

Stationary source emissions — Determination of PM₁₀/PM_{2,5} mass concentration in flue gas — Measurement at low concentrations by use of impactors (ISO 23210:2009)

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National foreword

This British Standard is the UK implementation of EN ISO 23210:2009. The UK participation in its preparation was entrusted to Technical Committee EH/2/1, Stationary source emission.

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

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English Version

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Émissions de sources fixes - Détermination de la
concentration en masse de PM10/PM2,5 dans les effluents
gazeux - Mesurage à des faibles concentrations au moyen
d'impacteurs (ISO 23210:2009)

Emissionen aus stationären Quellen - Ermittlung der
Massenkonzentration von PM10/PM2,5 im Abgas -
Messung bei niedrigen Konzentrationen mit Impaktoren
(ISO 23210:2009)

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Foreword

This document (EN ISO 23210:2009) has been prepared by Technical Committee ISO/TC 146 "Air quality" in collaboration with Technical Committee CEN/TC 264 "Air quality", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2010, and conflicting national standards shall be withdrawn at the latest by February 2010.

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Endorsement notice

The text of ISO 23210:2009 has been approved by CEN as a EN ISO 23210:2009 without any modification.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 23210 was prepared by Technical Committee ISO/TC 146, *Air quality*, Subcommittee SC 1, *Stationary source emissions*.

Introduction

In order to quantify the amount of PM₁₀ and PM_{2,5} particles in stationary source emissions or to identify the contribution sources of PM₁₀ and PM_{2,5} in ambient air, it is necessary to measure fine particulate matter in the flue gas of industrial sources.

This International Standard describes a measurement method for the determination of mass concentrations of PM₁₀ and PM_{2,5} emissions, which realizes the same separation curves as those specified in ISO 7708:1995 for PM₁₀ and PM_{2,5} in ambient air. The method is based on the principle of impaction. During sampling, the particle fraction is divided into three groups with aerodynamic diameters greater than 10 µm, between 10 µm and 2,5 µm and smaller than 2,5 µm.

The measurement method allows the simultaneous determination of concentrations of PM₁₀ and PM_{2,5} emissions. The method is designed for stack measurements at stationary emission sources.

The contribution of stationary source emissions to PM₁₀ and PM_{2,5} concentrations in ambient air can be classified as primary and secondary. Those emissions that exist as particulate matter within the stack gas and that are emitted directly to air can be considered “primary”. Secondary particulate consists of those emissions that form in ambient air due to atmospheric chemical reactions. The measurement technique in this International Standard does not measure the contribution of stack emissions to the formation of secondary particulate matter in ambient air.

This International Standard includes normative references to ISO 12141:2002. The corresponding requirements in ISO 12141:2002 are identical to those in European Standards EN 13284-1:2001 and EN 15259:2007.