



SLOVENSKI STANDARD
kSIST-TP FprCEN/TR 18076:2024
01-maj-2024

Zunanji zrak - Ekvivalentnost avtomatskih meritev elementarnega ogljika (EC) in organskega ogljika (OC) v delcih PM

Ambient air - Equivalence of automatic measurements of elemental carbon (EC) and organic carbon (OC) in PM

Außenluft - Äquivalenz von automatischen Messungen von elementarem Kohlenstoff (EC) und organischem Kohlenstoff (OC) in PM

Air ambiant - Equivalence des systèmes automatisés de mesure de carbone élémentaire et de carbone organique

Ta slovenski standard je istoveten z: FprCEN/TR 18076

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13.040.20 Kakovost okoljskega zraka Ambient atmospheres

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TECHNISCHER REPORT

FINAL DRAFT
FprCEN/TR 18076

February 2024

ICS 13.040.20

English Version

**Ambient air - Equivalence of automatic measurements of
elemental carbon (EC) and organic carbon (OC) in PM**

Air ambiant - Equivalence des systèmes automatisés de
mesurage du carbone élémentaire et du carbone
organique

Außenluft - Äquivalenz von automatischen Messungen
von elementarem Kohlenstoff (EC) und organischem
Kohlenstoff (OC) in PM

This draft Technical Report is submitted to CEN members for Vote. It has been drawn up by the Technical Committee CEN/TC 264.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (FprCEN/TR 18076:2024) has been prepared by Technical Committee CEN/TC 264 “Air quality”, the secretariat of which is held by DIN.

This document is currently submitted to the Vote on TR.

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Introduction

The Directive on ambient air quality and cleaner air for Europe [1] requires the chemical speciation of the sub-2,5 μm size fraction of suspended particulate matter ($\text{PM}_{2,5}$) in ambient air, as described in Annex IV. For air quality to be assessed on a consistent basis across the European Union, Member States are required to employ standard measurement techniques and procedures. The aim of the European Standard EN 16909 is to present guidance on the measurement procedures to be followed when monitoring elemental carbon (EC) and organic carbon (OC) by collecting $\text{PM}_{2,5}$ on filters, and subsequently performing thermal-optical analyses.

Although EC and OC are only defined in an operational way, measurements according to EN 16909 are reproducible and EC and OC as defined by the standard are commonly applicable variables. But the measurement is time consuming, and automated online measurements of EC and OC is not part of EN 16909. Substitution of OC and EC thermal-optical analyses as described in EN 16909 by automatic methods would be useful, if the equivalence of candidate methods with the standard EN 16909 can be demonstrated.

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