

**Bijlage 2**

Behorende bij

Handhavingsverzoek  
Inzake de sjoemelsigaret

d.d. 31 juli 2018  
Van Veen e.a. / NVWA



## RIVM meet veel hogere waarden van teer, nicotine en koolmonoxide in sigaretten

Publicatiedatum: 12 juni 2018

Wijzigingsdatum: 13 juni 2018

**Teer, nicotine en koolmonoxide (TNCO) gehalten die gemeten worden volgens de Canadian Intense (CI) methode zijn minimaal twee keer zo hoog als de gehalten gemeten met de wettelijke voorgeschreven ISO methode. In sommige gevallen liggen de gehaltes die met de CI methode zijn gemeten zelfs tot meer dan 20 keer hoger dan die gemeten met de ISO methode. Dat blijkt uit onderzoek van het RIVM, dat 100 sigaretten onder de loep nam met behulp van de Canadian Intense methode.**

Dit onderzoek is uitgevoerd vanwege de discussie over de meetmethode die wordt gebruikt bij het meten van de waarden van teer, nicotine en koolmonoxide (TNCO) in sigaretten. Deze worden tot nog toe gemeten met de voorgeschreven ISO-meetmethode, in overeenstemming met de Europese tabaksproductenrichtlijn. Deze ISO-methode geeft echter een onderschatting van de werkelijke hoeveelheden TNCO die rokers binnenkrijgen. Dit wordt onder andere veroorzaakt doordat de te meten rook wordt gemengd met lucht die wordt aangezogen door de ventilatiegaatjes die in het filter van de sigaret zijn aangebracht. Een meer realistische methode is de Canadian Intense methode, waarbij deze gaatjes worden afgeplakt.

Met dit onderzoek heeft het RIVM van 100 merkvarianten sigaretten de waarden van teer, nicotine en koolmonoxide met de Canadian Intense methode gemeten. Deze resultaten zijn vergeleken met de TNCO waarden die de producenten en importeurs hebben gerapporteerd, en die zijn gemeten met de voorgeschreven ISO-methode.

De gemeten teergehaltes met de CI methode zijn 2 tot 26 keer hoger dan werd gemeten met de ISO-methode. Voor nicotine en koolmonoxide liggen de gehaltes respectievelijk 2 tot 17 en 2 tot 20 keer hoger met de CI methode. Opvallend is dat de grootste verschillen tussen de twee meetmethoden worden gevonden voor sigaretten waarbij met de ISO-methode relatief lage TNCO waarden worden gemeten. Deze lage TNCO waarden uit de ISO-methode worden vooral veroorzaakt door een hoge mate van filterventilatie. Omdat bij de CI-methode de filtergaatjes worden geblokkeerd, heeft de mate van filterventilatie geen invloed op de meetresultaten. Hierdoor zijn bij deze methode de verschillen in TNCO gehalten tussen merkvarianten kleiner.

Geen enkele sigaret bevatte bij de meting minder teer, nicotine of koolmonoxide dan werd gemeten met de ISO-methode. Op die van één sigaret na, komen alle gemeten TNCO waarden boven de wettelijk vastgestelde maxima uit.

De resultaten van dit onderzoek ondersteunen de conclusie dat de voorgeschreven ISO methode een onderschatting geeft van de hoeveelheden TNCO die een roker binnen krijgt. De commissie die deze methode opgesteld heeft wordt in grote mate beïnvloed door de tabaksindustrie. Daarom pleit het RIVM ervoor om in plaats van de ISO methode een onafhankelijke meetmethode op te nemen in de wet, zoals die van WHO TobLabNet.

Delen op:

