Objectives: DRUID (Driving Under the Influence of Drugs, Alcohol and Medicines) is a research project funded by the European Commission in which oral fluid is analysed by eleven laboratories. A common collection and analysis methodology has been used: collection with Statsure Saliva Sampler and LC-MS/MS or GC-MS analysis of 22 substances. Four rounds of proficiency testing (PT) were organized between March 2008 and September 2009.

Methods: Qualitative results were evaluated using sensitivity and specificity. Quantitative results were evaluated using z-scores and the standard deviation of Horwitz. Specificity was above 99% for all analytes; sensitivity per analyte varied between 81.7 and 100%. 20 out of 22 analytes had a sensitivity >90%. The percentage of satisfactory z-scores increased from 79.4% to 89.2% over the test period. This trend was seen for all drugs, except zopiclone. Results were discussed with participating laboratories and problems were addressed.

Conclusions: Because of these corrective actions, DRUID laboratories have a lower variation in results than previously published PT schemes in oral fluid.

Disclaimer:
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