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ROLL NUMBER

DESCRIPTION

1410

2007 HOUSE INDUSTRY, BUSINESS AND LABOR

HB 1410

2007 HOUSE STANDING COMMITTEE MINUTES

Bill/Resolution No. HB 1410

House Industry, Business and Labor Committee

Check here for Conference Committee

Hearing Date: 01-23-2007

Recorder Job Number: 1646

Committee Clerk Signature

David M Thomas

Minutes:

Chairman Keiser opened the hearing on HB 1410. HB 1410 relates to the nicotine yield of cigarettes sold in the state.

Rep. Wrangham introduced the bill.

Rep. Wrangham: There is a group of people who have been brainstorming on how to positively deal with the smoking issue. This is one of the ideas that came out of one of those sessions. This bill reduces the amount of nicotine allowed in cigarettes sold in North Dakota, incrementally over the next seven years. After August 1, 2015, the nicotine yield you have to be less than 1/100 of milligram calculated using the federal trade commission's method. This bill by reducing the addictive substance in cigarettes over a period of time is believed it will help smokers who want to quit, be able to quit. Penalizing and demoralizing smokers is not a good or successful way to promote smoking cessation. We are looking for a more positive way to do it. Reducing the additive substance will help those who want to quit, quit.

I don't have a lot of the scientific information that we need to move this bill forward, but hopefully we will all learn a lot and out of this bill will come some solutions. I know there is one gentlemen here to testify on this and can probably answer more questions for you.

Rep. Ruby: How do we direct the cigarette companies to reduce the nicotine?

Rep. Wrangham: With a law. HB 1410.

Rep. Johnson: When I read this, I thought about what a tremendous black market we would have in our state, have you thought about that?

Rep. Wrangham: Nothing is easy. There are pitfalls to most all solutions. We have to weigh the pros and cons.

Rep. Amerman: By 2008, not to exceed 1 milligram per cigarette, do you know what it is right now?

Rep. Wrangham: There are statistics available, I didn't keep a copy of what LC looked up. I believe 1.7 grams.

Rick LaFleur, Current President of the North Dakota Coin Machine Operators Assoc. and Member of the Coin and Tavern Association, spoke in support of the bill.

LaFleur: We are here today as a result of discussions that we have had trying to conclude how to eliminate the smoking issue. We think the smokers have really been singled out in this scenario as being portrayed in a negative light and we think that they are victims of more than one thing, but certainly nicotine manipulation. These articles that I am passing out to you today are just reference articles. *See attached.*

Rep. Ruby: Do you have statistics of how many people have increased in people who now are addicted within the same time frame?

LaFleur: I really don't know.

Rep. Ruby: During that time, if we don't have statistics that show that there was an increase, how will we know that it will be lower?

LaFleur: We don't. I'm going to be the first one to tell you.

Rep. Nottestad: Is this kind of legislation the first one?

LaFleur: The state of Massachusetts has wrestled with it, and I don't see that they have solved it.

Rep. Nottestad: Do you think the manufacturers will comply with this?

LaFleur: Probably not.

Nicki Weissman, NDHA, spoke in support of the bill.

Weissman: This bill is looking for an alternative for the smokers that are having a situation trying to quit. We all know the situation of smoking. We are looking for suggestions and alternatives.

Rep. Nottestad: Then will the retail sales in North Dakota be gone?

Weissman: You are probably correct.

Rep. Clark: Does this bill have a fiscal note?

Weissman: There is a possibility.

Rep. Keiser: You either smoke five times as much or you don't have as many.

Opposition was allowed at this time.

David Remes, see attached written testimony.

Rep. Amerman: The studies and so on that was in the handout for Mr. LaFleur, do you believe those studies are accurate?

Remes: I haven't studied them closely enough.

Rep. Keiser: Internet sales are beginning to grow in this sector, what is your knowledge and experience with internet sales and what impact would a law like this have potentially?

Remes: Internet sales have been a problem ever since they started because the internet retailers don't collect tax.

Rep. Boe: What is your knowledge on sales of cigarettes on reservations?

Remes: I think I may be the wrong person to ask about the legalisms of ND tax on reservations.

The committee recessed and reconvened later that day.

