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Standards

Irish Standard
I.S. EN 15980:2011

Air quality - Determination of the deposition of benz[a]anthracene, benzo [b]fluoranthene, benzo[j]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, dibenz[a,h]anthracene and indeno[1,2,3-cd]pyrene

I.S. EN 15980:2011

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English Version

Air quality - Determination of the deposition of
benz[a]anthracene, benzo[b]fluoranthene, benzo[j]fluoranthene,
benzo[k]fluoranthene, benzo[a]pyrene, dibenz[a,h]anthracene
and indeno[1,2,3-cd]pyrene

Qualité de l'air - Détermination du benzo[a]anthracène,
benzo[b]fluoranthène, benzo[j]fluoranthène,
benzo[k]fluoranthène, benzo[a]pyrène,
dibenz[a,h]anthracène et indeno[1,2,3-cd]pyrène dans les
dépôts atmosphériques

Luftqualität - Bestimmung der Deposition von
Benz[a]anthracen, Benzo[b]fluoranthen,
Benzo[j]fluoranthen, Benzo[k]fluoranthen, Benzo[a]pyren,
Dibenz[a,h]anthracen und Indeno[1,2,3-cd]pyren

This European Standard was approved by CEN on 21 April 2011.

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Contents	Page
Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Symbols and abbreviations	7
4.1 Symbols	7
4.2 Abbreviations	8
5 Principle	9
6 Apparatus, reagents and materials	9
6.1 Reagents	9
6.2 Materials	9
6.3 Sampling equipment	9
6.4 Laboratory equipment	10
7 Sampling	10
7.1 General	10
7.2 Sampling location	10
7.3 Sampling requirements	11
7.4 Sample transport	12
8 Sample preparation and analysis	12
8.1 Sample storage	12
8.2 Extraction	12
8.3 Analysis	12
8.4 Interferences	12
9 Quality assurance	12
10 Calculation of results	13
11 Performance characteristics	13
12 Uncertainty	14
13 Reporting of results	14
Annex A (informative) Collectors used in the field trial	15
Annex B (normative) Work-up of deposition samples for PAH analysis	19
Annex C (normative) Analytical conditions	26
Annex D (informative) Performance characteristics determined in laboratory and field tests	29
Annex E (informative) Relationship between this European Standard and the essential requirements of EU Directives	43
Bibliography	44

Foreword

This document (EN 15980:2011) has been prepared by Technical Committee CEN/TC 264 "Air quality", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2011, and conflicting national standards shall be withdrawn at the latest by November 2011.

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Introduction

Directive 2004/107/EC [2] requires the measurement of the "total or bulk deposition" of benz[a]anthracene (BaA), benzo[b]fluoranthene (BbF), benzo[j]fluoranthene (BjF), benzo[k]fluoranthene (BkF), benzo[a]pyrene (BaP), dibenz[a,h]anthracene (DBahA) and indeno[1,2,3-*cd*]pyrene (INP) at background sites, one every 100 000 km². Wet-only sampling may be used instead of bulk sampling if it can be shown that the difference between their results is within 10 %. Where appropriate, monitoring shall be coordinated with the European Monitoring and Evaluation Programme (EMEP).

The Directive uses "total deposition" and "bulk deposition" as synonyms and defines it as the total mass of pollutants which is transferred from the atmosphere to surfaces (e.g. soil, vegetation, water, buildings) in a given area within a given time. The considered polycyclic aromatic hydrocarbons (PAH) are predominantly bound to particles. The mass of PAH bound to non sedimenting particles is thought to be low compared to the mass of the compounds bound to sedimenting wet and dry particles. Consequently the sum of the deposition of sedimenting wet and dry particles (defined as "bulk deposition" in this European Standard) and total deposition has been considered as substantially equivalent for the purposes of this document. At sites far enough from obstacles like buildings and trees the influence of specific surface characteristics on the deposition of PAH can be neglected.

This document describes the measurement of the deposition of PAH using collectors designed for bulk and wet-only deposition. The validation field test demonstrated that the funnel-bottle bulk collector provided the most reliable and robust results. Therefore this collector type has been chosen as standard collector.

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