



Letter to the Editor

Should Cigarette Packs and Electronic Cigarettes Indicate the Expiration Date of Their Product?



¿Deberían indicar las cajetillas de cigarrillos y los cigarrillos electrónicos la caducidad de su producto?

Dear Editor:

The expiration date (ED) is indicated on products that are highly perishable and with a microbiological risk. Once the expiration date has passed, the product should not be consumed. The preferred consumption date (PCD) applies to products that are much more durable and that are stable. Once this date has passed, they may have lost part of their properties (presenting a rancid flavour, having less or a strange aroma, changing texture, colour, etc.).¹ It is known that none of the tobacco products (manufactured cigarettes [MC] and electronic cigarettes [EC]) have an ED or a PCD, and, of course, these products are spoil and expire.

Tobacco is a product with a limited useful life, which loses its original characteristics when the tobacco leaf deteriorates due to changes in morpho-histology and accumulation of substances derived from the natural fermentation of this plant.² This accumulation of fermentation products is different if the tobacco is black or blond, being greater in the black one. The accumulation of products derived from fermentation increases during the conservation/storage time, which means that the fermentation and curing do not end with the packaging of the cigarettes. According to the different brands analysed,² the PCD should be established in an interval between 3 and 9 months. A significant deterioration in its quality due to the passage of time and inadequate storage can increase the harmful effects on health that tobacco consumption already has. For this reason, as concluded in this work, tobacco should be considered a semi-perishable product (shelf-life), and it should be kept refrigerated, avoiding the use of humidifiers. This shelf-life of tobacco could be established as the ED of the product.²

In Spain EC are regulated by RD 579/2017 of 9 June, which transposes the European Directive 2014/40/EU (TPD) of 3 April.³ The regulation stipulates that refill liquids must be labelled with their ingredients in descending order of concentration, including nicotine, and the World Health Organization (WHO)⁴ require manufacturers to disclose all product information. E-liquids expire. E-liquids degrade slowly over time, so it's not like they'll suddenly turn 'bad' on the exact date shown on the label. Rather, this PCD indicates when the degradation of the juice is likely to start. Most e-liquids have a shelf-life of around 2 years from the manufacturing date. The U.S. Food & Drug Administration (FDA) published draft guidance on the premarket tobacco product application for EC. Within this guidance, FDA specifies the constituents that should be measured in e-liquids and aerosols.⁵ It has been shown in different studies that although many EC contain data on PCD and ED, most do

not comply with what is indicated on the products, which demonstrates their low quality. Besides, it is unknown how most EC and e-liquid manufacturers determine the shelf-life of their products.⁶

As stated above, both MC and EC should have their ED or PCD, because they definitely degrade. About this the WHO recommends that tobacco packaging should not be allowed to list an ED because this leads consumers to believe that it's "safe" to consume the product before the expiry date, the FDA also does not recommend that a PCD be indicated on EC,^{6,7} and we are agree with this, but we have to say that the consumption of these products is always harmful to health, but that it is important that tobacco industry comply with the regulations on ED and PCD because if they are consumed with those expired dates, the tobacco still It would be more toxic and must be withdrawn from sale to the public.

Funding

This article has not had funding.

Conflicts of interest

The authors declare not to have any interest conflicts.

Authors' contribution

All authors have contributed to the preparation and writing of the manuscript.

References

1. Las fechas de consumo preferente y de caducidad en los envases de alimentos. Agencia Española de Seguridad Alimentaria y Nutrición. Ministerio de Consumo. Available from: https://www.consumo.gob.es/AECOSAN/web/para_el_consumidor/ampliacion/fechas.caducidad.htm [accessed 28.04.22].
2. García Fontestad GA. Tesis Doctoral Evaluación de la vida útil del tabaco basada en la influencia del almacenamiento sobre sus características morfo-histológicas y la posible repercusión en la salud. Valencia: Universidad CEU Cardenal Herrera; 2017. Available from: <https://repositorioinstitucional.ceu.es/bitstream/10637/8567/1/Evaluaci%C3%B3n%20de%20la%20vida%20C3%BAtil%20del%20tabaco%20basada%20en%20la%20influencia%20del%20almacenamiento%20sobre%20su%20caracter%C3%ADsticas%20morfohistol%C3%B3gicas%20y%20la%20posible%20repercusi%C3%B3n%20en%20la%20salud.pdf> [accessed 28.04.22].
3. Informe sobre los cigarrillos electrónicos: situación actual, evidencia disponible y regulación. Dirección General de Salud Pública, Ministerio de Sanidad; 2022. Available from: <https://www.sanidad.gob.es/ciudadanos/proteccionSalud/tabaco/docs/InformeCigarrilloelectronicos.pdf> [accessed 29.04.22].
4. New WHO report sheds light on the dark impact of e-cigarettes and heated tobacco products. Available from: <https://www.euro.who.int/en/health-topics/disease-prevention/tobacco/news/news/2021/9/new-who-report-sheds-light-on-the-dark-impact-of-e-cigarettes-and-heated-tobacco-products> [accessed 01.05.22].
5. US Food and Drug Administration. Guidance for industry. Premarket tobacco product applications for electronic nicotine delivery systems. Draft

- guidance. Available from: <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/premarket-tobacco-product-applications-electronic-nicotine-delivery-systems-ends> [accessed 02.05.22].
6. Flora JW, Wilkinson CT, Sink KM, McKinney DL, Miller JH. Nicotine-related impurities in e-cigarette cartridges and refill e-liquids. *J Liq Chromatogr Relat Technol.* 2016;39:821–9, <http://dx.doi.org/10.1080/10826076.2016.1266500>.
7. The Global Health Observatory. Tobacco packaging must not display product expiry dates. World Health Organization. Available from: <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4578> [accessed 02.05.22].

José Ignacio de Granda-Orive^{a,*}, Segismundo Solano-Reina^b,
Carlos A. Jiménez-Ruiz^c

^a Servicio de Neumología, Hospital Universitario 12 de Octubre, Madrid, Spain

^b Servicio de Neumología, Hospital General Universitario Gregorio Marañón, Madrid, Spain

^c Unidad Especializada de Tabaquismo de la Comunidad de Madrid, Hospital Clínico San Carlos, Madrid, Spain

* Corresponding author.

E-mail address: igo01m@gmail.com (J.I. de Granda-Orive).