ISO 22262-2:2014-09 (E)

Air quality - Bulk materials - Part 2: Quantitative determination of asbestos by gravimetric and microscopical methods

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Abbreviated terms 6

5 Determination of analytical requirements 6

6 Range 7

7 Limitofquantification 7

8 Principle 8

9 Safety precautions 8

10 Apparatus 8

11 Reagents 10

12 Sample size and homogeneity 10
12.1 Sample size 10
12.2 Representative sample 10

13 Methods for gravimetric matrix reduction 11
13.1 General 11
13.2 Data recording 11
13.3 Selection and pre-treatment of a representative sub-sample 13
13.4 Removal of organic materials by ashing 14
13.5 Acid treatment and sedimentation procedures 15

14 Proceduresforquantificationofasbestosinthefinalresiduefromgravimetric matrix reduction 18
14.1 General 18
14.2 Examination of the residue on the filter and selection of the appropriate procedure 19

15 Determination of asbestiform amphibole in vermiculite 25
15.1 General 25
15.2 Required size of sample for analysis 26
15.3 Sample pre-treatment 26
15.4 Separation of amphibole and measurement of the amphibole mass fraction 28

16 Determination of asbestos in talc 29
16.1 General 29
16.2 Determination of chrysotile in talc 29

16.3 Determination of amphibole in talc 29

17 Determination of compliance with legislative control limits 30
17.1 General 30
17.2 Gravimetry alone 30
17.3 Gravimetry combined with visual estimation 30
17.4 Gravimetry combined with point counting 30
17.5 Quantitative SEM or TEM fibre counting 32

18 Test report 32

Annex A (normative) Types of commercial asbestos-containing materials and optimum analytical procedures 34

Annex B (normative) Required centrifuge times for separation of amphibole in heavy liquid 42

Annex C (normative) Example of test report 44

Bibliography 46