

Evaluation of Benzodiazepine results

Cut-off value

200 µg/L

Cross-reactivity

This assay detects all benzodiazepines; however, clonazepam, lorazepam, and triazolam exhibit very low cross-reactivity and would need to be present in large quantities to be detectable.

Metabolism

Liver biotransformation by hepatic microsomal enzymes occurs via demethylation or conjugation with a glucuronide. Most benzodiazepines are detected in urine for several days following administration.

Half-life of some benzodiazepines

Clonazepam (Rivotril)	10–58 hours
Diazepam (Valium, Valpam, Ducene, Antenex)	20–50 hours
Flunitrazepam (Hypnodorm)	10–70 hours
Flurazepam	50–100 hours
Lorazepam (Ativan)	9–24 hours
Oxazepam (Serepax, Alepam, Murelax)	3–21 hours
Temazepam (Normison, Temaze)	3–38 hours
Triazolam (Halcion)	1.5–3 hours
Alprazolam (Xanax, Zamhexal, Alprax, Kalma)	10–58 hours

Other benzodiazepines include

Bromazepam (Lexotan)
Clobazam (Frisium)
Nitrazepam (Alodorm, Mogadon)
Midazolam (Hypnovel)
Zolpidem (Stilnox)