

ISO 29462:2013-03 (E)

Field testing of general ventilation filtration devices and systems for *in situ* removal efficiency by particle size and resistance to airflow

Contents	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms, definitions, and abbreviations	1
3.1 Terms and definitions	1
3.2 Abbreviations	3
4 Test equipment and setup	3
4.1 Particle counter	3
4.2 Diluter	3
4.3 Pump	4
4.4 Sampling system	4
4.5 Air velocity measurement instrument	6
4.6 Relative humidity measurement instrument	6
4.7 Temperature measurement instrument	6
4.8 Resistance to airflow measurement instrument	6
4.9 Test equipment maintenance and calibration	7
5 Site evaluation	7
5.1 General	7
5.2 Filter installation pre-testing inspection	7
5.3 Approval for testing	7
6 Test procedure	8
6.1 Air velocity	8
6.2 Relative humidity	8
6.3 Temperature	8
6.4 Resistance to airflow	9
6.5 Removal efficiency	9
6.6 Sampling probes	12
7 Expression of results	14
7.1 General information	14
7.2 Data collection	15
8 Errors and data analyses	16
8.1 General	16
8.2 Relative humidity	16
8.3 Air temperature	16
8.4 Aerosol composition	16
8.5 Uniformity of aerosol concentration	17
8.6 Coincidence errors -- Particle counter	17
8.7 Particle losses	17
9 Calculation of results	17
9.1 Calculation of removal efficiency	17

9.2	Calculation of uncertainty	20
9.3	Coefficient of variation (CV)	20
10	Optional enhanced test system	21
10.1	Application of enhanced test	21
10.2	Principle of the enhanced test system	22
10.3	Determination of the corrected particle size	23
10.4	Presentation of results	24
	Annex A (informative) Filter installation pre-testing inspection form	25
	Annex B (informative) Approval for testing form	28
	Annex C (informative) Example of how to complete testing	30
	Bibliography	46