Publicatiedatum: 12 juni 2018



## Meetresultaten van TNCO

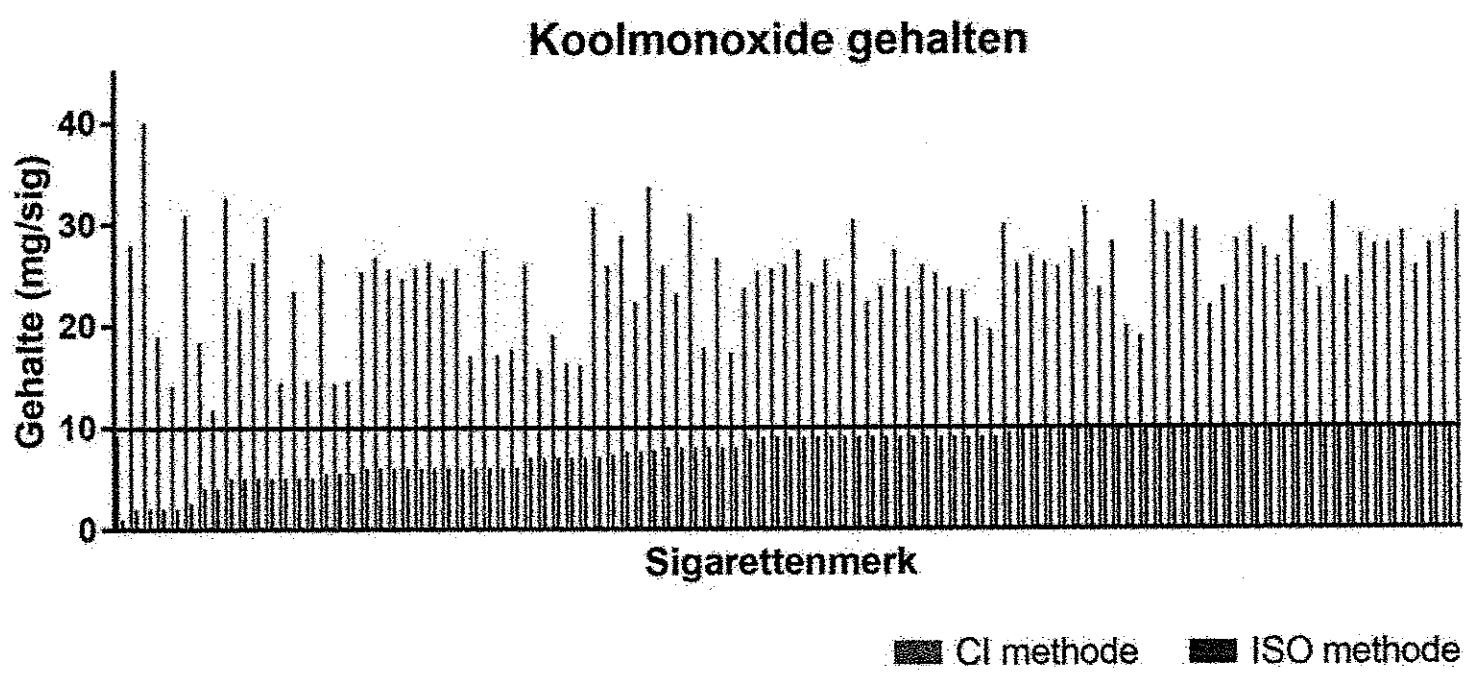
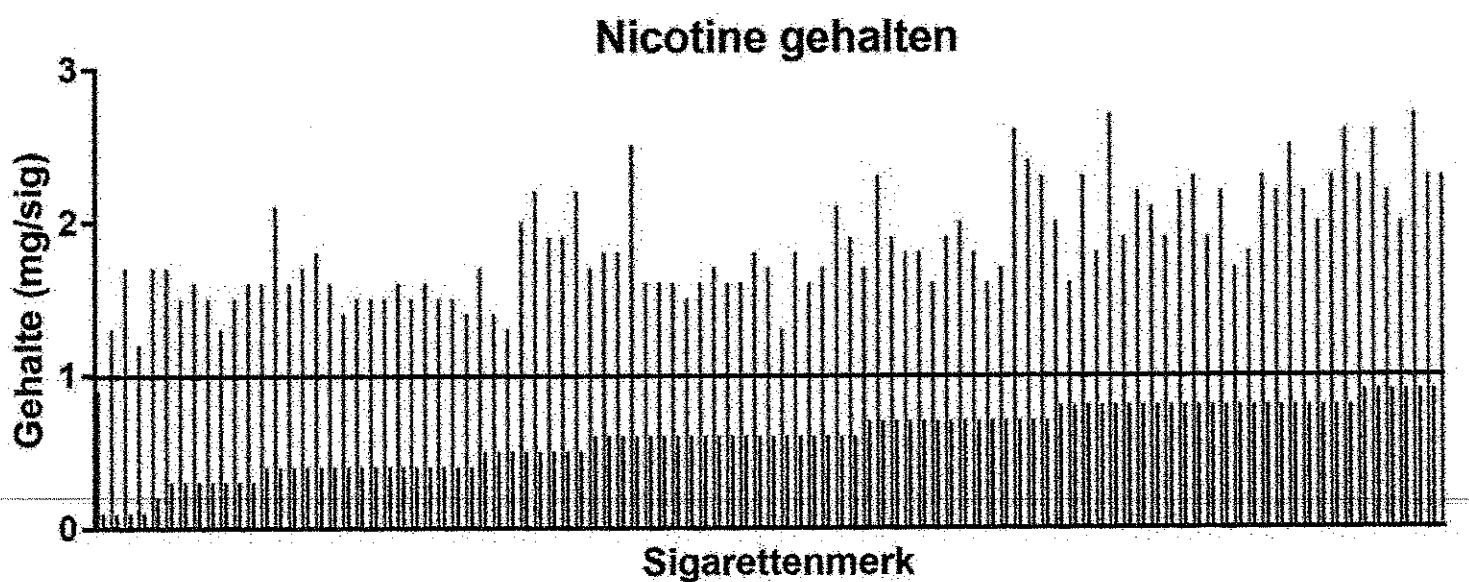
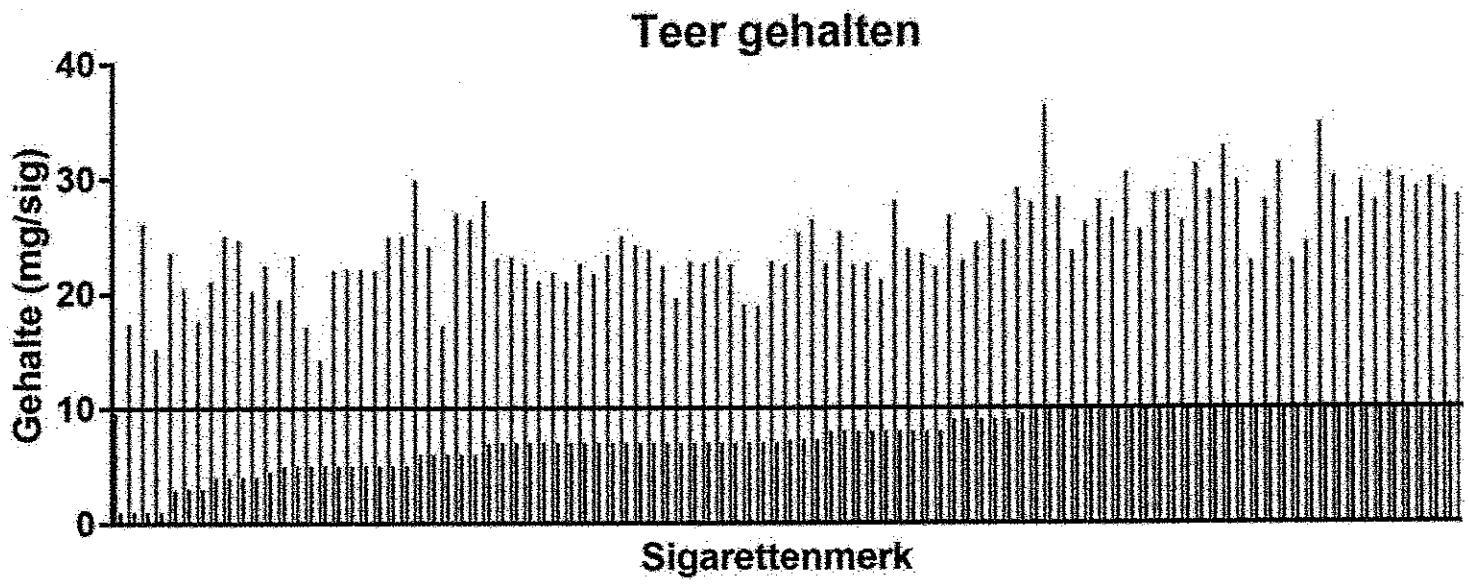
Het RIVM heeft voor 100 sigarettenmerken die in Nederland op de markt zijn, de teer, nicotine en koolmonoxide (TNCO) gehalten gemeten met de Canadian Intense (CI) methode. Deze gehalten zijn vergeleken met de TNCO gehalten die door fabrikanten zijn opgegeven en door hen zijn gemeten met de ISO methode. Volgens het RIVM geeft de CI methode een betere benadering van wat een roker werkelijk inhaleert.

De TNCO gehalten gemeten met de CI methode zijn voor alle 100 merken minimaal twee keer zo hoog als de door fabrikanten opgegeven gehalten, gemeten met de ISO methode. Voor sommige sigaretten vallen de gehalten tot meer dan 20 keer hoger uit. Het grootste verschil tussen de twee meetmethoden is te zien bij sigaretten met relatief lage TNCO waarden in de ISO methode. Deze lage ISO TNCO waarden worden vooral veroorzaakt door een hoge mate van filterventilatie. Omdat bij de CI methode de filtergaatjes worden geblokkeerd, heeft de mate van filterventilatie geen invloed op de meetresultaten. Hierdoor zijn bij deze methode de verschillen in TNCO gehalten tussen merkvarianten kleiner.

[Lees hier meer over de verschillen tussen de meetmethoden. \(/Onderwerpen/T/Tabak/Filterventilatie/Meetmethoden\\_voor\\_TNCO\)](#)

### Wettelijke norm

De huidige wet bepaalt dat sigarettenrook maximaal 10 mg teer, 1 mg nicotine en 10 mg koolmonoxide mag bevatten, gemeten volgens de ISO methode. De ISO TNCO gehalten vallen binnen die maximumwaarden en voldoen dus aan de wet. De CI TNCO gehalten komen daar in (bijna) alle gevallen boven uit. Dit is te zien in de grafieken.



Figuur. Teer, nicotine en koolmonoxide gehalten als gemeten met de CI en de ISO methode. Ieder staafje toont het gehalte van één merk;

gemeten met Cl in rood, met ISO in zwart. De horizontale lijn toont het wettelijke maximum voor de ISO methode.

## Resultaten per merk

De TNCO gehalten van 100 sigarettenmerken die verkrijgbaar zijn op de Nederlandse markt zijn verwerkt in een tabel. De linker drie kolommen tonen de waarden die door het RIVM zijn gemeten met de Cl methode. In de middelste drie kolommen staan de waarden die door fabrikanten zijn opgegeven, en door hen zijn gemeten met de wettelijk voorgeschreven ISO methode. De ratio's in de rechter drie kolommen laten zien hoeveel keer hoger de TNCO gehalten zijn met de Cl methode vergeleken met de ISO methode. De kolommen voor teer zijn weergegeven in blauw, die voor nicotine in groen en die voor koolmonoxide in oranje.

