



European Commission Call for evidence for an impact assessment Concerning: Tobacco products and tobacco advertising – revision of EU rules

Input from the Dutch National Institute for Public Health and the Environment (RIVM). June 2026

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This document presents a comprehensive overview of evidence-based measures for future-proof regulation of tobacco and other nicotine products. The recommendations are structured around key themes and draw from the tenth World Health Organization (WHO) report on the scientific basis of tobacco product regulation, studies from the Dutch National Institute for Public Health and the Environment (RIVM), and recent research on the harms associated with tobacco, e-cigarette use, and other nicotine products. The focus is on policies that address both public health and environmental concerns, with special attention to measures that effectively reduce the appeal and accessibility of nicotine products—particularly for young people. The following sections outline concrete regulatory actions, supported by scientific evidence, that can contribute to a stronger, more effective European tobacco product directive.

A broad ban on flavours in all tobacco products, e-cigarettes, and other nicotine products is urgently needed. Research consistently shows that flavours are a key factor in why young people start using nicotine. Therefore, The Netherlands, for example, has already introduced a flavour ban in e-cigarettes—only tobacco flavour is permitted, based on strict regulations for additives¹. Initial results show effectiveness: one in five young vapers in the Netherlands said they quit e-cigarette use because of the flavour ban².

Evidence also points to the importance of extending flavour bans to products like waterpipes, which are popular among young users due to their wide range of flavours³. Another concern is flavoured cigarillos that closely resemble cigarettes. These products are marketed towards people who previously used flavoured cigarettes, creating a loophole that undermines existing bans⁴. Closing this gap is crucial to reduce their appeal.

International bodies such as the WHO strongly advise banning all flavours (except tobacco) in tobacco, nicotine, and related products—including flavour accessories⁵—to make these products less attractive, especially to young people⁶. This approach includes banning additives and flavouring agents that enhance taste and palatability, since these encourage both initiation and continued use among youth⁷. Additives do not offer any health benefits; in fact, some are toxic or can create harmful substances when burned⁸.

It is crucial to prevent new nicotine-containing products from entering the market and to ban existing ones. The WHO recommends banning all nicotine pouches, as they are particularly appealing to young people and increase the risk of nicotine addiction⁹. Because nicotine is harmful to public health—especially for young people¹⁰—any product containing nicotine poses health risks and should therefore be restricted. The RIVM has established scientifically backed limits for both oral and inhalation uptake of nicotine and 6-methylnicotine, aimed at preventing early symptoms of toxicity such as increased heart rate and airway irritation^{11,12,13}. These thresholds are so low that nearly all products containing nicotine would exceed them. To effectively protect young people from nicotine addiction, it is necessary to implement a comprehensive ban on all products containing nicotine—regardless of how the nicotine is

delivered, whether orally, via inhalation, or through other routes. The approach taken in Moldova, with its broad definition of nicotine products, serves as a good example¹⁴.

Furthermore, a market freeze—halting the introduction of new nicotine products—would allow only those already on the market to remain temporarily. This would give countries time to assess the public health and environmental impacts and develop appropriate regulatory frameworks¹⁵. Evidence from countries that have banned smokeless tobacco products, including snus, shows that such bans are effective: two out of three studies found a significant reduction in the sale and use of these products following the ban¹⁶.

To reduce the appeal of nicotine delivery devices—such as e-cigarettes and heated tobacco products (HTP)—it is important to restrict unnecessary features and designs that go beyond nicotine delivery. Devices should be limited to essential functionalities required for nicotine delivery or e-liquid consumption. For instance, features like lights, LED screens, and interactive elements should not be allowed. Belgium has already put such measures in place, ensuring that devices are focused solely on their intended purpose¹⁷.

The appearance of these devices, particularly their colour, is also a significant factor in their attractiveness. A recent study found that even when e-cigarettes contain the same tobacco flavour, a red device is perceived as sweeter and more appealing than a white or brown one, simply based on its visual appearance¹⁸. This evidence supports including colour regulations as part of broader flavour restriction policies¹⁹.

