English sub-sample.
 2. The current HWMs without descriptor tested significantly on the attribute related to the amounts of chemicals and additives.
 - However, this effect was not found to be significant in the total sample and was not validated in the French sub-sample.
- Overall, the magnitude of the deviations from the control was closer to those observed in the total sample, in the same direction, and was largest for the L&M insert. But because the deviations were small and based on a smaller sample, no stringent statistical test could establish their significance in the English sub-sample.

French Sub-Sample

- As for the English sub-sample, the largest deviations from the control scenario were observed for the L&M insert. In the French sub-sample, the L&M insert had highly significant effects on three attributes, also found highly significant in the total sample.
 1. The L&M insert increased the perception that L&M cigarettes were closer to regular cigarettes in terms of:
 - Level of nicotine
 - Amount of tar
 - Harmfulness to health
 2. Another effect was also significant but only with the less stringent T-test at $P < 0.05$. The insert increased the perception that L&M cigarettes contained higher amounts of chemicals and additives than previously thought.
 - However, this effect was not corroborated in the English sub-sample and did not test significantly in the total sample.

7.3.2 MULTIVARIATE ANALYSIS

- On the following pages the main Manova results (SPSS – Statistical Package for the Social Sciences) are presented. Multivariate analysis of the deviations from the control scenario indicated that:
 1. Deviations from the control scenario after exposure to the new scenarios/options were highly significant in the total sample as well as in both linguistic sub-samples.
 - This means that when all three new scenarios and all knowledge attributes were considered, some or all new scenarios significantly influenced the previous knowledge respondents had of L&M vs. regular cigarettes.
 - This finding corroborates the existence of significant effects caused by all three new scenarios, as revealed by univariate analysis.
 2. The interaction effect between deviations from the control scenario and new scenarios was highly significant in the total sample and in both linguistic sub-samples.
 - This means that some information tools had significantly more influence than others on some attributes.
 - Univariate analysis revealed that it was the L&M insert which had the strongest impact on knowledge attributes.
 3. The interaction effect between deviations from the control and gender was not significant, whether in the total or in both linguistic sub-samples.
 - This means that each information tool uniformly influenced respondents, whatever their gender.

As can be seen by the following Manova results, all multivariate F-tests for deviations from the control scenario, and interaction effect between deviations from the control and scenarios were highly significant ($P < 0.01$).

→ Since the conditions of sphericity were not satisfied, this indicated that the T-tests and Scheffé tests were more accurate than univariate F-tests which could be derived from Manova to determine which particular scenarios had significant effects and which scales were influenced (see conclusions of previous univariate section – 7.3.1).

**** MULTIVARIATE ANALYSIS OF VARIANCE ****
**** TOTAL SAMPLE ****

KNOWLEDGE OF L&M vs. REGULAR CIGARETTES

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, $W = .42312$
Chi-square approx. = 781.06470 with 14 D. F.
Significance = .000

Greenhouse-Geisser Epsilon = .70493
Huynh-Feldt Epsilon = .71656
Lower-bound Epsilon = .20000

EFFECT .. LANGUAGE BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance ($S = 1$, $M = 1 \frac{1}{2}$, $N = 452$)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00735	1.34217	5.00	906.00	.244
Hotellings	.00741	1.34217	5.00	906.00	.244
Wilks	.99265	1.34217	5.00	906.00	.244
Roys	.00735				

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance ($S = 1$, $M = 1 \frac{1}{2}$, $N = 452$)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00462	.84028	5.00	906.00	.521
Hotellings	.00464	.84028	5.00	906.00	.521
Wilks	.99538	.84028	5.00	906.00	.521
Roys	.00462				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance ($S = 2$, $M = 1$, $N = 452$)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.03923	3.62926	10.00	1814.00	.000

Hotellings	.04062	3.67615	10.00	1810.00	.000
Wilks	.96087	3.65273	10.00	1812.00	.000
Roys	.03652				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE
Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 452)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.17794	39.22286	5.00	906.00	.000
Hotellings	.21646	39.22286	5.00	906.00	.000
Wilks	.82206	39.22286	5.00	906.00	.000
Roys	.17794				

26040 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

** MULTIVARIATE ANALYSIS OF VARIANCE ** ** ENGLISH SUB-SAMPLE ** <u>KNOWLEDGE OF L&M vs. REGULAR CIGARETTES</u>					
Tests involving 'EXPOSURE' Within-Subject Effect.					
Mauchly sphericity test, W =	.33597				
Chi-square approx. =	489.85340	with 14 D. F.			
Significance =	.000				
Greenhouse-Geisser Epsilon =	.63827				
Huynh-Feldt Epsilon =	.65048				
Lower-bound Epsilon =	.20000				

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE
Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 222 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.01577	1.43284	5.00	447.00	.211
Hotellings	.01603	1.43284	5.00	447.00	.211
Wilks	.98423	1.43284	5.00	447.00	.211
Roys	.01577				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE
Multivariate Tests of Significance (S = 2, M = 1 , N = 222 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.04490	2.05759	10.00	896.00	.025
Hotellings	.04671	2.08344	10.00	892.00	.023
Wilks	.95524	2.07055	10.00	894.00	.024
Roys	.04160				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 222 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.15217	16.04529	5.00	447.00	.000
Hotellings	.17948	16.04529	5.00	447.00	.000
Wilks	.84783	16.04529	5.00	447.00	.000
Roys	.15217				

22464 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

**** MULTIVARIATE ANALYSIS OF VARIANCE ****
**** FRENCH SUB-SAMPLE ****

KNOWLEDGE OF L&M vs. REGULAR CIGARETTES

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, W = .46951
 Chi-square approx. = 345.60059 with 14 D. F.
 Significance = .000

Greenhouse-Geisser Epsilon = .76003
 Huynh-Feldt Epsilon = .77551
 Lower-bound Epsilon = .20000

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 226 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00028	.02504	5.00	455.00	1.000
Hotellings	.00028	.02504	5.00	455.00	1.000
Wilks	.99972	.02504	5.00	455.00	1.000
Roys	.00028				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 1, N = 226 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.06547	3.08642	10.00	912.00	.001
Hotellings	.06961	3.16044	10.00	908.00	.001
Wilks	.93473	3.12352	10.00	910.00	.001
Roys	.06226				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 226 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.22228	26.00852	5.00	455.00	.000
Hotellings	.28581	26.00852	5.00	455.00	.000
Wilks	.77772	26.00852	5.00	455.00	.000
Roys	.22228				

22464 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

7.3.3 CONCLUSION

- Based on multivariate and univariate statistical testing, as well as consistency of findings across linguistic sub-groups, results of this experiment indicated that:
 - The L&M insert had the strongest impact on previous knowledge of L&M vs. regular cigarettes. It clearly brought L&M cigarettes closer to regular cigarettes in the minds of the L&M smokers surveyed, in terms of:
 - Level of nicotine
 - Amount of tar
 - Risk of dying
 - Harmfulness to health
 - L&M HWMs with descriptor significantly influenced previous knowledge about the level of nicotine contained in L&M vs. regular cigarettes, narrowing their gap in respondents' minds.
 - Current HWMs without descriptor made respondents think more often that the risk of dying from smoking L&M cigarettes was the same as smoking regular cigarettes. This effect was a reflection of the false reassurance kept alive by the presence of the descriptor.
 - Although significant, these effects were small.
 - No other effect on knowledge attributes was significant or consistent enough to be considered a true effect of a scenario.

7.4 EFFECTS OF NEW SCENARIOS ON BELIEFS

Three criteria / attributes were used to determine the effects of the new scenarios/options on beliefs about smoking L&M vs. regular cigarettes.

Respondents were asked if they smoked L&M cigarettes because they believed (yes, no or don't know) L&M cigarettes reduced:

- the risk of smoking without having to actually give up smoking;
- the amount of tar inhaled compared to regular cigarettes; and,
- the risk to health compared to regular cigarettes.

By comparing the proportion of smokers whose beliefs changed after exposure to the new scenarios with those who changed their beliefs after exposure to the control scenario, we obtained an objective measurement of the influence of the new scenarios on beliefs about L&M cigarettes.

As for the effects on other constructs, statistical testing was done using:

- Scheffé comparative tests (univariate) at $P < 0.05$;
- T-tests (univariate) at $P < 0.01$ and $P < 0.05$ (if Scheffé test was not significant); and,
- Manova (multivariate) F-tests at $P < 0.05$ and $P < 0.01$.

Table 16 (in the Summary Tables section) summarizes the results of the statistical significance of the effects (deviations) observed in **Tables 17-19**.

Tables 17-19 show the deviations from the control scenario in terms of the mean differences pre- vs. post-exposure, for the total sample and for each of the two linguistic sub-samples.

Tables 20-21 present the detailed raw scores used to calculate differences and deviations.

Interpretation of univariate analysis is presented first, followed by Manova results.

7.4.1 UNIVARIATE ANALYSIS

Total Sample

- No deviations of any of the new scenarios/options from the control scenario were significant to any of the univariate tests applied to the total sample.
 1. The largest deviation was observed for the L&M insert on the belief about the reduced amount of tar, but it represented only 6 percent of the scale points.
 2. Although we observed a scale slide (belief reduced) immediately after exposure to the information tools, the scale slides were small and each of the new scenarios had a scale slide statistically identical to the control scenario. Therefore, no effect could be attributed to any of the new scenarios.

3. Overall, note that between 19%-34% of respondents before exposure and between 13%-28% of respondents after exposure held one of the "reducing" beliefs about smoking L&M vs. regular cigarettes, which illustrated the importance and firmness of smokers' confusion caused by the L&M descriptor.

English Sub-Sample

- As for the total sample, no significant effect could be attributed to any of the new scenarios/options, when compared with the control scenario.

French Sub-Sample

- As for the total sample, no significant effect of the new scenarios could be detected.

7.4.2 MULTIVARIATE ANALYSIS

- Multivariate analysis of the deviations from the control scenario indicated that:
 1. Deviations from the control after exposure to the new scenarios/options had a highly significant effect in the total sample and in both linguistic sub-samples.
 - This means that when all three new scenarios and all beliefs were considered, some or all of the new scenarios significantly influenced beliefs about the reduced risks of smoking L&M cigarettes.
 - Univariate analysis (see previous section) did not conclude that any new scenario had a significant impact on at least one belief and, therefore, univariate findings did not corroborate those of Manova.
 - The discrepancy between the results of univariate and multivariate analysis indicated that the scale slides caused by exposure to the new information tools were not large enough to test significantly at the attribute level, but were consistent enough so that their combined multivariate effect tested significantly at the construct level.
 2. The interaction effect between deviations from the control and the new scenarios was not significant, whether in the total or in both linguistic sub-samples.
 - This means that deviations from the control after exposure to each of the information tools were uniform.
 - This finding reinforces the conclusion from the univariate analysis that no particular new scenario had more or less influence than others on beliefs about smoking L&M vs. regular cigarettes.
 3. There was no significant interaction effect between deviations from the control scenario and gender.
- As can be seen by the following Manova results, all multivariate F-tests for the deviations after exposure were significant ($P < 0.01$), but not the interaction effect of deviations after exposure and scenarios.

- Again, because the conditions of sphericity could not be accepted, this indicated that univariate tests should be used to draw conclusions about particular scenarios and individual attributes and that Manova results should be used only to corroborate findings from univariate analysis.

**** MULTIVARIATE ANALYSIS OF VARIANCE ****
**** TOTAL SAMPLE ****

BELIEFS ABOUT L&M VS. REGULAR CIGARETTES

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, W = .78593
Chi-square approx. = 218.89876 with 5 D. F.
Significance = .000

Greenhouse-Geisser Epsilon = .85159
Huynh-Feldt Epsilon = .86451
Lower-bound Epsilon = .33333

EFFECT .. LANGUAGE BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 453)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00308	.93533	3.00	908.00	.423
Hotellings	.00309	.93533	3.00	908.00	.423
Wilks	.99692	.93533	3.00	908.00	.423
Roys	.00308				

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 453)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00183	.55388	3.00	908.00	.646
Hotellings	.00183	.55388	3.00	908.00	.646
Wilks	.99817	.55388	3.00	908.00	.646
Roys	.00183				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 0, N = 453)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00708	1.07704	6.00	1818.00	.374
Hotellings	.00712	1.07594	6.00	1814.00	.375
Wilks	.99292	1.07649	6.00	1816.00	.374
Roys	.00558				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 453)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.03977	12.53528	3.00	908.00	.000
Hotellings	.04142	12.53528	3.00	908.00	.000
Wilks	.96023	12.53528	3.00	908.00	.000
Roys	.03977				

15752 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

**** MULTIVARIATE ANALYSIS OF VARIANCE ******** ENGLISH SUB-SAMPLE ******BELIEFS ABOUT L&M VS. REGULAR CIGARETTES**

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, W = .78302
Chi-square approx. = 110.00309 with 5 D. F.
Significance = .000

Greenhouse-Geisser Epsilon = .84722
Huynh-Feldt Epsilon = .86187
Lower-bound Epsilon = .33333

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 223 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00094	.14100	3.00	449.00	.935
Hotellings	.00094	.14100	3.00	449.00	.935
Wilks	.99906	.14100	3.00	449.00	.935
Roys	.00094				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 0, N = 223 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00256	.19219	6.00	900.00	.979
Hotellings	.00257	.19154	6.00	896.00	.979
Wilks	.99744	.19186	6.00	898.00	.979
Roys	.00244				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 223 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.05514	8.73386	3.00	449.00	.000
Hotellings	.05836	8.73386	3.00	449.00	.000
Wilks	.94486	8.73386	3.00	449.00	.000
Roys	.05514				

12784 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

**** MULTIVARIATE ANALYSIS OF VARIANCE ******** FRENCH SUB-SAMPLE ******BELIEFS ABOUT L&M VS. REGULAR CIGARETTES**

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, W = .78234
 Chi-square approx. = 112.35466 with 5 D. F.
 Significance = .000

Greenhouse-Geisser Epsilon = .85426
 Huynh-Feldt Epsilon = .86883
 Lower-bound Epsilon = .33333

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 227 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00397	.60755	3.00	457.00	.610
Hotellings	.00399	.60755	3.00	457.00	.610
Wilks	.99603	.60755	3.00	457.00	.610
Roys	.00397				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 0, N = 227 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.01605	1.23530	6.00	916.00	.286
Hotellings	.01620	1.23145	6.00	912.00	.288
Wilks	.98400	1.23338	6.00	914.00	.287
Roys	.01118				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 227 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.02674	4.18506	3.00	457.00	.006
Hotellings	.02747	4.18506	3.00	457.00	.006
Wilks	.97326	4.18506	3.00	457.00	.006
Roys	.02674				

12784 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

7.4.3 CONCLUSION

- Multivariate and univariate analysis of the deviations in beliefs from the control scenario, caused by exposure to the new scenarios, indicated that:
 1. No new scenario significantly influenced beliefs about smoking L&M vs. regular cigarettes – no deviation was large enough to test significantly at the univariate (attribute) level for any particular scenario.
 2. However, when all new scenarios were taken together and all their effects considered simultaneously, multivariate analysis of the deviations from the control scenario were significant, which indicates that some effects were consistent, yet not significant for one scenario in particular.
 3. The strength of beliefs observed before and after exposure suggested that a sizeable proportion of L&M smokers held strong beliefs about the reduced risks of smoking L&M cigarettes and the information tools tested were not striking enough to significantly disturb these beliefs.
- One may also think that L&M smokers were unlikely to negate the “rationale of a safer cigarette” as a reason for smoking L&M cigarettes, even when faced with credible evidence or convincing arguments.
 - Therefore, one cannot exclude the hypothesis that the new L&M information tools were, in fact, convincing and that respondents could not immediately reduce or cope with the dissonance created and therefore refuted the information presented.
 - But for the purpose of this study, it should be considered that no new scenario significantly influenced beliefs about smoking L&M vs. regular cigarettes. Further qualitative research may help clarify observation if this was the case.
- Also, note that findings obtained immediately after exposure cannot be extrapolated to the long term effects of exposure to the information tools.

7.5 EFFECTS OF NEW SCENARIOS ON SENSORY PROFILE

Effects of the scenarios on the product sensory profile were measured by five attributes selected from a list and scales the tobacco industry uses. These product properties were also used in previous experiments on the effect of the L&M descriptor on the perceived strength of cigarettes.

The same 5-point scale used in previous experiments and industry studies was also used in this experiment.

By comparing deviations of the new scenarios/options from the control scenario, we obtained an objective measurement of the influence of each of the new information tools on the perceived strength of L&M cigarettes.

To test the statistical significance of the observed differences and deviations, the following tests were performed:

- *Scheffé comparative tests (univariate) at $P < 0.05$;*
- *T-tests (univariate) at $P < 0.01$ and $P < 0.05$ (if Scheffé test was not significant); and,*
- *Manova (multivariate) F-tests at $P < 0.05$ and $P < 0.01$.*

Table 22 (in the Summary Tables section) summarizes the results of the statistical significance of the effects (deviations) observed in **Tables 23-25**.

Tables 23-25 show the deviations from the control scenario in terms of the mean differences pre- vs. post-exposure, for the total sample and for each of the two linguistic sub-samples.

Tables 26-27 present the detailed raw scores used to calculate differences and deviations.

Interpretation of univariate analysis is presented first, followed by Manova results.

7.5.1 UNIVARIATE ANALYSIS

Total Sample

- Only the L&M insert had significant measurable effects upon the perceived strength (sensory profile) of L&M cigarettes, for three of the five attributes used, when compared to the control scenario. Overall, after exposure to the information contained in the L&M insert, L&M smokers significantly perceived L&M cigarettes as being stronger or closer to regular cigarettes than they had previously thought.
 - Draw effort / pull: significant with the Scheffé test.
 - L&M cigarettes were thought to require greater effort to get a satisfactory puff of smoke into the mouth than previously thought.

- Throat catch / hit: significant with the Scheffé test.
 - L&M cigarettes were thought to hit the lower throat / upper chest region harder as the smoke goes down than previously thought.
- Toxicity: significant with the less stringent T-test at $P < 0.05$.
 - L&M cigarettes were thought to cause more harmful health effects than previously thought.
 - Although this effect was significant only with the T-test at the $P < 0.05$ level, because it was consistent with the effects of the L&M insert on the knowledge of L&M cigarettes vs. regular cigarettes (more tar and nicotine than previously thought), this consistency reinforced the conclusion that increased perception of toxicity was likely a true effect of this scenario.
- Again, note that although the information conveyed by the L&M insert was able to significantly influence the perceived strength of L&M cigarettes, and therefore reduced consumers' confusion on that construct, the magnitude of these effects was small.
 - The "largest" deviation (0.25) represented only 5 percent of the scale points.
- No other effect on any scale or scenario was detected in the total sample.

English Sub-Sample

- As for the total sample, only the L&M insert had a significant influence on the perceived strength of L&M cigarettes, on two of the five attributes (and in the same direction as those observed in the total sample).
 - **Draw effort / pull:** significant with the T-test at $P < 0.05$.
 - **Throat catch / hit:** significant with the T-test at $P < 0.05$.
- Note that these two effects were too small to be significant with the Scheffé test with the size of the English sub-sample.
- Toxicity, which was significantly influenced by the L&M insert when tested in the total sample, did not test significantly in the English sub-sample. However, it was the third largest deviation, which was consistent with what emerged in the total sample.
 - Again, note that the "largest" deviation (0.28) observed in the English sub-sample was small (6 percent of the scale points).
 - No other effect on any scale or scenario was detected in the English sub-sample.

French Sub-Sample

- As for the total sample and English sub-sample, the L&M insert had the largest effect of the three new scenarios, and two of the five attributes tested significantly, in the same direction as those observed in the total sample.
 - **Draw effort / pull:** significant with the T-test at $P < 0.05$.
 - **Initial satisfaction:** significant with the T-test at $P < 0.05$.
- The effect on initial satisfaction was not consistent with the deviation of this attribute observed in the English sub-sample.
 - Therefore, because it was significant only with the T-test at $P < 0.05$ (and not with the Scheffé test) and because its direction was not consistent in the English sub-sample, we cannot consider this deviation (observed only in the French sub-sample) as a true effect.
- Again, the "largest" significant deviation (0.27) was small (5 percent of the scale points).
- Effects of the L&M insert on throat catch and toxicity, although not significant in the French sub-sample, were found here in the same direction as in the total sample and the English sub-sample.
 - In addition, they were among the "largest" deviations in any of the three new scenarios/options.
 - Therefore, even if the sample size of the French experimental group who tested the L&M insert was not sufficient for the small magnitude of the effects to test as significant, the observed consistency of the deviations on throat catch and toxicity confirmed they were likely to be true effects of the L&M insert, as found in the total sample.
- No other effect on any scale or scenario was detected in the French sub-sample.

7.5.2 MULTIVARIATE ANALYSIS

- Multivariate analysis of the deviations from the control scenario indicated that:
 1. Deviations from the control after exposure to the new scenarios/options had a highly significant effect in the total sample, as well as in both linguistic sub-samples.
 - This means that when all three new scenarios and all sensory attributes were considered, some or all of the new scenarios significantly influenced the perceived strength of L&M cigarettes.
 - Univariate analysis revealed that only the L&M insert had a significant impact.

2. The interaction effect between deviations from the control and new scenarios was significant in the total sample at $P < 0.06$ and the French sub-sample at $P < 0.08$ but this interaction effect was not corroborated by the English sub-sample.
 - This means that some information tools had significantly more influence than others on some attributes, but their uniqueness was not consistent enough to test significantly in both linguistic sub-samples.
 - These findings were corroborated by those from univariate analysis which indicated that the L&M insert had an inconsistent effect on the initial satisfaction attribute.
 3. The interaction effect between deviations from the control and gender was not significant.
- As can be seen by the following Manova results, all multivariate F-tests for the deviations after exposure were highly significant ($P < 0.01$) and the interaction effect of deviations after exposure and scenarios were at the limit of statistical significance in the total sample and the French sub-sample.
 - Again, because the conditions of sphericity could not be accepted, this indicates that univariate tests should be used to draw conclusions about particular scenarios and individual attributes and that Manova results should be used only to corroborate findings from univariate analysis.

