The incidence of drugs of impairment in oral fluid from random roadside testing

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Oral fluid (OF) has become a popular specimen to test for presence of drugs, particularly in regards to road safety. In Victoria, OF specimens from drivers have been used to test for the presence of methylamphetamine (MA) and Δ(9)-tetrahydrocannabinol (THC) since 2003 and 3,4-methylenedioxy-N-methylamphetamine (MDMA) since 2006. LC-MS/MS has been used to test the most recent 853 submitted OF specimens from Victoria Police for 31 drugs of abuse including those listed in the Australian Standard AS4760-2006. At least one proscribed drug was detected in 96% of drivers, of which MA was the most common (77%), followed by THC (42%), MDMA (17%) and the combination of all three (3.9%). Opioids were detected in 14% of drivers of which 4.8% were positive for 6-acetylmorphine and 3.3% for methadone. The incidence of the opioids tramadol (1.2%) and oxycodone (1.1%) were relatively low. Cocaine (8.0%) was as commonly detected as benzodiazepines (8.0%), and was almost always found in combination with MA (7.9%). Samples positive to benzodiazepines were largely due to diazepam (3.5%) and alprazolam (3.4%), with only 0.2% of drivers combining the two. Ketamine was also detected in 1.5% of cases. While the incidences of the proscribed drugs itself are concerning, it is clear that many drivers are also using other drugs capable of causing impairment.