IMD Labor Berlin-Potsdam

Improved drug analysis for amphetamines, benzodiazepines and methadone metabolites peri-analysis

Problems related to the abuse of drugs and other substances that are encountered in daily practice are a growing social concern. They are not only underlying diseases themselves, but also exacerbate and obscure them. Carrying out diagnostic tests and monitoring of those patients is difficult and requires the compliance of the patient, which is often difficult to achieve, due to the legal issues involved. New substance groups with addictive potential have also forced us to revise our diagnostic guidelines.

Peri-analysis

The term "peri-analysis" refers to urine testing to exclude manipulation of the sample. These include:

- Macroscopic abnormalities of the urine sample (odour, colour, clouding, etc.)
- Adverse effects of endogenous substances (detergents, soaps, etc.) on immunoassay results
- Determination of creatinine in urine to identify secondary sample dilution or forced diuresis by excessive fluid intake
- Calculating the cannabis/creatinine ratio to evaluate cannabis excretion over time.

Amphetamines

In recent years, there has been an increase in the use of designer drugs. We have improved our analytical tests for amphetamines. With their sensitivity, they allow us to also detect the latest designer drugs By modifying the cut-off levels, we were able to reduce the rate of false positive results.

Benzodiazepines

Benzodiazepines and their metabolites are excreted in the urine primarily as glucuronide conjugates. However, glucuronides are not detected by conventional testing (test strips, normal enzyme immunoassay). By introducing an additional preparation step (enzymatic separation of glucuronic acid), we are now able to prove benzodiazepine abuse over a longer period of time.

Methadone metabolite (EDDP)

Compliance testing of patients in methadone substitution programmes includes measuring levels of methadone and its metabolite, EDDP.
Any abuse of methadone can be detected over a longer period of time based on EDDP testing.

Measurement and evaluation of urine peri-analytic tests are free of charge if these are ordered on a referral form with the comment "Drug Screening".

Changes in cut-off values

Parameters	Confirmation cut-off (new)		Confirmation cut-off (old)
Barbiturates	< 100 ng/ml	for secobarbital	(< 200)
Benzodiazepines after pre-treatment	< 100 ng/ml	for nitrazepam	(< 150)
Cocaine	< 100 ng/ml	for the main metabolite benzoylecgonine	(< 300)
Amphetamines and designer drugs	< 500 ng/ml	for d-methamphetamine	(< 300)
Cannabis	< 25 ng/ml	for THC carboxylic acid	(< 50)
Opiates	< 100 ng/ml	for morphine	(< 300)
EDDP (methadone metabolite)	< 100 ng/ml	for EDDP	(< 100)

All analytical methods comply with the recommendations of the Senate Commission for Clinical-Toxicological Analysis of the German Research Foundation and are subject to ongoing internal and external quality control.
With a positive enzyme immunoassay (EIA), we will send you an initial, preliminary report in advance.

This partial results report is to be considered preliminary and indicative. It is followed by the confirmatory test, using HPLC or GC/MS. If you do not wish a confirmatory test, please write on the referral form: "no confirmatory test". This will also be noted in the final report.

Diag-Info: 101 Version: 2

Do you have questions? Our serviceteam will be happy to support you: +49 (0)30 770 01-181.

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