ISO 15202-2:2001-07 (E)

Workplace air - Determination of metals and metalloids in airborne particulate matter by induct ively coupled plasma atomic emission spectrometry - Part 2: Sample preparation

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 2

3 Terms and definitions 2

4 Principle 3

5 Requirements 4

6 Reactions 4

7 Reagents 4

8 Laboratory apparatus 4

9 Procedure 5
9.1 Soluble metal and metalloid compounds 5
9.2 Total metals and metalloids and their compounds 5
9.3 Mixed exposure 5

10 Special cases 6
10.1 Action to be taken if there is doubt about the effectiveness of the selected sample dissolution method 6
10.2 Action to be taken when particles have become dislodged from the filter during transportation 6

11 Laboratory records 6

Annex A (informative) Safety precautions to be observed when using hydrofluoric and perchloric acids 7

Annex B (normative) Sample dissolution method for soluble metal and metalloid compounds 8

Annex C (normative) Sample dissolution using nitric acid and hydrochloric acid on a hotplate 14

Annex D (normative) Sample dissolution using hydrofluoric and nitric acids and ultrasonic agitation 17

Annex E (normative) Sample dissolution based on the use of sulfuric acid and hydrogen peroxide on a hotplate 20

Annex F (normative) Sample dissolution based on the use of nitric acid and perchloric acid on a hotplate 24

Annex G (normative) Sample dissolution in a closed vessel microwave digestion system 28

Annex H (normative) Action to be taken when there is visible, undissolved, particulate material after sample dissolution 33

Bibliography 37