

## Information on nitrogen oxides (NO<sub>2</sub>, NO<sub>x</sub>)

### Limit values

	Averaging period	Limit value	Date by which limit value is to be met	Margin of tolerance
Hourly limit value for the protection of human health	1 hour	200 µg/m <sup>3</sup> NO <sub>2</sub> , not to be exceeded more than 18 times a calendar year	1 January 2010	100 µg/m <sup>3</sup> in zones with time extension until 31.12.2014
Annual limit value for the protection of human health	Calendar year	40 µg/m <sup>3</sup> NO <sub>2</sub>	1 January 2010	20 µg/m <sup>3</sup> in zones with time extension until 31.12.2014
Annual limit value for the protection of vegetation	Calendar year	30 µg/m <sup>3</sup> NO <sub>x</sub>	19 July 2001	None

The volume must be standardised at a temperature of 293 K and an atmospheric pressure of 101,3 kPa.

### Alert threshold

If more than 400 µg/m<sup>3</sup> NO<sub>2</sub> are measured over three consecutive hours at locations representative of air quality over at least 100 km<sup>2</sup> or an entire zone or agglomeration, whichever is the smaller, the Member State has to apprehend adequate measures.

### Upper and lower assessment thresholds

	Hourly limit value for the protection of human health (NO <sub>2</sub> )	Annual limit value for the protection of human health (NO <sub>2</sub> )	Annual limit value for the protection of vegetation (NO <sub>x</sub> )
Upper assessment threshold	140 µg/m <sup>3</sup> , not to be exceeded more than 18 times in any calendar year	32 µg/m <sup>3</sup>	24 µg/m <sup>3</sup>
Lower assessment threshold	100 µg/m <sup>3</sup> , not to be exceeded more than 18 times in any calendar year	26 µg/m <sup>3</sup>	19,5 µg/m <sup>3</sup>

## Data quality objectives

Data collection	Data quality objective
<i>Continuous measurement</i> Uncertainty Minimum data capture	 15 % 90 %
<i>Indicative measurement</i> Uncertainty Minimum data capture Minimum time coverage	 25 % 90 % 14 % (One day's measurement a week at random, evenly distributed over the year, or eight weeks evenly distributed over the year.)
<i>Modelling</i> Uncertainty Hourly averages Annual averages	  50 % 30 %
<i>Objective estimation</i> Uncertainty	 75 %

### Reference method for the analysis of nitrogen oxides

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".

### Minimum details to be made available to the public when the alert threshold for nitrogen dioxides is exceeded

Details to be made available to the public should include at least:

- the date, hour, place and the reasons for the occurrence,
- any forecasts of: changes in concentrations together with the reasons for those changes,
- the geographical area concerned, the duration of the occurrence,
- the type of population potentially sensitive to the occurrence,
- the precautions to be taken by the sensitive population concerned.

### Legal basis

- Directive 2008/50/EC of 21 May 2008 on ambient air quality and cleaner air for Europe (OJ EC. L 152/1)
- 39th Ordinance Implementing the Federal Immission Control Act (Ordinance on Air Quality Standards and Emission Ceilings - 39. BImSchV)