

**SLOVENSKI STANDARD**  
**oSIST prEN 17375:2019**  
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**Elektronske cigarete in e-tekočine - Referenčne e-tekočine**

Electronic cigarettes and e-liquids - Reference e-liquids

Elektronische Zigaretten und Liquids für elektronische Zigaretten - Referenz-E-Liquids

Cigarettes électroniques et e-liquides - E-liquides de référence

**Ta slovenski standard je istoveten z: prEN 17375**

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**ICS:**

65.160	Tobak, tobačni izdelki in oprema	Tobacco, tobacco products and related equipment
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## Electronic cigarettes and e-liquids - Reference e-liquids

Cigarettes électroniques et e-liquides - E-liquides de  
référence

Elektronische Zigaretten und Liquids für elektronische  
Zigaretten - Referenz-E-Liquids

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (prEN 17375:2019) has been prepared by Technical Committee CEN/TC 437 “Electronic cigarettes and e-liquids”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

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## 1 Scope

This document specifies reference e-liquids to be used to test emissions generated by electronic cigarettes [1].

This document applies to the reference e-liquids to be used when an electronic cigarette is sold empty, without an e-liquid, and where the product information or instructions for use are not specific in terms of the compositional characteristics of the e-liquid to be used with the device.

## 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.

WI00437008 (prEN XXXX:2018), *Electronic cigarettes and e-liquids — Terms and definitions*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in WI 00437008 “Electronic cigarettes and e-liquids - Terms and definitions” apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

## 4 Preparation and storage of reference e-liquids

### 4.1 General

The formulations of reference e-liquids that shall be used within the scope of this standard are given in Table 1.

### 4.2 Ingredients

The reference e-liquids contain the following ingredients:

**4.2.1** Propylene glycol (CAS: 57-55-6), commonly termed (PG), shall comply with the requirements of the European pharmacopoeia (Ph. Eur.) [2] and its purity shall be 99,5 % or higher.

**4.2.2** Glycerol (CAS: 56-81-5), commonly termed Vegetable Glycerin (VG), shall comply with the requirements of the European pharmacopoeia (Ph. Eur.) and its purity shall be 98,0 % or higher.

**4.2.3** Nicotine or (S)-3-(1-methyl-2-pyrrolidinyl) pyridine (CAS: 54-11-5), shall comply with the requirements of the European pharmacopoeia (Ph. Eur.) and its purity shall be 99,0 % or higher.

**4.2.4** Ethanol (CAS: 64-17-5), shall comply with the requirements of the European pharmacopoeia (Ph. Eur.) and of the codex alimentarius (food grade). It shall not be denatured and its purity shall be 95,0 % (v/v) or higher.

**4.2.5** Water (CAS: 7732-18-5), shall be purified in bulk in accordance with the European pharmacopoeia (Ph. Eur.) or any equivalent or stricter specifications regarding the conductivity criteria at 25 °C, the total organic carbon concentration, and the microbiological germ count.

### 4.3 Composition of reference e-liquids

**4.3.1** A reference e-liquid, termed 70/30, which contains propylene glycol (PG) (4.2.1) and glycerol (vegetable glycerine) (VG) (4.2.2) in a ratio of 7:3 respectively.

**4.3.2** A reference e-liquid, termed 50/50, which contains propylene glycol (PG) (4.2.1) and glycerol (vegetable glycerine) (VG) (4.2.2) in a ratio of 1:1 respectively.

The compositions of the reference e-liquids are detailed in Table 1. Masses are expressed in g per 100 g, and are not corrected for purity of the particular ingredient.

**Table 1 — Composition of reference e-liquids**

Ingredients	e-liquid 70/30 (g/100 g)	e-liquid 50/50 (g/100 g)
Propylene glycol (PG) (4.2.1)	67,90 ± 0,50	48,00 ± 0,50
Glycerol (VG) (4.2.2)	29,10 ± 0,50	48,00 ± 0,50
Nicotine (4.2.3)	1,00 ± 0,05	1,00 ± 0,05
Ethanol (4.2.4)	1,00 ± 0,05	1,00 ± 0,05
Water (4.2.5)	1,00 ± 0,10	2,00 ± 0,10
	Total – 100,00	Total – 100,00

### 4.4 Storage of reference e-liquids

The maximum expiry date of the reference e-liquids is determined by the earliest expiry date of an individual ingredient.

Standardized e-liquids should be stored at a temperature between 5 °C and 25 °C, away from light sources, and in an airtight (preferably glass) container under conditions that prevent alteration of their compositions. Prior to use in the device the reference e-liquids should be brought to ambient room temperature.

## 5 Use of reference e-liquids

### 5.1 Selection of reference e-liquid

Electronic cigarettes complying with the scope of this standard shall be tested with one of the two reference e-liquids listed in Table 1. The manufacturer shall justify the choice made between the two reference e-liquids; as a guide low power devices would probably be better suited to using the e-liquid with PG/VG 70/30 ratio, and high power devices would probably be better suited to using the e-liquid with the PG/VG 50/50 ratio. The product information available to the consumer shall indicate which reference e-liquid was used for the emissions testing.

### 5.2 Period of use after opening

Reference e-liquids should be used within 24 h after opening if stored appropriately.

E-liquids are hygroscopic. Exposing opened containers of e-liquids to ambient atmosphere might change their compositions, so exposure of the reference e-liquids to ambient atmosphere should be minimized.