Technical Bulletin: Reporting oil, fuel, and petroleum product data - Accounting for density of test materials

02 March 2026

It has been identified across the fuels, oils, petroleum & petroleum products industry that the reporting of mass or volume based concentration units (mg/kg or mg/l) does not always provide an accurate result if the sample is assumed to have the same properties (density) as the calibration/CRM in use, or if an assumed and therefore untraceable value is used. This appears to be common for autosamplers using fixed volume amounts and later converting to mass based units (or assuming a constant density), where the normal process would be a mass-based approach.

From discussions across various testing laboratories, it is noted that a step change in results could occur if the values were corrected in accordance with the measured density of the materials, or if the values were reported without this conversion (for example reporting in mg/l rather than converting to mg/kg).

Testing laboratories will need to review reporting processes to ensure that results are reported in the correct and traceable units, and especially where the density of the samples could affect the result due to mass/volume conversions, or in the case where volume is used rather than mass as stated in the standard methods, a measured and traceable density value is used for the conversion.

A **self-declaration form** will be required to be completed by affected laboratories to confirm implementation of requirements, with this required to be returned to UKAS within six months from the date of publication of this technical bulletin, i.e. by **02 September 2026**. Implementation of the requirements from this Technical Bulletin will be followed up at laboratories' future assessments.