Rep. Amerman: I don't see how it is doable.

Rep. Amerman moved a DO NOT PASS. Rep. Gruchalla seconded.

Rep. Keiser: The discussion was that this was creating a black market and it's unenforceable and these are going to have the biggest impact on retail sales. You are going to have to smoke twice as much or four times as much, or you are not going to smoke.

Rep. Ruby: I just see it as a bill that will probably make retail sales completely disappear because the manufacturers are not going to have every brand of cigarette at the lower level.

Rep. Gruchalla: I do believe that the sales tax would not apply on reservations.

Rep. Keiser: I am sure it would not apply. I do not now. You would have everyone in Bismarck that smokes going to the casino to buy cigarettes.

Roll Call Vote: 12 yes. 1no. 1 absent.

Date: 1-23-07
Roll Call Vote #: _____

2007 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HB 1410

House Industry Business & Labor Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Not Pass

Motion Made By Rep Amerman Seconded By Rep Gruchalla

Representatives	Yes	No	Representatives	Yes	No
Chairman Keiser	X		Rep. Amerman	X	
Vice Chairman Johnson	X		Rep. Boe		X
Rep. Clark	X		Rep. Gruchalla	X	
Rep. Dietrich	X		Rep. Thorpe	X	
Rep. Dosch	X		Rep. Zaiser		
Rep. Kasper	X				
Rep. Nottestad	X				
Rep. Ruby	X				
Rep. Vigesaa	X				

Total Yes 12 No 1

Absent 1

Floor Assignment Rep. ~~Zaiser~~ Ruby

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE (410)
January 23, 2007 1:25 p.m.

Module No: HR-15-1041
Carrier: Ruby
Insert LC: . Title: .

REPORT OF STANDING COMMITTEE

HB 1410: Industry, Business and Labor Committee (Rep. Keiser, Chairman)
recommends **DO NOT PASS** (12 YEAS, 1 NAY, 1 ABSENT AND NOT VOTING).
HB 1410 was placed on the Eleventh order on the calendar.

2007 TESTIMONY

HB 1410

David Remes

January 23, 2007

HB 1410 SHOULD BE REJECTED

Beginning in 2008, HB 1410 would prohibit the sale in North Dakota of cigarettes whose FTC nicotine ratings exceed levels specified in the bill would allow. By 2015, only cigarettes whose smoke contains virtually no nicotine could be sold in the State. The bill should be rejected.

HB 1410 could amount to ban a ban on legal cigarettes in North Dakota. Previous efforts by cigarette manufacturers to market cigarettes with ultra-low nicotine ratings have been unsuccessful. Whether in the short term or as ultimately implemented, HB 1410 therefore could amount to a ban on legal cigarettes in North Dakota. Outlawing legal cigarettes would adversely affect State revenues. In calendar year 2005, North Dakota collected over \$19.5 million per year in cigarette excise tax revenues. In addition, outlawing legal cigarettes would cause financial hardship for cigarette retailers, shift legal sales to retailers in adjoining states and to Internet retailers, and create a black market in North Dakota.

HB 1410 would conflict with federal law. Congress has foreclosed a ban of tobacco products, choosing instead a distinct regulatory scheme focusing on labeling and advertising (under the FTC) and ingredient disclosure (under the U.S. Department of Health and Human Services). The chosen regulatory approach to nicotine content has been disclosure to the FTC under a long-standing voluntary agreement. Except for certain product disclosure requirements, federal courts have held that federal agencies and the states may not regulate cigarettes except as specifically authorized by federal law.

Thus, the Supreme Court has held that Congress has not authorized the FDA to regulate cigarettes, *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 137 (2000), and has barred States from regulating cigarette advertising and promotion, *Lorillard v. Reilly*, 533 U.S. 525, 540-566 (2001). In *Brown & Williamson*, the Supreme Court concluded that Congress had not authorized the FDA to regulate cigarettes because the FDA would then have to ban cigarettes. The Court stated: "Congress, however, has foreclosed the removal of tobacco products from the market." *Id.* at 137. The Court explained:

Congress stopped well short of ordering a ban. Instead, it has generally regulated the labeling and advertisement of tobacco products, expressly providing that it is the policy of Congress that "commerce and the national economy may be . . . protected to the maximum extent consistent with" consumers "be[ing] adequately informed about any adverse health effects." 15 U.S.C. § 1331. Congress' decisions to regulate labeling and advertising and to adopt the express policy of protecting "commerce and the national economy . . . to the maximum extent" reveal its intent that tobacco products remain on the market. Indeed, the collective premise of these statutes is that cigarettes and smokeless tobacco will continue to be sold in the United States. A ban of tobacco products . . . would therefore plainly contradict congressional policy.