Bekijk hier de tabel met meetresultaten op volgorde van ratio in teergehalte

(/Onderwerpen/T/Tabak/Filterventilatie/Meetresultaten\_van\_TNCO/Tabel\_meetresultaten\_op\_volgorde\_van\_ratio\_in\_teergehalte.pdf)

Bekijk hier de tabel met meetresultaten op alfabetische volgorde.

(/Onderwerpen/T/Tabak/Filterventilatie/Meetresultaten\_van\_TNCO/Tabel\_meetresultaten\_op\_alfabetische\_volgorde.pdf)

Delen op:

## **Bijlage 3**

Behorende bij

Handhavingsverzoek  
Inzake de sjoemelsigaret

d.d. 31 juli 2018  
Van Veen e.a. / NVWA

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## Ministry of Health, Welfare and Sport

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**Our reference**

167856

Date October 20, 2017  
Subject Shortcoming in the Tobacco Product Directive (TPD)

*All correspondence addressed to the postal address quoting date and reference of this letter.*

Dear Mr. Andriukaitis,

With this letter I would like to draw your attention to a shortcoming in the Tobacco Product Directive (TPD). It enhances the already negative effects of cigarettes for smokers. I appreciate the steps that are taken with the directive to further reduce the harmful effects of smoking. It supports our national programs to avoid young people to start smoking and stimulates smokers to stop. It also helps the international collaboration regarding tobacco control. However, there is an omission in the directive concerning the measurement of tar, nicotine and carbon monoxide (TNCO) values, that increases the harmful effects of cigarettes. This was recognized in the negotiations leading to the revised directive in 2014, but in the end it was decided to keep the existing method. I nevertheless asked our National Institute for Public Health to further investigate the different methods regarding measurements of TNCO concentrations. The preliminary results (appendix A) cause me to express my concern in this letter.

In accordance with the TPD, TNCO contents in cigarettes are currently determined using the ISO method. Cigarette smoke is permitted to contain a maximum of 10 mg of tar, 1 mg of nicotine and 10 mg of carbon monoxide when smoked in accordance with the ISO method. However, measurements using the ISO method are not an accurate way of determining the amount of TNCO a smoker actually inhales. One of the reasons for this is that smoke measured by means of this method is mixed with air, sucked in through ventilation holes in the filter of the cigarette. As a result, TNCO concentrations in the inhaled smoke are diluted, resulting in lower values measured.

In line with this, several studies have shown that the main predictor of ISO measured TNCO yields, is filter ventilation. However, increasing the level of filter ventilation has no effect on the actual amounts of TNCO that a smoker inhales. Research has shown that, in order to inhale their desired amount of nicotine, smokers adapt their behavior depending on the degree of filter ventilation, for example by inhaling more deeply, for longer or more often. Smokers thus get equal amounts of nicotine from any type of cigarette, regardless of the ISO measured TNCO yields, by adapting their behavior.

**Our reference**  
167856

Smokers will also cover some of the ventilation holes, consciously or unconsciously, with their fingers and mouth while smoking. Due to more intense smoking and closing of the ventilation holes, greater quantities of harmful substances end up in the smoke. So for each mg of inhaled nicotine, smokers are exposed to higher concentrations of, for example, tar, carbon monoxide, acetaldehyde and acrolein. These substances are harmful to health as they are toxic, carcinogenic and/or addictive.

The ISO method that is currently used underestimates the quantity of harmful substances to which smokers are exposed. There is a better method; the Canadian Intense (CI) method for example provides a more suitable alternative, closer to human smoking behavior and not susceptible to changes in filter ventilation, as the ventilation holes in the filter are taped and inhalation is deeper and more frequent. Smoking parameters of the CI method are also closer to the smoking topography of actual smokers. Measurements using the CI method will result in higher TNCO values in cigarettes than measurements using the ISO method. The CI / ISO ratios of the investigated cigarettes show that emission levels of TNCO measured by the CI method are 2 to 17 times higher than the level measured by the ISO method.

I know that the directive will be evaluated in the future. However, knowing that there is a shortcoming and that it enhances the harm done to smokers, I call upon you to take action now. I hope you will consider to improve the directive with respect to the measurements of TNCO contents of cigarettes. If you need more information from our National Institute for Public Health, or any other information, I am willing to provide this.

Yours sincerely,

Martin van Rijn  
State Secretary for Health, Welfare and Sport

Appendix A:

Our reference  
167856

**The Canadian Intense method for determining tar, nicotine, and carbon monoxide contents in cigarette smoke produces at least twice as high levels of toxic emissions as the ISO method**

*As commissioned by, and in collaboration with, the Office for Risk Assessment and Research of the Netherlands Food and Consumer Product Safety Authority, the Dutch National Institute for Public Health and the Environment (RIVM) and the department of Pharmacology and Toxicology of Maastricht University are conducting research into the emission of toxic substances in cigarette smoke.*

The data in the table below are taken from the manuscript titled "The influence of cigarette filter ventilation on aldehyde yields in cigarette mainstream smoke of 11 Dutch brands using four different machine testing protocols", which will shortly be submitted for publication in a scientific journal. The table shows that the average tar, nicotine, and carbon monoxide (TNCO) contents as measured by the Canadian Intense (CI) method are at least twice as high as the contents measured by the ISO method, which is the current standard by-law. Smoking parameters of the more intense CI method are closer to human smoking behavior. The largest difference in TNCO contents between the two methods arises for cigarettes with the lowest TNCO yields in the ISO method. These cigarettes have more filter ventilation holes, which are taped over in the CI method—similar to smokers blocking these holes with their fingers and lips during smoking.

**Table 1: TNCO contents, as provided by manufacturers, measured by the ISO method vs. TNCO contents measured by the RIVM by means of the CI method. According to the tobacco product directive (2014/40/EU) cigarette smoke is permitted to contain a maximum of 10 mg/cigarette of tar, 1 mg/cigarette of nicotine, and 10 mg/cigarette of carbon monoxide.**

Brand	Tar (mg/cigarette)			Nicotine (mg/cigarette)			CO (mg/cigarette)		
	ISO	CI	CI/ISO ratio*	ISO	CI	CI/ISO ratio*	ISO	CI	CI/ISO ratio*
1.	1	17	17	0.1	1.2	12	2	27	14
2.	4	23	6	0.4	1.5	4	5	24	5
3.	8	20	3	0.6	1.7	3	9	26	3
4.	10	34	3	0.8	2.0	3	10	26	3
5.	10	34	3	0.8	2.0	3	10	28	3
6.	10	37	4	0.8	2.1	3	10	29	3
7.	10	29	3	0.9	1.8	2	10	25	2
8.	10	30	3	0.8	2.0	3	10	28	3
9.	10	29	3	0.8	1.9	2	10	25	3
10.	10	39	4	0.8	1.9	2	10	24	2
11.	10	34	3	0.8	1.7	2	10	29	3

\* The CI/ ISO ratio shows how many times the emission level measured by the CI method is higher than the level measured by the ISO method.

## **Bijlage 4**

Behorende bij

Handhavingsverzoek  
Inzake de sjoemelsigaret

d.d. 31 juli 2018  
Van Veen e.a. / NVWA

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Ministry of Health, Welfare and Sport

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[www.rijksoverheid.nl](http://www.rijksoverheid.nl)

Date 22 June 2018  
Subject Ratification Protocol to Eliminate Illicit Trade in Tobacco  
Products and update measurement TNCO

Our reference  
1369203-178340-  
VGP

Dear Mr. Andriukaitis,

*All correspondence  
addressed to the  
postal address,  
quoting date and  
reference of this  
letter.*

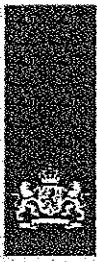
I hope this letter finds you well.