Additionally, a factsheet from RIVM outlines several options for reducing the appeal of e-cigarettes, including restrictions on both design and appearance²⁰. Regulating device settings that influence nicotine uptake is another important aspect. By limiting adjustable settings—such as power, temperature, or airflow—that affect how much nicotine is inhaled, we can further reduce the potential for misuse. Restricting these parameters helps ensure that devices are used only as intended and do not encourage excessive nicotine consumption^{21,22}. Altogether, these measures can play a key role in making these products less attractive, particularly to young people.

Banning cigarette filters is a crucial policy measure that addresses significant public health and environmental concerns, while also closing regulatory loopholes exploited by the tobacco industry. This policy prohibits the sale, import, distribution, and manufacture of cigarettes with filters, as well as filters sold separately. Currently, about 90% of cigarettes on the market are filtered²³. Although the tobacco industry claims that filters reduce the harms of cigarette smoke, research shows they do little to prevent the inhalation of toxic substances and do not eliminate the risks associated with smoking²⁴. In fact, filters can actually encourage smokers to take deeper and more frequent puffs, resulting in a greater deposit of toxicants in the lungs. This behaviour has been linked to higher rates of lung adenocarcinoma, a particularly deadly form of lung cancer²⁵. Microfibres from cigarette filters have been detected in the lung tissue of smokers with lung cancer, though further research is needed to confirm a direct causal relationship²⁶. Beyond their health impacts, cigarette filters are also a major source of plastic pollution²⁷. Research by RIVM indicates that removing filters does not lead to additional environmental harm²⁸.

Another important issue is how the tobacco industry manipulates tar, nicotine, and carbon monoxide (TNCO) levels in cigarettes. By placing small ventilation holes in filters, industry can artificially lower emission measurements when using the traditional ISO method. However, when emissions are measured with the WHO TobLabNet method, much higher levels are found²⁹. Banning cigarette filters would eliminate this loophole and provide clearer, more accurate regulation of cigarette emissions.

Strict regulation of nicotine forms and nicotine limits is essential to prevent addiction and protect public health, especially among young people. Nicotine is harmful, and early symptoms of toxicity—such as increased heart rate and airway irritation—can occur even at relatively low doses. The RIVM has established scientifically supported limits for oral and inhalation uptake of nicotine and 6-methylnicotine to prevent these effects^{30,31,32}. Currently, the maximum permitted concentration for e-cigarette liquids is set at 20 mg/ml, but strong scientific arguments for this limit are lacking. Lowering this threshold to 10 mg/ml would significantly reduce the risk of accidental poisoning, particularly among children, as case studies have shown that child-resistant packaging alone is not sufficient to prevent fatalities^{33,34}. At a concentration of 10 mg/ml, accidental ingestion is unlikely to result in fatal toxicity, and this level has been shown to be acceptable and preferred by users compared to higher concentrations³⁵.

In addition, it is important to regulate all nicotine-like substances to prevent legal loopholes and ensure comprehensive protection. Only S-nicotine—whether plant-derived or synthetic—should be permitted, as it has similar effects regardless of its source, while little is known about the health risks of other forms such as R-nicotine³⁶. By only allowing S-nicotine, analogues like 6-methylnicotine, which may be even more potent than nicotine, as well as other compounds such as methyl-nicotine analogs, nornicotine, anabasine, and nicotine polymers, are also be prohibited. These substances could pose similar risks, although their addictive properties and health impacts remain largely unstudied^{37,38}. Nicotine salts, increasingly used in e-cigarettes, make inhalation less harsh and therefore increase product appeal—a development that is undesirable from a public health perspective. In general, to better control nicotine exposure, it is recommended to set limits on nicotine emissions from all products, rather than only regulating the nicotine content. This approach considers the actual amount of nicotine delivered to the user. Nicotine emission limits prevent variation in nicotine transfer from liquid to aerosol by changes in power settings, wick materials or other device properties. Another option is to regulate nicotine flux—the rate at which nicotine is released and absorbed— as it may provide an effective strategy for limiting exposure and reducing the risk of addiction.³⁹

¹ [Reducing attractiveness of e-liquids: proposal for a restrictive list of tobacco-related flavourings - PubMed](#) Tob Control. 2024 Mar 19;33(e1):e41-e47. doi: 10.1136/tc-2022-057764.