**** MULTIVARIATE ANALYSIS OF VARIANCE ****
**** TOTAL SAMPLE ****

SENSORY PROFILE OF L&M CIGARETTES

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, $W = .92643$
 Chi-square approx. = 69.39634 with 14 D. F.
 Significance = .000

Greenhouse-Geisser Epsilon = .96944
 Huynh-Feldt Epsilon = .98704
 Lower-bound Epsilon = .20000

EFFECT .. LANGUAGE BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance ($S = 1$, $M = 1 \frac{1}{2}$, $N = 452$)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.01821	3.36093	5.00	906.00	.005
Hotellings	.01855	3.36093	5.00	906.00	.005
Wilks	.98179	3.36093	5.00	906.00	.005
Roys	.01821				

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE
 Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 452)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.01090	1.99768	5.00	906.00	.077
Hotellings	.01102	1.99768	5.00	906.00	.077
Wilks	.98910	1.99768	5.00	906.00	.077
Roys	.01090				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE
 Multivariate Tests of Significance (S = 2, M = 1 , N = 452)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.01933	1.76992	10.00	1814.00	.061
Hotellings	.01961	1.77457	10.00	1810.00	.060
Wilks	.98072	1.77225	10.00	1812.00	.061
Roys	.01644				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE
 Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 452)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.15626	33.55875	5.00	906.00	.000
Hotellings	.18520	33.55875	5.00	906.00	.000
Wilks	.84374	33.55875	5.00	906.00	.000
Roys	.15626				

26040 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

**** MULTIVARIATE ANALYSIS OF VARIANCE ****
**** ENGLISH SUB-SAMPLE ****

SENSORY PROFILE OF L&M CIGARETTES

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, W = .88349
 Chi-square approx. = 55.63117 with 14 D. F.
 Significance = .000

Greenhouse-Geisser Epsilon = .95188
 Huynh-Feldt Epsilon = .97394
 Lower-bound Epsilon = .20000

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 222 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.02121	1.93716	5.00	447.00	.087
Hotellings	.02167	1.93716	5.00	447.00	.087
Wilks	.97879	1.93716	5.00	447.00	.087
Roys	.02121				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 1, N = 222 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.02352	1.06615	10.00	896.00	.386
Hotellings	.02390	1.06610	10.00	892.00	.386
Wilks	.97657	1.06613	10.00	894.00	.386
Roys	.01889				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 222 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.14143	14.72696	5.00	447.00	.000
Hotellings	.16473	14.72696	5.00	447.00	.000
Wilks	.85857	14.72696	5.00	447.00	.000
Roys	.14143				

22464 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

**** MULTIVARIATE ANALYSIS OF VARIANCE ******** FRENCH SUB-SAMPLE ******SENSORY PROFILE OF L&M CIGARETTES**

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly's sphericity test, W =	.86489
Chi-square approx. =	66.34678 with 14 D. F.
Significance =	.000
Greenhouse-Geisser Epsilon =	.94518
Huynh-Feldt Epsilon =	.96661
Lower-bound Epsilon =	.20000

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 226 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00632	.57890	5.00	455.00	.716
Hotellings	.00636	.57890	5.00	455.00	.716
Wilks	.99368	.57890	5.00	455.00	.716
Roys	.00632				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 1, N = 226 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.03633	1.68730	10.00	912.00	.079
Hotellings	.03704	1.68166	10.00	908.00	.080
Wilks	.96398	1.68448	10.00	910.00	.080
Roys	.02245				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1 1/2, N = 226 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.18733	20.97692	5.00	455.00	.000
Hotellings	.23052	20.97692	5.00	455.00	.000
Wilks	.81267	20.97692	5.00	455.00	.000
Roys	.18733				

22464 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

7.5.3 CONCLUSION

- Multivariate and univariate analysis of the deviations in sensory profile from the control scenario, caused by exposure to the new scenarios, indicated that the L&M insert was the only new scenario able to influence the perceived strength of L&M cigarettes (stronger than previously thought) in terms of:
 - higher effort for drawing cigarettes to get a satisfactory puff;
 - harder throat catch / hit as the smoke contacts the throat; and,
 - higher toxicity, harmful health effects.

7.6 EFFECTS OF NEW SCENARIOS ON PRODUCT PERSONALITY

Twelve attributes were used to measure the objective effects of the scenarios on product personality. These attributes were drawn from previous studies on the effect of the L&M descriptor and used a 9-point semantic scale with two contrasting labels (for example risk-taker vs. very prudent) at either end.

By comparing the deviations from the control scenario of the differences pre- vs. post-exposure, we obtained an objective measurement of the impact of each of the new scenarios/options on the product personality traits of L&M cigarettes.

As we did for the effects on other constructs, comparisons were made using:

- Scheffé comparative tests (univariate) at $P < 0.05$;
- T-tests (univariate) at $P < 0.01$ and $P < 0.05$ (if Scheffé test was not significant); and,
- Manova (multivariate) F-tests at $P < 0.05$ and $P < 0.01$.

Tables 28-29 (in the Summary Tables section) summarize the results of the statistical significance of the effects (deviations) observed in **Tables 30-32**.

Tables 30-32 show the deviations from the control scenario in terms of the mean differences pre- vs. post-exposure for the total sample and for each of the two linguistic sub-samples.

Tables 33-34 present the detailed raw scores used to calculate differences and deviations.

Interpretation of univariate analysis is presented first followed by Manova results.

7.6.1 UNIVARIATE ANALYSIS

Total Sample

- Of the three new scenarios, only the L&M insert significantly influenced personality traits associated with L&M cigarettes, on only one of the 12 attributes: risk-taker vs. very prudent.
 - This effect was significant only with the less stringent T-test at the $P < 0.05$ level.
 - The more conservative Scheffé test was not significant.
 - The significance of this deviation associated with the L&M insert was confirmed in the French sub-sample but not in the English sub-sample.
 - This "largest" significant deviation found in the total sample was in fact small (0.37 points toward the risk-taker side of the scale), representing only 4 percent of the scale points.

- No other effect on any scale or scenario was detected in the total sample.

English Sub-Sample

- Only one effect was significant in the English sub-sample – disciplined vs. disorganized – and again associated with the L&M insert.
 - This effect was highly significant (Scheffé test).
 - However, it represented a small deviation (6 percent of the scale points) and was not corroborated in either the French sub-sample or the total sample.
- No other effect on any scale or scenario was detected in the English sub-sample.

French Sub-Sample

- Three effects were significant, two caused by the L&M insert and one by the current HWMs without descriptor.

Effects of the L&M insert

This scenario made French L&M smokers see people who smoked L&M cigarettes as more risk-takers and more health negligent than they had previously thought.

- These effects were significant only with the less stringent T-test at the $P < 0.05$ level.
- These two effects were too small to be confirmed in the English sub-sample.
- Only the effect on the risk-taker vs. very prudent trait was also reflected in the total sample.
- The magnitude of the "largest" effect (0.66) was in fact small: it represented 7 percent of the scale points.

Effect of the current HWMs without descriptor

This scenario made French L&M smokers see people who smoked L&M cigarettes as being less worried about death (vs. being afraid of death).

- This effect was significant only with the less stringent T-test at the $P < 0.05$ level.
- This "largest" effect was in fact small: it represented only 5 percent of the scale points.
- This effect was not confirmed in either the total sample or the English sub-sample.
- No other effect on any scale or scenario was detected in the French sub-sample.

7.6.2 MULTIVARIATE ANALYSIS

- Multivariate analysis of the deviations from the control scenario indicated that:
 1. Deviations from the control scenario after exposure to the new scenarios/options had a highly significant effect, corroborated by both linguistic sub-samples.
 - This means that when all three new scenarios and all personality traits were considered, some or all of the new scenarios significantly influenced the personality traits of L&M cigarettes.
 - Univariate analysis (see previous section) did not conclude that any impact of the new scenarios should be considered as a true effect, even if some tested significantly, because of a lack of significance or consistency of effect directions.
 - Manova findings validated the existence of significant effects but univariate analysis showed that these significant effects were not consistent.
 2. The interaction effect between deviations from the control and the new scenarios was not significant, whether in the total sample or in both linguistic sub-samples.
 - This means that deviations from the control after exposure to each of the information tools were uniform.
 - This finding supports the conclusion from the univariate analysis that no particular new scenario should be considered as having more or less influence than others on the personality traits of L&M cigarettes.
 3. There was no significant interaction effect between deviations from the control scenario and gender.
- As can be seen by the following Manova results, all multivariate F-tests for the deviations from the control after exposure were significant ($P < 0.01$) but not the interaction effect of deviations after exposure and scenarios.
 - Again, because the conditions of sphericity could not be accepted, this indicates that univariate tests should be used to draw conclusions about particular scenarios and individual attributes and that Manova results should be used only to corroborate findings from univariate analysis.

* * MULTIVARIATE ANALYSIS OF VARIANCE * *
* * TOTAL SAMPLE * *

PRODUCT PERSONALITY TRAITS OF L&M CIGARETTES

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, $W = .37071$

Chi-square approx. = 898.85525 with 77 D. F.

Significance = .000
 Greenhouse-Geisser Epsilon = .84004
 Huynh-Feldt Epsilon = .86047
 Lower-bound Epsilon = .08333

EFFECT .. LANGUAGE BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 5 , N = 448 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00933	.70593	12.00	899.00	.747
Hotellings	.00942	.70593	12.00	899.00	.747
Wilks	.99067	.70593	12.00	899.00	.747
Roys	.00933				

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 5 , N = 448 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.01145	.86794	12.00	899.00	.580
Hotellings	.01159	.86794	12.00	899.00	.580
Wilks	.98855	.86794	12.00	899.00	.580
Roys	.01145				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 4 1/2, N = 448 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.02708	1.02934	24.00	1800.00	.423
Hotellings	.02747	1.02783	24.00	1796.00	.425
Wilks	.97310	1.02859	24.00	1798.00	.424
Roys	.01671				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 5 , N = 448 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.09212	7.60174	12.00	899.00	.000
Hotellings	.10147	7.60174	12.00	899.00	.000
Wilks	.90788	7.60174	12.00	899.00	.000
Roys	.09212				

93704 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

* * MULTIVARIATE ANALYSIS OF VARIANCE * *
* * ENGLISH SUB-SAMPLE * *

PRODUCT PERSONALITY TRAITS OF L&M CIGARETTES

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, W = .32925
Chi-square approx. = 496.37488 with 77 D. F.
Significance = .000

Greenhouse-Geisser Epsilon = .83641
Huynh-Feldt Epsilon = .86645
Lower-bound Epsilon = .08333

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 5, N = 219)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.01713	.63895	12.00	440.00	.809
Hotellings	.01743	.63895	12.00	440.00	.809
Wilks	.98287	.63895	12.00	440.00	.809
Roys	.01713				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 4 1/2, N = 219)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.05635	1.06550	24.00	882.00	.378
Hotellings	.05836	1.06751	24.00	878.00	.375
Wilks	.94427	1.06651	24.00	880.00	.377
Roys	.04128				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 5, N = 219)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.12016	5.00781	12.00	440.00	.000
Hotellings	.13658	5.00781	12.00	440.00	.000
Wilks	.87984	5.00781	12.00	440.00	.000
Roys	.12016				

86720 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

* * MULTIVARIATE ANALYSIS OF VARIANCE * *
* * FRENCH SUB-SAMPLE * *

PRODUCT PERSONALITY TRAITS OF L&M CIGARETTES

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, W = .28620
Chi-square approx. = 568.99606 with 77 D. F.
Significance = .000

Greenhouse-Geisser Epsilon = .80759
Huynh-Feldt Epsilon = .83542
Lower-bound Epsilon = .08333

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 5 , N = 223)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.01920	.73082	12.00	448.00	.721
Hotellings	.01958	.73082	12.00	448.00	.721
Wilks	.98080	.73082	12.00	448.00	.721
Roys	.01920				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 4 1/2, N = 223)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.06402	1.23737	24.00	898.00	.199
Hotellings	.06614	1.23188	24.00	894.00	.204
Wilks	.93700	1.23462	24.00	896.00	.202
Roys	.03283				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 5 , N = 223)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.09190	3.77831	12.00	448.00	.000
Hotellings	.10120	3.77831	12.00	448.00	.000
Wilks	.90810	3.77831	12.00	448.00	.000
Roys	.09190				

86720 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

7.6.3 CONCLUSION

- Multivariate and univariate analysis of the deviations in personality attributes from the control scenario, caused by exposure to the new scenarios, indicated that although some effects tested significantly, they were not significant or consistent enough to be considered as true effects of an individual scenario.
- Statistical significance of the effects of the new information types on personality traits was not very consistent between the total sample and linguistic sub-sample. This lack of consistency is often observed in situations when many comparisons are made, especially on small differences: some will appear to be significant even when all differences are in fact equal.
 - For example, with five groups, there are ten possible comparisons between pairs of means. When all population means are equal, the probability that at least one of the ten observed significance levels will be less than 0.05 is about 0.29. This is why Scheffé developed a test to protect against calling too many differences significant.
 - In addition, note that in previous experiments testing the effects of the L&M descriptor, it was observed that it was on brand/product image that effects were the least consistent.

7.7 EFFECTS OF NEW SCENARIOS ON BEHAVIOURAL INTENTIONS

Three statements were used to measure the effects of the new information types on behavioural intentions (switch from L&M to regular cigarettes, reduce smoking, quit smoking).

For each of the three statements, respondents were invited to express their intentions using a 10-point scale where 1 meant not at all likely and 10 meant very likely that they would act as stated.

By comparing deviations from the control scenario of the differences pre- vs post-exposure to the information tools, we obtained an objective measurement of the influence of the information tools on intentions towards smoking L&M cigarettes.

→ Note that "intention" to behave in a given way is not a true behavioural dimension but is an affective or attitudinal measure.

To test the statistical significance of the observed differences and deviations, the following tests were performed:

- Scheffé comparative tests (univariate) at $P < 0.05$;
- T-tests (univariate) at $P < 0.01$ and $P < 0.05$ (if Scheffé test was not significant); and,
- Manova (multivariate) F-tests at $P < 0.05$ and $P < 0.01$.

Table 35 (in the Summary Tables section) summarizes the results of the statistical significance of the effects (deviations) observed in **Tables 36-37**.

Tables 36-37 show the deviations from the control scenario in terms of the mean differences pre- vs. post-exposure for the total sample and for each of the two linguistic sub-samples.

Tables 38-39 present the detailed raw scores used to calculate differences and deviations.

Interpretation of univariate analysis is presented first, followed by Manova results.

7.7.1 UNIVARIATE ANALYSIS

Total Sample

- All three new scenarios had a significant effect on the "quit smoking" intention scale: after exposure to any of the three new scenarios, L&M smokers expressed a stronger intention to quit smoking, compared to measures after exposure to the control scenario.
- No other behavioural intention scale was significantly influenced by any of the new scenarios, when compared with the control scenario.

- The effect on the "quit smoking" intention scale was significant with the more conservative Scheffé test for the L&M HWMs with descriptor and the current HWMs without descriptor.
 - For the L&M insert, this effect was significant only with the less stringent T-test at $P < 0.05$ level.
- The raw scores on the quitting scale indicated that it was mainly because the control scenario (current HWMs with descriptor) reinforced L&M smokers' desire to continue smoking, that all new scenarios performed better on this scale.
- These findings suggest that L&M smokers were more likely to think of quitting smoking if their cigarette packages contained or displayed L&M related information (insert or HWMs) or if the L&M descriptor was simply withdrawn from the packaging.
 - Raw pre- vs. post-exposure scores observed for the control scenario indicated that the mere presence of the L&M descriptor made L&M smokers less likely to think about quitting smoking. This finding supports the hypothesis that the presence of the L&M descriptor on the face of cigarette packages serves to maintain smokers' confusion about L&M vs. regular cigarettes.
 - Findings also suggest that the new L&M related HWMs have the ability to make L&M cigarettes less attractive, even if their packaging displays the L&M descriptor.
- The "largest" significant deviation from the control scenario found in the total sample was small (0.56), representing 6 percent of the scale points.
- Differences and deviations from the control scenario for the quitting intention were in the same direction in both the English and French sub-samples. However, statistical significance was:
 - corroborated in both linguistic sub-samples for the current HWMs without descriptor scenario (which reinforced the hypothesis that the mere presence of the L&M descriptor was a source of confusion);
 - corroborated in the English but not in the French sub-sample for the L&M HWMs with descriptor scenario;
 - The effect of the L&M insert was not large enough to be significant in either linguistic sub-sample but was in the same direction in both sub-samples.

English Sub-Sample

- As described previously, the statistical significance of the effect of the L&M HWMs with descriptor and the current HWMs without descriptor on the intention to quit smoking was confirmed by the English sub-sample (Scheffé test).
- Although not statistically significant, the effect of the L&M insert on the quitting intention was in the same direction as its effect in the total sample.

- In the English sub-sample we observed another significant effect: the L&M insert made L&M smokers less inclined to switch from L&M to regular cigarettes.
 - This effect was not in the same direction in the French sub-sample and did not test significantly in either the French sub-sample or in the total sample.
 - Therefore, this effect found in the English sub-sample was not validated and should not be considered a true effect.

French Sub-Sample

- Only the effect of the current HWMs without descriptor was significant (T-test at $P < 0.05$) and in the same direction as those found in the English sub-sample and the total sample.
- No other effect on any scale or scenario was statistically significant in the French sub-sample.
- However, the direction of differences and deviations of the L&M HWMs with descriptor and L&M insert were consistent with those found in the English sub-sample and total sample with regard to the intention to quit smoking.

7.7.2 MULTIVARIATE ANALYSIS

- Multivariate analysis of the deviations from the control scenario indicated that:
 1. Deviations from the control scenario after exposure to the new scenarios/options were significant in the total sample, as well as in both linguistic sub-samples (although they were at the limit of statistical significance in the French sub-sample – $P=0.07$)
 - This means that when all three new scenarios and all behavioural intention attributes were considered, some or all of the new scenarios significantly influenced intentions.
 - Univariate analysis indicated that all three scenarios influenced the quitting smoking intention scale.
 2. The interaction effect between deviations from the control scenarios and the new scenarios was not significant in either the total sample or linguistic sub-samples.
 - This means that deviations from the control scenario after exposure to each of the information tools were uniform.
 3. The interaction effect between deviations from the control and gender was not significant.
- As can be seen by the following Manova results, all multivariate F-tests for the deviations from the control after exposure were significant ($P < 0.01$ except for the French sub-sample at $P = 0.07$) and the interaction effect between deviations after exposure and scenarios was not significant.

- Again, because the conditions of sphericity could not be accepted, this indicates that univariate tests should be used to draw conclusions about particular scenarios and individual attributes and that Manova results should be used only to corroborate findings from univariate analysis.

**** MULTIVARIATE ANALYSIS OF VARIANCE ****
**** TOTAL SAMPLE ****

BEHAVIOURAL INTENTIONS

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, W = .85352
Chi-square approx. = 143.92746 with 5 D. F.
Significance = .000

Greenhouse-Geisser Epsilon = .91301
Huynh-Feldt Epsilon = .92711
Lower-bound Epsilon = .33333

EFFECT .. LANGUAGE BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 453)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00200	.60593	3.00	908.00	.611
Hotellings	.00200	.60593	3.00	908.00	.611
Wilks	.99800	.60593	3.00	908.00	.611
Roys	.00200				

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 453)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00383	1.16518	3.00	908.00	.322
Hotellings	.00385	1.16518	3.00	908.00	.322
Wilks	.99617	1.16518	3.00	908.00	.322
Roys	.00383				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 0, N = 453)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00727	1.10608	6.00	1818.00	.356
Hotellings	.00731	1.10536	6.00	1814.00	.357
Wilks	.99273	1.10572	6.00	1816.00	.356
Roys	.00600				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 453)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.02222	6.87894	3.00	908.00	.000
Hotellings	.02273	6.87894	3.00	908.00	.000
Wilks	.97778	6.87894	3.00	908.00	.000
Roys	.02222				

15752 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

**** MULTIVARIATE ANALYSIS OF VARIANCE ******** ENGLISH SUB-SAMPLE ******BEHAVIOURAL INTENTIONS**

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, W = .83027
 Chi-square approx. = 83.65241 with 5 D. F.
 Significance = .000

Greenhouse-Geisser Epsilon = .89868
 Huynh-Feldt Epsilon = .91463
 Lower-bound Epsilon = .33333

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 223 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00956	1.44400	3.00	449.00	.229
Hotellings	.00965	1.44400	3.00	449.00	.229
Wilks	.99044	1.44400	3.00	449.00	.229
Roys	.00956				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 0, N = 223 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.02287	1.73513	6.00	900.00	.110
Hotellings	.02335	1.74336	6.00	896.00	.108
Wilks	.97716	1.73926	6.00	898.00	.109
Roys	.02159				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 223 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.03494	5.41809	3.00	449.00	.001
Hotellings	.03620	5.41809	3.00	449.00	.001
Wilks	.96506	5.41809	3.00	449.00	.001
Roys	.03494				

12784 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

**** MULTIVARIATE ANALYSIS OF VARIANCE ******** FRENCH SUB-SAMPLE ******BEHAVIOURAL INTENTIONS**

Tests involving 'EXPOSURE' Within-Subject Effect.

Mauchly sphericity test, W = .85988
 Chi-square approx. = 69.09642 with 5 D. F.
 Significance = .000

Greenhouse-Geisser Epsilon = .91772
 Huynh-Feldt Epsilon = .93387
 Lower-bound Epsilon = .33333

EFFECT .. GENDER BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 227 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.00163	.24800	3.00	457.00	.863
Hotellings	.00163	.24800	3.00	457.00	.863
Wilks	.99837	.24800	3.00	457.00	.863
Roys	.00163				

EFFECT .. TOOLS BY DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 2, M = 0, N = 227 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.01484	1.14088	6.00	916.00	.336
Hotellings	.01498	1.13832	6.00	912.00	.338
Wilks	.98520	1.13960	6.00	914.00	.337
Roys	.01136				

EFFECT .. DEVIATIONS FROM CONTROL AFTER EXPOSURE

Multivariate Tests of Significance (S = 1, M = 1/2, N = 227 1/2)

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.01529	2.36500	3.00	457.00	.070
Hotellings	.01553	2.36500	3.00	457.00	.070
Wilks	.98471	2.36500	3.00	457.00	.070
Roys	.01529				

12784 BYTES OF WORKSPACE NEEDED FOR MANOVA EXECUTION.

7.7.3 CONCLUSION

- Univariate and multivariate findings on the deviations in behavioural intentions from the control scenario, caused by exposure to the new scenarios, indicated that:
 1. L&M HWMs with descriptor and the current HWMs without descriptor had the ability to make L&M smokers think more about quitting smoking.
 - The L&M insert shared this ability with the other two scenarios but to a lesser extent and was not highly statistically significant.
 2. L&M HWMs with descriptor had the ability to make smoking less attractive, even if their packaging displays the L&M descriptor.
 3. To the contrary, current HWMs with descriptor (the control scenario) supported L&M smokers' confusion about L&M vs. regular cigarettes.

7.8 PERCEIVED INFORMATIVE VALUE OF SCENARIOS

Results on the informative value perceived by respondents are subjective judgments which may or may not be verified by objective measurements. They do, however, provide useful insights on receptivity towards the new options tested and provide some context to put the objective effects reported earlier into perspective.

Respondents were invited to express their views on the overall informative value of the tools (10-point scale) and their agreement or disagreement (7-point scale) with a series of eight more-detailed statements about the information or message contained in the information tools tested.

→ *Note that these subjective measurements came last in the interview schedule, after objective measurements on the scenarios were taken.*

Comparisons of the raw scores obtained after exposure to the new scenarios against those of the control scenario were made using the Scheffé test at $P < 0.05$.

Tables 40-41 (in the Summary Tables section) present the findings for the total sample and for each of the two linguistic sub-samples.

7.8.1 OVERALL INFORMATIVE VALUE

- Using a 10-point scale, respondents were invited to rate to what extent the information tool they tested informed them about the health effects of smoking L&M cigarettes.
- All three new scenarios obtained higher ratings on overall informative value, compared to the control scenario.
- Univariate statistical testing of the average rating obtained by the new scenarios vs. the control scenario indicated that:
 1. In the total sample, the L&M insert obtained the highest rating (7.0), significantly higher than the control scenario's rating (5.6).
 - Statistical significance was present in the French sub-sample (7.5 vs. 5.0) but was not confirmed in the English sub-sample, even though the difference from the control scenario was also in favour of the L&M insert (6.5 vs. 6.1).
 2. In the total sample, the L&M HWMs with descriptor obtained the second highest average rating (6.4) on overall informative value and its difference from the control scenario (5.6) was significant.
 - As for the L&M insert, statistical significance was confirmed in the French sub-sample (6.4 vs. 5.0) but not in the English sub-sample (6.4 vs. 5.6), although the difference was also in favour of the L&M HWMs with descriptor.

