

ISO 15202-1:2020 (E)

Workplace air — Determination of metals and metalloids in airborne particulate matter by inductively coupled plasma atomic emission spectrometry — Part 1: Sampling

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Principle
5	Requirement
6	Sampling equipment
6.1	Samplers
6.2	Filters
6.3	Sampling pumps
6.4	Flowmeter
6.5	Ancillary equipment
7	Occupational exposure assessment
7.1	General
7.2	Personal sampling
7.3	Static sampling
7.4	Selection of measurement conditions and measurement pattern
7.4.1	General
7.4.2	Screening measurements of variation of concentration in time/and or space
7.4.3	Screening measurements of time-weighted average concentration and reasonable worst-case measurements
7.4.4	Measurements near an emission source
7.4.5	Measurements for comparison with limit values and periodic measurements
7.4.5.1	Measurements for comparison with limit values
7.4.5.2	Periodic measurements
8	Sampling method
8.1	Preliminary considerations
8.1.1	Selection and use of samplers
8.1.2	Sampling period
8.1.3	Temperature and pressure effects
8.1.4	Handling of collection substrates
8.2	Preparation for sampling
8.2.1	Cleaning of samplers
8.2.2	Loading the samplers with collection substrates
8.2.3	Setting the volumetric flow rate
8.2.4	Field blanks
8.3	Sampling position
8.3.1	Personal sampling
8.3.2	Static sampling
8.4	Collection of samples
8.5	Transportation

9 Documentation

9.1 Sampling information

9.2 Information to accompany the request for analytical services

Annex A (informative) Sampler wall deposits

A.1 General

A.2 Samplers

A.3 Collection efficiency

A.4 Contribution to the uncertainty budget

Annex B (informative) Guidance on filter selection

B.1 Collection efficiency

B.2 Dust-loading capacity

B.3 Metal content

B.4 Weight stability

B.5 Solubility

B.6 Chemical compatibility

Annex C (informative) Temperature and pressure correction for the indicated volumetric flow rate

Page count: 17