² [Reduced vaping and smoking prevalence among people using e-cigarettes after implementation of an e-cigarette flavour ban in the Netherlands - PubMed](#) Tob Control. 2026 Apr 1;tc-2025-059567. doi: 10.1136/tc-2025-059567.

³ [Options for waterpipe product regulation: A systematic review on product characteristics that affect attractiveness, addictiveness and toxicity of waterpipe use - PubMed](#) Tob Induc Dis. 2020 Aug 25;18:69. doi: 10.18332/tid/125079.

⁴ [Circumventing cigarette regulation: Product characteristics of cigarette-like cigarillos on the Dutch market - PubMed](#) Tob Induc Dis. 2023 Jul 14;21:91. doi: 10.18332/tid/167476.

⁵ [Across the world availability of flavour accessories for tobacco products - PubMed](#) Tob Control. 2025 Jul 31;34(4):532-538. doi: 10.1136/tc-2023-058255.

⁶ [WHO study group on tobacco product regulation: report on the scientific basis of tobacco product regulation: tenth report of a WHO study group](#)

⁷ Specifically FLM: (c) Products – iii in [Forward-looking tobacco control measures \(in relation to Article 2.1 of the WHO FCTC\)](#) FCTC/COP/11/5.

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- ⁸ [Sweet flavours and bright colours lure youth into nicotine addiction](#) WHO, 2025.
- ⁹ [Exposing marketing tactics and strategies driving the global growth of nicotine pouches](#) WHO, 2026.
- ¹⁰ [Nicotine on the developing brain](#) - PubMed Pharmacol Res. 2023 Apr;190:106716. doi: 10.1016/j.phrs.2023.106716.
- ¹¹ <https://www.rivm.nl/publicaties/advisory-values-for-maximum-emission-of-nicotine-and-6-methylnicotine-from-nicotine> RIVM, 2025.
- ¹² <https://www.rivm.nl/documenten/beoordeling-van-6-methylnicotinegehalte-in-nicotinezakjes> RIVM, 2024.
- ¹³ <https://www.rivm.nl/publicaties/nicotineproducten-zonder-tabak-voor-recreatief-gebruik> RIVM, 2021.
- ¹⁴ <https://assets.tobaccocontrol.org/uploads/legislation/Moldova/Moldova-2015-TC-Amdts.pdf> Moldova, 2015.
- ¹⁵ [Forward-looking tobacco control measures \(in relation to Article 2.1 of the WHO FCTC\)](#) FCTC/COP/11/5.
- ¹⁶ [The global impact of tobacco control policies on smokeless tobacco use: a systematic review](#) - PubMed Lancet Glob Health. 2023 Jun;11(6):e953-e968. doi: 10.1016/S2214-109X(23)00205-X.
- ¹⁷ <https://www.who.int/europe/news/item/21-05-2025-tobacco-control-in-belgium--aim-high---act-now> WHO, 2025.
- ¹⁸ [Device color influences e-cigarette flavor expectations, perception, and appeal](#) - PubMed Chem Senses. 2026 Mar 2;51:bjag007. doi: 10.1093/chemse/bjag007.
- ¹⁹ [Impact of standardising the colour and branding of vape devices on product appeal among young people: a randomised experiment in England, Canada and the United States](#) - PubMed Tob Control. 2025 May 20:tc-2024-059210. doi: 10.1136/tc-2024-059210.
- ²⁰ <https://www.rivm.nl/en/documenten/options-to-reduce-e-cigarette-appeal-by-regulating-appearance-and-functionality-towards> RIVM, 2024.
- ²¹ [E-cigarettes: Impact of E-Liquid Components and Device Characteristics on Nicotine Exposure](#) - PubMed Curr Neuropharmacol. 2018;16(4):438-459. doi: 10.2174/1570159X15666171016164430.
- ²² [Effects of user puff topography, device voltage, and liquid nicotine concentration on electronic cigarette nicotine yield: measurements and model predictions](#) - PubMed Nicotine Tob Res. 2015 Feb;17(2):150-7. doi: 10.1093/ntr/ntu174.
- ²³ [The intractable cigarette 'filter problem'](#) - PubMed Tob Control. 2011 May;20 Suppl 1(Suppl_1):i10-6. doi: 10.1136/tc.2010.040113.
- ²⁴ [Banning cigarette filters in the United Kingdom: Time to correct misperceptions of harms](#) - PubMed Addiction. 2025 Dec;120(12):2368-2370. doi: 10.1111/add.70200.
- ²⁵ [Cigarette Filter Ventilation and its Relationship to Increasing Rates of Lung Adenocarcinoma](#) - PubMed J Natl Cancer Inst. 2017 Dec 1;109(12):djsx075. doi: 10.1093/jnci/djsx075.
- ²⁶ [Fibers released from cigarette filters: an additional health risk to the smoker?](#) - PubMed Cancer Res. 1995 Jan 15;55(2):253-8.
- ²⁷ [WHO study group on tobacco product regulation: report on the scientific basis of tobacco product regulation: tenth report of a WHO study group](#) WHO, 2025.
- ²⁸ <https://www.rivm.nl/publicaties/milieu-effecten-van-sigarettenpeuken-met-en-zonder-filter-kansen-en-kennishiaten> RIVM, 2026.
- ²⁹ <https://www.rivm.nl/en/documenten/methods-for-determining-tnco-in-tobacco-smoke> RIVM, 2023.
- ³⁰ <https://www.rivm.nl/publicaties/advisory-values-for-maximum-emission-of-nicotine-and-6-methylnicotine-from-nicotine> RIVM, 2025.

