ISO 18635:2016-04 (E)

Water qual ity - Determination of short-chain polychlorinated alkanes (SCCPs) in sediment, sewage sludge and suspended (particulate) matter - Method using gas chromatography-mass spectrometry (GC-MS) and electron capture negative ionization (ECNI)

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Principle 1

4 Interferences 2

5 Reagents 3

6 Apparatus 6

7 Sampling and sample pretreatment 7

8 Procedure 7
8.1 Extraction 7
8.2 Extract clean-up 7
8.3 Measurement and integration of the chromatogram 8
8.4 Calibration 8
8.4.1 General 8
8.4.2 Basic calibration 9
8.4.3 Identification and quantification with mass fragment combinations 10
8.4.4 Calculation of the results 10
8.4.5 Quality checks for internal standardization 11

9 Expression of results 11

10 Test report 11

Annex A (normative) Programme for pressurized liquid extraction 12

Annex B (informative) Explanation of the calibration of the sum of SCCPs with multiple linear regression 13

Annex C (informative) Examples of typical GC-MS conditions 18

Annex D (normative) Alternative clean-up with column chromatography 22

Annex E (informative) Alternative clean-up with gel chromatography 24

Annex F (informative) Typical chromatograms of standard solutions 1 µg/ml 25

Annex G (informative) Presentation of goodness of fit of the calibration 26

Annex H (informative) Example for recoveries of quality assurance solutions 27

Annex I (informative) Chromatograms of real samples 29

Annex J (informative) Performance data 31

Annex K (informative) Quality control check solutions 32

Bibliography 33