

Heavy metal slips down UK air quality charts

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Air quality in the UK has improved significantly over the last 25 years according to a report published by the National Physical Laboratory (NPL). Monitoring at 17 testing sites around the UK shows a fall in the presence of harmful heavy metals such as lead, iron and copper in the air we breathe.

Results show a 70% reduction in the average presence of all heavy metals tested over the period. The total average concentration has fallen from 1873 nanograms per cubic metre of air in 1980 to just 568 ng/m³ in 2006 for the nine elements monitored. Lead has seen a particularly sharp decline falling from 556 ng/m³ in 1980 to 19.95ng/m³ last year. A reduction of 96.5%.

The decrease in air pollution reflects a move to greener industrial and household processes and advances in environmentally focused technology such as unleaded petrol. Dr Richard Brown, Principal Research Scientist at NPL explains.

‘Taking lead as an example, the steady decline of emissions from coal and oil combustion along with the change in fuel usage, and reductions in industrial output, has resulted in a significant reduction of lead in the atmosphere. We expect to see this decline continuing across the board until levels finally bottom out and become close to those occurring naturally.’

Air quality is measured on a monthly basis by collecting filters provided to the participating sites by NPL. These are returned to the laboratory

where the results are analysed and collated. Results show that levels of all 13 harmful elements monitored are below those demanded by European directives and all are already well inside the UK's air quality objectives for 2009.

Air pollution has been recognised as a danger to public health for over 200 years but it is only since 1980 that supporting data for metals has been widely available. Disparate air monitoring sites were brought together under the umbrella of the UK Heavy Metals Monitoring Network in 2003. The network is run on behalf of Defra by NPL, the UK's national measurement institute.

Source: National Physical Laboratory

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