Further to our earlier contacts I would like to inform you on two recent developments on tobacco control in the Netherlands: the situation of ratification of the WHO Protocol to Eliminate Illicit Trade in Tobacco Products (hereafter: Protocol) and the results of research conducted by the Dutch National Institute for Public Health and the Environment (RIVM) on measurement methods for tar, nicotine and carbon monoxide yields of cigarettes. A summary of the alarming results you will find enclosed in the appendix to this letter.

First, I am happy to bring you the good news that the Netherlands will ratify the Protocol as soon as possible, including legislation in 2019.

Secondly, I would like to inform you about the results of the research by the RIVM. As you know the RIVM published the results of their research on tar, nicotine and carbon monoxide (TNCO) emissions measured by the Canadian Intense (CI) method. These results show that smokers inhale considerably more toxic substances in comparison with measurements following the ISO method. These differences of TNCO emissions between the ISO method and the Canadian Intense method are mainly caused by a high extent of filter ventilation.

In our meeting on the 23<sup>rd</sup> of April we talked about the possibility to explore an alternative method to measure TNCO levels in cigarettes. I was very pleased by your offer to explore solutions in an expert meeting in Brussels. This expert meeting took place on the 6th of June. Unfortunately, the meeting did not result in a proactive strategy to explore alternatives for the ISO-method on a short notice. One week after this meeting, the RIVM published the results of their research. In my opinion, these results are very alarming.



In the Netherlands, about 20.000 people die every year as a result of smoking-related diseases. Therefore I want to do everything in my power to prevent young people start smoking and help smokers quit smoking. I will continue putting this issue on the agenda in meetings in Brussels, in the preparation of the Conference of Parties in Geneva this October and in meetings with my European colleagues. I would like to ask you, given the alarming results of the RIVM research, to concretize your following steps on short-notice in preparation of the evaluation of the Tobacco Productive Directive. In this way, we can explore which extra steps we can take together until the evaluation starts.

**Our reference**  
1369203-178340-  
VGP

Yours sincerely,

Paul Blokhuis  
State Secretary for Health, Welfare and Sport



## Appendix A:

Our reference  
1369203-178340-  
VGP

**The Canadian Intense method for determining tar, nicotine, and carbon monoxide contents in cigarette smoke produces at least twice as high levels of toxic emissions as the ISO method**

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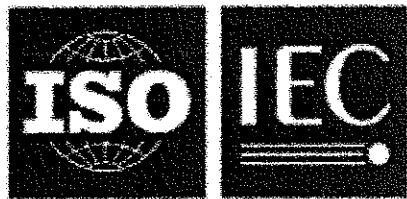
\* The CI / ISO ratio shows how many times the emission level measured by the CI method is higher than the level measured by the ISO method.

**Bijlage 5**

Behorende bij

Handhavingsverzoek  
Inzake de sjoemelsigaret

d.d. 31 juli 2018  
Van Veen e.a. / NVWA



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# **ISO/IEC**

## **Directives, Part 1**

# **Procedures for the technical work**

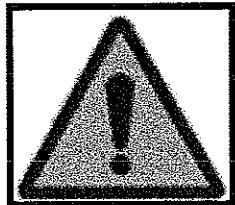
*Directives ISO/IEC, Partie 1*  
*Procédures pour les travaux techniques*

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Twelfth edition, 2016

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## **2.9 Maintenance of deliverables**

The procedures for the maintenance of deliverables are given in the respective Supplements to the ISO/IEC Directives.

## **2.10 Technical corrigenda and amendments**

### **2.10.1 General**

A published International Standard may subsequently be modified by the publication of

- a technical corrigendum;
- an amendment; or
- a revision (as part of the maintenance procedure in [2.9](#)).

Technical corrigenda and amendments are normally published as separate documents, the edition of the International Standard affected remaining in print.

NOTE In case of revision a new edition of the International Standard will be issued.

### **2.10.2 Technical corrigenda**

A technical corrigendum is issued to correct a technical error or ambiguity in an International Standard, a Technical Specification, a Publicly Available Specification or a Technical Report, inadvertently introduced either in drafting or in printing and which could lead to incorrect or unsafe application of the publication.

Technical corrigenda are not issued to correct errors that can be assumed to have no consequences in the application of the publication, for example minor printing errors.

Technical corrigenda are not issued to update information that has become outdated since publication.

Suspected technical errors shall be brought to the attention of the secretariat of the technical committee or subcommittee concerned. After confirmation by the secretariat and chair, if necessary in consultation with the project leader and P-members of the technical committee or subcommittee, the secretariat shall submit to the office of the CEO a proposal for correction, with an explanation of the need to do so.

The Chief Executive Officer shall decide, in consultation with the secretariat of the technical committee or subcommittee, and bearing in mind both the financial consequences to the organization and the interests of users of the publication, whether to publish a technical corrigendum or a corrected or updated reprint of the existing edition of the publication (see also [2.10.4](#)). In general, a technical corrigendum will not be issued for an International Standard that is older than 3 years.

### **2.10.3 Amendments**

An amendment alters and/or adds to previously agreed technical provisions in an existing International Standard.

The procedure for developing and publishing an amendment shall be as described in [2.3](#) (ISO and JTC 1), or the review and maintenance procedures (see IEC Supplement) and [2.4](#) to [2.8](#).

At the approval stage ([2.7](#)), the Chief Executive Officer shall decide, in consultation with the secretariat of the technical committee or subcommittee, and bearing in mind both the financial consequences to the organization and the interests of users of the International Standard, whether to publish an amendment or a new edition of the International Standard, incorporating the amendment. (See also [2.10.4](#).)

NOTE Where it is foreseen that there will be frequent *additions* to the provisions of an International Standard, the possibility should be borne in mind at the outset of developing these additions as a series of parts (see ISO/IEC Directives, Part 2).

### **2.10.4 Avoidance of proliferation of modifications**

No more than 2 separate documents in the form of technical corrigenda or amendments shall be published modifying a current International Standard. The development of a third such document shall result in publication of a new edition of the International Standard.

## **2.11 Maintenance agencies**

When a technical committee or subcommittee has developed a standard that will require frequent

