
**Workplace air — Metals and
metalloids in airborne particles
— Requirements for evaluation of
measuring procedures**

*Air des lieux de travail — Métaux et métalloïdes dans les particules
en suspension dans l'air — Exigences relatives à l'évaluation des
procédures de mesure*

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Published in Switzerland

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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 documents 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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 146, *Air quality*, Subcommittee SC 2, *Workplace atmospheres*.

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.

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Introduction

The health of workers in many industries is at risk through exposure by inhalation of toxic metals and metalloids. Industrial hygienists and other public health professionals need to determine the effectiveness of measures taken to control workers' exposure, and this is generally achieved by taking workplace air measurements. This document has been published in order to make available a method for making valid ultra-trace exposure measurements for a wide range of metals and metalloids in use in industry. It is intended for: agencies concerned with health and safety at work; industrial hygienists and other public health professionals; analytical laboratories; and industrial users of metals and metalloids and their workers.

This document provides a framework for assessing the performance of procedures for measuring metals and metalloids against the general requirements for the performance of procedures for measuring chemical agents in workplace atmospheres as specified in ISO 20581. It enables producers and users of procedures for measuring metals and metalloids in airborne particles to adopt a consistent approach to method validation. See also [Annex B](#).

Although this document has been written for assessing the performance of procedures for measuring metals and metalloids, it can be used as the basis for assessing the performance of procedures for measuring other chemical agents that are present as or in airborne particles, for example, sulphuric acid mist.

This document is based on EN 13890:2009^[14], published by the European Committee for Standardization (CEN).

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