3. In the total sample, the current HWMs without descriptor obtained a statistically identical average rating of overall informative value (5.9) as the control scenario (5.6)
 - The lack of added informative value of the current HWMs without descriptor vs. the current HWMs with descriptor (control) was confirmed by both linguistic sub-samples.

7.8.2 ACCURACY OF INFORMATION ABOUT L&M CIGARETTES

- In the total sample, both the L&M insert (5.8) and the L&M HWMs with descriptor (5.8) scored significantly higher on accuracy of information when compared to the control scenario (5.0).
 - Current HWMs without descriptor obtained the same average rating (5.0) as the control scenario (current HWMs with descriptor).
- Statistical significance in favour of the L&M insert for accuracy of information was verified in both the English and French sub-sample.
- Statistical significance in favour of the L&M HWMs with descriptor was verified only in the French sub-sample, although in the English sub-sample the difference from the control scenario (5.0) remained in favour of the L&M HWMs with descriptor scenario (5.6).

7.8.3 BELIEVABILITY OF INFORMATION ABOUT L&M CIGARETTES

- As with accuracy of information, both the L&M insert (5.9) and the L&M HWMs with descriptor (5.8) tested significantly better in the total sample against the control scenario (5.3), on the "believability of information" statement.
 - Again, the current HWMs without descriptor (5.3) obtained the same average rating as the control scenario (5.3).
- Statistical significance was confirmed only by the French sub-sample, for both the L&M insert and L&M HWMs with descriptor.
 - However, in the English sub-sample the difference from the control scenario remained also in favour of the L&M insert (5.7 vs. 5.4) and of the L&M HWMs with descriptor (5.6 vs. 5.4).

7.8.4 PERSONAL RELEVANCE OF INFORMATION ABOUT L&M CIGARETTES

- Results obtained on this aspect of informative value were consistent with those obtained for the believability and accuracy of information attributes.
 - In the total sample, both the L&M insert (5.6) and L&M HWMs with descriptor (5.5) tested significantly better than the control scenario (4.7).
 - The current HWMs without descriptor (4.8) obtained a statistically identical average rating compared to the control scenario (4.7).

- As with the believability and accuracy aspects of information, statistical significance for the "relevance" aspect was confirmed only in the French sub-sample, for both the L&M insert and L&M HWMs with descriptor.
- Again, in the English sub-sample, the difference from the control scenario remained in favour of the L&M insert (5.2 vs. 4.7) and also the L&M HWMs with descriptor (5.3 vs. 4.7).

7.8.5 MAKING SMOKING LESS ATTRACTIVE

- In the total sample, only the L&M HWMs with descriptor (4.9) tested significantly better than the control scenario (4.4) on this aspect of perceived informative value.
- Statistical significance was verified in the English sub-sample (5.1 vs. 4.4) but not in the French sub-sample (4.7 vs. 4.4).
- However, differences in rating remained consistent in the French sub-sample in favour of the L&M HWMs with descriptor.

7.8.6 NEW INFORMATION LEARNED

- In the total sample, only the L&M insert (4.1) tested significantly better than the control scenario (3.5) in terms of "new information".
- Statistical significance in favour of the L&M insert was verified only in the French sub-sample (4.4 vs. 3.2).
- In the English sub-sample, the L&M insert (3.8) scored the same as the control scenario on this aspect (3.8).

7.8.7 OTHER ATTRIBUTES OF INFORMATIVE VALUE

- No other attribute obtained ratings significantly different in one of the new scenarios than in the control scenario.
- It is interesting to note that in the total sample:
 1. The same attribute obtained the lowest and statistically identical score in all scenarios: *"This message shocked me"*;
 2. All new scenarios scored better, even if not statistically different, than the control scenario on most statements; the control scenario did not score significantly better on any statement than did the new options tested; and,
 3. The current HWMs without descriptor did not score significantly lower or better than the same current HWMs with descriptor (control) on any statement, indicating it made no difference to respondents in terms of perceived informative value if the descriptor were to be removed from the packaging.

7.8.8 CONCLUSION

- Overall, the univariate statistical testing and the consistency of differences on the perceived informative value of the scenarios indicated that:
 1. Only the L&M insert and L&M HWMs with descriptor were acknowledged by smokers of L&M cigarettes as:
 - being more informative about the health effects of smoking L&M cigarettes;
 - providing more accurate information about L&M cigarettes;
 - providing more believable information about L&M cigarettes; and,
 - providing more personally-relevant information about L&M cigarettes.
 2. Only the L&M HWMs with descriptor was acknowledged as making smoking less attractive;
 3. Only the L&M insert was acknowledged as providing new information about L&M cigarettes, information that was not known before;
 4. The current HWMs without descriptor were not seen as being more or less informative than the control scenario on any of the informative value attributes, which suggested that the presence or absence of the L&M descriptor was not acknowledged as an informative feature about L&M cigarettes.

7.9 MAPPING OF THE NEW SCENARIOS' EFFECTS

To help visualize the significant effects the new scenarios had, we performed a correspondence analysis between the new scenarios and the 14 attributes significantly influenced by at least one of them (see map at the end of this section)

7.9.1 INTRODUCTION

- This multivariate technique does not differ much in principle from factor analysis. The difference between the two methods stems from the type of data involved.
 - Factor analysis is not symmetrical: only survey questions are aggregated according to specific factors.
 - Correspondence analysis is symmetrical: survey questions and respondents or objects are aggregated simultaneously. It is used in this study essentially for descriptive purposes, to make it easier to understand the distinct effects of the new scenarios.
- As a general rule, correspondence analysis is a statistical method used specifically for the multivariate analysis of a rectangular table (e.g., scenarios and their effects) with numerical values so large that they prevent rapid assimilation of the information contained in the data set.
- The program used allowed for mapping on the same factor axes of the segments and the descriptive variables.

7.9.2 DATA ANALYZED

- Consequently, to visually position and describe the new scenarios using effects which emerged as significant, we performed a correspondence analysis between the three new scenarios and the 14 effects which tested as being significant.
- Correspondence analysis was used with the following features:
 - The 3 new scenarios and the 8 significant objective measures were active while the 6 significant subjective measures of informative value were passive. This means that solely the active points determined the configuration of the map.
 - The normalization method was the full distribution equivalence that distributes the total inertia³ symmetrically among the rows and columns of the data table.
 - This means that distances between need-based segments on the one hand and between attributes on the other could be compared among themselves and that distances between segments and attributes could also be compared.

³ A measure of variance/weighted distance.

- The data matrix subjected to the correspondence analysis included:
 - The 3 new scenarios, as objects (columns);
 - The 14 attributes (8 objective and 6 subjective measures) which were significantly influenced by at least one new scenario:
 - 4 attributes related to the previous knowledge of L&M vs. regular cigarettes;
 - 3 attributes related to the perceived strength of L&M cigarettes (sensory profile);
 - 1 attribute related to behavioural intentions;
 - 6 attributes related to the perceived informative value of the scenarios.
- The following table details the attributes used to map the significant effects observed after exposure, and the new information scenarios/options.

ATTRIBUTES USED TO MAP THE SIGNIFICANT EFFECTS OF THE NEW SCENARIOS

Knowledge of L&M vs. Regular Cigarettes	
1.	L&M have more nicotine than previously thought
2.	L&M have more tar than previously thought
3.	Risk of dying from smoking L&M higher than previously thought
4.	Harmfulness to health from smoking L&M higher than previously thought
Behavioural Intentions	
5.	More likely to quit smoking
Perceived Sensory Profile	
6.	More effort to get a satisfactory puff from L&M cigarettes
7.	Harder throat catch/hit of L&M cigarettes
8.	Higher toxicity of L&M cigarettes
Informative Value of Scenario	
9.	Overall informative value
10.	Accuracy of information
11.	Believability of information
12.	Relevance of information
13.	Makes smoking less attractive
14.	Newness of information

N.B. Only attributes significantly influenced by at least one scenario were used for correspondence analysis. Deviations from the control scenario were the measurements mapped.

7.9.3 INTERPRETATION OF THE MAP

- The basic principles for interpretation of a perceptual map obtained by correspondence analysis are (see map at the end of this section):
 - a) Some degree of proximity between two scenarios/options means that the characteristics of the two scenarios/options are correlated to some degree, especially as the scenarios/options points become more distant from the point of origin.

The position of a point on a factor axis is the correlation coefficient of this scenario / option with the corresponding factor; thus, points located in the centre frame at origin have no significant correlation with the factors.

- b) Proximity between two impact measures means that these two measures are correlated.
- c) Finally, proximity between a scenario / option and an impact measure signifies, on average, that this impact is distinctive to this scenario / option.
- Because there were 3 objects (new scenarios), the entire variance was totally explained by 2 factors (see map at the end of this section).
 - Factor horizontal axis 1: 92 percent
 - Factor vertical axis 2: 8 percent

Horizontal Axis

- This factor was by far the most important and alone accounted for 92 percent of the total variance. In fact, it was so important that interpretation of the map could be based only on this factor.
- At a glance, this factor clearly separated the L&M insert (left) from the other two new scenarios (current HWMs without descriptor and L&M HWMs with descriptor on the right).
 - The positions of the new scenarios in the universe determined by their significant effects suggested that the L&M insert had the most distinct impact, when compared to the two other new scenarios.
- This factor also separated:

On the left all the subjective measurements of better informative value and all the sensory attributes related to perceived strength.

These distinct effects strongly associated with the L&M insert corroborate what was drawn from univariate and multivariate analysis.

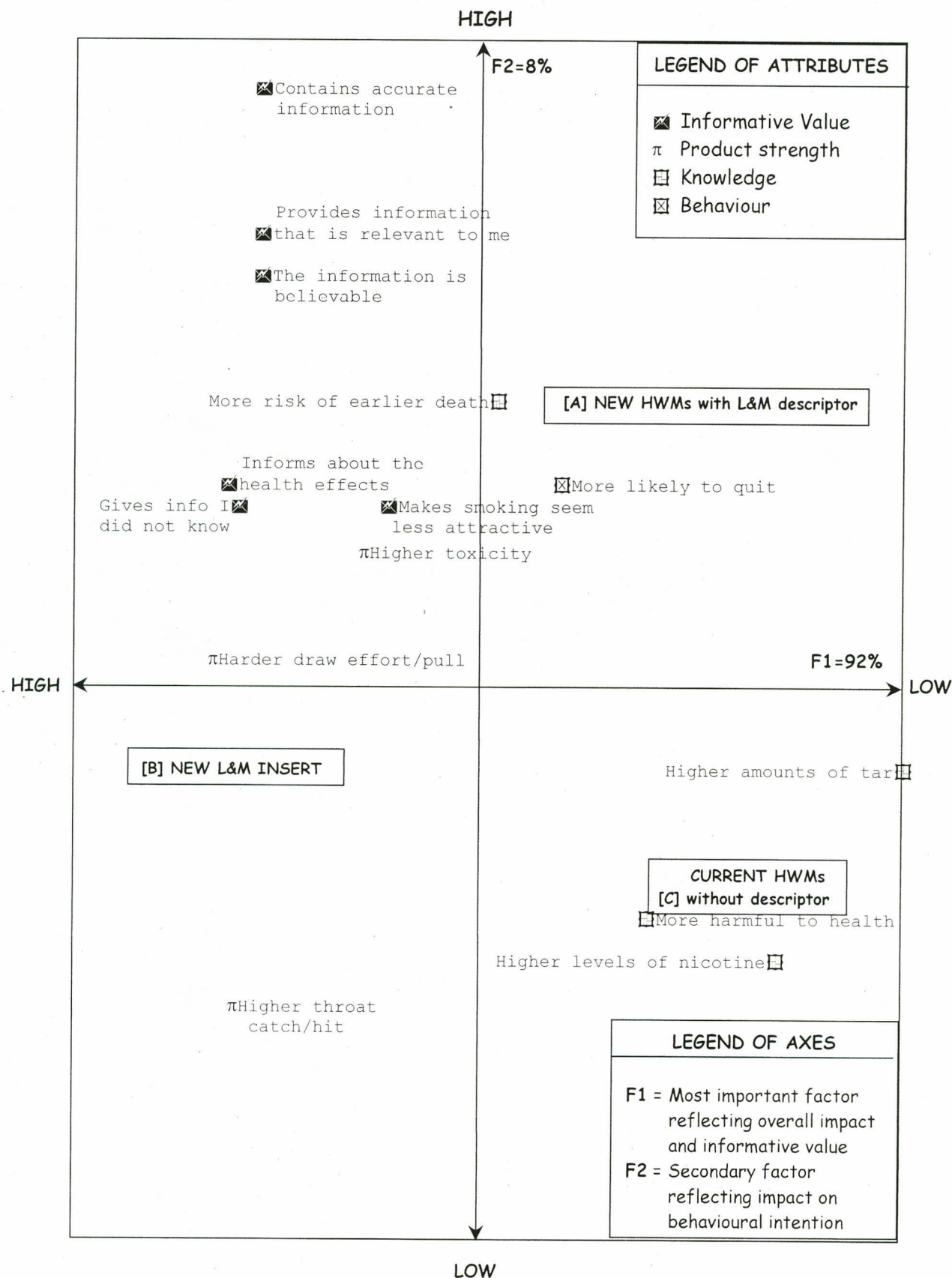
- These positionings confirmed that the L&M insert was acknowledged by respondents as being the most informative and was the most efficient in reducing smokers' confusion about perceived strength (lack of) of L&M cigarettes.

On the right are all the knowledge attributes and the "quitting smoking" intention.

- The current HWMs without descriptor were strongly associated with the knowledge attributes.
 - Univariate and multivariate analysis indicated that effects on these attributes were significant only for the L&M insert, but were small.

- The association correspondence analysis made with the knowledge attributes and the current HWMs without descriptor rather than the L&M insert suggested that the current HWMs without descriptor had their most important effects on these attributes (even if not significant), and that these effects were not large enough for the L&M insert to retain them as distinct features of this scenario.
- The L&M HWMs with descriptor were strongly associated with the quitting smoking intention scale, as revealed by univariate and multivariate analysis.
- It is interesting to note that the L&M insert, although well-positioned and distinctively-positioned in terms of its ability to alter the perceived strength of L&M cigarettes and to inform respondents, was as well-positioned in relation to the quitting smoking scale "owned" by L&M HWMs with descriptor.
- Based on the positioning of the new information tools in the sphere of effects, we can make the following two hypotheses:
 1. The removal of the L&M descriptor on cigarette packages using the current HWMs may change the previous knowledge smokers had of the nicotine and tar content of L&M vs. regular cigarettes, and increase their perception of the health risks of smoking L&M cigarettes.
 - However, this effect for scenario B was not significant and should be considered only as a distinct tendency of this scenario, when all significant deviations of all new scenarios are considered. But because scenario B significantly influenced the quitting smoking scale, it may still be an improvement over the current situation.
 2. Combination of new L&M HWMs with descriptor plus the new L&M insert would be the best option because their objective effects seem to reinforce each other and because they were both acknowledged by L&M smokers as more informative than the current situation.
 - This combined scenario would reduce confusion about the strength of L&M cigarettes (a significant effect of the L&M insert but not of the L&M HWMs) and increase the propensity to quit smoking (a highly significant effect of the L&M HWMs but not to the same extent of the L&M insert).
- Overall, the mapping confirmed that the insert was the most influential on previous knowledge and sensory profile of L&M cigarettes and that the new L&M related HWMs were more convincing, more likely to change behaviour in the intended direction.

MAP OF 14 SIGNIFICANT EFFECTS OF NEW SCENARIOS



8. SUMMARY TABLES

LIST OF TABLES

TABLE 1	CHARACTERISTICS OF THE WEIGHTED SAMPLE.....	81
TABLE 2	COMPARABILITY OF OVERALL EXPERIMENTAL GROUPS	82
TABLE 3	COMPARABILITY OF ENGLISH EXPERIMENTAL GROUPS.....	83
TABLE 4	COMPARABILITY OF FRENCH EXPERIMENTAL GROUPS.....	83
TABLE 5	PRE-EXPOSURE KNOWLEDGE OF L&M VS. REGULAR CIGARETTES	84
TABLE 6	PRE-EXPOSURE BELIEFS ABOUT SMOKING L&M VS. REGULAR CIGARETTES	85
TABLE 7	PRE-EXPOSURE PERCEIVED STRENGTH OF L&M CIGARETTES.....	85
TABLE 8	PRE-EXPOSURE PERCEIVED PERSONALITY TRAITS OF L&M CIGARETTES	86
TABLE 9	PRE-EXPOSURE BEHAVIOURAL INTENTIONS	87
TABLE 10	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS EFFECTS – SUMMARY OF STATISTICAL TESTING ON L&M KNOWLEDGE ATTRIBUTES –	88
TABLE 11	EFFECTS OF INFORMATION TOOLS (TOTAL) – DIFFERENCES AND DEVIATIONS ON L&M KNOWLEDGE ATTRIBUTES –	89
TABLE 12	EFFECTS OF <u>ENGLISH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON L&M KNOWLEDGE ATTRIBUTES –	90
TABLE 13	EFFECTS OF <u>FRENCH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON L&M KNOWLEDGE ATTRIBUTES –	91
TABLE 14	RAW SCORES ON L&M KNOWLEDGE ATTRIBUTES (TOTAL)	92
TABLE 15	RAW SCORES ON L&M KNOWLEDGE ATTRIBUTES	93
TABLE 16	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS – SUMMARY OF STATISTICAL TESTING ON L&M BELIEFS ATTRIBUTES –	94
TABLE 17	EFFECTS OF INFORMATION TOOLS (TOTAL) – DIFFERENCES AND DEVIATIONS ON L&M BELIEFS ATTRIBUTES –	95
TABLE 18	EFFECTS OF <u>ENGLISH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON L&M BELIEFS ATTRIBUTES –	96
TABLE 19	EFFECTS OF <u>FRENCH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON L&M BELIEFS ATTRIBUTES –	97
TABLE 20	RAW SCORES ON L&M BELIEFS ATTRIBUTES (TOTAL)	98
TABLE 21	RAW SCORES ON L&M BELIEFS ATTRIBUTES	99
TABLE 22	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS – SUMMARY OF STATISTICAL TESTING ON SENSORY ATTRIBUTES –	100
TABLE 23	EFFECTS OF INFORMATION TOOLS (TOTAL) – DIFFERENCES AND DEVIATIONS ON SENSORY ATTRIBUTES –	101
TABLE 24	MAIN EFFECTS OF <u>ENGLISH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON SENSORY ATTRIBUTES –	102
TABLE 25	MAIN EFFECTS OF <u>FRENCH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON SENSORY ATTRIBUTES –	103

TABLE 26	RAW SCORES ON SENSORY PROFILE (TOTAL)	104
TABLE 27	RAW SCORES ON SENSORY PROFILE	105
TABLE 28	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS (TOTAL) – SUMMARY OF STATISTICAL TESTING ON PRODUCT PERSONALITY ATTRIBUTES –	106
TABLE 29	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS – SUMMARY OF STATISTICAL TESTING ON PRODUCT PERSONALITY ATTRIBUTES –	107
TABLE 30	EFFECTS OF INFORMATION TOOLS (TOTAL) – DIFFERENCES AND DEVIATIONS ON PRODUCT PERSONALITY ATTRIBUTES –	108
TABLE 31	EFFECTS OF <u>ENGLISH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON PRODUCT PERSONALITY ATTRIBUTES –	109
TABLE 32	MAIN EFFECTS OF <u>FRENCH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON PRODUCT PERSONALITY ATTRIBUTES –	110
TABLE 33	RAW SCORES ON PRODUCT PERSONALITY PROFILE (TOTAL)	111
TABLE 34	RAW SCORES ON PRODUCT PERSONALITY PROFILE	113
TABLE 35	DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS – SUMMARY OF STATISTICAL TESTING ON BEHAVIOURAL ATTRIBUTES –	115
TABLE 36	EFFECTS OF INFORMATION TOOLS (TOTAL) – DIFFERENCES AND DEVIATIONS ON BEHAVIOURAL ATTRIBUTES –	116
TABLE 37	EFFECTS OF <u>ENGLISH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON BEHAVIOURAL ATTRIBUTES –	117
TABLE 38	MAIN EFFECTS OF <u>FRENCH</u> VERSION OF INFORMATION TOOLS – DIFFERENCES AND DEVIATIONS ON BEHAVIOURAL ATTRIBUTES –	117
TABLE 39	RAW SCORES ON BEHAVIOURAL ATTRIBUTES (TOTAL)	118
TABLE 40	RAW SCORES ON BEHAVIOURAL ATTRIBUTES	119
TABLE 41	PERCEIVED INFORMATIVENESS OF INFORMATIONAL TOOLS (TOTAL)	120
TABLE 42	PERCEIVED INFORMATIVENESS OF INFORMATIONAL TOOLS	121

TABLE 1

CHARACTERISTICS OF THE WEIGHTED SAMPLE

	Total (1,229) %	English (611) %	French (618) %
Gender			
• Male	53	54	52
• Female	47	46	48
Age			
• 18-24 years	31	25	37
• 25-44 years	38	44	31
• 45 years and over	31	31	32
Educational Attainment			
• High school or less	60	58	62
• College (some or completed)	28	27	29
• > College	12	15	8
Employment Status			
• Full-time	49	56	42
• Part-time	16	15	17
• Student	7	3	11
• Unemployed	26	24	28
• Don't know / no answer	0	0	0
Marital Status			
• Married / living as couple	31	34	28
• Single	52	45	58
• Other	16	16	14
• Dk/Na	2	5	0
Family Income			
• < \$40,000	56	49	62
• \$40,000 - \$79,999	23	22	24
• \$80,000 and over	9	11	6
• Dk/Na	13	18	8
Daily Number of Cigarettes			
• 10 or less	32	35	29
• 11-25	62	59	65
• More than 25	6	5	6
• Average number	16.1	15.3	17.0
Usual brand of cigarettes			
• DuMaurier Light ⁴	78	85	72
• Total DuMaurier ¹	21	15	28
Always smoked L&M	40	40	39
Consider usual brand to be "L&M"	86	92	81
Use a secondary brand of cigarettes	73	74	71
Secondary brand of cigarettes			
• DuMaurier Light ¹	11	16	6
• Total DuMaurier ¹	15	20	9
Label of secondary brand is "Light" or "Mild" ⁵	45	55	34
Length of daily cigarette smoking			
• 5 years or less	22	21	23
• 6-10 years	20	21	19
• More than 10 years	58	58	58

⁴ Note that the brand depicted in the test was DuMaurier.

⁵ L&M cigarettes include Ultra Light, Ultra Mild, Extra Light, Extra Mild.