Id. at 138-39 (emphasis added). Federal courts have similarly concluded that applying state tort law that would have the effect of banning cigarettes would conflict with federal law. Thus, for example, courts have dismissed claims that cigarette manufactur-

ers should be liable for manufacturing and marketing an inherently-dangerous product because punishing manufacturers for continuing to market cigarettes would conflict with Congress's policy in favor of keeping cigarettes on the market. *See, e.g., Valle-Ortiz v. R.J. Reynolds Tobacco Co.*, 385 F. Supp.2d 126, 133 (D. P.R. 2005) (citing precedents).

HB 1410 would violate the Commerce Clause. "In order to prevent economic balkanization among the states, the dormant Commerce Clause prohibits certain state regulation even when Congress has failed to legislate on the subject." *Hampton Feedlot, Inc. v. Nixon*, 249 F.3d 814, 818 (8th Cir. 2001). A state law violates the Commerce Clause if it (1) discriminates in favor of local interests and against out-of-state interests, or (2) imposes on interstate commerce a burden that is "clearly excessive in relation to the putative local benefits." *U & I Sanitation v. City of Columbus*, 205 F.3d 1063, 1067-68 (8th Cir. 2000) (citation omitted). The second of these tests is known as the *Pike* balancing test.

HB 1410 would fail the *Pike* balancing test. On one side of the balance, the bill's burden on interstate commerce would be "far from trivial," 205 F.3d at 1072, because, to comply with the bill's requirements, cigarette manufactures must either (1) reformulate their cigarettes specifically for the North Dakota market, (2) reformulate their cigarettes for the national market to meet North Dakota's requirements, or (3) stop selling cigarettes in North Dakota. On the other side of the balance, any local benefit from the bill would be "illusory," 205 F.3d at 1070, because, as noted, experience indicates that smokers would simply shift legal sales to retailers in other states and Internet retailers and create a black market. At most, it is "sheer speculation" to say that the bill would advance its apparent purpose. *Id.*

* * *

In short, HB 1410 would effectively ban legal cigarettes, eliminating North Dakota's excise tax revenues, conflict with Congress's purposes and objectives, and violate the Commerce Clause. For these reasons I would recommend a Do Not Pass on HB 1410.

#1

washingtonpost.com

Nicotine Up Sharply In Many Cigarettes

Some Brands More Than 30% Stronger

By David Brown
Washington Post Staff Writer
Thursday, August 31, 2006; A01

The amount of nicotine in most cigarettes rose an average of almost 10 percent from 1998 to 2004, with brands most popular with young people and minorities registering the biggest increases and highest nicotine content, according to a new study.

Nicotine is highly addictive, and while no one has studied the effect of the increases on smokers, the higher levels theoretically could make new smokers more easily addicted and make it harder for established smokers to quit.

The trend was discovered by the Massachusetts Department of Public Health, which requires that tobacco companies measure the nicotine content of cigarettes each year and report the results.

As measured using a method that mimics actual smoking, the nicotine delivered per cigarette -- the "yield" -- rose 9.9 percent from 1998 to 2004 -- from 1.72 milligrams to 1.89. The total nicotine content increased an average of 16.6 percent in that period, and the amount of nicotine per gram of tobacco increased 11.3 percent.

The study, reported by the Boston Globe, found that 92 of 116 brands tested had higher nicotine yields in 2004 than in 1998, and 52 had increases of more than 10 percent.

Boxes of Doral lights, a low-tar brand made by R.J. Reynolds Tobacco Co., had the biggest increase in yield, 36 percent. Some of this may have been the result of an increase in the total amount of tobacco put in that brand's cigarettes, one expert said.

