Technical Specification

ISO/TS 12828-3

Validation method for fire gas analysis —

Part 3: Considerations related to interlaboratory trials

Méthode de validation des analyses de gaz d'incendie —

Partie 3: Considérations relatives aux essais interlaboratoires

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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 document 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 92, *Fire safety*, Subcommittee SC 3, *Fire threat to people and environment*.

This second edition cancels and replaces the first edition (ISO/TS 12828-3:2020), which has been technically revised.

The main changes are as follows:

— Clause 1, 5.1.2, and 6.4 have been updated to clarify confusion between repeatability and reproducibility;

— minor editorial changes have been made throughout the document.

A list of all parts in the ISO 12828 series can be found on the ISO website.

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

The reduction of human tenability from fire effluent has long been recognized as a major cause of injury and death in fire. The composition and concentration of the effluent from a large fire are also clearly key factors in determining the potential for harm to the environment. The harmful components of fire effluent can be determined from both large- and small-scale tests of materials and finished products. Formulae have been developed for quantifying the effects of the effluent components, in order to estimate the available safe escape time (ASET), for example.[1] Related documents are also being developed by ISO/TC 92/SC 3 which deal with environmental threats from fire effluent.

These advances in fire science and fire safety engineering have led to an increasing demand for quantitative measurements of the chemical components of the fire effluent. The characterization of these measurements is described in ISO 12828-2. This document describes the how to compare results from one laboratory to another and how to obtain a global confidence in any measurement technique, independent of the user and the conditions of use.

This document complements ISO 12828-1, which deals with limits of quantification and detection, and ISO 12828-2, which deals with intralaboratory validation of analytical methods. It is a useful toolbox within the framework of ISO/IEC 17025 assessment of any fire laboratory.

Examples of existing standards where the information contained in this document can be used are the analytical chemical methods in ISO 19701, ISO 19702, ISO 5660-1, and the chemical measurements in the methods discussed in ISO/TR 16312-2, ISO 16405, ISO/TS 19021, or their application to fire toxicity assessment using ISO 13571 and ISO 13344.