TABLE 1

CHARACTERISTICS OF THE WEIGHTED SAMPLE

	Total (1,229) %	English (611) %	French (618) %
Why smoke L&M (open-ended)			
• Relative and/or friend smokes it	9	13	6
• Taste / flavour	39	39	38
• Smell / aroma	5	5	5
• Low degree of throat irritation (less "harshness")	35	35	35
• Strength/satisfies nicotine craving	21	22	20
• Acceptable tar, nicotine & carbon monoxide levels	11	17	4
• Attractive packaging	1	1	1
• Popular brand	3	5	1
• Health reasons	8	10	6
• Trying to quit	5	7	3
• Advertising / promotion / sponsoring	1	1	0
• Habit	3	2	5
• Addicted	1	2	0
• Other	1	1	1
• Dk/Na	3	4	2

TABLE 2

COMPARABILITY OF OVERALL EXPERIMENTAL GROUPS

	TOTAL (1,229) %	New L/M HWMs with descriptor (309) %	New L/M Insert (310) %	Current HWMs without descriptor (304) %	Current HWMs with descriptor (306) %
▪ Male	53	53	53	53	53
▪ 18-24 years old	31	33	30	32	29
▪ More than college education	12	9	13	11	13
▪ Employed full-time	49	49	49	48	50
▪ Single	52	53	51	51	52
▪ Family income less than \$40 K	56	63	55	50	55
▪ Average daily number of cigarettes smoked	16.1	16.6	15.5	16.3	16.1
▪ Regular brand is DuMaurier Light	78	76	81	78	79
▪ Always smoked L&M cigarettes	40	41	34	41	42
▪ Smoked for at least 10 years	58	58	58	54	62

Differences between groups not significant at $P < 0.05$

TABLE 3

COMPARABILITY OF ENGLISH EXPERIMENTAL GROUPS

	TOTAL (611) %	New L/M HWMs with descriptor (156) %	New L/M Insert (155) %	Current HWMs without descriptor (148) %	Current HWMs with descriptor (152) %
▪ Male	54	54	54	54	53
▪ 18-24 years old	25	30	23	27	20
▪ More than college education	15	12	12	15	20
▪ Employed full-time	56	58	56	55	55
▪ Single	45	50	42	45	43
▪ Family income less than \$40 K	49	57	48	43	50
▪ Average daily number of cigarettes smoked	15.3	15.6	14.9	15.5	15.1
▪ Regular brand is DuMaurier Light	85	83	90	82	85
▪ Always smoked L&M cigarettes	40	41	32	44	45
▪ Smoked for at least 10 years	58	55	62	50	63

Differences between groups not significant at $P < 0.05$

TABLE 4

COMPARABILITY OF FRENCH EXPERIMENTAL GROUPS

	TOTAL (618) %	New L/M HWMs with descriptor (153) %	New L/M Insert (155) %	Current HWMs without descriptor (156) %	Current HWMs with descriptor (154) %
▪ Male	52	52	53	52	53
▪ 18-24 years old	37	35	38	37	39
▪ More than college education	8	7	13	7	6
▪ Employed full-time	42	40	42	41	45
▪ Single	58	55	60	56	60
▪ Family income less than \$40 K	62	69	63	56	59
▪ Average daily number of cigarettes smoked	17.0	17.5	16.1	17.2	17.1
▪ Regular brand is DuMaurier Light	72	69	70	75	74
▪ Always smoked L&M cigarettes	39	41	36	39	40
▪ Smoked for at least 10 years	58	59	54	58	60

Differences between groups not significant at $P < 0.05$

TABLE 5 PRE-EXPOSURE KNOWLEDGE OF L&M VS. REGULAR CIGARETTES

L.1 Think about the possible differences between cigarettes labelled as regular and cigarettes labelled as light or mild.

KNOWLEDGE OF L&M vs. REGULAR CIGARETTES	Total (1,229) %	English (611) %	French (618) %
Levels of nicotine			
▪ Much higher	1	1	1
▪ Somewhat higher	3	3	4
▪ The same	46	43	48
▪ Somewhat lower or	41	43	40
▪ Much lower levels of nicotine	8	9	6
▪ Dk/Na	1	1	1
Amounts of chemicals and additives			
▪ Much higher	2	1	2
▪ Somewhat higher	7	7	6
▪ The same	52	49	55
▪ Somewhat lower or	33	35	31
▪ Much lower amounts of chemicals and additive	5	7	4
▪ Dk/Na	2	1	2
Amounts of tar			
▪ Much higher	1	1	2
▪ Somewhat higher	4	4	5
▪ The same	46	42	50
▪ Somewhat lower	40	43	37
▪ Much lower amounts of tar	6	9	4
▪ Dk/Na	2	1	2
Harm to health			
▪ Much more	1	0	2
▪ Somewhat more	3	4	3
▪ The same	71	66	75
▪ Somewhat less or	20	22	18
▪ Much less harmful to the health of smokers	5	7	2
▪ Dk/Na	0	1	0
Risk of dying			
▪ Much more	1	1	1
▪ Somewhat more	4	4	4
▪ The same	75	70	81
▪ Somewhat less or	16	20	13
▪ Much less risk of earlier death for smokers	3	5	2
▪ Dk/Na	1	1	1

TABLE 6

**PRE-EXPOSURE BELIEFS ABOUT SMOKING
L&M VS. REGULAR CIGARETTES**

L.2 Do you smoke light or mild cigarettes because...

BELIEFS ABOUT L&M vs. REGULAR CIGARETTES	Total (1,229) %	English (611) %	French (618) %
▪ L&M reduce the risks of smoking	21	26	17
▪ L&M reduce the amount of tar you inhale	34	40	28
▪ L&M reduce the risk to your health	22	25	19

TABLE 7

PRE-EXPOSURE PERCEIVED STRENGTH OF L&M CIGARETTES

Q1. Now, I would like to have your impressions on what you think happens when you smoke light or mild cigarettes. I would like you to fill out this part of the survey on your own. Here are the questions and a pencil. I will wait right here for you to finish this part, then we can go on with a few more interview questions. If you have any questions as you are going along, please ask me about them.

First, read the description of what may happen when you smoke light or mild cigarettes. Then check the box that best represents your impression about what would happen. (Explain scale 1 to 5 / Self-complete)

STRENGTH OF L&M CIGARETTES	Total (1,229) %	English (611) %	French (618) %
▪ Draw effort / pull			
– Hard	18	20	16
– Easy	47	40	54
▪ Taste / flavour			
– Pleasant	52	50	55
– Unpleasant	15	16	14
▪ Initial satisfaction			
– High	41	40	41
– Low	22	18	25
▪ Throat catch / hit			
– High	23	26	21
– Low	43	35	50
▪ Toxicity			
– High	58	51	66
– Low	13	14	12

N.B. Top 2 box scores (ex. hard) or bottom 2 box scores (ex. easy) of 5-point scale.

TABLE 8 PRE-EXPOSURE PERCEIVED PERSONALITY TRAITS OF L&M CIGARETTES

Q2. *I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)*

PERSONALITY TRAITS OF L&M CIGARETTES	Total (1,229) %	English (611) %	French (618) %
1. Risk-takers – Very prudent – Top 2 box – Bottom 2 box	9 15	7 15	11 14
2. Concerned for others – Selfish – Top 2 box – Bottom 2 box	15 16	11 11	19 20
3. Health negligent – Health conscious – Top 2 box – Bottom 2 box	11 26	11 18	10 34
4. Financially secure – Poor – Top 2 box – Bottom 2 box	7 10	8 6	6 14
5. Image conscious – Sloppy – Top 2 box – Bottom 2 box	6 14	5 10	6 18
6. Straight – Cool – Top 2 box – Bottom 2 box	6 11	5 9	8 12
7. Leader – Follower – Top 2 box – Bottom 2 box	10 10	11 9	8 12
8. Higher education – Lower education – Top 2 box – Bottom 2 box	5 9	6 8	5 9
9. In control of their destiny – Fatalists – Top 2 box – Bottom 2 box	7 11	7 10	6 12
10. Afraid of death – Do not worry about death – Top 2 box – Bottom 2 box	24 10	21 8	27 12
11. Disciplined – Disorganised – Top 2 box – Bottom 2 box	7 13	6 10	7 15
12. Rebellious – Follow the rules – Top 2 box – Bottom 2 box	10 10	8 10	11 9

N.B. *Top 2 box scores (ex. Very prudent) and bottom 2 box scores (ex. Risk-takers) of 9-point semantic differential scales.*

TABLE 9**PRE-EXPOSURE BEHAVIOURAL INTENTIONS**

Q3 / Q4/ Q5 On a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely do you think it is that you...

BEHAVIOURAL INTENTIONS	Total (1,229) %	English (611) %	French (618) %
▪ will switch from L&M to regular	8	6	10
▪ will quit smoking	34	28	39
▪ will reduce smoking	33	28	39

N.B. Top 3 box scores (8-10) of 10-point scale.

TABLE 10

**DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS EFFECTS
– SUMMARY OF STATISTICAL TESTING ON L&M KNOWLEDGE ATTRIBUTES –**

L.1 Think about the possible differences between cigarettes labelled as regular and cigarettes labelled as light or mild.

KNOWLEDGE OF L&M vs. REGULAR CIGARETTES	TOTAL Deviations from control scenario			ENGLISH VERSIONS Deviations from control scenario		
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)
A. Levels of nicotine	★	SIG				
B. Amounts of chemicals and additives						★
C. Amounts of tar		SIG				
D. Harm to health		★★				
E. Risk of dying		SIG	★	★	★	★

KNOWLEDGE OF L&M vs. REGULAR CIGARETTES	FRENCH VERSIONS Deviations from control scenario		
	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)
A. Levels of nicotine	★	SIG	
B. Amounts of chemicals and additives		★	
C. Amounts of tar		SIG	
D. Harm to health		★★	
E. Risk of dying			

SIG = One way Scheffé test significant at $P < 0.05$

★ = T-test significant at $P < 0.05$

★★ = T-test significant at $P < 0.01$

Not significant

TABLE 11

EFFECTS OF INFORMATION TOOLS (TOTAL)
– DIFFERENCES AND DEVIATIONS ON L&M KNOWLEDGE ATTRIBUTES –

L.1 Think about the possible differences between cigarettes labelled as regular and cigarettes labelled as light or mild.

KNOWLEDGE OF L&M vs. REGULAR CIGARETTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)
A. Levels of nicotine	-.31**	-.43**	-.18**	-.18**	-.12*	-.24***	.00
B. Amounts of chemicals and additives	-.23**	-.32**	-.14**	-.24**	.01	-.08	.10
C. Amounts of tar	-.21**	-.44**	-.09	-.19**	-.02	-.25***	.10
D. Harm to health	-.13**	-.23**	-.16**	-.09*	-.05	-.14**	-.07
E. Risk of dying	-.11**	-.18**	-.13**	-.04	-.07	-.14***	-.09*

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences on 5-point scale used.

Dk/Na computed as "same/equally".

TABLE 12

**EFFECTS OF ENGLISH VERSION OF INFORMATION TOOLS
– DIFFERENCES AND DEVIATIONS ON L&M KNOWLEDGE ATTRIBUTES –**

L.1 Think about the possible differences between cigarettes labelled as regular and cigarettes labelled as light or mild.

KNOWLEDGE OF L&M vs. REGULAR CIGARETTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)
A. Levels of nicotine	-.31**	-.36**	-.15*	-.22**	-.09	-.14	.07
B. Amounts of chemicals and additives	-.28**	-.27**	-.08	-.29**	.00	.01	.21*
C. Amounts of tar	-.25**	-.37**	-.05	-.22**	-.02	-.14	.18
D. Harm to health	-.20**	-.17**	-.23**	-.09	-.11	-.09	-.15
E. Risk of dying	-.16**	-.18**	-.18**	.00	-.16*	-.17*	-.17*

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences on 5-point scale used.

Dk/Na computed as "same/equally".

TABLE 13

**EFFECTS OF FRENCH VERSION OF INFORMATION TOOLS
– DIFFERENCES AND DEVIATIONS ON L&M KNOWLEDGE ATTRIBUTES –**

L.1 Think about the possible differences between cigarettes labelled as regular and cigarettes labelled as light or mild.

KNOWLEDGE OF L&M vs. REGULAR CIGARETTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)
A. Levels of nicotine	-.30**	-.50**	-.21**	-.15**	-.15*	-.35***	-.06
B. Amounts of chemicals and additives	-.17**	-.37**	-.20**	-.19**	.02	-.18*	.00
C. Amounts of tar	-.17**	-.52**	-.13*	-.16**	-.01	-.36***	.02
D. Harm to health	-.07	-.29**	-.09	-.09*	.02	-.20**	.00
E. Risk of dying	-.07*	-.18**	-.09*	-.07	.00	-.11	-.01

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences on 5-point scale used.

Dk/Na computed as "same/equally".

TABLE 14 RAW SCORES ON L&M KNOWLEDGE ATTRIBUTES (TOTAL)

L.1 Think about the possible differences between cigarettes labelled as regular and cigarettes labelled as light or mild.

KNOWLEDGE OF L&M vs. REGULAR CIGARETTES (5-point scale)	TOTAL			
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)
A. Levels of nicotine				
▪ Pre-exposure	3.6	3.5	3.5	3.4
▪ Post-exposure	3.3	3.1	3.3	3.2
▪ Difference	-0.3**	-0.4**	-0.2**	-0.2**
B. Amounts of chemicals and additives				
▪ Pre-exposure	3.4	3.3	3.3	3.3
▪ Post-exposure	3.2	3.0	3.2	3.1
▪ Difference	-0.2**	-0.3**	-0.1**	-0.2**
C. Amounts of tar				
▪ Pre-exposure	3.5	3.5	3.4	3.4
▪ Post-exposure	3.3	3.1	3.3	3.2
▪ Difference	-0.2**	-0.4**	-0.1	-0.2**
D. Harm to health				
▪ Pre-exposure	3.3	3.2	3.3	3.2
▪ Post-exposure	3.2	3.0	3.1	3.1
▪ Difference	-0.1**	-0.2**	-0.2**	-0.1*
E. Risk of dying				
▪ Pre-exposure	3.2	3.2	3.3	3.1
▪ Post-exposure	3.1	3.0	3.2	3.1
▪ Difference	-0.1**	-0.2**	-0.1**	0.0

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

Note: All pre and post-exposure results shown are averages of raw scores obtained on a 5-point scale where 1 means "much higher / much more" and 5 means "much lower / much less". Dk/Na computed as "same / equally".

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 15

RAW SCORES ON L&M KNOWLEDGE ATTRIBUTES

L.1 Think about the possible differences between cigarettes labelled as regular and cigarettes labelled as light or mild.

KNOWLEDGE OF L&M vs. REGULAR CIGARETTES (5-point scale)	ENGLISH VERSIONS				FRENCH VERSIONS			
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)
A. Levels of nicotine								
▪ Pre-exposure	3.7	3.5	3.6	3.5	3.6	3.5	3.4	3.4
▪ Post-exposure	3.4	3.1	3.5	3.3	3.3	3.0	3.1	3.2
▪ Difference	-0.3**	-0.4**	-0.1*	-0.2**	-0.3**	-0.5**	-0.3**	-0.2**
B. Amounts of chemicals and additives								
▪ Pre-exposure	3.5	3.3	3.4	3.3	3.3	3.3	3.3	3.3
▪ Post-exposure	3.2	3.0	3.3	3.1	3.1	2.9	3.1	3.1
▪ Difference	-0.3**	0.3**	0.1	0.2**	0.2**	0.4**	0.2**	0.2**
C. Amounts of tar								
▪ Pre-exposure	3.7	3.5	3.5	3.5	3.4	3.4	3.3	3.4
▪ Post-exposure	3.4	3.2	3.5	3.2	3.2	2.9	3.1	3.2
▪ Difference	-0.3**	-0.3**	0.0	-0.3**	-0.2**	-0.5**	-0.2	-0.2**
D. Harm to health								
▪ Pre-exposure	3.3	3.2	3.4	3.1	3.1	3.1	3.2	3.1
▪ Post-exposure	3.1	3.1	3.2	3.1	3.0	2.9	3.1	3.0
▪ Difference	-0.2**	-0.1**	-0.2**	0.0	-0.1	-0.2**	-0.1	-0.1*
E. Risk of dying								
▪ Pre-exposure	3.4	3.2	3.4	3.2	3.2	3.1	3.2	3.1
▪ Post-exposure	3.2	3.0	3.2	3.1	3.1	2.8	3.1	3.1
▪ Difference	-0.2**	-0.2**	-0.2**	-0.1	-0.1*	-0.3**	-0.1*	0.0

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

Note: All pre- and post-exposure results shown are averages of raw scores obtained on a 5-point scale where 1 means "much higher / much more" and 5 means "much lower / much less". Dk/Na computed as "same / equally".

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 16

**DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS
– SUMMARY OF STATISTICAL TESTING ON L&M BELIEFS ATTRIBUTES –**

L.2 Do you smoke light or mild cigarettes because...

BELIEFS ABOUT L&M vs. REGULAR CIGARETTES	TOTAL Deviations from control scenario			ENGLISH VERSIONS Deviations from control scenario		
	New L/M HWMs with descriptor (309)	New L/M HWMs with descriptor (310)	New L/M Insert (304)	Current HWMs without descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)
▪ L&M reduces the risks of smoking						
▪ L&M reduces the amount of tar you inhale						
▪ L&M reduces the risk to your health						

BELIEFS ABOUT L&M vs. REGULAR CIGARETTES	FRENCH VERSIONS Deviations from control scenario		
	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)
▪ L&M reduces the risks of smoking			
▪ L&M reduces the amount of tar you inhale			
▪ L&M reduces the risk to your health			

SIG = One way Scheffé test significant at $P < 0.05$

★ = T-test significant at $P < 0.05$

★★ = T-test significant at $P < 0.01$

Not significant

TABLE 17

EFFECTS OF INFORMATION TOOLS (TOTAL)
– DIFFERENCES AND DEVIATIONS ON L&M BELIEFS ATTRIBUTES –

L.2 Do you smoke *light or mild* cigarettes because...

BELIEFS ABOUT L&M vs. REGULAR CIGARETTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)
▪ L&M reduces the risks of smoking	-.01	-.03	-.03	-.04	.03	.00	.01
▪ L&M reduces the amount of tar you inhale	-.09**	-.12**	-.06*	-.05*	-.04	-.06	.00
▪ L&M reduces the risk to your health	-.03	-.09**	-.03	-.04	.01	-.04	.02

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences of proportions who believed the statement to be true.

Dk/Na computed as zero.

TABLE 18

**EFFECTS OF ENGLISH VERSION OF INFORMATION TOOLS
– DIFFERENCES AND DEVIATIONS ON L&M BELIEFS ATTRIBUTES –**

L.2 Do you smoke *light or mild* cigarettes because...

BELIEFS ABOUT L&M vs. REGULAR CIGARETTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)
▪ L&M reduces the risks of smoking	-.03	-.04	-.04	-.05	.02	.01	.01
▪ L&M reduces the amount of tar you inhale	-.11**	-.12**	-.10**	-.07*	-.04	-.05	-.03
▪ L&M reduces the risk to your health	-.05	-.08*	-.04	-.08**	.03	.00	.05

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences of proportions who believed the statement to be true.

Dk/Na computed as zero.

TABLE 19

**EFFECTS OF FRENCH VERSION OF INFORMATION TOOLS
– DIFFERENCES AND DEVIATIONS ON L&M BELIEFS ATTRIBUTES –**

L.2 Do you smoke *light or mild* cigarettes because...

BELIEFS ABOUT L&M vs. REGULAR CIGARETTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)
▪ L&M reduces the risks of smoking	.01	-.02	-.02	-.02	.03	.00	.00
▪ L&M reduces the amount of tar you inhale	-.07	-.11**	-.02	-.04	-.03	-.07	.02
▪ L&M reduces risk to your health	-.01	-.09**	-.02	-.01	-.01	-.09	-.02

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences of proportions who believed the statement to be true.
Dk/Na computed as zero.

TABLE 20 **RAW SCORES ON L&M BELIEFS ATTRIBUTES (TOTAL)**L.2 Do you smoke *light or mild* cigarettes because...

BELIEFS ABOUT L&M vs. REGULAR CIGARETTES	TOTAL			
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)
▪ L&M reduces the risks of smoking				
– Pre-exposure	0.2	0.2	0.2	0.2
– Post-exposure	0.2	0.2	0.2	0.2
– Difference	0.0	0.0	0.0	0.0
▪ L&M reduces the amount of tar you inhale				
– Pre-exposure	0.4	0.3	0.4	0.3
– Post-exposure	0.3	0.2	0.3	0.2
– Difference	-0.1**	-0.1**	-0.1*	-0.1*
▪ L&M reduces the risk to your health				
– Pre-exposure	0.2	0.2	0.2	0.2
– Post-exposure	0.2	0.1	0.2	0.2
– Difference	0.0	-0.1**	0.0	0.0

* *T-test significant at $P < 0.05$* ** *T-test significant at $P < 0.01$*

Note: All pre- and post-exposure results shown are averages of raw proportions of respondents who believed the statement to be true. Dk/Na computed as zero.

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 21

RAW SCORES ON L&M BELIEFS ATTRIBUTES

L.2 Do you smoke *light or mild* cigarettes because...

BELIEFS ABOUT L&M vs. REGULAR CIGARETTES	ENGLISH VERSIONS				FRENCH VERSIONS			
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)
* L&M reduces the risks of smoking								
– Pre-exposure	0.3	0.2	0.2	0.3	0.1	0.2	0.2	0.2
– Post-exposure	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2
– Difference	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
* L&M reduces the amount of tar you inhale								
– Pre-exposure	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3
– Post-exposure	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
– Difference	-0.1**	-0.1**	-0.1**	-0.1*	-0.1	-0.1**	-0.1	0.0
* L&M reduces the risk to your health								
– Pre-exposure	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2
– Post-exposure	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2
– Difference	-0.1	0.0*	0.0	-0.1**	-0.1	-0.1**	0.0	0.0

* T-test significant at $P < 0.05$ ** T-test significant at $P < 0.01$

Note: All pre- and post-exposure results shown are averages of raw proportions of respondents who believed the statement to be true. Dk/Na computed as zero.

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 22

**DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS
– SUMMARY OF STATISTICAL TESTING ON SENSORY ATTRIBUTES –**

Q1. Now, I would like to have your impressions on what you think happens when you smoke light or mild cigarettes. I would like you to fill out this part of the survey on your own. Here are the questions and a pencil. I will wait right here for you to finish this part, then we can go on with a few more interview questions. If you have any questions as you are going along, please ask me about them.

First, read the description of what may happen when you smoke light or mild cigarettes. Then check the box that best represents your impression about what would happen. (Explain scale 1 to 5 / Self-complete)

SENSORY ATTRIBUTES	TOTAL Deviations from control scenario			ENGLISH VERSIONS Deviations from control scenario		
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)
▪ Draw effort / pull		SIG			★	
▪ Taste / flavour						
▪ Initial satisfaction						
▪ Throat catch / hit		SIG			★	
▪ Toxicity		★				

SENSORY ATTRIBUTES	FRENCH VERSIONS Deviations from control scenario		
	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)
▪ Draw effort / pull		★	
▪ Taste / flavour			
▪ Initial satisfaction		★	
▪ Throat catch / hit			
▪ Toxicity			

SIG = One way Scheffé test significant at $P < 0.05$

★ = T-test significant at $P < 0.05$

★★ = T-test significant at $P < 0.01$

■ Not significant

TABLE 23

EFFECTS OF INFORMATION TOOLS (TOTAL)
– DIFFERENCES AND DEVIATIONS ON SENSORY ATTRIBUTES –

Q1. Now, I would like to have your *impressions* on what you think happens when you smoke *light or mild* cigarettes. I would like you to fill out this part of the survey on your own. Here are the questions and a pencil. I will wait right here for you to finish this part, then we can go on with a few more interview questions. If you have any questions as you are going along, please ask me about them.

First, read the description of what may happen when you smoke light or mild cigarettes. Then check the box that best represents your impression about what would happen. (Explain scale 1 to 5 / Self-complete)

SENSORY ATTRIBUTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)
▪ Draw effort / pull	.22**	.38**	.20**	.14*	.08	.24***	.07
▪ Taste / flavour	-.22**	-.10	-.17**	-.19**	-.02	.10	.02
▪ Initial satisfaction	-.04	.02	-.12*	-.06	.02	.08	-.06
▪ Throat catch / hit	.18**	.40**	.28**	.15*	.03	.25***	.13
▪ Toxicity	.17**	.19**	.16**	.02	.15	.17*	.14

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences on 5-point scale used.