## **Bijlage 6**

Behorende bij

Handhavingsverzoek  
Inzake de sjoemelsigaret

d.d. 31 juli 2018  
Van Veen e.a. / NVWA

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<b>Merknaam</b>	<b>Canadian Intense methode - Gemeten waarden</b>			<b>ISO methode - Opgegeven waarden</b>			<b>Ratio Canadian Intense/ISO</b>		
	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (CI/ISO)	Nicotine (CI/ISO)	CO (CI/ISO)
American Spirit Blue	22,8	2,3	19,5	9,0	1,0	9,0	2,5	2,3	2,2
American Spirit Orange	20,5	2,1	18,4	3,0	0,4	4,0	6,8	5,1	4,6
American Spirit Yellow	19,5	1,8	17,0	5,0	0,6	6,0	3,9	3,0	2,8
Bastos Filter*	27,9	2,3	22,3	9,8	0,9	7,6	2,8	2,5	2,9
Belinda Filterkings	29,9	2,2	24,7	6,0	0,5	6,0	5,0	4,3	4,1
Belinda Green	24,1	1,9	25,6	6,0	0,5	6,0	4,0	3,9	4,3
Belinda Super Kings	36,3	2,7	29,5	10,0	0,8	10,0	3,6	3,4	2,9
Benson & Hedges Gold	28,3	2,3	27,9	10,0	0,9	10,0	2,8	2,6	2,8
Benson & Hedges Silver	22,6	1,8	25,1	8,0	0,7	9,0	2,8	2,5	2,8
Black Devil Black	23,1	1,6	30,4	7,0	0,6	9,0	3,3	2,7	3,4
Black Devil Yellow	25,4	1,8	31,6	8,0	0,6	10,0	3,2	2,9	3,2
Boston Red	23,2	1,6	25,4	7,0	0,4	9,0	3,3	4,0	2,8
Boston White	23,3	1,6	25,3	5,0	0,3	6,0	4,7	5,5	4,2
Caballero Plain	23,7	1,9	15,8	10,0	0,8	7,0	2,4	2,3	2,3
Camel Blue	22,5	1,7	23,8	8,0	0,6	9,0	2,8	2,8	2,6
Camel Filter	26,2	2,2	21,9	10,0	0,8	10,0	2,6	2,7	2,2
Camel Orange	24,4	1,9	23,6	9,0	0,7	10,0	2,7	2,8	2,4
Camel Original	28,1	2,1	19,1	10,0	0,8	7,0	2,8	2,6	2,7
Chesterfield Red	26,5	1,8	28,2	10,0	0,7	10,0	2,6	2,6	2,8
Claridge Red	22,6	1,3	26,6	8,0	0,6	8,0	2,8	2,2	3,3
Couture Gold	17,1	1,4	14,4	5,0	0,5	5,0	3,4	2,9	2,9
Couture Purple	21,2	1,8	17,3	8,0	0,7	8,0	2,7	2,5	2,2
Davidoff Blue*	23,6	1,7	30,9	2,9	0,2	2,6	8,3	7,0	12,1
Davidoff Classic*	29,1	2,4	31,0	9,5	0,7	10,4	3,1	3,3	3,0
Davidoff Gold*	28,1	2,2	31,6	6,9	0,5	7,1	4,1	4,0	4,5
Davidoff Menthol*	26,4	1,9	33,6	7,3	0,6	7,7	3,6	3,1	4,4
Dunhill International	30,5	2,6	29,1	10,0	0,9	10,0	3,0	2,9	2,9
Dunhill Masterblend Red	25,5	1,9	23,7	10,0	0,8	10,0	2,5	2,4	2,4
Elixyr Blue	22,6	1,6	25,9	7,0	0,6	8,0	3,2	2,7	3,2
Elixyr Red	28,7	2,2	28,4	10,0	0,8	10,0	2,9	2,8	2,8

Merkenaam	Canadian Intense methode - Gemeten waarden			ISO methode - Opgewegeven waarden			Ratio Canadian Intense/ISO		
	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (CI/ISO)	Nicotine (CI/ISO)	CO (CI/ISO)
Esse Blue	14,3	1,3	11,7	5,0	0,5	4,0	2,9	2,6	2,9
Export Red	28,9	2,3	29,5	10,0	0,8	10,0	2,9	2,9	2,9
Florint Red	21,1	1,4	25,6	7,0	0,4	9,0	3,0	3,5	2,8
Gauloises Blondes Blue *	29,2	2,3	29,7	10,3	0,8	10,4	2,8	2,9	2,9
Gauloises Blondes Red*	25,3	2,1	28,8	7,3	0,6	7,6	3,5	3,5	3,8
Gauloises Brunes*	23,8	1,6	20,6	10,5	0,8	9,0	2,3	2,1	2,3
Gladstone Classic	26,3	1,9	27,5	10,0	0,8	10,0	2,6	2,4	2,8
Glamm Green	21,8	1,6	17,1	7,0	0,6	6,0	3,1	2,7	2,8
Glamm Pinks	21,0	1,5	17,6	7,0	0,6	6,0	3,0	2,5	2,9
Goldfield Green	22,6	1,5	26,8	7,0	0,4	10,0	3,2	3,7	2,7
Goldfield Red	21,7	1,5	26,0	7,0	0,4	9,0	3,1	3,8	2,9
Goldfield White	22,0	1,5	26,8	5,0	0,3	6,0	4,4	5,0	4,5
JPS Red*	30,0	2,3	29,9	10,1	0,7	9,4	3,0	3,1	3,2
JPS Silver*	22,5	1,7	25,9	7,2	0,6	7,3	3,1	2,9	3,5
Karelia I	9,6	0,9	9,3	1,0	0,1	1,0	9,6	8,6	9,3
Karelia L (Blue)	17,6	1,7	14,1	3,0	0,3	2,0	5,9	5,6	7,1
Karelia S	17,2	1,8	14,6	6,0	0,6	5,0	2,9	3,0	2,9
Kent HD Silver	21,1	1,6	26,2	4,0	0,4	5,0	5,3	3,9	5,2
Kent HD White	17,4	1,3	28,0	1,0	0,1	2,0	17,4	13,4	14,0
Kent Surround Menthol	25,0	1,7	30,8	4,0	0,4	5,0	6,3	4,3	6,2
Kent Surround Silver*	22,5	1,7	27,0	4,5	0,5	5,5	5,0	3,7	4,9
Kornet Blue	22,2	1,3	25,5	5,0	0,3	6,0	4,4	4,4	4,3
Kornet Green	23,4	1,5	26,2	7,0	0,4	10,0	3,3	3,8	2,6
Kornet Red	25,0	1,6	27,3	7,0	0,4	9,0	3,6	4,1	3,0
L&M Blue Label	28,1	1,8	27,3	8,0	0,6	9,0	3,5	3,1	3,0
L&M Red Label*	31,2	2,0	29,0	10,0	0,8	10,0	3,1	2,7	2,9
Lambert & Butler Original Silver*	26,8	2,3	23,6	9,0	0,7	8,8	3,0	3,3	2,7
Lexington	28,9	2,3	16,1	10,0	1,0	7,0	2,9	2,3	2,3
Lucky Strike Blue Additive Free	24,2	1,6	23,2	7,0	0,6	8,0	3,5	2,7	2,9

