General principles and requirements for testing of quality and nicotine levels of electronic cigarette liquids
National foreword

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A list of organizations represented on this committee can be obtained on request to its committee manager.

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## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>European foreword</td>
<td>3</td>
</tr>
<tr>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>1 Scope</td>
<td>5</td>
</tr>
<tr>
<td>2 Normative references</td>
<td>5</td>
</tr>
<tr>
<td>3 Terms and definitions</td>
<td>5</td>
</tr>
<tr>
<td>4 General requirements</td>
<td>6</td>
</tr>
<tr>
<td>5 Ingredients</td>
<td>7</td>
</tr>
<tr>
<td>6 E-liquids testing</td>
<td>7</td>
</tr>
<tr>
<td>7 Technical records</td>
<td>9</td>
</tr>
<tr>
<td>Bibliography</td>
<td>10</td>
</tr>
</tbody>
</table>
European foreword

This document (CEN/TS 17633:2022) has been prepared by Technical Committee CEN/TC 437 “Electronic cigarettes and e-liquids”, the secretariat of which is held by AFNOR.

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Introduction

E-liquid is a term describing liquid either prefilled in vaping products, or available in other forms so that consumers can fill the reservoirs or soak the wicking material of vaping products. E-liquids can or cannot contain nicotine. In either case, they generally contain glycerol and/or propylene glycol together with additional flavouring components. E-liquids are intended to be aerosolised for inhalation by the user.

The recommendations given in this document are relevant to the vast majority of product types currently available, as well as to those that will be developed. Not all elements of these recommendations will apply to every type of product, but the definitions can be used to identify recommendations for specific products within the product sector.

The content is applicable to manufacturers and distributors in Europe and forms a guide for regulators, enforcement authorities and commercial operators in the area. It is also applicable to consultancies, laboratories and testing houses engaged in or advising on, the manufacturing of e-liquids and e-liquid components.

This document can provide state of the art guidance for the testing of e-liquids for quality and nicotine level; however, in cases where national regulations currently exist, said regulations take precedence over this document.
1 Scope

This document specifies the manufacturing quality testing of e-liquids for vaping products in their fully produced form, i.e. “finished e-liquid”, at the point of manufacture, whether containing nicotine or not. This document is intended to be read in conjunction with EN 17647 and EN 17648.

NOTE Testing for undesirable constituents is outside the scope of this document because their presence in final e-liquid is limited by controls at the ingredient level. The maximum level of undesirable constituents is set in the ingredient specification and monitored by testing at a frequency determined appropriate by the manufacturer.

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.

EN 17647, General principles for manufacturing, filling and holding e-liquids for prefilled containers or products

ISO 20714, E-liquid — Determination of nicotine, propylene glycol and glycerol in liquids used in electronic nicotine delivery devices — Gas chromatographic method

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

3.1 e-liquid
base liquid, which might or might not contain nicotine and/or ingredients, intended for transformation into an aerosol by a vaping product

3.2 finished e-liquid
base liquid, which might or might not contain nicotine and/or ingredients, intended for transformation into an aerosol by a vaping product

Note 1 to entry: Finished e-liquid can refer to bulk e-liquid stored in large volume vessels prior to final filling into individual refill containers or e-liquid that has been filled into refill containers or cartridges.

3.3 vaping product
product that vaporizes e-liquid to generate an inhalable aerosol carried by air drawn through the device by the user

Note 1 to entry: Vaping products are also referred to as electronic cigarette, e-cig, vapour product, personal vaporizer or ENDS/ENNDS.

Note 2 to entry: Vaping products differ from tobacco products in that they do not contain tobacco.