TABLE 24

**MAIN EFFECTS OF ENGLISH VERSION OF INFORMATION TOOLS
– DIFFERENCES AND DEVIATIONS ON SENSORY ATTRIBUTES –**

Q1. Now, I would like to have your *impressions* on what you think happens when you smoke *light or mild* cigarettes. I would like you to fill out this part of the survey on your own. Here are the questions and a pencil. I will wait right here for you to finish this part, then we can go on with a few more interview questions. If you have any questions as you are going along, please ask me about them.

First, read the description of what may happen when you smoke light or mild cigarettes. Then check the box that best represents your impression about what would happen. (Explain scale 1 to 5 / Self-complete)

SENSORY ATTRIBUTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)
▪ Draw effort / pull	.06	.28**	.21**	.05	.01	.23*	.16
▪ Taste / flavour	-.21*	-.08	-.18**	-.11	-.10	.03	-.06
▪ Initial satisfaction	-.01	-.11	-.15*	.00	-.01	-.11	-.15
▪ Throat catch / hit	.13	.29**	.10	.00	.13	.28*	.09
▪ Toxicity	.20*	.18*	.14	.03	.17	.15	.10

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences on 5-point scale used.

TABLE 25

**MAIN EFFECTS OF FRENCH VERSION OF INFORMATION TOOLS
– DIFFERENCES AND DEVIATIONS ON SENSORY ATTRIBUTES –**

Q1. Now, I would like to have your *impressions* on what you think happens when you smoke *light or mild* cigarettes. I would like you to fill out this part of the survey on your own. Here are the questions and a pencil. I will wait right here for you to finish this part, then we can go on with a few more interview questions. If you have any questions as you are going along, please ask me about them.

First, read the description of what may happen when you smoke light or mild cigarettes. Then check the box that best represents your impression about what would happen. (Explain scale 1 to 5 / Self-complete)

SENSORY ATTRIBUTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)
▪ Draw effort / pull	.36**	.49**	.20**	.22**	.13	.26*	-.02
▪ Taste / flavour	-.22*	-.12	-.17*	-.27**	.05	.16	.11
▪ Initial satisfaction	-.07	.16	-.09	-.12	.05	.27*	.03
▪ Throat catch / hit	.22*	.52**	.46**	.30**	-.08	.22	.16
▪ Toxicity	.15	.20*	.19**	.02	.13	.19	.17

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences on 5-point scale used.

TABLE 26

RAW SCORES ON SENSORY PROFILE (TOTAL)

Q1. Now, I would like to have your *impressions* on what you think happens when you smoke *light or mild* cigarettes. I would like you to fill out this part of the survey on your own. Here are the questions and a pencil. I will wait right here for you to finish this part, then we can go on with a few more interview questions. If you have any questions as you are going along, please ask me about them.

First, read the description of what may happen when you smoke light or mild cigarettes. Then check the box that best represents your impression about what would happen. (Explain scale 1 to 5 / Self-complete)

SENSORY PROFILE (5-point scale)	TOTAL			
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)
▪ Draw effort / pull				
– Pre-exposure	2.5	2.3	2.6	2.6
– Post-exposure	2.7	2.7	2.8	2.7
– Difference	0.2**	0.4**	0.2**	0.1*
▪ Taste / flavour				
– Pre-exposure	3.6	3.5	3.5	3.6
– Post-exposure	3.4	3.4	3.3	3.4
– Difference	-0.2**	-0.1	-0.2**	-0.2**
▪ Initial satisfaction				
– Pre-exposure	3.2	3.3	3.3	3.3
– Post-exposure	3.2	3.3	3.2	3.2
– Difference	0.0	0.0	-0.1*	-0.1
▪ Throat catch / hit				
– Pre-exposure	2.8	2.6	2.6	2.7
– Post-exposure	3.0	3.0	2.9	2.9
– Difference	0.2**	0.4**	0.3**	0.2*
▪ Toxicity				
– Pre-exposure	3.8	3.8	3.7	3.8
– Post-exposure	4.0	4.0	3.9	3.8
– Difference	0.2**	0.2**	0.2**	0.0

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

Note: All pre- and post-exposure results shown are averages of raw scores obtained on a 5-point scale where 1 means "low" and 5 means "high".

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 27

RAW SCORES ON SENSORY PROFILE

Q1. Now, I would like to have your *impressions* on what you think happens when you smoke *light or mild* cigarettes. I would like you to fill out this part of the survey on your own. Here are the questions and a pencil. I will wait right here for you to finish this part, then we can go on with a few more interview questions. If you have any questions as you are going along, please ask me about them.

First, read the description of what may happen when you smoke light or mild cigarettes. Then check the box that best represents your impression about what would happen. (Explain scale 1 to 5 / Self-complete)

SENSORY PROFILE (5-point scale)	ENGLISH VERSIONS				FRENCH VERSIONS			
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)
▪ Draw effort / pull								
– Pre-exposure	2.7	2.5	2.8	2.6	2.2	2.2	2.4	2.6
– Post-exposure	2.7	2.8	3.0	2.7	2.6	2.7	2.6	2.8
– Difference	0.0	0.3**	0.2**	0.1	0.4**	0.5**	0.2**	0.2**
▪ Taste / flavour								
– Pre-exposure	3.4	3.4	3.5	3.5	3.7	3.7	3.5	3.6
– Post-exposure	3.2	3.3	3.3	3.4	3.5	3.6	3.3	3.3
– Difference	-0.2*	-0.1	-0.2**	-0.1	-0.2*	-0.1	-0.2*	-0.3**
▪ Initial satisfaction								
– Pre-exposure	3.2	3.3	3.4	3.3	3.3	3.2	3.1	3.2
– Post-exposure	3.2	3.2	3.3	3.3	3.2	3.2	3.0	3.1
– Difference	0.0	-0.1	-0.1*	0.0	-0.1	0.1	-0.1	-0.1
▪ Throat catch / hit								
– Pre-exposure	2.9	2.7	2.8	2.9	2.7	2.5	2.5	2.5
– Post-exposure	3.0	3.0	2.9	2.9	3.0	3.0	3.0	2.8
– Difference	0.1	0.3**	0.1	0.0	0.3*	0.5**	0.5**	0.3**
▪ Toxicity								
– Pre-exposure	3.6	3.7	3.6	3.7	4.0	4.0	3.8	4.0
– Post-exposure	3.8	3.8	3.7	3.7	4.2	4.2	4.0	4.0
– Difference	0.2*	0.1*	0.1	0.0	0.2	0.2*	0.2**	0.0

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

Note: All pre- and post-exposure results shown are averages of raw scores obtained on a 5-point scale where 1 means "low" and 5 means "high".

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 28 **DEVIATIONS FROM CONTROL SCENARIO OF
NEW INFORMATION TOOLS MAIN EFFECTS (TOTAL)**
- SUMMARY OF STATISTICAL TESTING ON PRODUCT PERSONALITY ATTRIBUTES -

Q2. *I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)*

PRODUCT PERSONALITY ATTRIBUTES	TOTAL Deviations from control scenario		
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)
1. Risk-takers - Very prudent		★	
2. Concerned for others - Selfish			
3. Health negligent - Health conscious			
4. Financially secure - Poor			
5. Image conscious - Sloppy			
6. Straight - Cool			
7. Leader - Follower			
8. Higher education - Lower education			
9. In control of their destiny - Fatalists			
10. Afraid of death - Do not worry about death			
11. Disciplined - Disorganised			
12. Rebellious - Follow the rules			

SIG = One way Scheffé test significant at $P < 0.05$

★ = T-test significant at $P < 0.05$

★★ = T-test significant at $P < 0.01$

□ Not significant

TABLE 29

**DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS
– SUMMARY OF STATISTICAL TESTING ON PRODUCT PERSONALITY ATTRIBUTES –**

Q2. *I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)*

PRODUCT PERSONALITY ATTRIBUTES	ENGLISH VERSIONS Deviations from control scenario			FRENCH VERSIONS Deviations from control scenario		
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)
1. Risk-takers – Very prudent					★	
2. Concerned for others – Selfish						
3. Health negligent – Health conscious					★	
4. Financially secure – Poor						
5. Image conscious – Sloppy						
6. Straight – Cool						
7. Leader – Follower						
8. Higher education – Lower education						
9. In control of their destiny – Fatalists						
10. Afraid of death – Do not worry about death						★
11. Disciplined – Disorganised		SIG				
12. Rebellious – Follow the rules						

SIG = One way Scheffé test significant at $P < 0.05$

★ = T-test significant at $P < 0.05$

★★ = T-test significant at $P < 0.01$

□ Not significant

TABLE 30

EFFECTS OF INFORMATION TOOLS (TOTAL)
– DIFFERENCES AND DEVIATIONS ON PRODUCT PERSONALITY ATTRIBUTES –

Q2. I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)

PRODUCT PERSONALITY ATTRIBUTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)
1. Risk-takers – Very prudent	-.38**	-.64**	-.40**	-.27**	-.12	-.37*	-.13
2. Concerned for others – Selfish	.14	.25*	.24**	.10	.03	.15	.14
3. Health negligent – Health conscious	-.22	-.26*	-.09	-.02	-.21	-.24	-.07
4. Financially secure – Poor	.09	-.05	-.03	.01	.08	-.05	-.04
5. Image conscious – Sloppy	.26**	.23*	.16	.15	.11	.08	.01
6. Straight – Cool	.08	.17	.06	.05	.04	.13	.01
7. Leader – Follower	.20*	.10	.03	.14	.06	-.05	-.11
8. Higher education – Lower education	.16*	.06	-.03	.11	.05	-.05	-.14
9. In control of their destiny – Fatalists	.18	.21*	.09	.21*	-.03	.01	-.11
10. Afraid of death – Do not worry about death	.04	.03	.12	.02	.01	.00	.09
11. Disciplined – Disorganised	.21*	.03	.34**	.22**	-.02	-.20	.11
12. Rebellious – Follow the rules	-.07	-.18*	-.26**	-.07	.00	-.11	-.19

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences on 9-point scale.

TABLE 31

**EFFECTS OF ENGLISH VERSION OF INFORMATION TOOLS
– DIFFERENCES AND DEVIATIONS ON PRODUCT PERSONALITY ATTRIBUTES –**

Q2. *I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)*

PRODUCT PERSONALITY ATTRIBUTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)
1. Risk-takers – Very prudent	-.55**	-.54**	-.28*	-.38**	-.17	-.16	.09
2. Concerned for others – Selfish	.13	.30*	.22	.11	.01	.19	.10
3. Health negligent – Health conscious	-.58**	-.15	-.20	-.33*	-.26	.18	.12
4. Financially secure – Poor	-.05	.00	-.15	.11	-.16	-.11	-.26
5. Image conscious – Sloppy	.29*	.20	.21	.27*	.01	-.08	-.07
6. Straight – Cool	.11	.14	.04	.09	.03	.05	-.05
7. Leader – Follower	.17	.01	.04	.25	-.08	-.24	-.21
8. Higher education – Lower education	.31**	-.05	-.08	.20	.12	-.25	-.28
9. In control of their destiny – Fatalists	.16	.09	.15	.38**	-.22	-.29	-.23
10. Afraid of death – Do not worry about death	.16	-.08	.00	.28*	-.12	-.36	-.29
11. Disciplined – Disorganised	.48**	-.08	.34*	.43**	.05	-.51***	-.10
12. Rebellious – Follow the rules	-.13	-.25*	-.18	.05	-.19	-.30	-.23

* *T-test significant at $P < 0.05$*

** *T-test significant at $P < 0.01$*

*** *One way Scheffé test significant at $P < 0.05$*

N.B. *Differences on 9-point scale.*

TABLE 32

MAIN EFFECTS OF FRENCH VERSION OF INFORMATION TOOLS
– DIFFERENCES AND DEVIATIONS ON PRODUCT PERSONALITY ATTRIBUTES –

Q2. I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)

PRODUCT PERSONALITY ATTRIBUTES	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)
1. Risk-takers – Very prudent	-.24	-.74**	-.51**	-.16	-.08	-.58*	-.35
2. Concerned for others – Selfish	.15	.20	.27	.09	.05	.11	.18
3. Health negligent – Health conscious	.11	-.37	.03	.29	-.19	-.66*	-.26
4. Financially secure – Poor	.22	-.10	.09	-.10	.31	.00	.18
5. Image conscious – Sloppy	.23	.25	.11	.01	.21	.23	.09
6. Straight – Cool	.06	.21	.07	.01	.05	.20	.07
7. Leader – Follower	.24	.19	.02	.04	.20	.15	-.02
8. Higher education – Lower education	.03	.18	.03	.02	.00	.16	.00
9. In control of their destiny – Fatalists	.19	.34*	.03	.03	.16	.31	.00
10. Afraid of death – Do not worry about death	-.07	.14	.24	-.24	.16	.37	.47*
11. Disciplined – Disorganised	-.04	.14	.34**	.01	-.06	.12	.33
12. Rebellious – Follow the rules	-.02	-.11	-.35**	-.20	.18	.09	-.14

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences on 9-point scale.

TABLE 33 RAW SCORES ON PRODUCT PERSONALITY PROFILE (TOTAL)

Q2. *I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)*

PRODUCT PERSONALITY PROFILE (9-point scale)	TOTAL			
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)
1. Risk-takers – Very prudent				
– Pre-exposure	4.8	4.9	5.0	4.7
– Post-exposure	4.4	4.3	4.6	4.4
– Difference	-0.4**	-0.6**	-0.4**	-0.3**
2. Concerned for others – Selfish				
– Pre-exposure	4.9	4.7	5.0	5.1
– Post-exposure	5.0	5.0	5.2	5.2
– Difference	0.1	0.3*	0.2**	0.1
3. Health negligent – Health conscious				
– Pre-exposure	4.4	4.5	4.4	4.3
– Post-exposure	4.2	4.2	4.3	4.3
– Difference	-0.2	-0.3*	-0.1	0.0
4. Financially secure – Poor				
– Pre-exposure	4.8	5.0	4.8	4.8
– Post-exposure	4.9	4.9	4.8	4.8
– Difference	0.1	-0.1	0.0	0.0
5. Image conscious – Sloppy				
– Pre-exposure	4.5	4.5	4.6	4.6
– Post-exposure	4.8	4.7	4.8	4.7
– Difference	0.3**	-0.2*	0.2	0.1
6. Straight – Cool				
– Pre-exposure	4.8	4.7	4.9	4.9
– Post-exposure	4.9	4.9	5.0	5.0
– Difference	0.1	0.2	0.1	0.1
7. Leader – Follower				
– Pre-exposure	4.9	5.0	5.1	5.0
– Post-exposure	5.1	5.1	5.1	5.1
– Difference	0.2*	0.1	0.0	0.1
8. Higher education – Lower education				
– Pre-exposure	4.8	4.8	4.9	4.8
– Post-exposure	5.0	4.9	4.9	4.9
– Difference	0.2*	0.1	0.0	0.1
9. In control of their destiny – Fatalists				
– Pre-exposure	4.7	4.7	4.9	4.8
– Post-exposure	4.9	4.9	5.0	5.0
– Difference	0.2	0.2*	0.1	0.2*

TABLE 33 **RAW SCORES ON PRODUCT PERSONALITY PROFILE (TOTAL)**

Q2. *I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)*

PRODUCT PERSONALITY PROFILE (9-point scale)	TOTAL			
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)
10. Afraid of death – Do not worry about death				
– Pre-exposure	5.6	5.8	5.47	5.7
– Post-exposure	5.0	5.8	5.59	5.7
– Difference	0.0	0.0	0.12	0.0
11. Disciplined – Disorganised				
– Pre-exposure	4.7	4.8	4.7	4.8
– Post-exposure	4.9	4.8	5.0	5.0
– Difference	0.2*	0.0	0.3**	0.2**
12. Rebellious – Follow the rules				
– Pre-exposure	5.0	5.1	5.0	5.0
– Post-exposure	4.9	4.9	4.7	4.9
– Difference	-0.1	-0.2*	-0.3**	-0.1

* *T-test significant at $P < 0.05$*

** *T-test significant at $P < 0.01$*

Note: All pre- and post-exposure results shown are averages of raw scores obtained on a 9-point semantic differential scale where 1 applies to the left side and 9 applies to the right side of the scale.

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 34

RAW SCORES ON PRODUCT PERSONALITY PROFILE

Q2. I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)

PRODUCT PERSONALITY PROFILE (9-point scale)	ENGLISH VERSIONS				FRENCH VERSIONS			
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)
1. Risk-takers – Very prudent								
– Pre-exposure	4.7	4.9	4.8	4.5	5.0	5.0	5.1	4.7
– Post-exposure	4.1	4.4	4.5	4.2	4.7	4.3	4.6	4.6
– Difference	-0.6**	-0.5**	-0.3*	-0.3**	-0.3	-0.7**	-0.5**	-0.1
2. Concerned for others – Selfish								
– Pre-exposure	5.0	4.8	4.9	5.2	4.8	4.8	5.0	5.1
– Post-exposure	5.1	5.1	5.1	5.3	4.9	5.0	5.3	5.2
– Difference	0.1	0.3*	0.2	0.1	0.1	0.2	0.3	0.1
3. Health negligent – Health conscious								
– Pre-exposure	4.9	4.9	4.8	4.6	4.0	4.1	4.1	4.1
– Post-exposure	4.3	4.8	4.6	4.3	4.1	3.7	4.1	4.4
– Difference	-0.6**	-0.1	-0.2	-0.3*	0.1	-0.4	0.0	0.3
4. Financially secure – Poor								
– Pre-exposure	5.1	5.1	5.1	4.9	4.5	4.8	4.6	4.7
– Post-exposure	5.1	5.1	4.9	5.0	4.7	4.7	4.7	4.6
– Difference	0.0	0.0	-0.2	0.1*	0.2	-0.1	0.1	-0.1
5. Image conscious – Sloppy								
– Pre-exposure	4.8	4.5	4.8	4.6	4.3	4.6	4.5	4.5
– Post-exposure	5.1	4.7	5.0	4.9	4.5	4.8	4.6	4.6
– Difference	0.3*	0.2	0.2	0.3	0.2	0.2	0.1	0.1
6. Straight – Cool								
– Pre-exposure	4.7	4.7	4.9	4.8	4.8	4.7	4.9	5.0
– Post-exposure	4.9	4.9	4.9	4.9	4.9	4.9	5.0	5.0
– Difference	0.2	0.2	0.0	0.1	0.1	0.2	0.1	0.0
7. Leader – Follower								
– Pre-exposure	5.1	5.1	5.1	5.0	4.8	4.9	5.0	4.9
– Post-exposure	5.2	5.1	5.2	5.2	5.0	5.1	5.0	5.0
– Difference	0.1	0.0	0.1	0.2	0.2	0.2	0.0	0.1

TABLE 34

RAW SCORES ON PRODUCT PERSONALITY PROFILE

Q2. I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)

PRODUCT PERSONALITY PROFILE (9-point scale)	ENGLISH VERSIONS				FRENCH VERSIONS			
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)
8. Higher education – Lower education								
– Pre-exposure	4.9	4.8	5.0	4.8	4.7	4.9	4.7	4.7
– Post-exposure	5.2	4.7	4.9	5.0	4.7	5.1	4.8	4.8
– Difference	0.3**	-0.1	-0.1	0.2	0.0	0.2	0.1	0.1
9. In control of their destiny – Fatalists								
– Pre-exposure	4.8	4.7	4.8	4.8	4.7	4.6	4.9	4.6
– Post-exposure	5.0	4.8	4.9	5.2	4.8	5.0	5.0	4.7
– Difference	0.2	0.1	0.1	0.4**	0.1	0.4*	0.1	0.1
10. Afraid of death – Do not worry about death								
– Pre-exposure	5.3	5.6	5.5	5.6	5.7	5.9	5.5	5.6
– Post-exposure	5.5	5.6	5.5	5.9	5.7	6.1	5.7	5.4
– Difference	0.2	0.0	0.0	0.3*	0.0	0.2	0.2	-0.2
11. Disciplined – Disorganised								
– Pre-exposure	4.6	4.8	4.8	4.7	4.7	4.7	4.5	4.8
– Post-exposure	5.1	4.7	5.1	5.1	4.7	4.8	4.8	4.8
– Difference	0.5**	-0.1	0.3*	0.4**	0.0	0.1	0.3**	0.0
12. Rebellious – Follow the rules								
– Pre-exposure	5.0	5.0	5.0	4.9	5.0	5.2	4.9	5.1
– Post-exposure	4.9	4.7	4.8	4.9	5.0	5.1	4.6	4.9
– Difference	-0.1	-0.3*	-0.2	0.0	0.0	-0.1	-0.3**	-0.2

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

Note: All pre- and post-exposure results shown are averages of raw scores obtained on a 9-point semantic differential scale where 1 applies to the left side and 9 applies to the right side of the scale.

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 35

**DEVIATIONS FROM CONTROL SCENARIO OF NEW INFORMATION TOOLS MAIN EFFECTS
– SUMMARY OF STATISTICAL TESTING ON BEHAVIOURAL ATTRIBUTES –**

Q3 / Q4 / Q5 On a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely do you think it is that you...

BEHAVIOURAL INTENTIONS	TOTAL Deviations from control scenario			ENGLISH VERSIONS Deviations from control scenario		
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)
▪ will switch from L&M to regular					★	
▪ will quit smoking	SIG	★	SIG	SIG		SIG
▪ will reduce smoking						

BEHAVIOURAL INTENTIONS	FRENCH VERSIONS Deviations from control scenario		
	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)
▪ will switch from L&M to regular			
▪ will quit smoking			★
▪ will reduce smoking			

SIG = One way Scheffé test significant at $P < 0.05$

★ = T-test significant at $P < 0.05$

★★ = T-test significant at $P < 0.01$

Not significant

TABLE 36

EFFECTS OF INFORMATION TOOLS (TOTAL)
– DIFFERENCES AND DEVIATIONS ON BEHAVIOURAL ATTRIBUTES –

Q3 / Q4 / Q5 On a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely do you think it is that you...

BEHAVIOURAL INTENTIONS	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)
▪ will switch from L&M to regular	-.15	-.25	-.25*	-.09	-.06	-.16	-.16
▪ will quit smoking	.26**	.01	.28*	-.28**	.54***	.29*	.56***
▪ will reduce smoking	.02	-.08	.18	.16	-.13	-.23	.02

* *T-test significant at $P < 0.05$*

** *T-test significant at $P < 0.01$*

*** *One way Scheffé test significant at $P < 0.05$*

N.B. *Differences on 10-point scale.*

TABLE 37

EFFECTS OF ENGLISH VERSION OF INFORMATION TOOLS
– DIFFERENCES AND DEVIATIONS ON BEHAVIOURAL ATTRIBUTES –

Q3 / Q4 / Q5 On a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely do you think it is that you...

BEHAVIOURAL INTENTIONS	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)
▪ will switch from L&M to regular	-.12	-.46*	-.04	.03	-.15	-.49*	-.07
▪ will quit smoking	.46**	.01	.31*	-.39*	.85***	.40	.70***
▪ will reduce smoking	.25*	-.17	.20	.31	-.06	-.47	-.11

TABLE 38

MAIN EFFECTS OF FRENCH VERSION OF INFORMATION TOOLS
– DIFFERENCES AND DEVIATIONS ON BEHAVIOURAL ATTRIBUTES –

BEHAVIOURAL INTENTIONS	DIFFERENCES PRE vs. POST-EXPOSURE				DEVIATIONS FROM CONTROL SCENARIO		
	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)
▪ will switch from L&M to regular	-.18	-.02	-.46*	-.21	.03	.18	-.25
▪ will quit smoking	.09	.00	.24	-.17	.25	.17	.41*
▪ will reduce smoking	-.18	.02	.16	.00	-.18	.02	.16

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

*** One way Scheffé test significant at $P < 0.05$

N.B. Differences on 10-point scale.