The nicotine in Marlboro products, preferred by two-thirds of high school smokers, increased 12 percent. Kool lights increased 30 percent. Two-thirds of African American smokers use menthol brands.

Not only did most brands have more nicotine in 2004, the number of brands with very high nicotine yields also rose.

In 1998, Newport 100s and unfiltered Camels were tied for highest nicotine yield at 2.9 milligrams. In 2004, Newport had risen to 3.2 milligrams, and five brands measured 3 milligrams or higher.

"The reports are stunning," said Matthew L. Myers, president of the Campaign for Tobacco-Free Kids. "What's critical is the consistency of the increase, which leads to the conclusion that it has to have been conscious and deliberate."

"People need to be aware of this," said Sally Fogerty, Massachusetts's associate commissioner for

Advertisement



community health. "If a person is trying to quit and is having a hard time, it's not just them. There is an increasing percentage of nicotine that they are ingesting, and that may make it more difficult."

The Centers for Disease Control and Prevention also focused on the potential behavioral consequences of the finding.

"We know nicotine is addictive, so if the amount of nicotine in cigarettes is increasing, it could make it even harder for the 70 percent of smokers who want to quit and the more than 40 percent who try to quit every year," Corinne Husten, acting director of the CDC's Office on Smoking and Health, said in an e-mail message.

No spokesman for a tobacco company would speak on the record about the Massachusetts findings yesterday.

One company official, speaking on the condition of anonymity, said that while the nicotine content measured by smoking machines can vary by up to 6 percent between individual cigarettes of the same brand, "we don't know" whether an entire brand's production could differ that much from year to year.

But in a 1,653-page opinion released two weeks ago in a landmark suit against the major tobacco companies by the federal government and several anti-smoking organizations, the judge found that cigarette makers adjusted nicotine levels with great care.

"Using the knowledge produced by that research, defendants have designed their cigarettes to precisely control nicotine delivery levels and provide doses of nicotine sufficient to create and sustain addiction," wrote U.S. District Judge Gladys Kessler.

The ruling enjoined the companies from misinforming the public about tobacco's hazards. The companies are uncertain what that means and cited the ruling yesterday as the chief reason for their silence. Reynolds and Lorillard Tobacco Co. have also temporarily shut down their Web sites.

Reginald V. Fant, a clinical pharmacologist and nicotine expert at Pinney Associates, a consulting firm in Bethesda, said increasing nicotine content by 10 percent "would not be expected" to change how much a person smokes but could affect his ability to quit.

"We know that physiologically the changes in the nicotine receptors in the brain are related to the amount of nicotine consumed," he said.

Neal Benowitz, a physician and pharmacologist at the University of California at San Francisco, said, "I don't think we know what the consequences are for the population in terms of addictive behavior and how hard it is for people to quit."

Myers said the Massachusetts findings are evidence that tobacco products should be more strictly regulated.

"The only way the companies were able to secretly increase nicotine levels without anyone knowing about it is because no federal agency regulates tobacco products," he said.

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MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

CHANGE IN NICOTINE YIELDS 1998 - 2004

**DATA SUBMITTED IN ACCORDANCE WITH MASSACHUSETTS
GENERAL LAWS**

CHAPTER 94: Section 307B, 105 CMR 660.000

Report produced by:

The Massachusetts Tobacco Control Program, Massachusetts Department of Public Health

Lois Keithly, Ph.D., Director; Doris Cullen, MA, Research Analyst; Thomas Land, Ph.D., Research Analyst

TABLE OF CONTENTS

1. Summary
2. Background
3. Nicotine Yield Testing
Table 1-- Historical/MA Nicotine Yield Summary
4. Nicotine Content of Whole Tobacco
5. Percent Filter Ventilation
6. Nicotine Yield Ratings
Table 2-- Nicotine Yield Ratings
7. Appendix--Table Summary

SUMMARY

Since 1997, cigarette manufacturers have delivered nicotine reporting information using testing methods established by the Massachusetts Department of Public Health (MDPH). Massachusetts General Law chapter 94 section 307B and Department of Public Health Regulations 105 CMR 660.000 mandate that cigarette companies report each year to the Department the nicotine yield ratings for all cigarette brands with a U.S. market share of greater than 1.5%.

