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## COMMISSION RECOMMENDATION

of XXX

**on monitoring of furan-2(5H)-one, benzene-1,2-diol (catechol), styrene or benzofuran in  
foods smoked with the the use of conventional smoking processes**

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 292 thereof,

Whereas:

- (1) Regulation (EC) No 2065/2003<sup>1</sup> establishes a procedure for the safety assessment and the authorisation of smoke flavouring primary products with a view to ensuring a high level of protection of human health and the effective functioning of the internal market. No smoke flavouring or any food where such a smoke flavouring is used (in or on) can be placed on the market if the smoke flavouring is not an authorised primary product or is not derived therefrom and if the conditions of use laid down in the authorisation in accordance with this Regulation are not adhered to (Article 4(2) of Regulation (EC) No 2065/2003).
- (2) Commission Implementing Regulation (EU) No 1321/2013<sup>2</sup> authorised 10 smoke flavouring primary products for a 10-year period, that expired on 31 December 2023.
- (3) In June 2022, the authorisation holders submitted applications for the renewal of authorisation for 8 smoke flavouring primary products. EFSA evaluated the submitted applications and published on 16 November 2023 the corresponding opinions where, for all 8 smoke flavouring primary products, EFSA either raised concerns with respect to genotoxicity or concluded that a safety concern related to genotoxicity of the primary product cannot be ruled out, mainly related to the presence of furan-2(5H)-one, benzene-1,2-diol (catechol), styrene or benzofuran as component of the smoke flavouring primary product.
- (4) It is appropriate that the safety of food smoked with the use of conventional smoking processes as alternative for the use of smoke flavouring primary products in smoked meat and meat products, smoked fish and fishery products and smoked cheese should be assessed, in particular as regards the components assessed to be of concern in the evaluated smoke flavouring primary products and other contaminants of potential health concern of conventional smoking processes, in particular polycyclic aromatic hydrocarbons (PAH). The use of smoked ingredients such as smoked spices, smoked yeast and smoked salt as alternative for the use of smoke flavouring primary products

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<sup>1</sup> Regulation (EC) No 2065/2003 of the European Parliament and of the Council of 10 November 2003 on smoke flavourings used or intended for use in or on foods (OJ L 309, 26.11.2003, p. 1, ELI: <http://data.europa.eu/eli/reg/2003/2065/oj> )

<sup>2</sup> Commission Implementing Regulation (EU) No 1321/2013 of 10 December 2013 establishing the Union list of authorised smoke flavouring primary products for use as such in or on foods and/or for the production of derived smoke flavourings (OJ L 333, 12.12.2013, p. 54, ELI: [http://data.europa.eu/eli/reg\\_impl/2013/1321/oj](http://data.europa.eu/eli/reg_impl/2013/1321/oj) )

has also to be considered in the assessment. The Commission has requested to EFSA to perform this assessment<sup>3</sup>.

- (5) In view of this assessment and possible future regulatory measures, it is appropriate to monitor the presence of presence of furan-2(5H)-one, benzene-1,2-diol (catechol), styrene or benzofuran in addition to polycyclic aromatic hydrocarbons (PAH) in smoked meat and meat products, smoked fish and fishery products, smoked cheese and smoked ingredients such as smoked spices, smoked yeast and smoked salt. It is in addition appropriate to verify the application of good smoking practices in accordance with the Codex Alimentarius Code of Practice for the reduction of contamination of food with polycyclic aromatic hydrocarbons (PAH) from smoking and direct drying processes (CXC 68-2009)<sup>4</sup>

HAS ADOPTED THIS RECOMMENDATION:

- (1) Member States with the active involvement of food business operators should monitor during 2025, 2026 and 2027 the presence of furan-2(5H)-one, benzene-1,2-diol (catechol), styrene or benzofuran in addition to polycyclic aromatic hydrocarbons (PAH) in smoked meat and meat products, smoked fish and fishery products, smoked cheese and smoked ingredients such as smoked spices, smoked yeast and smoked salt.
- (2) The sampling for monitoring purposes is recommended to be done in accordance with Regulation (EC) 333/2007<sup>5</sup>. The recommended methods of analysis are based on tandem mass spectrometry (MS/MS) coupled either to liquid (LC-MS/MS) or gas chromatography (GC-MS/MS).

The target limit of quantification (LOQ) for the determination of furan-2(5H)-one, benzene-1,2-diol (catechol), styrene or benzofuran should 10 µg/kg or lower.

In case the used method of analysis allows to quantify other substances of potential concern for genotoxicity such as glycoaldehyde dimer, 4-methyl-2(5H)-furanone, 3-methyl-2(5H)-furanone, hydroxycycetaldehyde, acetaldehyde, formaldehyde, glyoxal, 2-propenal (acrolein), 2,5-hexadione, 3-methoxycatechol, 5-methyl-2(5H)-furanone, 2-(hydroxymethyl)-5-methoxy-2-methyl-tetrahydrofuran-3-one, 5-ethyl-3-methyl-2(5H)-furanone, 4H-pyran-4-one, 3,4,5-methyl-2(5H)-furanone, these should also be determined.

- (3) In cases where significant levels of furan-2(5H)-one, benzene-1,2-diol (catechol), styrene or benzofuran are found, Member States, with the active involvement of food business operators, should verify the application of good smoking practices in accordance with the Codex Alimentarius Code of Practice for the reduction of contamination of food with polycyclic aromatic hydrocarbons (PAH) from smoking and direct drying processes (CXC 68-2009).

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<sup>3</sup> <https://open.efsa.europa.eu/questions/EFSA-Q-2024-00692?foodDomains=Contaminants>

<sup>4</sup> [https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%252B68-2009%252FCXC\\_068e.pdf](https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252FStandards%252FCXC%252B68-2009%252FCXC_068e.pdf)

<sup>5</sup> Commission Regulation (EC) No 333/2007 of 28 March 2007 laying down the methods of sampling and analysis for the control of the levels of trace elements and processing contaminants in foodstuffs, OJ L 88, 29.3.2007, p. 29. ELI: <http://data.europa.eu/eli/reg/2007/333/oj>

- (4) Member States and food business operators should provide to EFSA, by 30 June of each year, the data for the previous year for compilation into one database in line with the requirements of EFSA's Guidance on Standard Sample Description (SSD) for Food and Feed and EFSA's additional specific reporting requirements<sup>6</sup>.

Done at Brussels,

*For the Commission*

*Member of the Commission*

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<https://www.efsa.europa.eu/en/call/call-continuous-collection-chemical-contaminants-occurrence-data-0>