

ISO 16558-1:2015-08 (E)

Soil quality - Risk-based petroleum hydrocarbons - Part 1: Determination of aliphatic and aromatic fractions of volatile petroleum hydrocarbons using gas chromatography (static headspace method)

| Contents | | Page |
|--|--|-------------|
| Foreword | | iv |
| Introduction | | v |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 2 |
| 4 | Interferences | 3 |
| 5 | Principle | 3 |
| 6 | Reagents | 3 |
| 7 | Apparatus | 7 |
| 8 | Sampling, preservation, and sample pretreatment | 8 |
| 8.1 | General | 8 |
| 8.2 | Sampling using vials pre-filled with methanol | 8 |
| 8.3 | Sampling using coring tube method | 9 |
| 9 | Procedure | 9 |
| 9.1 | Blank determination | 9 |
| 9.2 | Extraction | 9 |
| 9.3 | Headspace-analysis | 9 |
| 9.4 | Gas chromatographic analysis | 10 |
| 9.4.1 | General | 10 |
| 9.4.2 | Calibration | 10 |
| 9.4.3 | Measurement | 12 |
| 10 | Calculation | 12 |
| 10.1 | Calculation of the concentration in the spiked water sample | 12 |
| 10.1.1 | Volatile aromatic hydrocarbon compounds with internal standard method | 12 |
| 10.1.2 | Volatile aliphatic fractions | 12 |
| 10.2 | Calculation of the concentration of a volatile compound or fraction in the soil sample | 13 |
| 10.3 | Calculation of the concentration of volatile oil in the soil sample | 13 |
| 11 | Expression of results | 13 |
| 12 | Precision | 13 |
| 13 | Test report | 13 |
| Annex A (informative) Examples of GC-MS chromatograms of fuels | | 14 |
| Bibliography | | 16 |