- ³¹ <https://www.rivm.nl/documenten/beoordeling-van-6-methylnicotinegehalte-in-nicotinezakjes> RIVM, 2024
- ³² <https://www.rivm.nl/publicaties/nicotineproducten-zonder-tabak-voor-recreatief-gebruik> RIVM, 2021
- ³³ [Acute Nicotine Poisoning From Nicotine Pouch Use in Adolescents: A Case Report of Two Pediatric Cases - PubMed](#) *Cureus*. 2026 Feb 16;18(2):e103698. doi: 10.7759/cureus.103698.
- ³⁴ [Nicotine Ingestions Among Young Children: 2010-2023 - PubMed](#) *Pediatrics*. 2025 Aug 1;156(2):e2024070522. doi: 10.1542/peds.2024-070522.
- ³⁵ [E-Cigarette Nicotine Delivery Among Young Adults by Nicotine Form, Concentration, and Flavor: A Crossover Randomized Clinical Trial - PubMed](#) *JAMA Netw Open*. 2024 Aug 1;7(8):e2426702. doi: 10.1001/jamanetworkopen.2024.26702.
- ³⁶ [Synthetic nicotine has arrived - PubMed](#) *Tob Control*. 2023 Apr;32(e1):e113-e117. doi: 10.1136/tobaccocontrol-2021-056626.
- ³⁷ <https://www.rivm.nl/publicaties/advisory-values-for-maximum-emission-of-nicotine-and-6-methylnicotine-from-nicotine> RIVM, 2025.
- ³⁸ [Reengineering Addiction - The Tobacco Industry's Potential Response to a Nicotine Standard for Cigarettes - PubMed](#) *N Engl J Med*. 2024 May 9;390(18):1639-1641. doi: 10.1056/NEJMp2314800.
- ³⁹ [Understanding the nicotine dose delivered by electronic nicotine delivery systems in a single puff: the importance of nicotine flux and puff duration - PubMed](#) *Tob Control*. 2024 Jun 19;tc-2023-058485. doi: 10.1136/tc-2023-058485.