Merkenaam	Canadian Intense methode - Gemeten waarden				ISO methode - Opgegeven waarden				Ratio Canadian Intense/ISO		
	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (CI/ISO)	Nicotine (CI/ISO)	CO (CI/ISO)		
Lucky Strike Gold	23,8	1,7	22,3	7,0	0,6	9,0	3,4	2,8	2,5		
Lucky Strike Original Red	32,8	2,2	26,6	10,0	0,8	10,0	3,3	2,8	2,7		
Lucky Strike Red Additive Free	29,8	2,2	25,7	10,0	0,9	10,0	3,0	2,5	2,6		
Mantano Plain	22,8	1,7	16,3	10,0	0,8	7,0	2,3	2,1	2,3		
Mark Adams No. 1 Gold	27,0	1,9	26,0	6,0	0,5	7,0	4,5	3,8	3,7		
Mark Adams No. 1 Green	28,1	1,8	30,5	10,0	0,8	10,0	2,8	2,2	3,0		
Mark Adams No. 1 Red	31,3	2,3	25,8	10,0	0,8	10,0	3,1	2,9	2,6		
Marlboro Gold	23,9	1,6	23,7	8,0	0,6	9,0	3,0	2,7	2,6		
Marlboro Green	22,9	1,6	19,9	10,0	0,7	10,0	2,3	2,2	2,0		
Marlboro Mix	26,6	2,0	23,4	9,0	0,7	9,0	3,0	2,8	2,6		
Marlboro Prime	26,1	1,7	40,0	1,0	0,1	2,0	26,1	17,2	20,0		
Marlboro Red	24,5	1,7	18,9	10,0	0,7	10,0	2,5	2,4	1,9		
Marlboro Red 100s	34,8	2,6	32,1	10,0	0,7	10,0	3,5	3,8	3,2		
Marlboro Silver Blue	24,7	1,5	32,6	4,0	0,3	5,0	6,2	5,0	6,5		
Marlboro True Blue	23,4	1,6	23,6	8,0	0,7	9,0	2,9	2,4	2,6		
Marlboro True Red	30,1	2,0	27,9	10,0	0,9	10,0	3,0	2,2	2,8		
Mohawk Origins Blue	22,4	1,6	31,0	7,0	0,6	8,0	3,2	2,7	3,9		
Mohawk Origins Red	24,6	1,8	30,2	9,0	0,8	10,0	2,7	2,2	3,0		
Pall Mall Blue	19,6	1,6	17,8	7,0	0,6	8,0	2,8	2,6	2,2		
Pall Mall Red	26,4	2,2	23,5	10,0	0,8	10,0	2,6	2,7	2,4		
Pall Mall Red 100s	29,8	2,5	31,9	10,0	0,8	10,0	3,0	3,1	3,2		
Peter Stuyvesant Blue*	20,2	1,6	21,7	4,0	0,4	5,0	5,1	4,7	4,3		
Peter Stuyvesant Red	28,0	2,2	24,6	10,0	0,8	10,0	2,8	2,7	2,5		
Peter Stuyvesant Silver	15,2	1,2	19,0	1,0	0,1	2,0	15,2	12,3	9,5		
Pueblo Blue	26,4	2,5	27,4	6,0	0,6	6,0	4,4	4,2	4,6		
Riverside Blue	22,1	1,5	24,6	5,0	0,3	6,0	4,4	5,1	4,1		
Riverside Green	22,8	1,5	25,7	7,0	0,4	10,0	3,3	3,6	2,6		
Riverside Red	22,6	1,6	24,1	7,0	0,4	9,0	3,2	3,9	2,7		
Ruba Green	23,1	1,5	27,4	7,0	0,4	10,0	3,3	3,8	2,7		

Merkenaam	Canadian Intense methode - Gemeten waarden			ISO methode - Opgegeven waarden			Ratio Canadian Intense / ISO		
	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (CI/ISO)	Nicotine (CI/ISO)	CO (CI/ISO)
Ruba Red	22,5	1,5	26,4	7,0	0,4	9,0	3,2	3,8	2,9
Ruba White	22,0	1,6	25,7	5,0	0,3	6,0	4,4	5,2	4,3
Silk Cut Purple	24,9	2,0	23,4	5,0	0,5	5,0	5,0	4,0	4,7
Superkings original black*	28,5	2,6	26,0	10,5	0,8	9,8	2,7	3,0	2,7
Templeton Blue	25,0	1,8	26,2	5,0	0,4	6,0	5,0	4,4	4,4
Texas Red	19,0	1,4	24,3	7,0	0,4	9,0	2,7	3,4	2,7
Titaan Red	30,4	2,0	28,8	10,0	0,8	10,0	3,0	2,5	2,9
Tivoli Kingsize	30,0	2,7	28,7	10,0	0,9	10,0	3,0	3,0	2,9
Vogue Blue*	18,9	1,7	14,3	7,0	0,7	5,5	2,7	2,6	2,6
Vogue Menthe*	22,8	1,9	14,6	7,0	0,7	5,5	3,3	2,7	2,7
Winston Blue	22,3	1,7	25,9	8,0	0,6	9,0	2,8	2,8	2,9
Winston Classic	29,2	2,3	27,8	10,0	0,8	10,0	2,9	2,9	2,8
<b>Mediaan ratio:</b>									
<b>Laagste ratio:</b>									
<b>Hoogste ratio:</b>									
							<b>26,1</b>	<b>17,2</b>	<b>20,0</b>

\*Opmerking: In enkele gevallen zijn er verschillende ISO TNCO waarden opgegeven voor hetzelfde merk. Dit kan bijvoorbeeld komen doordat sigaretten van dat merk in verschillende fabrieken gemaakt worden. In dit geval is de mediaan van de opgegeven waarden in de tabel opgenomen. De waarden waar dit voor geldt zijn schuingedrukt.

De bedrijven waarvan sigaretten zijn onderzocht zijn minimaal twee weken voor publicatie onder embargo op de hoogte gebracht van de onderzoeksresultaten. Tabaksfabrikant JTI heeft op 6 juni 2018 een reactie gestuurd op deze resultaten. Tabaksfabrikanten Imperial Tobacco en BAT hebben op 8 juni reacties gestuurd. De e-mails aan de betrokken bedrijven met de onderzoeksresultaten en de reacties van JTI, Imperial Tobacco en BAT en de antwoorden daarop worden openbaar gemaakt op [www.rijksoverheid.nl/onderwerpen/roken/transparant-over-contact-tabaksindustrie](http://www.rijksoverheid.nl/onderwerpen/roken/transparant-over-contact-tabaksindustrie).

Merkenaam	Canadian Intense methode - Gemeten waarden			ISO methode - Opgegeven waarden			Ratio Canadian Intense/ISO		
	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (CI/ISO)	Nicotine (CI/ISO)	CO (CI/ISO)
Marlboro Prime	26,1	1,7	40,0	1,0	0,1	2,0	26,1	17,2	20,0
Kent HD White	17,4	1,3	28,0	1,0	0,1	2,0	17,4	13,4	14,0
Peter Stuyvesant Silver	15,2	1,2	19,0	1,0	0,1	2,0	15,2	12,3	9,5
Karelia I	9,6	0,9	9,3	1,0	0,1	1,0	9,6	8,6	9,3
Davidoff Blue*	23,6	1,7	30,9	2,9	0,2	2,6	8,3	7,0	12,1
American Spirit Orange	20,5	2,1	18,4	3,0	0,4	4,0	6,8	5,1	4,6
Kent Surround Menthol	25,0	1,7	30,8	4,0	0,4	5,0	6,3	4,3	6,2
Marlboro Silver Blue	24,7	1,5	32,6	4,0	0,3	5,0	6,2	5,0	6,5
Karelia L (Blue)	17,6	1,7	14,1	3,0	0,3	2,0	5,9	5,6	7,1
Kent HD Silver	21,1	1,6	26,2	4,0	0,4	5,0	5,3	3,9	5,2
Peter Stuyvesant Blue*	20,2	1,6	21,7	4,0	0,4	5,0	5,1	4,7	4,3
Kent Surround Silver*	22,5	1,7	27,0	4,5	0,5	5,5	5,0	3,7	4,9
Templeton Blue	25,0	1,8	26,2	5,0	0,4	6,0	5,0	4,4	4,4
Belinda Filterkings	29,9	2,2	24,7	6,0	0,5	6,0	5,0	4,3	4,1
Silk Cut Purple	24,9	2,0	23,4	5,0	0,5	5,0	5,0	4,0	4,7
Boston White	23,3	1,6	25,3	5,0	0,3	6,0	4,7	5,5	4,2
Mark Adams No. 1 Gold	27,0	1,9	26,0	6,0	0,5	7,0	4,5	3,8	3,7
Kornet Blue	22,2	1,3	25,5	5,0	0,3	6,0	4,4	4,4	4,3
Riverside Blue	22,1	1,5	24,6	5,0	0,3	6,0	4,4	5,1	4,1
Pueblo Blue	26,4	2,5	27,4	6,0	0,6	6,0	4,4	4,2	4,6
Ruba White	22,0	1,6	25,7	5,0	0,3	6,0	4,4	5,2	4,3
Goldfield White	22,0	1,5	26,8	5,0	0,3	6,0	4,4	5,0	4,5
Davidoff Gold*	28,1	2,2	31,6	6,9	0,5	7,1	4,1	4,0	4,5
Belinda Green	24,1	1,9	25,6	6,0	0,5	6,0	4,0	3,9	4,3
American Spirit Yellow	19,5	1,8	17,0	5,0	0,6	6,0	3,9	3,0	2,8
Belinda Super Kings	36,3	2,7	29,5	10,0	0,8	10,0	3,6	3,4	2,9
Davidoff Menthol*	26,4	1,9	33,6	7,3	0,6	7,7	3,6	3,1	4,4
Kornet Red	25,0	1,6	27,3	7,0	0,4	9,0	3,6	4,1	3,0
L&M Blue Label	28,1	1,8	27,3	8,0	0,6	9,0	3,5	3,1	3,0
Gauloises Blondes Red*	25,3	2,1	28,8	7,3	0,6	7,6	3,5	3,5	3,8

