
**Test method for determination of
gas concentrations in ISO 5659-2
using Fourier transform infrared
spectroscopy**

*Méthode pour déterminer les concentrations des gaz émis lors de l'essai
ISO 5659-2 par spectroscopie infrarouge à transformée de Fourier*

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Foreword

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This document was prepared by Technical Committee ISO/TC 92, *Fire safety*, Subcommittee SC 1, *Fire initiation and growth*.

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Introduction

This document describes a test method to generate and analyse effluents produced during pyrolysis and flaming combustion of samples from materials and products exposed in a single-chamber test scenario as defined in ISO 5659-2.

This document establishes a continuous measurement procedure (i.e. analysis of time-related emissions) for selected gases emitted from pyrolysis and combustion of materials exposed to ISO 5659-2 physical fire model. It produces data as gas volume ($\mu\text{L/L}$) or mass (mg/m^3) concentration versus time.

This test method is not designed to provide input data for Fire Safety Engineering, as the fire stages included in ISO 19706 are not defined according to time in the considered physical fire model and depend on product fire behaviour during the test. This test method is limited to a prescriptive approach which may be used in combination with existing reaction-to-fire tests (ignitability, spread of flame, heat release rate).

No consideration of further assessment, e.g. toxicity assessment, is proposed in this document. Other methods described in specific standards (e.g. ISO 13344, EN 45545-2) or specific codes (e.g. IMO FTP code) could be used for that kind of interpretation and to complete conditions of use of this document.

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