

ISO/TS 19021:2018-05 (E)

Test method for determination of gas concentrations in ISO 5659-2 using Fourier transform infrared spectroscopy

Contents	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	2
5 Apparatus for combustion of test specimen and for cone radiator calibration	2
6 Gas sampling system	2
6.1 General arrangement	2
6.2 Sampling probe	3
6.3 Main filter	4
6.4 Sampling line before gas cell	4
6.5 Secondary filter	4
6.6 FTIR gas cell	5
6.7 Conditioning of sampling flow and pump capacity	5
6.8 Sampling flow rate	5
6.9 FTIR Spectrometer	5
7 Calibrations	6
7.1 General calibrations	6
7.2 Chamber leakage test	6
7.3 Gas analyser calibration	6
8 Conditioning	6
9 Test environment	7
10 Pre-test conditions	7
11 Test procedure	7
11.1 Principle	7
11.2 Operation before each test	7
11.3 Operation during a test	8
11.4 Operation after each test	9
12 Gas species analysis and correction	9
12.1 General	9
12.2 Calculation of corrected volume fraction	9
12.3 Calculation of time shift	10
13 Test report	10
14 Test precision	11

Annex A (informative) Typical FTIR calibration procedure at commissioning or after major changes	12
Annex B (informative) Accuracy (trueness and precision) of the test method	15
Bibliography	23