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Soil quality — Determination of polycyclic aromatic hydrocarbons (PAH) — Gas chromatographic method with mass spectrometric detection (GC-MS)

Qualité du sol — Dosage des hydrocarbures aromatiques polycycliques (HAP) — Méthode par chromatographie en phase gazeuse avec détection par spectrométrie de masse (CG-SM)



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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Introduction

This International Standard is principally based on the extraction method described in ISO 13877. It is modified for the use of gas-chromatography with mass spectrometric detection and is applicable for different PAH pollution levels of soils.

Two alternative extraction methods, A and B, are described in this International Standard.

Method A (two-step method): Extraction of the field-moist soil sample with acetone and petroleum ether, followed by the removal of acetone by washing the extract with water as prescribed in ISO 13877.

Method B (one-step method or on-line method): Extraction of the field-moist soil sample with a mixture of acetone, petroleum ether and water in the presence of sodium chloride. This method is preferred for soil samples with a high content of organic matrix.

Experience has shown that these two methods are applicable with comparable results to less as well as highly polluted soils