

Conversion Factors Between ppb and $\mu\text{g m}^{-3}$ and ppm and mgm^{-3}

On the UK Air Quality Archive, and for reporting data to the European Commission, the appropriate conversion factors at 20°C and 1013 mb are used.

Pollutant	EC 20 °C and 1013mb	WHO 25°C and 1013mb
Ozone	1 ppb = 1.9957 $\mu\text{g m}^{-3}$	1 ppb = 1.96 $\mu\text{g m}^{-3}$
Nitrogen dioxide	1 ppb = 1.9125 $\mu\text{g m}^{-3}$	1 ppb = 1.88 $\mu\text{g m}^{-3}$
Carbon monoxide	1 ppm = 1.1642 mg m^{-3}	1 ppm = 1.15 mg m^{-3}
Sulphur dioxide	1 ppb = 2.6609 $\mu\text{g m}^{-3}$	1 ppb = 2.62 $\mu\text{g m}^{-3}$
Benzene	1 ppb = 3.2430 $\mu\text{g m}^{-3}$	1 ppb = 3.19 $\mu\text{g m}^{-3}$
1,3-butadiene	1 ppb = 2.2452 $\mu\text{g m}^{-3}$	1 ppb = 2.21 $\mu\text{g m}^{-3}$

NO_x in $\mu\text{g m}^{-3}$ is expressed as NO₂. i.e. (NO ppb + NO₂ ppb) * 1.91 = NO_x $\mu\text{g m}^{-3}$.

In the UK Indicative gravimetric equivalent PM₁₀ data are calculated from TEOM monitoring data by applying a default factor of 1.3.