Nicotine Yield Testing

- For all brands tested in both 1998 and 2004 (N = 116), the total amount of nicotine delivered to the smoker has increased significantly: 1.72 mg in 1998 compared to 1.89 mg in 2004. These data were also evaluated by manufacturer. For each of the major manufacturers (i.e., Brown & Williamson, Lorillard, Phillip Morris, and RJ Reynolds), the increases in nicotine delivered were significant.
- Each manufacturer markets many brands of cigarettes and this data was analyzed by brand. Once again, the increases in nicotine delivered were significant. With the exception of Winston cigarettes, all brands that were tested in both 1998 and 2004 had significant increases in nicotine delivered to the smoker. This includes Basic, Camel, Doral, Kool, Marlboro, and Newport cigarettes.
- Cigarette brand families (e.g. Marlboro) with a U.S. market share of greater than 1.5% were required to submit nicotine yield information. In 2004, a total of 179 brands were tested from the four major cigarette manufacturers – Brown & Williamson (now owned by RJ Reynolds), Lorillard, Philip Morris, and RJ Reynolds.
- For over 30 years, nicotine yields have been reported from tests using smoking machines. The operation of the machine was an attempt to mimic the smoking behavior of a typical smoker. However, these historical methods have been found to be inadequate^{1,2} because the machine's puff duration is too short, too little smoke is inhaled, and none of the filter ventilation holes is covered. The MDPH testing method better simulates the smoking behavior of the typical smoker under typical smoking conditions. Using the Massachusetts' method, the amount of smoke inhaled with each puff is increased and the amount of time between puffs is reduced. In addition, 50% of the cigarette filter is covered.
- Testing for nicotine yield using the MDPH method revealed levels that are more than twice as high as those found by the historical method. For the typical smoker, 'low yield' cigarettes in almost every case deliver moderate to high doses of nicotine. These levels are sufficient to cause and maintain heavy dependence. For all brands tested in both 1998 and 2004 (N = 116), the average from using the historical method was 0.90mg/cigarette while the average from the Massachusetts method was 1.89mg/cigarette.

Nicotine Ranges

- Massachusetts has rated different brands of cigarettes based on the nicotine that a cigarette delivers under typical smoking conditions. The nicotine ratings range from high, moderate, low, or nicotine free. These ranges were created in order to allow smokers to compare nicotine levels among brands of cigarettes.
- Ninety-three percent of the cigarettes tested in 2004 fell into the highest nicotine range. This compares to 84% in 1998. Of 179 cigarette brands tested in 2004, 166 were rated as *high nicotine*. This includes 59 brands that the manufacturers label as 'light' cigarettes, 12 brands labeled as 'mild' or 'medium', and 14 labeled as 'ultra-light'. All remaining brands fell into the moderate range. Cigarettes with moderate and high yields can cause heavy dependence on nicotine.

Nicotine Content of Whole Tobacco

- For all brands tested in both 1998 and 2004, there were no significant differences in the total nicotine content between 'full flavor,' 'medium,' 'mild,' 'light,' or 'ultra-light' cigarettes.
- Whether a cigarette is classified by the manufacturer as being 'full flavor,' 'medium,' 'mild,' 'light,' or 'ultra-light,' it is likely to contain similar amounts of nicotine in the unsmoked tobacco. Smokers who switch to 'lower yield' cigarettes to reduce their intake of nicotine are faced with similar levels of nicotine content.

Percent Filter Ventilation

- For all brands tested in 2004, cigarettes ranged from 0% to 83% filter ventilation, emphasizing the extreme differences in cigarette design.
- When smokers place their lips and fingers over the vents, they keep outside air from diluting the smoke. As a result, they take in higher levels of tar and nicotine.
- Based on information provided by the manufacturers, there is a strong correlation between the percent of filter ventilation and total nicotine content for *ultra-light* cigarettes. When the nicotine content is low, there is relatively little filter ventilation. When it is high, there tends to be much more ventilation. Under typical smoking conditions, the amount of filter ventilation reduces the amount of nicotine delivered to the smoker. Despite lower nicotine content for some ultra-light cigarettes, these same cigarettes tend to have correspondingly low levels of filter ventilation. This means that a much higher proportion of the nicotine in the cigarette enters a smoker's lungs.

