

ANNEX VI

Reference methods for assessment of concentrations of sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter (PM₁₀ and PM_{2,5}), lead, benzene, carbon monoxide, and ozone

A. Reference measurement methods

1. Reference method for the measurement of sulphur dioxide

The reference method for the measurement of sulphur dioxide is that described in EN 14212:2005 'Ambient air quality — Standard method for the measurement of the concentration of sulphur dioxide by ultraviolet fluorescence'.

2. Reference method for the measurement of nitrogen dioxide and oxides of nitrogen

The reference method for the measurement of nitrogen dioxide and oxides of nitrogen is that described in EN 14211:2005 'Ambient air quality — Standard method for the measurement of the concentration of nitrogen dioxide and nitrogen monoxide by chemiluminescence'.

3. Reference method for the sampling and measurement of lead

The reference method for the sampling of lead is that described in Section A(4) of this Annex. The reference method for the measurement of lead is that described in EN 14902:2005 'Standard method for measurement of Pb/Cd/As/Ni in the PM₁₀ fraction of suspended particulate matter'.

4. Reference method for the sampling and measurement of PM₁₀

The reference method for the sampling and measurement of PM₁₀ is that described in EN 12341:1999 'Air Quality — Determination of the PM₁₀ fraction of suspended particulate matter — Reference method and field test procedure to demonstrate reference equivalence of measurement methods'.

5. Reference method for the sampling and measurement of PM_{2,5}

The reference method for the sampling and measurement of PM_{2,5} is that described in EN 14907:2005 'Standard gravimetric measurement method for the determination of the PM_{2,5} mass fraction of suspended particulate matter'.

6. Reference method for the sampling and measurement of benzene

The reference method for the measurement of benzene is that described in EN 14662:2005, parts 1, 2 and 3 'Ambient air quality — Standard method for measurement of benzene concentrations'.

7. Reference method for the measurement of carbon monoxide

The reference method for the measurement of carbon monoxide is that described in EN 14626:2005 'Ambient air quality — Standard method for the measurement of the concentration of carbon monoxide by non-dispersive infrared spectroscopy'.

8. Reference method for measurement of ozone

The reference method for the measurement of ozone is that described in EN 14625:2005 'Ambient air quality — Standard method for the measurement of the concentration of ozone by ultraviolet photometry'.

B. Demonstration of equivalence

1. A Member State may use any other method which it can demonstrate gives results equivalent to any of the methods referred to in Section A or, in the case of particulate matter, any other method which the Member State concerned can demonstrate displays a consistent relationship to the reference method. In that event the results achieved by that method must be corrected to produce results equivalent to those that would have been achieved by using the reference method.
2. The Commission may require the Member States to prepare and submit a report on the demonstration of equivalence in accordance with paragraph 1.
3. When assessing the acceptability of the report mentioned in paragraph 2, the Commission will make reference to its guidance on the demonstration of equivalence (to be published). Where Member States have been using interim factors to approximate equivalence, the latter shall be confirmed and/or amended with reference to the Commission's guidance.
4. Member States should ensure that whenever appropriate, the correction is also applied retroactively to past measurement data in order to achieve better data comparability.

C. Standardisation

For gaseous pollutants the volume must be standardised at a temperature of 293 K and an atmospheric pressure of 101,3 kPa. For particulate matter and substances to be analysed in particulate matter (e.g. lead) the sampling volume refers to ambient conditions in terms of temperature and atmospheric pressure at the date of measurements.

D. Introduction of new equipment

All new equipment purchased for implementation of this Directive must comply with the reference method or equivalent by 11 June 2010.

All equipment used in fixed measurements must comply with the reference method or equivalent by 11 June 2013.

E. Mutual recognition of data

In carrying out the type approval to demonstrate that equipment meets the performance requirements of the reference methods listed in Section A, competent authorities and bodies designated pursuant to Article 3 shall accept test reports issued in other Member States by laboratories accredited to EN ISO 17025 for carrying out such testing.