



Dear readers,

What are benzodiazepines? Why is a sensitive saliva test so important in the specific case of benzodiazepines? We've collected some information and facts for you and hope you enjoy reading this report.

Your Securetec team

## DrugWipe® 6 S Benzodiazepines

### More sensitivity, more reliability

Just 5 ng per ml of saliva – that's the new detection limit of the DrugWipe® 6 S for benzodiazepines, making the test now more sensitive by a factor of 4.



The benzodiazepine concentration detected is equivalent to a teaspoon of sugar dissolved in an Olympic-size swimming pool.

### Pitfalls of detection

Benzodiazepines are only ever found in relatively low concentrations in saliva.<sup>1</sup> The conditions that prevail in the oral cavity don't suit these substances, and so they are very reluctant to pass from the blood into the saliva. As a result, a very sensitive test is required for screening.

### DrugWipe® – already achieving success

DrugWipe® 6 S Benzodiazepines has already proven itself in the ROSITA-2 project, demonstrating that it can produce satisfactory results despite these unfavorable circumstances.<sup>2</sup>

Our 6-fold saliva test has been successfully used for many years by police forces in Finland. There, the blood values were compared with the results obtained with DrugWipe®. In laboratory testing with 16 different benzodiazepines, DrugWipe® 6 achieved a sensitivity of 81%.<sup>3</sup>

The new test, DrugWipe® 6 S Benzodiazepines, is now even more sensitive at 95%, which significantly increases the rate of apprehension as well as safety on the road.



<sup>1</sup> Wille et al., Ther. Drug Monit., Volume 31, Number 4, August 2009

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<sup>2</sup> Gunnar et al., ROSITA-2 Project : Final report, Academia Press, Gent, Belgium (2006)

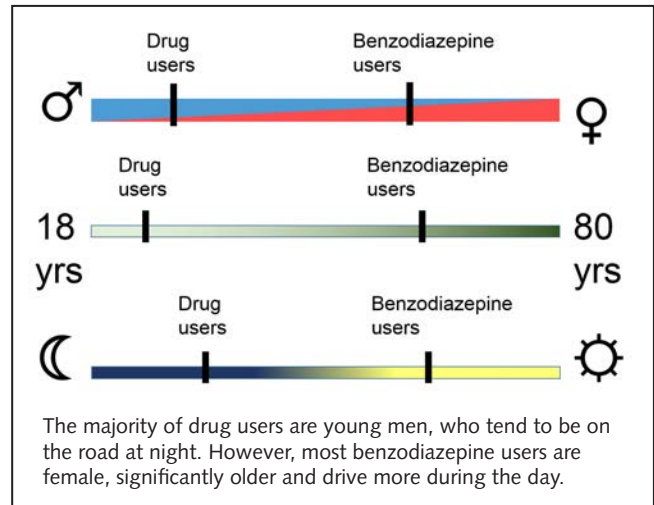
<sup>3</sup> Blencowe et al., J. Anal. Toxicol. 35 (6), 349-356 (2011)

## Benzodiazepines – a risk to road safety?

As a rule, the higher the benzodiazepine concentration in an individual's body, the greater the negative impact on their fitness to drive. Benzodiazepines affect the ability to drive a vehicle safely, even at the low doses that may be prescribed by a doctor. This fact has been proven in psychomotor tests.<sup>4</sup>

The risk of injury in an accident increases 5-fold when benzodiazepines are involved. If a combination of drugs and alcohol is used, the increase may be as much as 112-fold.<sup>5</sup> In road accidents that prove fatal to the driver, benzodiazepines are the second most frequently detected substance, exceeded only by alcohol. In accidents resulting in serious injury to the driver, benzodiazepines are the third most frequent cause after alcohol and THC.<sup>6</sup> The figures speak for themselves.

It is also striking that the majority of drivers who use benzodiazepines are middle-aged and older. In addition, use of benzodiazepines is much more widespread among women than men. Also worthy of note is the fact that most drivers caught driving under



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the influence of benzodiazepines are apprehended during daytime hours.<sup>6</sup>

Driving under the influence of benzodiazepines represents a significant risk to road safety. Which makes it all the more important to use a sufficiently sensitive saliva test for this group of drugs.

## DrugWipe® 6 S – for greater road safety.

<sup>4</sup> Smink et al., Journal of Forensic and Legal Medicine 15 (2008) 483–488

<sup>5</sup> Movig et al., Accident Analysis & Prevention 36 (2004) 631–636

<sup>6</sup> Summary of Main DRUID Results, TRB 91st Annual Meeting, January 2012

### Benzodiazepines infobox

Benzodiazepines are drugs that are only available on prescription, as sedatives for patients suffering from stress, agitation or anxiety, or as sleeping pills. Due to their relaxing effect, they are also used as a tranquilizer. They are highly addictive. Benzodiazepines are prescribed to millions of people across Germany. 10–17% of the population will take medication containing a benzodiazepine at some point over the course of a year. 1–2% of adults take this type of medication once a day for at least a year. Benzodiazepines represent a large group of chemically related active substances. The individual substances differ in terms of effect, onset and duration of effect, metabolization, and the time required for breakdown. Depending on the substance, it may take between several hours and several days to be broken down by the body.



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