BACKGROUND

M.G.L. Chapter 94, Section 307B requires tobacco manufacturers to file an annual report concerning nicotine yields with the Massachusetts Department of Public Health (MDPH) for each brand of tobacco product sold in the Commonwealth. This annual report provides nicotine yield ratings which accurately predict nicotine intake for typical consumers, based on standards established by MDPH.

The national standard for testing tar and nicotine in mainstream smoke by use of a smoking machine was developed over thirty years ago.³ The nicotine yield ratings produced by this historical method were meant to serve as a relative measure of nicotine yield between cigarette brands.⁴ They are not reliable measures of how much nicotine a smoker actually takes into their body under normal smoking conditions.

Cigarette design has undergone significant changes over the last 30 years. Technology has altered the manner in which tar and nicotine are delivered to the smoker, and the smoking practices of consumers have shifted accordingly. Since the introduction of 'low yield' cigarettes (i.e. light and ultra-light cigarettes) in the late 1970's, smokers have been found to compensate for lower levels of nicotine yield by smoking more frequently, by smoking more cigarettes, smoking more deeply, and increasing puff volume.⁵ These changes in smoking behavior result in much higher relative nicotine levels being delivered to the body from lower yield cigarettes than what is calculated using the historical testing method.⁶

A recent report of the National Cancer Institute's Ad Hoc Committee of the President's Cancer Panel on the historical test method concluded that current ratings from this method provide little information for consumers who wish to know how much nicotine they actually take into their body when smoking.⁷ MDPH testing standards, developed in 1997, draw heavily on that report and reflect current scientific knowledge about compensatory smoking behaviors and nicotine intake.

This report features the following information reported to Massachusetts for cigarette brands:

- ◆ total nicotine content (mg) of tobacco contained in the cigarette rod
- ◆ percent filter ventilation (the amount of air allowed to dilute the smoke)
- ◆ nicotine yield based on MDPH developed test
- ◆ nicotine classification based on MDPH developed classification
- ◆ pH levels for a selected subset of cigarette brands

NICOTINE YIELD TESTING

What Is Nicotine Yield?

- A cigarette does not deliver fixed amounts of tar and nicotine in the manner that a capsule delivers a fixed dose of medicine. In part, it is how a person smokes that determines the amount of tar and nicotine that is delivered from the cigarette into the body.
- Nicotine yield is a measure of the amount of nicotine in the smoke that a smoker inhales. It does not measure the amount of nicotine in a cigarette.
- The amount of nicotine which smokers inhale is based on how long and how deeply they breathe in with each puff (puff volume), the amount of time between puffs (puff interval), and the percent filter ventilation of the smoke they breathe (the amount of pure air which is drawn in through vent holes in the filter tip during smoking and allowed to mix with the smoke, lessening its concentration).

When compared to the historical method of testing cigarettes, the Massachusetts method better simulates the smoking behavior of the typical smoker under normal smoking conditions. The Massachusetts method increases the amount of smoke inhaled with each puff by the smoking machine, reduces the amount of time taken between puffs, and requires that 50% of the cigarette filter be covered.

What Do Nicotine Yield Ratings Reflect?

- The historical method of measuring nicotine yield uses a smoking machine to simulate the way in which a smoker smokes. Nicotine yields and tar levels using the historical method are determined on the basis of the amount of smoke which is inhaled by the machine.
- Because nicotine yield is based on the way in which an individual smokes, ratings based on the historical method reflect what you take into your body only if you smoke a cigarette in exactly the same way as the testing machine.
- Ratings based on the historical method cannot accurately reflect the effects of vent blocking -- blocking ventilation holes in the filter. A typical smoker is likely to cover the vents placed around the filter, raising the levels of tar and nicotine which they inhale. The filter vents are left open when nicotine yields are measured using the historical method.
- The Massachusetts testing method was developed to reflect compensation techniques-- such as vent blocking, puffing more frequently, and inhaling more deeply. If smokers employ these compensation behaviors, they will inhale increased amounts of nicotine.