TABLE 39 **RAW SCORES ON BEHAVIOURAL ATTRIBUTES (TOTAL)**

Q3 / Q4 / Q5 On a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely do you think it is that you...

BEHAVIOURAL INTENTIONS (10-point scale)	TOTAL			
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)
▪ will switch from L&M to regular				
– Pre-exposure	3.1	3.0	3.0	2.7
– Post-exposure	2.9	2.8	2.7	2.6
– Difference	-0.2	-0.2	-0.3*	-0.1
▪ will quit smoking				
– Pre-exposure	5.4	5.8	5.3	5.8
– Post-exposure	5.7	5.8	5.6	5.5
– Difference	0.3**	0.0	0.3*	-0.3**
▪ will reduce smoking				
– Pre-exposure	5.6	5.9	5.5	5.6
– Post-exposure	5.6	5.8	5.7	5.8
– Difference	0.0	-0.1	0.2	0.2

* *T-test significant at $P < 0.05$*

** *T-test significant at $P < 0.01$*

Note: All pre- and post-exposure results shown are averages of raw scores obtained on a 10-point scale where 1 means "not at all likely" and 10 means "very likely".

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 40

RAW SCORES ON BEHAVIOURAL ATTRIBUTES

Q3 / Q4 / Q5 On a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely do you think it is that you...

BEHAVIOURAL INTENTIONS (10-point scale)	ENGLISH VERSIONS				FRENCH VERSIONS			
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)
▪ will switch from L&M to regular								
– Pre-exposure	2.7	2.8	2.5	2.2	3.4	3.3	3.4	3.2
– Post-exposure	2.6	2.3	2.5	2.2	3.2	3.3	2.9	3.0
– Difference	-0.1	-0.5*	0.0	0.0	-0.2	0.0	-0.5*	-0.2
▪ will quit smoking								
– Pre-exposure	5.2	5.6	5.0	5.4	5.6	6.0	5.7	6.1
– Post-exposure	5.6	5.6	5.3	5.0	5.7	6.1	5.9	5.9
– Difference	0.4**	0.0	0.3*	-0.4*	0.1	0.1	0.2	-0.2
▪ will reduce smoking								
– Pre-exposure	5.2	5.7	5.1	5.3	6.0	6.1	5.9	6.0
– Post-exposure	5.5	5.6	5.3	5.6	5.9	6.1	6.0	6.0
– Difference	0.3*	-0.1	0.2	0.3	-0.1	0.0	0.1	0.0

* T-test significant at $P < 0.05$

** T-test significant at $P < 0.01$

Note: All pre- and post-exposure results shown are averages of raw scores obtained on a 10-point scale where 1 means "not at all likely" and 10 means "very likely".

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 41

**PERCEIVED INFORMATIVENESS OF
INFORMATIONAL TOOLS (TOTAL)**

Q11. To what extent would you say that this warning message informs you about the health effects of smoking light or mild cigarettes? We will use a scale from 1 to 10, where 1 means "not at all" and 10 means "very much".

Q12. To what extent do you agree or disagree that the following statements describe this warning message? To give your answer, please use a 7-point scale where 1 means you totally disagree, 7 means you totally agree, and the midpoint (4) means you neither agree nor disagree.

PERCEIVED INFORMATIVENESS	TOTAL			
	New L/M HWMs with descriptor (309)	New L/M Insert (310)	Current HWMs without descriptor (304)	Current HWMs with descriptor (306)
Informs you about the health effects of smoking L&M cigarettes (Q11)				
▪ Average score on 10-point scale	6.4***	7.0***	5.9	5.6
Agreement ratings (6 or 7) with statements on 7-point scale (Q12)				
1. This warning message contains accurate information about light or mild cigarettes	5.8***	5.8***	5.0	5.0
2. The information that this warning message provides about light or mild cigarettes is believable	5.8***	5.9***	5.3	5.3
3. This warning message provides information about the health effects of smoking light or mild cigarettes that is relevant to me	5.5***	5.6***	4.8	4.7
4. This warning message makes smoking seem less attractive	4.9***	4.6	4.7	4.4
5. This warning message makes me want to quit smoking	4.2	4.0	3.9	3.7
6. This warning message makes me want to smoke less	4.5	4.3	4.3	4.1
7. This warning message gives me information I did not know about light or mild cigarettes	3.7	4.1***	3.5	3.5
8. This warning message shocked me	3.1	2.9	2.9	2.8

*** One way test against control scenario significant at $P < 0.05$

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

TABLE 42

PERCEIVED INFORMATIVENESS OF INFORMATIONAL TOOLS

Q11. To what extent would you say that this warning message informs you about the health effects of smoking light or mild cigarettes? We will use a scale from 1 to 10, where 1 means "not at all" and 10 means "very much".

Q12. To what extent do you agree or disagree that the following statements describe this warning message? To give your answer, please use a 7-point scale where 1 means you totally disagree, 7 means you totally agree, and the midpoint (4) means you neither agree nor disagree.

PERCEIVED INFORMATIVENESS	ENGLISH VERSIONS				FRENCH VERSIONS			
	New L/M HWMs with descriptor (156)	New L/M Insert (155)	Current HWMs without descriptor (148)	Current HWMs with descriptor (152)	New L/M HWMs with descriptor (153)	New L/M Insert (155)	Current HWMs without descriptor (156)	Current HWMs with descriptor (154)
Informs you about the health effects of smoking L&M cigarettes (Q11)								
* Average score on 10-point scale	6.5	6.5	5.8	6.1	6.4***	7.5***	6.0***	5.0
Agreement ratings (6 or 7) with statements on 7-point scale (Q12)								
1. This warning message contains accurate information about light or mild cigarettes	5.6	5.6***	5.1	5.0	5.9***	6.1***	4.9	5.0
2. The information that this warning message provides about light or mild cigarettes is believable	5.6	5.7	5.4	5.4	6.0***	6.2***	5.2	5.1
3. This warning message provides information about the health effects of smoking light or mild cigarettes that is relevant to me	5.3	5.2	4.7	4.7	5.7***	6.0***	4.8	4.7
4. This warning message makes smoking seem less attractive	5.1***	4.4	4.6	4.4	4.7	4.9	4.8	4.4
5. This warning message makes me want to quit smoking	4.3	3.7	3.7	3.8	4.0	4.3	4.1	3.6
6. This warning message makes me want to smoke less	4.7	4.0	4.0	4.2	4.3	4.7	4.6	4.1
7. This warning message gives me information I did not know about light or mild cigarettes	4.1	3.8	3.6	3.8	3.3	4.4***	3.4	3.2
8. This warning message shocked me	3.3	2.8	2.9	3.0	2.9	3.0	2.9	2.5

*** One way test against control scenario significant at $P < 0.05$

Note: Only one insert or one of 3 randomly selected HWMs was evaluated by a respondent.

APPENDIX 1

QUESTIONNAIRE **(English and French version)**

FINAL INTERCEPT SCREENER Light/Mild Descriptor Study

A	1
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INTERVIEW	
Date:	_____
Start:	_____ [] a.m. [] p.m.

INTRO: Hi, we are doing a study on cigarette smoking on behalf of the Government of Canada. This survey involves people aged 18 or more who smoke cigarettes. If you smoke, we would like you to participate? Participation is voluntary, and answers will be kept confidential.

If you are a smoker and if you complete the interview, we will give you \$10 in cash as a way of thanking you for your help.

If respondent accepts, proceed with screening. If refuses, record as refusal and proceed with your recruiting.

S.1 At the present time, do you smoke manufactured (not rolled) cigarettes every day, occasionally (less than every day) or not at all?

- | | | |
|---|-----|---------------------|
| • EVERY DAY | () | SMOKER, CONTINUE |
| • OCCASIONALLY (LESS THAN EVERY DAY)..... | () | |
| • NOT AT ALL | () | THANK AND TERMINATE |
| • Dk/Na | () | |

S.2 What brand of cigarettes do you usually smoke, that is, the brand you smoke more often than any other?
(Do not read. Code one brand only. Probe for whether respondent smokes "regular" cigarettes, light, medium, mild, extra mild, extra light, ultra light, special mild, special, etc. within their brand. Do not probe whether they smoke king size or regular size. If not certain about brand, ask respondent to show you his/her pack)

All brands labelled light, mild, medium, ultra/extra light/mild/medium are eligible.
Respondent must be a smoker of a non-regular type of cigarette.
Smokers of regular type of cigarette are not eligible.
Eligible brands are highlighted in yellow in your list.
Terminate here if brand/type of cigarette is not eligible.

Enter code of usual brand here
(See codes in brand list)

--	--

S.3 What is your age? (If respondent is reluctant to give exact age, say: Instead of giving your exact age, I will read a range of ages for you to choose from. Please stop me when I read the range in which your age falls.)

- | | |
|-----------------------------|---|
| • 18-19 years old..... ()1 | • 45-54 years old ()5 |
| • 20-24 years old..... ()2 | • 55-64 years old ()6 |
| • 25-34 years old..... ()3 | • 65-74 years old ()7 |
| • 35-44 years old..... ()4 | • 75 years old or over ()8 |
| | • Less than 18 years old or NA ()9 CONCLUDE |

S.4 Do you, or does anyone in your household, work for an advertising, public relations or market research firm, radio, TV, the media, government (Municipal, Provincial or Federal), the pharmaceutical industry, the health sector, a tobacco company or Health Canada?

- Yes..... ☐ 1 THANK AND TERMINATE • No ☐ 2 CONTINUE

S.5 INTERVIEWER: Record gender of respondent

- Male ☐ 1 • Female ☐ 2

S.6 **PROCEED WITH INTERVIEW.** We would like to interview you as part of our study – this involves an interview right here in the mall – the interview could take around 25 minutes. We will be interviewing a large number of people across Canada and will only be reporting what you say as part of a larger group. As I mentioned before, we would give you \$10 as a way of thanking you for your help. Will you participate in our study?

- Yes..... ☐ 1 PROCEED WITH INTERVIEW
• No ☐ 2 THANK, RECORD REFUSAL

INTERVIEWER:

If respondent is not alone: We would like frank answers and opinions. Therefore we need to interview him/her without another person assisting, since different people may have different views. If other person smokes and is eligible, he /she can be interviewed separately but at the same time.

FINAL QUESTIONNAIRE

Light/mild Descriptor Study

A	1
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INTERVIEWER SAYS:

Thank you for taking the time to participate in this study. This interview will take no more than 25 minutes to complete.

Please rest assured that all your answers will be kept strictly confidential.

I am not an employee of the government or Health Canada or any company related to the tobacco industry.

SECTION 1 SMOKING HABITS

We are now ready to begin the actual interview. We'd first like to talk with you about your smoking habits.

H.1 On average, how many cigarettes do you smoke per day? (Probe for precise number. If respondent says one pack a day, probe for number of cigarettes in a pack)

Cigarettes per day

(Response must be numerical. Do not accept range)

IF SMOKE OCCASIONALLY, ASK H.2 / DAILY SMOKERS SKIP TO H.3

H.2 On the days you smoke, about how many cigarettes do you smoke?

Cigarettes per day

(Response must be numerical. Do not accept range)

H.3 How long have you been a cigarette smoker? Has it been...? (READ)

- Less than 1 year ()1
- 1-5 years ()2
- 6-10 years ()3
- More than 10 years ()4
- Dk/Na (do not read) ()9

H.4 You said that _____ (READ USUAL BRAND MENTIONED IN SCREENER) was your usual brand of cigarettes. Do you consider your main cigarette brand (SEE S.2 IN SCREENER) to be ...? (READ)

- Regular ()1
- Light ()2
- Mild ()3
- Ultra light ()4
- Extra light ()5
- Ultra mild ()6
- Extra mild ()7
- Other (SPECIFY) ()8
- Dk/Na (do not read) ()9

H.5 Since you first started smoking cigarettes, have you ever switched from smoking regular cigarettes to light or mild cigarettes or have you always smoked light or mild cigarettes?

- Have switched from regular to light or mild cigarettes..... ()1
- Have always smoked light or mild cigarettes..... ()2
- Dk/Na ()9

H.6 Is there another brand of cigarettes you usually smoke when you can't get your usual brand, _____? (S.2 IN SCREENER)

- Yes..... ()1
 - No ()2
 - Dk/Na ()9
- SKIP TO SECTION 2

H.7 What is your second preferred cigarette brand that you smoke when you can't get your usual regular brand? (Do not read. Code one brand only. Probe for whether this brand is a regular cigarette, light, medium, mild, extra mild, extra light, ultra light, special mild, special, etc. within that brand. Do not probe whether it is king size or regular size. If not certain about brand, ask respondent to show his/her pack)

Enter code of secondary brand here
(See codes in brand list)
Any brand is eligible.

H.8 Why do you smoke light or mild cigarettes? (DO NOT READ. CODE ALL THAT APPLY.)

- Relative and/or friend smokes it..... ()01
- Taste / flavour ()02
- Smell / aroma ()03
- Low degree of throat irritation (less "harshness") ()04
- Strength/satisfies nicotine craving ()05
- Acceptable tar, nicotine & carbon monoxide levels . ()06
- Attractive packaging..... ()07
- Popular brand..... ()08
- Health reasons ()09
- Trying to quit ()10
- Advertising / promotion/sponsoring..... ()11
- Other (SPECIFY) ()90
- Dk/Na (do not read) ()99

SECTION 2 PRE-EXPOSURE

KNOWLEDGE OF REGULAR vs. L&M CIGARETTES

L.1 Think about the possible differences between cigarettes labelled as regular and cigarettes labelled as light or mild. (READ AND ROTATE A - E)

[]A Compared to regular cigarettes, do you think that light or mild cigarettes have... (READ)

- Much higher ()1
- Somewhat higher ()2
- The same ()3
- Somewhat lower or ()4
- Much lower levels of nicotine? ()5
- Dk/Na (do not read) ()9

[]B Compared to regular cigarettes, do you think that light or mild cigarettes have... (READ)

- Much higher ()1
- Somewhat higher ()2
- The same ()3
- Somewhat lower or ()4
- Much lower amounts of chemicals and additives? ()5
- Dk/Na (do not read) ()9

[]C Compared to regular cigarettes, do you think that light or mild cigarettes produce... (READ)

- Much higher ()1
- Somewhat higher ()2
- The same ()3
- Somewhat lower ()4
- Much lower amounts of tar? ()5
- Dk/Na (do not read) ()9

[]D Compared to regular cigarettes, do you think that smoking light or mild cigarettes is... (READ)

- Much more ()1
- Somewhat more ()2
- The same ()3
- Somewhat less or ()4
- Much less harmful to the health of smokers? ()5
- Dk/Na (do not read) ()9

[]E Compared to regular cigarettes, do you think that light or mild cigarettes leads to... (READ)

- Much more ()1
- Somewhat more ()2
- The same ()3
- Somewhat less or ()4
- Much less risk of earlier death for smokers? ()5
- Dk/Na (do not read) ()9

BELIEFS ABOUT L&M vs. REGULAR CIGARETTES

L.2 Do you smoke light or mild cigarettes because... (READ AND ROTATE)

[]A you believe they reduce the risks of smoking without having to actually give up smoking?

- Yes ()1
- No ()2
- Dk/Na ()9

[]B you believe they reduce the amount of tar you inhale compared to regular cigarettes?

- Yes ()1
- No ()2
- Dk/Na ()9

[]C you believe they reduce the risk to your health compared to regular cigarettes?

- Yes ()1
- No ()2
- Dk/Na ()9

IMPRESSIONS ON SMOKING L&M CIGARETTES

Q1. Now, I would like to have your impressions on what you think happens when you smoke light or mild cigarettes. I would like you to fill out this part of the survey on your own. Here are the questions and a pencil. I will wait right here for you to finish this part, then we can go on with a few more interview questions. If you have any questions as you are going along, please ask me about them.

First, read the description of what may happen when you smoke light or mild cigarettes. Then check the box that best represents your impression about what would happen.
(Explain scale 1 to 5 / Self-complete)

Light or mild cigarettes

Q1.1 DRAW EFFORT / PULL (Easy – Hard)

The amount of effort necessary (drawing or sucking on light or mild cigarettes) to get a satisfactory puff of smoke into the mouth.

Easy ☐ ☐ ☐ ☐ ☐ Hard

Q1.2 TASTE / FLAVOUR (Unpleasant – Pleasant)

The degree of pleasantness or unpleasantness of the flavour that is present during smoking light or mild cigarettes.

Unpleasant ☐ ☐ ☐ ☐ ☐ Pleasant

Q1.3 INITIAL SATISFACTION (Low – High)

The extent to which light or mild cigarettes are capable of delivering satisfactory puffs of smoke, even in the starting puff or two.

Low ☐ ☐ ☐ ☐ ☐ High

Q1.4 THROAT CATCH / HIT (Low – High)

The short, sharp momentary “kick” or “hit” sensation felt in the lower throat / upper chest region specifically as the smoke of light or mild cigarettes goes down. It is noticed immediately as the smoke contacts the throat and lasts a second or less.

Low ☐ ☐ ☐ ☐ ☐ High

Q1.5 TOXICITY (Low – High)

How much does smoking light or mild cigarettes regularly cause harmful health effects.

Low ☐ ☐ ☐ ☐ ☐ High

RESPONDENT: RETURN QUESTIONNAIRE TO INTERVIEWER.

INTERVIEWER: CHECK FOR COMPLETENESS

PERSONALITY TRAITS OF SMOKERS OF LIGHT OR MILD CIGARETTES

Q2. I would like you to fill out the next part of the survey on your own as well. If you have any questions as you are going along, please ask me about them. Below are statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)

In general, people who smoke light or mild cigarettes are...

Q2.1	Risk-takers	1	2	3	4	5	6	7	8	9	Very prudent
Q2.2	Concerned for others	1	2	3	4	5	6	7	8	9	Selfish
Q2.3	Health negligent	1	2	3	4	5	6	7	8	9	Health conscious
Q2.4	Financially secure	1	2	3	4	5	6	7	8	9	Poor
Q2.5	Image conscious	1	2	3	4	5	6	7	8	9	Sloppy
Q2.6	Straight	1	2	3	4	5	6	7	8	9	Cool
Q2.7	Leader	1	2	3	4	5	6	7	8	9	Follower
Q2.8	Higher education	1	2	3	4	5	6	7	8	9	Lower education
Q2.9	In control of their destiny	1	2	3	4	5	6	7	8	9	Fatalists
Q2.10	Afraid of death	1	2	3	4	5	6	7	8	9	Do not worry about death
Q2.11	Disciplined	1	2	3	4	5	6	7	8	9	Disorganised
Q2.12	Rebellious	1	2	3	4	5	6	7	8	9	Follow the rules

RESPONDENT: RETURN QUESTIONNAIRE TO INTERVIEWER

INTERVIEWER: CHECK FOR COMPLETENESS

BEHAVIOURAL INTENTIONS

- Q3. On a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely do you think it is that you will switch from light or mild cigarettes to regular cigarettes? (HAND CARD SHOWING SCALE)

• Dk/Na○

- Q4. On a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely do you think it is that you will quit smoking? (HAND CARD SHOWING SCALE)

• Dk/Na○

- Q5. Still using a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely is it that you will reduce the number of cigarettes you smoke per week? (HAND CARD SHOWING SCALE)

• Dk/Na○

SECTION 3 POST-EXPOSURE

INTERVIEWER: Give the respondent the L/M warning message [A1] with the descriptor. At any time, let respondent pick it up and look at it at the distance he/she is most comfortable with.

Read...

Please take a quick look at this warning message for cigarette packs.

INTERVIEWER: Make sure pack is L/M warning [A1] with descriptor. Let respondent examine the warning message freely. Wait about 30 seconds before proceeding with the interview, then read...

Now that you have looked at this warning message, I would like you to answer the same questions we asked you before.

KNOWLEDGE OF REGULAR vs. L&M CIGARETTES

L.3 Now that you have looked at some information, what are your impressions about the possible differences between cigarettes labelled as regular and cigarettes labelled as light or mild. First (READ AND ROTATE A - E)

[]A Compared to regular cigarettes, do you think that light or mild cigarettes have...
(READ)

- Much higher ()1
- Somewhat higher..... ()2
- The same ()3
- Somewhat lower or ()4
- Much lower levels of nicotine?..... ()5
- Dk/Na (do not read)..... ()9

[]B Compared to regular cigarettes, do you think that light or mild cigarettes have...
(READ)

- Much higher ()1
- Somewhat higher..... ()2
- The same ()3
- Somewhat lower or ()4
- Much lower amounts of chemicals and additives? ()5
- Dk/Na (do not read)..... ()9

[]C Compared to regular cigarettes, do you think that light or mild cigarettes produce... (READ)

- Much higher ()1
- Somewhat higher..... ()2
- The same ()3
- Somewhat lower ()4
- Much lower amounts of tar? ()5
- Dk/Na (do not read)..... ()9

[]D Compared to regular cigarettes, do you think that smoking light or mild cigarettes is... (READ)

- Much more ()1
- Somewhat more..... ()2
- The same ()3
- Somewhat less or ()4
- Much less harmful to the health of smokers? ()5
- Dk/Na (do not read)..... ()9

[]E Compared to regular cigarettes, do you think that light or mild cigarettes leads to...
(READ)

- Much more ()1
- Somewhat more..... ()2
- The same ()3
- Somewhat less or ()4
- Much less risk of earlier death for smokers? ()5
- Dk/Na (do not read)..... ()9

BELIEFS ABOUT L&M vs. REGULAR CIGARETTES

L.4 Do you smoke light or mild cigarettes because... (READ AND ROTATE)

[]A you believe they reduce the risks of smoking without having to actually give up smoking?

- Yes.....()1
- No.....()2
- Dk/Na.....()9

[]B you believe they reduce the amount of tar you inhale compared to regular cigarettes?

- Yes.....()1
- No.....()2
- Dk/Na.....()9

[]C you believe they reduce the risk to your health compared to regular cigarettes?

- Yes.....()1
- No.....()2
- Dk/Na.....()9

IMPRESSIONS ON SMOKING L&M CIGARETTES

Q6. Again, now that you have looked at some information, I would like to have your impressions on what you think happens when you smoke light or mild cigarettes. You will fill out this part of the survey on your own. Here are the questions and a pencil. I will wait right here for you to finish this part. If you have any questions as you are going along, please ask me about them.

First, read the description of what may happen when you smoke light or mild cigarettes. Then check the box that best represents your impression about what would happen. (Self-complete)

Light or mild cigarettes

Q6.1 DRAW EFFORT / PULL (Easy – Hard)

The amount of effort necessary (drawing or sucking on light or mild cigarettes) to get a satisfactory puff of smoke into the mouth.

Easy ☐ ☐ ☐ ☐ ☐ Hard

Q6.2 TASTE / FLAVOUR (Unpleasant – Pleasant)

The degree of pleasantness or unpleasantness of the flavour that is present during smoking light or mild cigarettes.

Unpleasant ☐ ☐ ☐ ☐ ☐ Pleasant

Q6.3 INITIAL SATISFACTION (Low – High)

The extent to which light or mild cigarettes are capable of delivering satisfactory puffs of smoke, even in the starting puff or two.

Low ☐ ☐ ☐ ☐ ☐ High

Q6.4 THROAT CATCH / HIT (Low – High)

The short, sharp momentary “kick” or “hit” sensation felt in the lower throat / upper chest region specifically as the smoke of light or mild cigarettes goes down. It is noticed immediately as the smoke contacts the throat and lasts a second or less.