Merkenaam	Canadian Intense methode - Gemeten waarden				ISO methode - Opgegeven waarden				Ratio Canadian Intense/ISO	
	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (CI/ISO)	Nicotine (CI/ISO)	CO (CI/ISO)	
Marlboro Red 100s	34,8	2,6	32,1	10,0	0,7	10,0	3,5	3,8	3,2	
Lucky Strike Blue Additive Free	24,2	1,6	23,2	7,0	0,6	8,0	3,5	2,7	2,9	
Couture Gold	17,1	1,4	14,4	5,0	0,5	5,0	3,4	2,9	2,9	
Lucky Strike Gold	23,8	1,7	22,3	7,0	0,6	9,0	3,4	2,8	2,5	
Kornet Green	23,4	1,5	26,2	7,0	0,4	10,0	3,3	3,8	2,6	
Boston Red	23,2	1,6	25,4	7,0	0,4	9,0	3,3	4,0	2,8	
Ruba Green	23,1	1,5	27,4	7,0	0,4	10,0	3,3	3,8	2,7	
Black Devil Black	23,1	1,6	30,4	7,0	0,6	9,0	3,3	2,7	3,4	
Lucky Strike Original Red	32,8	2,2	26,6	10,0	0,8	10,0	3,3	2,8	2,7	
Vogue Menthe*	22,8	1,9	14,6	7,0	0,7	5,5	3,3	2,7	2,7	
Riverside Green	22,8	1,5	25,7	7,0	0,4	10,0	3,3	3,6	2,6	
Riverside Red	22,6	1,6	24,1	7,0	0,4	9,0	3,2	3,9	2,7	
Elixyr Blue	22,6	1,6	25,9	7,0	0,6	8,0	3,2	2,7	3,2	
Goldfield Green	22,6	1,5	26,8	7,0	0,4	10,0	3,2	3,7	2,7	
Ruba Red	22,5	1,5	26,4	7,0	0,4	9,0	3,2	3,8	2,9	
Mohawk Origins Blue	22,4	1,6	31,0	7,0	0,6	8,0	3,2	2,7	3,9	
Black Devil Yellow	25,4	1,8	31,6	8,0	0,6	10,0	3,2	2,9	3,2	
Mark Adams No. 1 Red	31,3	2,3	25,8	10,0	0,8	10,0	3,1	2,9	2,6	
JPS Silver*	22,5	1,7	25,9	7,2	0,6	7,3	3,1	2,9	3,5	
L&M Red Label*	31,2	2,0	29,0	10,0	0,8	10,0	3,1	2,7	2,9	
Glamm Green	21,8	1,6	17,1	7,0	0,6	6,0	3,1	2,7	2,8	
Goldfield Red	21,7	1,5	26,0	7,0	0,4	9,0	3,1	3,8	2,9	
Davidoff Classic*	29,1	2,4	31,0	9,5	0,7	10,4	3,1	3,3	3,0	
Dunhill International	30,5	2,6	29,1	10,0	0,9	10,0	3,0	2,9	2,9	
Titaan Red	30,4	2,0	28,8	10,0	0,8	10,0	3,0	2,5	2,9	
Florint Red	21,1	1,4	25,6	7,0	0,4	9,0	3,0	3,5	2,8	
Marlboro True Red	30,1	2,0	27,9	10,0	0,9	10,0	3,0	2,2	2,8	
Tivoli Kingsize	30,0	2,7	28,7	10,0	0,9	10,0	3,0	3,0	2,9	
Glamm Pinks	21,0	1,5	17,6	7,0	0,6	6,0	3,0	2,5	2,9	

Merkenaam	Canadian Intense methode - Gemeten waarden				ISO methode - Opgegeven waarden				Ratio Canadian Intense/ISO	
	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (CI/ISO)	Nicotine (CI/ISO)	CO (CI/ISO)	
Lambert & Butler Original Silver*	26,8	2,3	23,6	9,0	0,7	8,8	3,0	3,3	2,7	
Marlboro Gold	23,9	1,6	23,7	8,0	0,6	9,0	3,0	2,7	2,6	
Pall Mall Red 100s	29,8	2,5	31,9	10,0	0,8	10,0	3,0	3,1	3,2	
JPS Red*	30,0	2,3	29,9	10,1	0,7	9,4	3,0	3,1	3,2	
Lucky Strike Red Additive Free	29,8	2,2	25,7	10,0	0,9	10,0	3,0	2,5	2,6	
Marlboro Mix	26,6	2,0	23,4	9,0	0,7	9,0	3,0	2,8	2,6	
Marlboro True Blue	23,4	1,6	23,6	8,0	0,7	9,0	2,9	2,4	2,6	
Winston Classic	29,2	2,3	27,8	10,0	0,8	10,0	2,9	2,9	2,8	
Export Red	28,9	2,3	29,5	10,0	0,8	10,0	2,9	2,9	2,9	
Lexington	28,9	2,3	16,1	10,0	1,0	7,0	2,9	2,3	2,3	
Elixyr Red	28,7	2,2	28,4	10,0	0,8	10,0	2,9	2,8	2,8	
Karelia S	17,2	1,8	14,6	6,0	0,6	5,0	2,9	3,0	2,9	
Esse Blue	14,3	1,3	11,7	5,0	0,5	4,0	2,9	2,6	2,9	
Bastos Filter*	27,9	2,3	22,3	9,8	0,9	7,6	2,8	2,5	2,9	
Gauloises Blondes Blue *	29,2	2,3	29,7	10,3	0,8	10,4	2,8	2,9	2,9	
Benson & Hedges Silver	22,6	1,8	25,1	8,0	0,7	9,0	2,8	2,5	2,8	
Claridge Red	22,6	1,3	26,6	8,0	0,6	8,0	2,8	2,2	3,3	
Benson & Hedges Gold	28,3	2,3	27,9	10,0	0,9	10,0	2,8	2,6	2,8	
Camel Blue	22,5	1,7	23,8	8,0	0,6	9,0	2,8	2,8	2,6	
Mark Adams No. 1 Green	28,1	1,8	30,5	10,0	0,8	10,0	2,8	2,2	3,0	
Camel Original	28,1	2,1	19,1	10,0	0,8	7,0	2,8	2,6	2,7	
Pall Mall Blue	19,6	1,6	17,8	7,0	0,6	8,0	2,8	2,6	2,2	
Peter Stuyvesant Red	28,0	2,2	24,6	10,0	0,8	10,0	2,8	2,7	2,5	
Winston Blue	22,3	1,7	25,9	8,0	0,6	9,0	2,8	2,8	2,9	
Mohawk Origins Red	24,6	1,8	30,2	9,0	0,8	10,0	2,7	2,2	3,0	
Superkings original black*	28,5	2,6	26,0	10,5	0,8	9,8	2,7	3,0	2,7	
Texas Red	19,0	1,4	24,3	7,0	0,4	9,0	2,7	3,4	2,7	
Camel Orange	24,4	1,9	23,6	9,0	0,7	10,0	2,7	2,8	2,4	
Vogue Blue*	18,9	1,7	14,3	7,0	0,7	5,5	2,7	2,6	2,6	

