ISO 21438-1:2007-12 (E)

Workplace atmospheres - Determination of inorganic acids by ion chromatography - Part 1: Non-volatile acids (sulfuric a cid and phosphoric acid)

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms and definitions 2
3.1 General definitions 2
3.2 Particle size fraction definitions 3
3.3 Sampling definitions 3
3.4 Analytical definitions 4
3.5 Statistical terms 5

4 Principle 6

5 Requirement 7

6 Reagents 7

7 Apparatus 9
7.1 Sampling equipment 9
7.2 Laboratory apparatus 11

8 Occupational exposure assessment 12
8.1 General 12
8.2 Personal sampling 12
8.3 Static sampling 12
8.4 Selection of measurement conditions and measurement pattern 13

9 Sampling 14
9.1 Preliminary considerations 14
9.2 Preparation for sampling 16
9.3 Sampling position 16
9.4 Collection of samples 17
9.5 Transportation 17

10 Analysis 18
10.1 Preparation of test and calibration solutions 18
10.2 Instrumental analysis 19
10.3 Estimation of detection and quantification limits 20
10.4 Quality control 21
10.5 Measurement uncertainty 21

11 Expression of results 22

12 Method performance 22
12.1 Sample collection and stability 22
12.2 Quantification limits 22
12.3 Upper limits of the analytical range 22

12.4 Bias and precision 23
12.5 Uncertainty of sampling and analysis method 23
12.6 Interferences 23

13 Test report 24
13.1 Test record 24
13.2 Laboratory report 25

Annex A (informative) Temperature and pressure correction 26

Bibliography 28