Low ☐ ☐ ☐ ☐ ☐ High

Q6.5 TOXICITY (Low – High)

How much does smoking light or mild cigarettes regularly cause harmful health effects.

Low ☐ ☐ ☐ ☐ ☐ High

RESPONDENT: RETURN QUESTIONNAIRE TO INTERVIEWER.

INTERVIEWER: CHECK FOR COMPLETENESS

PERSONALITY TRAITS OF SMOKERS OF LIGHT OR MILD CIGARETTES

Q7. Again, now that you have looked at some information, I would like you to fill out the next part of the survey on your own. If you have any questions as you are going along, please ask me about them. Below are the statements about people who smoke light or mild cigarettes. Complete the sentences to describe your own impressions of people who smoke light or mild cigarettes by circling a number between 1 and 9 on each of the scales listed after the statements. (Self-complete)

In general, people who smoke light or mild cigarettes are...

Q7.1	Risk-takers	1	2	3	4	5	6	7	8	9	Very prudent
Q7.2	Concerned for others	1	2	3	4	5	6	7	8	9	Selfish
Q7.3	Health negligent	1	2	3	4	5	6	7	8	9	Health conscious
Q7.4	Financially secure	1	2	3	4	5	6	7	8	9	Poor
Q7.5	Image conscious	1	2	3	4	5	6	7	8	9	Sloppy
Q7.6	Straight	1	2	3	4	5	6	7	8	9	Cool
Q7.7	Leader	1	2	3	4	5	6	7	8	9	Follower
Q7.8	Higher education	1	2	3	4	5	6	7	8	9	Lower education
Q7.9	In control of their destiny	1	2	3	4	5	6	7	8	9	Fatalists
Q7.10	Afraid of death	1	2	3	4	5	6	7	8	9	Do not worry about death
Q7.11	Disciplined	1	2	3	4	5	6	7	8	9	Disorganised
Q7.12	Rebellious	1	2	3	4	5	6	7	8	9	Follow the rules

RESPONDENT: RETURN QUESTIONNAIRE TO INTERVIEWER

INTERVIEWER: CHECK FOR COMPLETENESS

BEHAVIOURAL INTENTIONS

- Q8. On a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely do you think it is that you will switch from light or mild cigarettes to regular cigarettes? (HAND CARD SHOWING SCALE)

• Dk/Na○

- Q9. On a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely do you think it is that you will quit smoking? (HAND CARD SHOWING SCALE)

• Dk/Na○

- Q10. Still using a scale of 1 to 10, where 1 means not at all likely and 10 means very likely, how likely is it that you will reduce the number of cigarettes you smoke per week? (HAND CARD SHOWING SCALE)

• Dk/Na○

SECTION 4 | OPINIONS

- Q11. To what extent would you say that this warning message informs you about the health effects of smoking light or mild cigarettes? We will use a scale from 1 to 10, where 1 means "not at all" and 10 means "very much". (HAND CARD SHOWING SCALE)

• Dk/Na○

- Q12. To what extent do you agree or disagree that the following statements describe this warning message? To give your answer, please use a 7-point scale where 1 means you totally disagree, 7 means you totally agree, and the midpoint (4) means you neither agree nor disagree. (HAND CARD SHOWING SCALE)

INTERVIEWER: for each statement, circle one code only. Do not read out "don't know".

READ AND ROTATE		Totally Disagree					Totally Agree		Don't know
Q12.1	This warning message contains accurate information about light or mild cigarettes	1	2	3	4	5	6	7	9
Q12.2	The information that this warning message provides about light or mild cigarettes is believable	1	2	3	4	5	6	7	9

READ AND ROTATE		Totally Disagree					Totally Agree		Don't know
Q12.3	This warning message provides information about the health effects of smoking light or mild cigarettes that is relevant to me	1	2	3	4	5	6	7	9
Q12.4	This warning message makes smoking seem less attractive	1	2	3	4	5	6	7	9
Q12.5	This warning message makes me want to quit smoking	1	2	3	4	5	6	7	9
Q12.6	This warning message makes me want to smoke less	1	2	3	4	5	6	7	9
Q12.7	This warning message gives me information I did not know about light or mild cigarettes	1	2	3	4	5	6	7	9
Q12.8	This warning message shocked me	1	2	3	4	5	6	7	9

SECTION 5 CLASSIFICATION

We now have just a few more questions to ask which will help us classify your responses for statistical purposes only.

C.1 What is the highest level of education you have achieved? (DO NOT READ)

- Elementary school or less (schooling up to grade 7) ()1
- Some high school (grades 8 - 11) ()2
- Completed high school (grades 12 or 13 or OAC) ()3
- Some community college, vocational or trade school (or some CEGEP) ()4
- Completed community college, vocational or trade school (or completed CEGEP) ... ()5
- Some university (no degree) ()6
- Completed university (Bachelor's degree) ()7
- Post graduate university (Master's, Ph.D., completed or not) ()8
- Dk/Na ()9

C.2 Which of the following best describes your employment status? Are you... (READ)

- Employed full-time (30 hours per week or more) ()1
- Employed part-time ()2
- Unemployed or looking for a job ()3
- Staying at home full-time (home-maker, social assistance) ()4
- Student ()5
- Retired ()6
- OTHER ()8
- Dk/Na (do not read) ()9

C.3 Are you... (READ)

- Married or living as a couple ()1
- Single ()2
- Widowed ()3
- Separated..... ()4
- Divorced ()5
- Dk/Na (**do not read**) ()9

C.4 Into which of the following categories would you put the total annual income for 2004, before taxes and deductions, of all members of your household, including yourself? Is it... (READ)

- Less than \$10,000..... ()1
- \$10,000 to \$19,999 ()2
- \$20,000 to \$39,999 ()3
- \$40,000 to \$59,999 ()4
- \$60,000 to \$79,999 ()5
- \$80,000 to \$99,999 ()6
- \$100,000 to \$119,999 ()7
- \$120,000 and over ()8
- Refuse / Dk/Na (**do not read**). ()9

C.5 In which province do you live?

- Newfoundland / Labrador..... ()01
- Prince Edward Island ()02
- Nova Scotia ()03
- New Brunswick..... ()04
- Québec..... ()05
- Ontario..... ()06
- Manitoba ()07
- Saskatchewan..... ()08
- Alberta ()09
- British Columbia ()10
- Yukon ()11
- Northwest Territories..... ()12
- Nunavut..... ()13

**THANK YOU VERY MUCH FOR YOUR PARTICIPATION.
THAT COMPLETES THE INTERVIEW.**

SPECIAL NOTES FROM INTERVIEWER:

--

INTERVIEW	RESPONDENT (for verification)
End: _____ [] a.m. [] p.m.	Tel.: (_____) _____
Interviewer: _____	Name: _____
	City: _____

SÉLECTION – Version finale

Étude sur la mention légère/douce

A	1
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ENTREVUE
Date : _____ Début : _____ [] a.m. [] p.m.

INTRO : Bonjour / Bonsoir. Nous effectuons une étude sur la cigarette pour le compte du gouvernement du Canada. L'étude vise les fumeurs âgés de 18 ans ou plus. Si vous fumez, nous aimerions que vous participiez. La participation est volontaire et toutes vos réponses resteront entièrement confidentielles.

Si vous êtes un fumeur et si vous complétez l'entrevue, vous recevrez 10 \$ en argent, en guise de remerciement.

Si le répondant accepte, continuez avec la sélection. Si refuse, inscrire comme refus et passez à un(e) autre candidat(e).

S.1 À l'heure actuelle, est-ce que vous fumez des cigarettes toutes faites (pas roulées) à tous les jours, occasionnellement (moins qu'à tous les jours) ou pas du tout?

- | | | |
|--|-----|------------------------------|
| • À TOUS LES JOURS | () | FUMEUR, CONTINUER |
| • OCCASIONNELLEMENT (PAS TOUS LES JOURS) | () | |
| • PAS DU TOUT | () | REMERCIER ET TERMINER |
| • Nsp/Nrp | () | |

S.7 Quelle marque de cigarettes fumez-vous habituellement, c'est-à-dire la marque que vous fumez plus souvent que toute autre? *(Ne pas lire. Cochez une seule marque. Sonder si la marque que le répondant fume est une cigarette régulière, légère, medium, douce, extra douce, extra légère, ultra légère, spéciale douce, spéciale, etc. Ne pas demander si king size ou format régulier. Si n'est pas certain de la marque, demander au répondant de montrer son paquet).*

Toutes les marques étiquetées Légère, Douce, Medium, Ultra/Extra Légère/Douce/Medium sont éligibles.

Le répondant doit être un fumeur de cigarette non régulière.

Les fumeurs d'un type de cigarette régulière ne sont pas éligibles.

Les marques éligibles sont surlignées en jaune dans votre liste.

Terminer ici si la marque/le type de cigarette n'est pas éligible.

Entrer le code de la marque habituelle ici.

(Voir les codes dans la liste de marques)

--	--

S.8 Quel est votre âge? *(Si le répondant hésite à donner son âge précis, dites : Au lieu de me donner votre âge exact, je vais vous lire des groupes d'âges et lorsque le vôtre tombera dans une catégorie, vous m'arrêterez.)*

- | | |
|------------------------|---|
| • 18-19 ans ()1 | • 45-54 ans ()5 |
| • 20-24 ans ()2 | • 55-64 ans ()6 |
| • 25-34 ans ()3 | • 65-74 ans ()7 |
| • 35-44 ans ()4 | • 75 ans ou plus ()8 |
| | • Moins de 18 ans ou NRP : ()9 TERMINER |

S.9 Est-ce que vous (ou un membre de votre foyer) travaillez pour une firme de publicité, de relations publiques ou d'études de marché, la radio, télé ou autre média, un gouvernement (municipal, provincial ou fédéral), le secteur pharmaceutique, le secteur de la santé, un fabricant de tabac ou Santé Canada?

• Oui ☐ 1 REMERCIER ET TERMINER

• Non ☐ 2 CONTINUER

S.10 INTERVIEWEUR : Enregistrer le sexe du répondant

• Masculin ☐ 1

• Féminin ☐ 2

S.11 **INITIER L'ENTREVUE.** Nous aimerions vous interviewer dans le cadre de notre sondage – ici même – dans le centre commercial. L'entrevue durera environ 25 minutes. Nous interrogerons un grand nombre de personnes à travers le Canada et les réponses seront toutes regroupées ensemble. Comme je vous l'ai mentionné précédemment, nous vous offrons 10 \$ en argent comptant en guise de remerciement. Acceptez-vous de participer à notre sondage?

• Oui ☐ 1 ENTREVUE

• Non ☐ 2 MERCI. INSCRIVEZ REFUS

INTERVIEWEUR :

Si le répondant est accompagné : Nous aimerions que les réponses à cette étude soient franches. C'est pourquoi nous devons l'interroger sans que personne ne l'accompagne car différentes personnes peuvent avoir des opinions différentes. Si une autre personne fume et est éligible, il/elle peut être interrogé(e) séparément mais au même moment.

QUESTIONNAIRE – Version finale

Étude sur la mention légère/douce

A	1
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INTERVIEWEUR, DITES :

Merci de prendre le temps de participer à cette étude. Cette entrevue prendra 25 minutes à compléter, pas plus.

Soyez assuré que toutes vos réponses demeureront strictement confidentielles.

Je ne suis pas un(e) employé(e) du gouvernement ou de Santé Canada ou d'une compagnie reliée à l'industrie du tabac.

SECTION 1 HABITUDES DE CONSOMMATION

Nous sommes maintenant prêts à commencer l'entrevue proprement dite. J'aimerais tout d'abord aborder vos habitudes reliées à la cigarette.

H.1 En moyenne, combien de cigarettes fumez-vous chaque jour? (Sonder pour obtenir un nombre précis. Si le répondant répond un paquet par jour, sonder pour savoir combien il y a de cigarettes dans le paquet.)

Cigarettes par jour

(Le répondant doit répondre par un nombre. Ne pas accepter un intervalle)

SI FUME OCCASIONNELLEMENT, DEMANDER H.2 / CEUX QUI FUMENT À CHAQUE JOUR SAUTENT À H.3

H.2 Les jours où vous fumez, environ combien de cigarettes fumez-vous?

Cigarettes par jour

(Le répondant doit répondre par un nombre. Ne pas accepter un intervalle)

H.3 Depuis combien de temps fumez-vous? Est-ce depuis...? (LIRE)

- Moins d'un an ()1
- 1-5 ans ()2
- 6-10 ans ()3
- Plus de 10 ans ()4
- Nsp/Nrp (ne pas lire) ()9

H.4 Vous avez dit que (LIRE LA MARQUE HABITUELLE MENTIONNÉE DANS LE QUESTIONNAIRE DE RECRUTEMENT) était votre marque habituelle de cigarettes. Considérez-vous que votre principale marque de cigarettes (VOIR S.2 DANS LA SÉLECTION) est une cigarette? (LIRE)

- Régulière ()1
- Légère ()2
- Douce ()3
- Ultra légère ()4
- Extra légère ()5
- Ultra douce ()6
- Extra douce ()7
- Autre (PRÉCISER) ()8
- Nsp/Nrp (ne pas lire) ()9

H.5 Depuis que vous fumez des cigarettes, êtes-vous passé de cigarettes régulières à des légères ou douces ou avez-vous toujours fumé des cigarettes légères ou douces?

- Est passé de régulières à des cigarettes légères ou douces ()1
- A toujours fumé des cigarettes légères ou douces ()2
- Nsp/Nrp ()9

H.6 Y a-t-il une autre marque de cigarettes que vous fumez habituellement lorsque vous ne pouvez vous procurer votre marque habituelle, _____? (S.2 DANS LA SÉLECTION)

- Oui ()1
 - Non ()2
 - Nsp/Nrp ()9
- SAUTER À LA SECTION 2

H.7 Quelle est votre seconde marque de cigarettes préférée, celle que vous fumez lorsque vous ne pouvez vous procurer votre marque habituelle régulière? (Ne pas lire. Cochez une seule marque. Sonder si cette marque est une cigarette régulière, légère, medium, douce, extra douce, extra légère, ultra légère, spéciale douce, spéciale, etc. Ne pas demander si king size ou format régulier. Si n'est pas certain de la marque, demander au répondant de montrer son paquet)

Entrez le code de la marque secondaire ici.
(Voir les codes de la liste de marques)
N'importe quelle marque est éligible.

H.8 Pourquoi fumez-vous des cigarettes légères ou douces? (NE PAS LIRE. CODER TOUTES LES MENTIONS QUI S'APPLIQUENT.)

- Un parent et/ou un ami en fume ()01
- Le goût / la saveur ()02
- L'odeur / l'arôme ()03
- Cause moins d'irritation de la gorge (moins «âcre») ()04
- La force/satisfait le besoin de nicotine ()05
- Taux de goudron, de nicotine et de monoxyde de carbone acceptables . ()06
- Emballage attirant ()07
- Marque populaire ()08
- Raisons de santé ()09
- Essaie d'arrêter ()10
- Publicité / promotion / commandites ()11
- Autre (PRÉCISER) _____ ()90
- Nsp/Nrp ()99

SECTION 2 | PRÉ-EXPOSITION

CONNAISSANCE DES CIGARETTES RÉGULIÈRES vs L&D

L.1 Pensez aux différences possibles entre les cigarettes étiquetées comme régulières et les cigarettes étiquetées légères ou douces. (LIRE EN ROTATION A - E)

[]A Par rapport aux cigarettes régulières, pensez-vous que les cigarettes légères ou douces ont une teneur en nicotine... (LIRE)

- Beaucoup plus élevée ()1
- Un peu plus élevée ()2
- Aussi élevée ()3
- Un peu moins élevée ou ()4
- Beaucoup moins élevée? ()5
- Nsp/Nrp (ne pas lire) ()9

[]B Par rapport aux cigarettes régulières, pensez-vous que les cigarettes légères ou douces ont une teneur en substances chimiques et en additifs ... (LIRE)

- Beaucoup plus élevée ()1
- Un peu plus élevée ()2
- Aussi élevée ()3
- Un peu moins élevée ou ()4
- Beaucoup moins élevée? ()5
- Nsp/Nrp (ne pas lire) ()9

[]C Par rapport aux cigarettes régulières, pensez-vous que les cigarettes légères ou douces ont une teneur en goudron ... (LIRE)

- Beaucoup plus élevée ()1
- Un peu plus élevée ()2
- Aussi élevée ()3
- Un peu moins élevée ou ()4
- Beaucoup moins élevée? ()5
- Nsp/Nrp (ne pas lire) ()9

[]D Par rapport aux cigarettes régulières, pensez-vous que le fait de fumer des cigarettes légères ou douces est ... (LIRE)

- Beaucoup plus dommageable pour la santé des fumeurs ()1
- Un peu plus dommageable ()2
- Aussi dommageable ()3
- Un peu moins dommageable ou ()4
- Beaucoup moins dommageable pour la santé des fumeurs? ()5
- Nsp/Nrp (ne pas lire) ()9

[]E Par rapport cigarettes régulières, pensez-vous que le fait de fumer les cigarettes légères ou douces cause ... (LIRE)

- Beaucoup plus de risques de mort précoce des fumeurs ()1
- Un peu plus de risques ()2
- Autant de risques ()3
- Un peu moins de risques ou ()4
- Beaucoup moins de risques de mort précoce des fumeurs? ()5
- Nsp/Nrp (ne pas lire) ()9

CROYANCES À PROPOS DES CIGARETTES L&D vs RÉGULIÈRES

L.2 Fumez-vous des cigarettes légères ou douces parce que... (LIRE EN ROTATION)

[]A vous croyez qu'elles réduisent les risques de fumer sans devoir réellement cesser de fumer?

- Oui.....()1
- Non.....()2
- Nsp/Nrp.....()9

[]B vous croyez qu'elles réduisent la quantité de goudron que vous inhalez comparativement aux cigarettes régulières?

- Oui.....()1
- Non.....()2
- Nsp/Nrp.....()9

[]C vous croyez qu'elles réduisent le risque pour votre santé comparativement aux cigarettes régulières?

- Oui.....()1
- Non.....()2
- Nsp/Nrp.....()9

IMPRESSIONS SUR LE FAIT DE FUMER DES CIGARETTES L&D

Q1. Maintenant, j'aimerais avoir vos impressions sur ce que vous pensez qu'il pourrait arriver lorsque vous fumez des cigarettes légères ou douces. Ensuite, j'aimerais que vous remplissiez cette partie du sondage vous-même. Voici le questionnaire et un crayon. J'attendrai ici que vous finissiez cette partie, puis nous continuerons avec quelques questions supplémentaires. Si vous avez des questions à me poser, n'hésitez pas à le faire.

Tout d'abord, lisez la description de ce qui pourrait arriver lorsque vous fumez des cigarettes légères ou douces. Ensuite, cochez la case qui correspond le plus à votre impression de ce qui pourrait arriver. (Expliquer l'échelle de 1 à 5 / Auto-administration)

Cigarettes légères ou douces

Q1.1 EFFORT POUR ASPIRER / TIRER (Facile – Difficile)

Le degré d'effort nécessaire (pour aspirer ou tirer sur des cigarettes légères ou douces), afin d'amener une bouffée de fumée satisfaisante dans la bouche.

Facile ☐ ☐ ☐ ☐ ☐ Difficile

Q1.2 GOÛT / SAVEUR

Dans quelle mesure la saveur goûtée pendant qu'on fume des cigarettes légères ou douces est agréable ou désagréable.

Désagréable ☐ ☐ ☐ ☐ ☐ Agréable

Q1.3 SATISFACTION INITIALE (Faible – Élevée)

Dans quelle mesure les cigarettes légères ou douces sont capables de fournir des bouffées de fumée satisfaisantes, y compris lors de la première ou seconde bouffée.

Faible ☐ ☐ ☐ ☐ ☐ Élevée

Q1.4 IMPACT SUR LA GORGE (Faible – Élevée)

La sensation rapide, de courte durée et frappante ressentie dans le bas de la gorge et le haut de la poitrine lorsque la fumée des cigarettes légères ou douces est avalée. On la ressent immédiatement dès que la fumée entre en contact avec la gorge et dure une seconde ou moins.

Faible ☐ ☐ ☐ ☐ ☐ Élevée

Q1.5 TOXICITÉ (Faible – Élevée)

Dans quelle mesure fumer régulièrement des cigarettes légères ou douces cause des dommages à la santé.

Faible ☐ ☐ ☐ ☐ ☐ Élevée

RÉPONDANT : RETOURNEZ LE QUESTIONNAIRE À L'INTERVIEWEUR.

INTERVIEWEUR : VÉRIFIER SI COMPLET.

TRAITS DE PERSONNALITÉ DES FUMEURS DE CIGARETTES LÉGÈRES OU DOUCES

Q2. J'aimerais que vous remplissiez vous-même la prochaine partie du questionnaire. Si vous avez des questions à me poser, n'hésitez pas à le faire. Voici des énoncés concernant des gens qui fument des cigarettes légères ou douces. Complétez la phrase afin de décrire vos propres impressions des personnes qui fument des cigarettes légères ou douces, en encerclant un nombre de 1 à 9 sur chacun des items qui suivent l'énoncé. (Auto-administration)

En général, les gens qui fument des cigarettes légères ou douces...

Q2.1	Aiment le risque	1	2	3	4	5	6	7	8	9	Très prudents
Q2.2	Tiennent compte des autres	1	2	3	4	5	6	7	8	9	Égoïstes
Q2.3	Négligent leur santé	1	2	3	4	5	6	7	8	9	Font attention à leur santé
Q2.4	À l'aise financièrement	1	2	3	4	5	6	7	8	9	Démunis
Q2.5	Conscients de leur image	1	2	3	4	5	6	7	8	9	Peu soigneux
Q2.6	Straight	1	2	3	4	5	6	7	8	9	Cool
Q2.7	Meneurs	1	2	3	4	5	6	7	8	9	Suiveurs
Q2.8	Très scolarisés	1	2	3	4	5	6	7	8	9	Ont peu d'études
Q2.9	En contrôle de leur destin	1	2	3	4	5	6	7	8	9	Fatalistes
Q2.10	Ont peur de la mort	1	2	3	4	5	6	7	8	9	Ne sont pas préoccupés par la mort
Q2.11	Disciplinés	1	2	3	4	5	6	7	8	9	Désorganisés
Q2.12	Rebelles	1	2	3	4	5	6	7	8	9	Suivent les règles

RÉPONDANT : RETOURNEZ LE QUESTIONNAIRE À L'INTERVIEWEUR.

INTERVIEWEUR : VÉRIFIER SI COMPLET.

INTENTIONS DE COMPORTEMENT

- Q3. Sur une échelle de 1 à 10, où 1 signifie pas du tout probable et 10 signifie très probable, quelle est la probabilité que vous passiez de cigarettes légères ou douces à des cigarettes régulières? (PRÉSENTEZ LA CARTE MONTRANT L'ÉCHELLE)

• Nsp/Nrp○

- Q4. Sur une échelle de 1 à 10, où 1 signifie pas du tout probable et 10 signifie très probable, quelle est la probabilité que vous cessiez de fumer? (PRÉSENTEZ LA CARTE MONTRANT L'ÉCHELLE)

• Nsp/Nrp○

- Q5. Toujours en utilisant une échelle de 1 à 10, où 1 signifie pas du tout probable et 10 signifie très probable, quelle est la probabilité que vous réduisiez le nombre de cigarettes que vous fumez par semaine? (PRÉSENTEZ LA CARTE MONTRANT L'ÉCHELLE)

• Nsp/Nrp○

SECTION 3 POST-EXPOSITION

INTERVIEWEUR : Remettre au répondant la **mise en garde L/D [A1] avec la mention**. En tout temps, laissez le répondant la manipuler et la regarder à la distance qu'il/elle est le plus confortable.