What Were the Results of Massachusetts Nicotine Yield Testing?

- By adjusting parameters to more accurately reflect typical smoking conditions, 2004 Massachusetts testing for nicotine yield produced numbers that were about twice as high as those found using the historical method. The typical smoker receives much greater levels of nicotine than is suggested by historical methods ratings.

Table 1: Nicotine yield from Massachusetts method compared to historical method

Cigarette Type¹	MA Method Nicotine Yield (mg/cigarette)²	Historical Method Nicotine Yield (mg/cigarette)²	% Difference³
Full (Regular)	2.16	1.09	98%
Medium / Mild	2.01	0.93	116%
Light	1.71	0.80	114%
Ultra-light	1.21	0.43	181%

Note: All data in Table 1 was supplied to the Massachusetts Department of Public Health (MDPH) by the cigarette manufacturers in compliance with M.G.L. Chapter 94, Section 307B. Tobacco manufacturers are required to file an annual report concerning nicotine yields with the MDPH for each brand of tobacco product sold in the Commonwealth. 1) In reporting information to MDPH, cigarette manufacturers classify cigarettes as Full Flavor, Medium or Mild, Light, or Ultra-Light. 2) Each year, manufacturers report nicotine yield in milligrams per cigarette from studies using both the Massachusetts and historical methods. 3) MA method yield divided by historical method yield.

- Compensation techniques used by smokers alter levels of nicotine received from 'light' or 'ultra-light' cigarettes to a much greater degree than with regular cigarettes. All cigarettes ('light', 'ultra-light', etc.) are based on nicotine yield ratings using the historical method, but 'low yield' cigarettes depend more heavily on design factors such as filter ventilation which are not accounted for by the historical testing method.
- For the typical smoker, 'low yield' cigarettes deliver moderate to high doses of nicotine. These levels are sufficient to cause and maintain heavy dependence. No brand tested produced nicotine yields of less than 0.5 mg per cigarette when smoked under typical smoking conditions.

NICOTINE CONTENT OF WHOLE TOBACCO

What Is Nicotine Content?

- The nicotine content of a cigarette is an important element in its design. Nicotine content is the amount of nicotine contained in the tobacco before it is burned and inhaled. A smoker extracts the nicotine contained within the tobacco by inhaling nicotine which is released into the smoke when the tobacco is burned.
- A cigarette with a higher nicotine content has a greater amount of nicotine, which may potentially be extracted by the smoker and inhaled during smoking.
- Consumers may believe that 'light' and 'ultra-light' cigarettes contain less nicotine than full flavor cigarettes. However, such classifications do not reflect the amount of nicotine in the cigarette-- they are based solely on ratings of nicotine yield using the historical method.

Why Is Nicotine Content Important?

- Nicotine yield ratings from the historical method are based on the amount of nicotine 'inhaled' by a smoking machine. These data suggest that light cigarettes contain less nicotine than regular cigarettes. In reality, the difference in nicotine content across types is not statistically significant. Light and regular cigarettes offer similar amounts of nicotine to the smoker.
- Compensation techniques such as vent blocking or taking longer and deeper puffs on a cigarette are used by smokers as means of extracting a greater amount of nicotine. When a cigarette has a high level of nicotine content, the smoker may be able to extract high levels of nicotine even when smoking cigarettes labeled with lower nicotine yields.
- A cigarette classified as 'light' according to the amount of nicotine which a standard smoking machine will extract from it, will contain levels of nicotine similar to that of a regular cigarette.
- Smokers who switch to 'lower yield' cigarettes in order to reduce their intake of nicotine, can be faced with similar levels of nicotine content in the 'low yield' cigarettes. By simply smoking harder and longer on light and ultra-light cigarettes, smokers can achieve the same impact and the same level of nicotine as they did from 'higher' nicotine yield brands.

According to 2004 data, there were no statistically significant differences in the nicotine content of 'full flavor,' 'medium,' 'mild,' 'light,' or 'ultra-light' cigarettes.

Whether a cigarette is classified as 'full flavor,' 'medium,' 'mild,' 'light,' or 'ultra-light', it is likely to contain similar amounts of nicotine in the unsmoked tobacco.

