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Directory of Toxicology

Toxicology Topics

IMMUNOASSAY AND GC/MS INTERFERENCE

Periodically a forensic urine drug testing report will be issued that indicated "IMMUNOASSAY INTERFERANCE" or "GC/MS INTERFERENCE", and an employer or Medical Review Officer (MRO) will not understand what this indication means.

Early in the development of forensic urine drug testing, a parallel industry developed to assist those who are using drugs, in their efforts to "beat" the drug test. In a recent Google® search for "Beating the drug test", there were 5,440,000 sites with information on this subject. For laboratories and the drug testing program, there is a never-ending battle between the efforts to detect drug abuse and those who are trying to prevent that detection.

Among some of the earliest products seen was "Mary Jane's Super Clean 13". This product consisted of two small vials (easily concealable) that when added to the urine, would interfere with the initial testing procedures. This product turned out to be nothing more than plain clear dishwashing soap, selling for \$30 for a package of two. Obviously, the financial incentives for these products are great and the market is large.

As these products began appearing, laboratories began developing methods to identify when interfering substances have been added to the urine. These tests now include testing for surfactants (soap), oxidants, acid or basic materials (pH), and attempts to dilute specimens. Unfortunately as quickly as the laboratory is able to develop a test for new adulterant, new products hit the market.

In testing urine specimens, the laboratory will on an occasion see something that just does not look appropriate in the testing process, and the laboratory is not able to specifically identify that material. The laboratory will report that finding to the client or MRO as "INVALID RESULT: Immunoassay Interference" or "INVALID RESULT: GC/MS Interference". In some cases, after consulting with the client or MRO on these findings, the specimen may be forwarded to another laboratory for more extensive testing in an effort to identify the "adulterant". In many cases, no addition information can be obtained. The only action that should be taken by the client, when receiving a report such as this, is to require an immediate observed re-collection of the employee.

It is worth noting that during the collection process, steps are taken to minimize the opportunity for the urine donor to add anything to their urine, but desperate people will do desperate things and the products are there to assist them. A drug user is never surprised when they are notified of a POSITIVE result. They may be surprised at a NEGATIVE result and they may be disappointed that their product didn't work, but they are never surprised.

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