

ISO 16170:2016-07 (E)

In situ test methods for high efficiency filter systems in industrial facilities

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	2
3	Terms and definitions	2
4	Principle of the method	4
5	Prerequisites	6
5.1	Filter initial characterization	6
5.2	Preparatory conditions	6
5.2.1	General	6
5.2.2	Choice of injection and sampling locations	7
5.2.3	Conditions for the ventilation systems on which the test is performed	7
5.2.4	Climatic conditions in the rooms where the injection/sampling is performed	7
5.2.5	Apparatus selection and preparation	8
5.2.6	Qualification of the test personnel	10
5.2.7	Health and safety	10
5.2.8	Test conditions	11
6	Test sequence	11
6.1	Evaluation of filtration system under test	11
6.2	Preparation of test equipment	12
6.3	Preparation of log sheets	12
6.4	Monitoring of climatic conditions	12
6.5	Aerosol generation setup	12
6.6	Sampling equipment setup	12
6.7	Monitoring of upstream challenge	12
6.8	Monitoring of downstream	13
6.9	Test performance	13
6.10	Calculations	13
7	Evaluation and report	14
Annex A (informative) Aerosol candidates for in situ testing		16
Annex B (normative) Integrity testing -- Typical methodology using dispersed oil test aerosols		17
Annex C (normative) Efficiency accountability testing -- Uranine test method		26
Annex D (informative) Leakage test methods		33
Annex E (informative) Guideline for representative sampling		34
Bibliography		36