Lire...

Veuillez jeter un coup d'œil rapide sur ce message de mise en garde pour les paquets de cigarettes.

INTERVIEWEUR : Assurez-vous que le paquet est la mise en garde L/D [A1] avec la mention. Laissez le répondant examiner la mise en garde librement. Attendre environ 30 secondes avant de procéder à l'entrevue, ensuite lire...

Maintenant que vous avez regardé ce message de mise en garde, j'aimerais que vous répondiez à nouveau aux mêmes questions que précédemment.

CONNAISSANCE DES CIGARETTES RÉGULIÈRES vs L&D

L.3 Maintenant que vous avez pris connaissance de certaines informations, quelles sont vos impressions à propos des différences possibles entre les cigarettes étiquetées comme régulières et les cigarettes étiquetées légères ou douces. Tout d'abord (*LIRE EN ROTATION A - E*)

[]A Par rapport aux cigarettes régulières, pensez-vous que les cigarettes légères ou douces ont une teneur en nicotine... (*LIRE*)

- Beaucoup plus élevée ()1
- Un peu plus élevée ()2
- Aussi élevée ()3
- Un peu moins élevée ou ()4
- Beaucoup moins élevée? ()5
- Nsp/Nrp (**ne pas lire**) ()9

[]B Par rapport aux cigarettes régulières, pensez-vous que les cigarettes légères ou douces ont une teneur en substances chimiques et en additifs ... (*LIRE*)

- Beaucoup plus élevée ()1
- Un peu plus élevée ()2
- Aussi élevée ()3
- Un peu moins élevée ou ()4
- Beaucoup moins élevée? ()5
- Nsp/Nrp (**ne pas lire**) ()9

[]C Par rapport aux cigarettes régulières, pensez-vous que les cigarettes légères ou douces ont une teneur en goudron ... (*LIRE*)

- Beaucoup plus élevée ()1
- Un peu plus élevée ()2
- Aussi élevée ()3
- Un peu moins élevée ou ()4
- Beaucoup moins élevée? ()5
- Nsp/Nrp (**ne pas lire**) ()9

[]D Par rapport aux cigarettes régulières, pensez-vous que le fait de fumer des cigarettes légères ou douces est ... (*LIRE*)

- Beaucoup plus dommageable pour la santé des fumeurs ()1
- Un peu plus dommageable ()2
- Aussi dommageable ()3
- Un peu moins dommageable ou ()4
- Beaucoup moins dommageable pour la santé des fumeurs? ()5
- Nsp/Nrp (**ne pas lire**) ()9

[]E Par rapport cigarettes régulières, pensez-vous que le fait de fumer les cigarettes légères ou douces cause... (*LIRE*)

- Beaucoup plus de risques de mort précoce des fumeurs ()1
- Un peu plus de risques ()2
- Autant de risques ()3
- Un peu moins de risques ou ()4
- Beaucoup moins de risques de mort précoce des fumeurs? ()5
- Nsp/Nrp (**ne pas lire**) ()9

CROYANCES À PROPOS DES CIGARETTES L&D vs RÉGULIÈRES

L.4 Fumez-vous des cigarettes légères ou douces parce que... (LIRE EN ROTATION)

[]A vous croyez qu'elles réduisent les risques associés au tabagisme sans pour autant devoir réellement cesser de fumer?

- Oui.....()1
- Non.....()2
- Nsp/Nrp.....()9

[]B vous croyez qu'elles réduisent la quantité de goudron que vous inhalez comparativement aux cigarettes régulières?

- Oui.....()1
- Non.....()2
- Nsp/Nrp.....()9

[]C vous croyez qu'elles sont moins nocives pour votre santé que les cigarettes régulières?

- Oui.....()1
- Non.....()2
- Nsp/Nrp.....()9

IMPRESSIONS SUR LE FAIT DE FUMER DES CIGARETTES L&D

Q6. Encore une fois, maintenant que vous avez pris connaissance de certaines informations, j'aimerais avoir vos impressions sur ce que vous pensez qu'il pourrait arriver lorsque vous fumez des cigarettes légères ou douces. Vous remplirez cette partie du sondage vous-même. Voici le questionnaire et un crayon. J'attendrai ici que vous finissiez cette partie, puis nous continuerons avec quelques questions supplémentaires. Si vous avez des questions à me poser, n'hésitez pas à le faire.

Tout d'abord, lisez la description de ce qui pourrait arriver lorsque vous fumez des cigarettes légères ou douces. Ensuite, cochez la case qui correspond le plus à votre impression de ce qui pourrait arriver. (Auto-administration)

Cigarettes légères ou douces

Q6.1 EFFORT POUR ASPIRER / TIRER (Facile – Difficile)

Le degré d'effort nécessaire (pour aspirer ou tirer sur des cigarettes légères ou douces), afin d'amener une bouffée de fumée satisfaisante dans la bouche.

Facile ☐ ☐ ☐ ☐ ☐ Difficile

Q6.2 GOÛT / SAVEUR

Dans quelle mesure la saveur goûtée pendant qu'on fume des cigarettes légères ou douces est agréable ou désagréable.

Désagréable ☐ ☐ ☐ ☐ ☐ Agréable

Q6.3 SATISFACTION INITIALE (Faible – Élevée)

Dans quelle mesure les cigarettes légères ou douces sont capables de fournir des bouffées de fumée satisfaisantes, y compris lors de la première ou seconde bouffée.

Faible ☐ ☐ ☐ ☐ ☐ Élevée

Q6.4 IMPACT SUR LA GORGE (Faible – Élevée)

La sensation rapide, de courte durée et frappante ressentie dans le bas de la gorge et le haut de la poitrine lorsque la fumée des cigarettes légères ou douces est avalée. On la ressent immédiatement dès que la fumée entre en contact avec la gorge et dure une seconde ou moins.

Faible ☐ ☐ ☐ ☐ ☐ Élevée

Q6.5 TOXICITÉ (Faible – Élevée)

Dans quelle mesure fumer régulièrement des cigarettes légères ou douces cause des dommages à la santé.

Faible ☐ ☐ ☐ ☐ ☐ Élevée

RÉPONDANT : RETOURNEZ LE QUESTIONNAIRE À L'INTERVIEWEUR.

INTERVIEWEUR : VÉRIFIER SI COMPLET.

TRAITS DE PERSONNALITÉ DES FUMEURS DE CIGARETTES LÉGÈRES OU DOUCES

Q7. À nouveau, maintenant que vous avez pris connaissance de certaines informations, j'aimerais que vous remplissiez vous-même la prochaine partie du questionnaire. Si vous avez des questions à me poser, n'hésitez pas à le faire. Voici des énoncés concernant des gens qui fument des cigarettes légères ou douces. Complétez la phrase afin de décrire vos propres impressions des personnes qui fument des cigarettes légères ou douces, en encerclant un nombre de 1 à 9 sur chacun des items qui suivent l'énoncé. (Auto-administration)

En général, les gens qui fument des cigarettes légères ou douces...

Q7.1	Aiment le risque	1	2	3	4	5	6	7	8	9	Très prudents
Q7.2	Tiennent compte des autres	1	2	3	4	5	6	7	8	9	Égoïstes
Q7.3	Négligent leur santé	1	2	3	4	5	6	7	8	9	Font attention à leur santé
Q7.4	À l'aise financièrement	1	2	3	4	5	6	7	8	9	Démunis
Q7.5	Conscients de leur image	1	2	3	4	5	6	7	8	9	Peu soigneux
Q7.6	Straight	1	2	3	4	5	6	7	8	9	Cool
Q7.7	Meneurs	1	2	3	4	5	6	7	8	9	Suiveurs
Q7.8	Très scolarisés	1	2	3	4	5	6	7	8	9	Ont peu d'études
Q7.9	En contrôle de leur destin	1	2	3	4	5	6	7	8	9	Fatalistes
Q7.10	Ont peur de la mort	1	2	3	4	5	6	7	8	9	Ne sont pas préoccupés par la mort
Q7.11	Disciplinés	1	2	3	4	5	6	7	8	9	Désorganisés
Q7.12	Rebelles	1	2	3	4	5	6	7	8	9	Suivent les règles

RÉPONDANT : RETOURNEZ LE QUESTIONNAIRE À L'INTERVIEWEUR.

INTERVIEWEUR : VÉRIFIER SI COMPLET.

INTENTIONS DE COMPORTEMENT

- Q8. Sur une échelle de 1 à 10, où 1 signifie pas du tout probable et 10 signifie très probable, quelle est la probabilité que vous passiez de cigarettes légères ou douces à des cigarettes régulières? (PRÉSENTEZ LA CARTE MONTRANT L'ÉCHELLE)

• Nsp/Nrp○

- Q9. Sur une échelle de 1 à 10, où 1 signifie pas du tout probable et 10 signifie très probable, quelle est la probabilité que vous cessiez de fumer? (PRÉSENTEZ LA CARTE MONTRANT L'ÉCHELLE)

• Nsp/Nrp○

- Q10. Toujours en utilisant une échelle de 1 à 10, où 1 signifie pas du tout probable et 10 signifie très probable, quelle est la probabilité que vous réduisiez le nombre de cigarettes que vous fumez par semaine? (PRÉSENTEZ LA CARTE MONTRANT L'ÉCHELLE)

• Nsp/Nrp○

SECTION 4 OPINIONS

- Q11. Dans quelle mesure diriez-vous que ce message de mise en garde vous informe des effets de fumer des cigarettes légères ou douces sur la santé? Nous utiliserons une échelle de 1 à 10, où 1 signifie « pas du tout » et 10 « beaucoup ». (PRÉSENTEZ LA CARTE MONTRANT L'ÉCHELLE)

• Nsp/Nrp○

- Q12. Dans quelle mesure êtes-vous en accord ou en désaccord avec les énoncés suivants pour décrire ce message de mise en garde? Pour cela, nous utiliserons une échelle en 7 points où 1 signifie totalement en désaccord, 7 totalement en accord et le point milieu 4, ni en accord, ni en désaccord. (PRÉSENTEZ LA CARTE MONTRANT L'ÉCHELLE)

INTERVIEWEUR : Pour chaque énoncé, encerclez un code seulement. Ne pas lire « Ne sait pas ».

LIRE EN ROTATION		Totalement en désaccord				Totalement en accord				Ne sait pas
Q12.1	Ce message de mise en garde contient de l'information exacte à propos des cigarettes légères ou douces	1	2	3	4	5	6	7		9
Q12.2	L'information que ce message de mise en garde donne à propos des cigarettes légères ou douces est crédible	1	2	3	4	5	6	7		9

LIRE EN ROTATION		Totalelement en désaccord				Totalelement en accord			Ne sait pas
Q12.3	Ce message de mise en garde donne de l'information sur les effets des cigarettes légères ou douces sur la santé qui est pertinente pour moi	1	2	3	4	5	6	7	9
Q12.4	Ce message de mise en garde fait en sorte que fumer paraît moins attrayant	1	2	3	4	5	6	7	9
Q12.5	Ce message de mise en garde m'incite à vouloir cesser de fumer	1	2	3	4	5	6	7	9
Q12.6	Ce message de mise en garde m'incite à vouloir fumer moins	1	2	3	4	5	6	7	9
Q12.7	Ce message de mise en garde me donne de l'information que j'ignorais au sujet des cigarettes légères ou douces	1	2	3	4	5	6	7	9
Q12.8	Ce message de mise en garde m'a bouleversé	1	2	3	4	5	6	7	9

SECTION 5 CLASSIFICATION

Il ne me reste plus que quelques questions pour nous aider à classer vos réponses et compléter nos statistiques.

C.1 Quel est le niveau de scolarité le plus élevé que vous avez atteint? (NE PAS LIRE)

- Cours primaire ou moins ()1
- Une partie du cours secondaire ()2
- Le cours secondaire ()3
- Une partie du cours collégial, du cours professionnel ou du cours technique (ou une partie du cégep) ()4
- Le cours collégial, professionnel ou technique (ou le cégep) ()5
- Une partie du cours universitaire (sans diplôme) ()6
- Un baccalauréat ()7
- Des études supérieures (maîtrise ou doctorat, terminé ou non) ()8
- Nsp/Nrp ()9

C.2 Laquelle des catégories suivantes décrit le mieux votre statut d'emploi? Est-ce que vous êtes...? (LIRE)

- Au travail à temps plein (30 heures par semaine ou plus) ()1
- Au travail à temps partiel ()2
- Sans emploi ou à la recherche d'un emploi ()3
- Au foyer à temps plein (au foyer, aide sociale) ()4
- Aux études ()5
- À la retraite ()6
- Autre ()8
- Nsp/Nrp (ne pas lire) ()9

C.3 Est-ce que vous êtes...? (*LIRE*)

- Marié ou vivant en couple ()1
- Célibataire ()2
- Veuf / veuve ()3
- Séparé ()4
- Divorcé ()5
- Nsp/Nrp (**ne pas lire**) ()9

C.4 Parmi les catégories de revenus suivantes, laquelle décrit le mieux le revenu total pour l'an 2004 de tous les membres de votre foyer, en vous incluant, avant l'impôt et les retenues? Est-ce...? (*LIRE*)

- Moins de 10 000 \$ ()1
- 10 000 \$ à 19 999 \$ ()2
- 20 000 \$ à 39 999 \$ ()3
- 40 000 \$ à 59 999 \$ ()4
- 60 000 \$ à 79 999 \$ ()5
- 80 000 \$ à 99 999 \$ ()6
- 100 000 \$ à 119 999 \$ ()7
- 120 000 \$ et plus ()8
- Refus / Nsp/Nrp (**ne pas lire**) ()9

C.5 Dans quelle province habitez-vous?

- Terre-Neuve / Labrador ()01
- Île-du-Prince-Édouard ()02
- Nouvelle-Écosse ()03
- Nouveau-Brunswick ()04
- Québec ()05
- Ontario ()06
- Manitoba ()07
- Saskatchewan ()08
- Alberta ()09
- Colombie-Britannique ()10
- Yukon ()11
- Territoires du Nord-Ouest ()12
- Nunavut ()13

MERCI BEAUCOUP D'AVOIR PARTICIPÉ, C'EST TERMINÉ. MERCI

NOTES SPÉCIALES DE L'INTERVIEWEUR :

ENTREVUE	RÉPONDANT (pour vérification)
Fin : _____ [] a.m. [] p.m.	Tél. : (_____) _____
Intervieweur : _____	Nom : _____
	Ville : _____

APPENDIX 2

NEW L&M HWMs WITH DESCRIPTOR (Scenario A)



Cancer
is not "mild"

People who smoke "light" or "mild"
cigarettes can still get cancer.

Health Canada

du MAURIER



25 VIRGINIA CIGARETTES

Light



le cancer à ne pas
prendre à la « légère »

Les fumeurs de cigarettes « légères » ou
« douces » ne sont pas à l'abri du cancer.

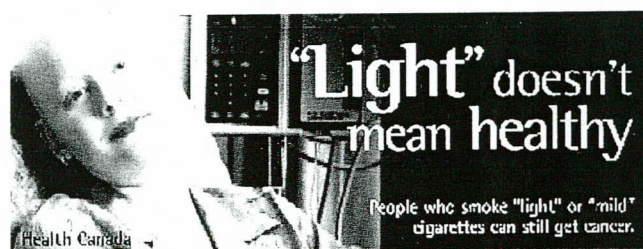
Santé Canada

du MAURIER



25 CIGARETTES VIRGINIE

Légère



"Light" doesn't
mean healthy

People who smoke "light" or "mild"
cigarettes can still get cancer.

Health Canada

du MAURIER



25 VIRGINIA CIGARETTES

Light



« Légère » n'est pas
synonyme de santé

Les fumeurs de cigarettes « légères » ou
« douces » ne sont pas à l'abri du cancer.

Santé Canada

du MAURIER



25 CIGARETTES VIRGINIE

Légère



"mild" flavour.
harsh reality

"My wife picked the taste of 'mild' cigarettes.
Last summer, she died of lung cancer."

John Doe, Scarborough, ON

Health Canada

du MAURIER



25 VIRGINIA CIGARETTES

Light



goût « léger »
dure réalité

"J'ai toujours préféré le goût des cigarettes « légères ».
Cette année, elle est décédée du cancer du poumon."

John Doe, Scarborough, ON

Santé Canada

du MAURIER

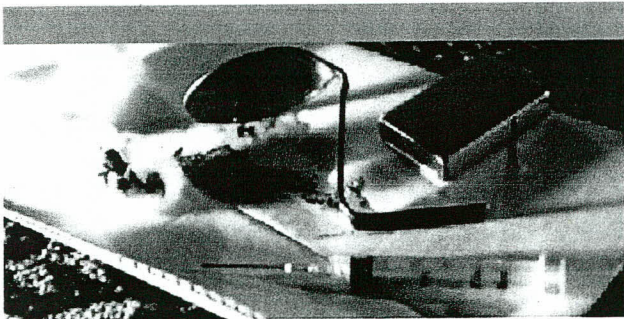


25 CIGARETTES VIRGINIE

Légère

APPENDIX 3

NEW L&M INSERT (Scenario B)



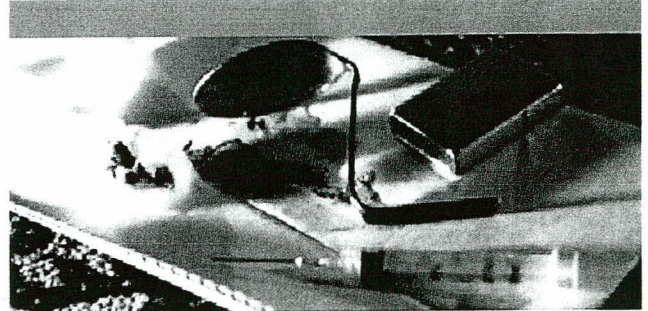
Addictions can kill you

"Light" or "mild" cigarettes are as addictive as "regular" cigarettes.

Some smokers choose "light" or "mild" brand cigarettes, believing that the smoke may be less addictive. But to get more nicotine, or a better 'hit', these people may adjust their way of smoking by inhaling deeper and longer, or covering the filter ventilation holes.

By increasing their intake of nicotine this way, "light" or "mild" smokers also inhale more tar and chemicals.

Health Canada



Une dépendance mortelle

Les cigarettes « douces » ou « légères » créent une aussi grande dépendance que les cigarettes « régulières ».

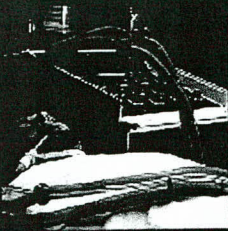
Certains fumeurs optent pour des cigarettes « douces » ou « légères » parce qu'ils croient que la fumée de ces cigarettes crée une moins grande dépendance. Cependant, pour tirer plus de nicotine de ces cigarettes, ils compensent en inhalant la fumée plus profondément ou encore, en bouchant les orifices de ventilation du filtre.

Ce faisant, les fumeurs de cigarettes « douces » ou « légères » inhalent aussi une plus grande quantité de goudron et de produits chimiques.

Santé Canada

APPENDIX 4

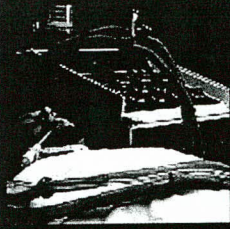
CURRENT HWMs WITHOUT DESCRIPTOR (Scenario C)



WARNING
CIGARETTES CAUSE LUNG CANCER
 Every cigarette you smoke increases your chance of getting lung cancer.
 Health Canada

du MAURIER

25 VIRGINIA CIGARETTES



AVERTISSEMENT
LA CIGARETTE CAUSE LE CANCER DU POUMON
 Chaque cigarette que vous fumez augmente vos chances de contracter le cancer du poumon.
 Santé Canada

du MAURIER

25 CIGARETTES VIRGINIE



WARNING
TOBACCO USE CAN MAKE YOU IMPOTENT
 Cigarettes may cause sexual impotence due to decreased blood flow to the penis. This can prevent you from having an erection.
 Health Canada

du MAURIER

25 VIRGINIA CIGARETTES



AVERTISSEMENT
LE TABAGISME PEUT VOUS RENDRE IMPUISSANT
 La cigarette peut provoquer l'impuissance sexuelle car elle réduit la circulation du sang dans le pénis. Cela peut vous rendre incapable d'avoir une érection.
 Santé Canada

du MAURIER

25 CIGARETTES VIRGINIE



DON'T POISON US
WARNING: Second-hand smoke contains carbon monoxide, ammonia, formaldehyde, benzo[a]pyrene and nitrosamines. These chemicals can harm your children.
 Health Canada

du MAURIER

25 VIRGINIA CIGARETTES



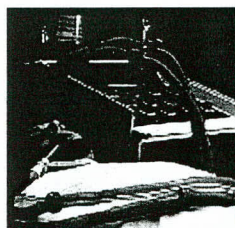
DE L'AIR S'IL VOUS PLAÎT!
AVERTISSEMENT : La fumée secondaire contient du monoxyde de carbone, de l'ammoniac, du formaldéhyde, du benzo[a]pyrène et des nitrosamines. Ces produits chimiques peuvent nuire à vos enfants.
 Santé Canada

du MAURIER

25 CIGARETTES VIRGINIE

APPENDIX 5

CURRENT HWMs WITH DESCRIPTOR (Control – Scenario D)



WARNING
**CIGARETTES
CAUSE LUNG
CANCER**

Every cigarette you smoke increases
your chance of getting lung cancer.

Health Canada

du MAURIER

25 MILDLY FLAVORED CIGARETTES

Light



AVERTISSEMENT
**LA CIGARETTE
CAUSE LE CANCER
DU POUMON**

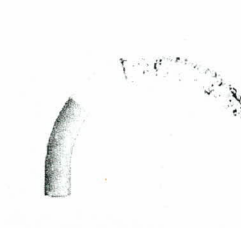
Chaque cigarette que vous fumez
augmente vos chances de contracter
le cancer du poulmon.

Santé Canada

du MAURIER

25 CIGARETTES VIRE V.C.

Légère



WARNING
**TOBACCO USE
CAN MAKE YOU
IMPOTENT**

Cigarettes may cause sexual
impotence due to decreased blood
flow to the penis. This can prevent
you from having an erection.

Health Canada

du MAURIER

25 MILDLY FLAVORED CIGARETTES

Light



AVERTISSEMENT
**LE TABAGISME PEUT VOUS
RENDRE IMPUISSANT**

La cigarette peut provoquer l'im-
puissance sexuelle car elle réduit
la circulation du sang dans le pénis.
Cela peut vous rendre incapable
d'avoir une érection.

Santé Canada

du MAURIER

25 CIGARETTES VIRE V.C.

Légère



**DON'T
POISON US**

WARNING: Second-hand smoke
contains carbon monoxide, ammonia,
formaldehyde, benzo(a)pyrene and
nitrosamines. These chemicals can
harm your children.

Health Canada

du MAURIER

25 MILDLY FLAVORED CIGARETTES

Light



DE L'AIR S'IL VOUS PLAÎT!

AVERTISSEMENT: La fumée secondaire
contient du monoxyde de carbone, de
l'ammoniac, du formaldéhyde, du benzo(a)
pyréne et des nitrosamines. Ces produits
chimiques peuvent nuire à vos enfants.

Santé Canada

du MAURIER

25 CIGARETTES VIRE V.C.

Légère