International Standard

ISO 5622

First edition
2026-06

Tobacco and tobacco products — Electrically heated tobacco products (eHTPs) — Determination of carbon monoxide in the vapour phase of tobacco heating system aerosol by NDIR method with a puffing regime according to ISO 5501-1

Reference number
ISO 5622:2026(en)

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Published in Switzerland

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Foreword

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This document was prepared by Technical Committee ISO/TC 126, *Tobacco and tobacco products*.

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

Tobacco heating systems (THS) are designed to heat a tobacco substrate, to produce a nicotine-containing aerosol. A THS is a combination of a heated tobacco product (HTP) and a tobacco heating device (THD). The HTP part of the THS is a product containing a tobacco substrate that is designed to be heated. This combination significantly reduces toxicants, such as carbon monoxide.

With the emerging development and commercialisation of HTPs, there are a number of different approaches to heating the HTP, categorised as electrically, aerosol and carbon, HTPs (eHTP, aHTP and cHTP), respectively as described in ISO 6080.

Specific parameters and standard conditions for aerosol generation and collection from electrically heated tobacco products have been described in ISO 5501-1.

Additionally, the expected level of carbon monoxide emissions from eHTPs is significantly lower than those from cigarettes, necessitating a lower calibration range than that described in ISO 22947[1].

The method in this document is based upon CORESTA recommended method CRM 108[2] which was written on the basis of the results obtained in an interlaboratory study conducted in 2021 involving seventeen laboratories and four THS samples. The results of this interlaboratory study were published by CORESTA in a technical report HTP-280-CTR[3]. The results showed repeatability and reproducibility values for aerosol heated tobacco products (aHTPs) were not statistically relevant. Carbon heated tobacco products (cHTPs) has not been commercially available.

This document defines and specifies the requirements for an electrically heated tobacco product (eHTP) for the quantification of carbon monoxide in the vapour phase of the aerosol.

No machine puffing regime can represent all human puffing behaviour.

— It is recommended that eHTP also be tested under conditions of a different intensity of machine puffing than those specified in this document.

— Machine puffing testing is useful to characterize eHTP emissions for design and regulatory purposes, but communication of machine measurements to users can result in misunderstandings about differences in exposure and risk across brands.

— Aerosol emission data from machine measurements may be used as inputs for product hazard assessment, but they are not intended to be nor are they valid as measures of human exposure or risks. Communicating differences between products in machine measurements as differences in exposure or risk is a misuse of testing using ISO standards

IMPORTANT — This document is a reference document for ISO standards and measurement on tobacco heating systems (e.g. ISO 6080). Regulation and standardisation are independent from each other, and standardisation does not pre-empt regulation.