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Vapour products — Determination of nicotine in vapour product emissions — Gas chromatographic method

Produits de vapotage — Détermination de la teneur en nicotine dans les émissions de produits de vapotage — Méthode par chromatographie en phase gazeuse

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 126, *Tobacco and tobacco products*, Subcommittee SC 3, *Vape and vapour products,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 437, *Electronic cigarettes and e-liquids,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

In many countries, the regulation of vapour products requires reporting for nicotine compounds in emissions. Therefore, there is a necessity to have an International Standard in place to get reliable/comparable data on nicotine in electronic cigarette emissions.

This document was developed for the determination of nicotine in the aerosol from vapour products utilizing gas chromatography coupled with a flame ionization detector. The experimental design parameters[1][2] used to collect the aerosolised vapour should be evaluated and documented for each analysis.

The document is based on the CORESTA recommended method (CRM) 84[3], which was written on the basis of the results obtained in an interlaboratory study conducted in 2015 involving 18 laboratories[4] and an interlaboratory study conducted in 2019 involving 11 laboratories[5].

Vapour products — Determination of nicotine in vapour product emissions — Gas chromatographic method

1 Scope

This document specifies an analytical method to quantify nicotine of collected vapour product emissions by gas chromatography.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 20768, *Vapour products — Routine analytical vaping machine — Definitions and standard conditions*

ISO 24197:—,[1)] *Vapour products — Determination of e-liquid vaporised mass and aerosol collected mass*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
vapour product
device intended for human use, which normally contains electronic components that vaporize a liquid to generate an aerosol carried by the air drawn through the device by the user

[SOURCE: ISO 20768:2018, 3.1, modified – Note 1 to entry has been removed]

3.2
e-liquid
liquid or gel consumable which may or may not contain nicotine intended for transformation into an aerosol and then inhaled with an electronic nicotine delivery device

[SOURCE: ISO 20714:2019, 3.1]

3.3
aerosol collected mass
ACM
mass of aerosol collected on a glass fibre filter pad resulting from the operation of a vapour product by a routine analytical vaping machine after a defined number of puffs

Note 1 to entry: Routine analytical vaping machine is covered by ISO 20768.

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