# ISO 8573-2:2018-02 (E)

## Compressed air - Contaminant measurement - Part 2: Oil aerosol content

## Contents

Page


Foreword ..... v

Introduction ..... vi

1 Scope ..... 1

2 Normative references ..... 1

3 Termsanddefinitions ..... 1

4 Units ..... 1

5 Reference conditions ..... 2

6 Guidance for selection of sampling method ..... 2

7 Method A -- Description, measuring procedure and calculation of results ..... 2
7.1 Description of sampling equipment and method ..... 2
7.1.1 General ..... 2
7.1.2 Sampling equipment ..... 2
7.2 Sampling procedure ..... 4
7.2.1 Start-up ..... 4
7.2.2 Stabilizing sampling filter ..... 4
7.2.3 Oil measurement ..... 5
7.2.4 Oil/water measurements ..... 5
7.2.5 Air flow-rate (discharge) ..... 7
7.2.6 Temperature ..... 7
7.3 Calculation of test results ..... 7
7.3.1 General ..... 7
7.3.2 Oil content ..... 7

8 Method B -- Description, measuring procedure and calculation of results ..... 7
8.1 General description of sampling equipment and method ..... 7
8.1.1 Sampling disc ..... 8
8.1.2 Sampling disc support ..... 8
8.1.3 Pipes and valves ..... 8
8.1.4 Sampling disc holder ..... 9
8.1.5 Construction materials ..... 9
8.2 Sampling equipment arrangement ..... 9
8.2.1 Sampling equipment Method B1 -- Full flow sampling ..... 9
8.2.2 Sampling equipment Method B2 -- Partial flow sampling ..... 9
8.2.3 Equipment set-up for isokinetic sampling ..... 10
8.2.4 Compressed air flow-rates for isokinetic conditions ..... 11
8.3 Equipment and sampling disc preparation ..... 13
8.3.1 Equipment preparation ..... 13
8.3.2 Oil vapour ..... 13
8.3.3 Temperature ..... 13
8.3.4 Handling ..... 13
8.3.5 Sampling disc contamination check ..... 14
8.4 Compressed air sampling procedure ..... 14
8.4.1 Typical sampling Method B1 ..... 14
8.4.2 Typical sampling Method B2 ..... 15

9 Analytical procedure for Methods B1 and B2 ..... 16
9.1 General ..... 16
9.2 Apparatus ..... 16
9.2.1 Usual laboratory glassware ..... 16
9.2.2 Infrared spectrometer (IR) ..... 16
9.2.3 Gas chromatograph and flame ionization detector (GC-FID) ..... 16
9.3 Analytical procedure linearity check ..... 16
9.4 Analytical procedure -- Oil recovery coefficient ..... 16

9.5 Limit of detection ..... 16
9.6 Calculation of test results ..... 16
9.7 General ..... 16

10 Presentation of results ..... 17

11 Uncertainty of the method ..... 17

Annex A (informative) Typical test report ..... 18

Annex B (informative) Typical equipment layout and dimensional details ..... 19

Annex C (informative) Example IR analysis and calculation of test results for Method B ..... 23

Annex D (informative) Example GC FID analysis and calculation of test results for Method B ..... 33

Annex E (informative) Alternative oil aerosol detection ..... 44

Bibliography ..... 45