Merkenaam	Canadian Intense methode - Gemeten waarden			ISO methode - Opgegeven waarden			Ratio Canadian Intense/ISO		
	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (mg/sig)	Nicotine (mg/sig)	CO (mg/sig)	Teer (CI/ISO)	Nicotine (CI/ISO)	CO (CI/ISO)
Couture Purple	21,2	1,8	17,3	8,0	0,7	8,0	2,7	2,5	2,2
Chesterfield Red	26,5	1,8	28,2	10,0	0,7	10,0	2,6	2,6	2,8
Pall Mall Red	26,4	2,2	23,5	10,0	0,8	10,0	2,6	2,7	2,4
Gladstone Classic	26,3	1,9	27,5	10,0	0,8	10,0	2,6	2,4	2,8
Camel Filter	26,2	2,2	21,9	10,0	0,8	10,0	2,6	2,7	2,2
Dunhill Masterblend Red	25,5	1,9	23,7	10,0	0,8	10,0	2,5	2,4	2,4
American Spirit Blue	22,8	2,3	19,5	9,0	1,0	9,0	2,5	2,3	2,2
Marlboro Red	24,5	1,7	18,9	10,0	0,7	10,0	2,5	2,4	1,9
Caballero Plain	23,7	1,9	15,8	10,0	0,8	7,0	2,4	2,3	2,3
Marlboro Green	22,9	1,6	19,9	10,0	0,7	10,0	2,3	2,2	2,0
Mantano Plain	22,8	1,7	16,3	10,0	0,8	7,0	2,3	2,1	2,3
Gauloises Brunes*	23,8	1,6	20,6	10,5	0,8	9,0	2,3	2,1	2,3
<b>Mediaan ratio:</b>									
<b>Laagste ratio:</b>									
<b>Hoogste ratio:</b>									
							<b>3,1</b>	<b>2,9</b>	<b>2,9</b>
							<b>2,3</b>	<b>2,1</b>	<b>1,9</b>
							<b>26,1</b>	<b>17,2</b>	<b>20,0</b>

\*Opmerking: In enkele gevallen zijn er verschillende ISO TNCO waarden opgegeven voor hetzelfde merk. Dit kan bijvoorbeeld komen doordat sigaretten van dat merk in verschillende fabrieken gemaakt worden. In dit geval is de mediaan van de opgegeven waarden in de tabel opgenomen. De waarden waar dit voor geldt zijn schuingedrukt.

De bedrijven waarvan sigaretten zijn onderzocht zijn minimaal twee weken voor publicatie onder embargo op de hoogte gebracht van de onderzoeksresultaten. Tabaksfabrikant JTI heeft op 6 juni 2018 een reactie gestuurd op deze resultaten. Tabaksfabrikanten Imperial Tobacco en BAT hebben op 8 juni reacties gestuurd. De e-mails aan de betrokken bedrijven met de onderzoeksresultaten en de reacties van JTI, Imperial Tobacco en BAT en de antwoorden daarop worden openbaar gemaakt op [www.rijksoverheid.nl/onderwerpen/roken/transparant-over-contact-tabaksindustrie](http://www.rijksoverheid.nl/onderwerpen/roken/transparant-over-contact-tabaksindustrie).

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Nederland

**Bijlage 7**

Behorende bij

Handhavingsverzoek  
Inzake de sjoemelsigaret

d.d. 31 juli 2018  
Van Veen e.a. / NVWA



**Vytenis ANDRIUKAITIS**

Member of the European Commission

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B-1049 Brussels - Belgium

**Mr van Rijn**  
State Secretary for Health, Welfare and Sport  
P.O. Box 20350  
2500 EJ The Hague  
The Netherlands

15.11.2017  
Brussels,  
ARES(2017)

Dear Mr van Rijn,

Thank you for your letter of 20 October 2017, in which you present your views regarding the measurements of tar, nicotine and carbon monoxide (TNCO) in tobacco products.

Let me assure you that the Commission is well aware of the risk of using ventilation holes to lower the measured values of tar, nicotine and CO emissions, in so called "light cigarettes". Branding such cigarettes as "light", "mild" or "ultra-light" is shown to mislead consumers. This is why the EU banned such descriptors on cigarette packages in 2001 as part of the earlier Tobacco Products Directive (2001/37/EC)<sup>1</sup> and required TNCO to be indicated on the packages of cigarettes and roll your own tobacco. However as these values were found not to reflect the actual emissions during use, the revised Tobacco Products Directive 2014/40/EU<sup>2</sup> does not foresee labelling of TNCO levels on cigarette packs.

The appropriate measurement of TNCO emissions has been discussed at international fora, including at the WHO Framework Convention on Tobacco Control (FCTC) and specifically within the Working Group on Articles 9 and 10 (Regulation of the contents and disclosures of tobacco products) where the EU is one of the key facilitators. In its report to the Conference of the Parties (COP6) in 2014, the working group encouraged parties to consider the use of two sets of smoking

<sup>1</sup> OJ L 194, 18.7.2001, p. 26

<sup>2</sup> OJ L 127, 29.4.2014, p. 138

measurement regimens, the "Canadian intense" method which you mention in your letter, and the "ISO" method.

However, the working group also highlighted that no machine-smoking regimen can represent all human smoking behaviours. In this respect, no conclusion should be drawn from the nominal machine-measured TNCO values regarding the "harmful effect" of the cigarette in question. During the negotiations of the EU position in the Council Working Group on Public Health, several Member States expressed concern about imposing emission measurements via a second smoking regime in addition to the ISO methodology.

In the absence of a "gold standard", and for the purpose of regulatory continuity, it was agreed during the negotiations on the Tobacco Products Directive that the ISO methodology should continue to be used for emission measurement. However, Article 4.3 of the Tobacco Products Directive gives the Commission delegated power to adapt the TNCO measurement methods, based on scientific and technical developments or internationally agreed standards. Furthermore, Article 3.2 of the Tobacco Products Directive gives the Commission delegated power to decrease the maximum emission levels for TNCO, where this is necessary based on internationally agreed standards. To that end, the Commission closely follows international discussions, on this issue.

The Commission and the Member States have discussed measurement methods in the Expert Group on Tobacco Policy on several occasions.<sup>3</sup> In accordance with Article 28 of the Tobacco Products Directive, the Commission will report on the application of the Directive by 2021.

I hope that this information is useful and look forward to a fruitful co-operation in the years to come.

Yours sincerely,

<sup>3</sup> [https://ec.europa.eu/health/sites/health/files/tobacco/docs/ev\\_20161202\\_ini\\_en.pdf](https://ec.europa.eu/health/sites/health/files/tobacco/docs/ev_20161202_ini_en.pdf)