

## DRUG TESTING METHODOLOGY CUT-OFF COMPARISON

Urine drug testing performed on-site in a point of care cup can provide a quick snap-shot of a patient's drug use. However, these test cups have limitations such as higher detection cut-off levels and limited specificity to determine which drug is present, making them susceptible to potential false negatives and false positives.

Many manufacturers of these point of care devices even suggest additional testing be done using a more specific assay when physicians require additional confidence in the result. Assurance Laboratories offers this definitive testing, using liquid chromatography and tandem mass spectrometry (LC-MS/MS) to boost practitioner confidence in the analytical result for their patient. If your patients need a different specimen type, LC-MS/MS testing allows for blood and saliva too!



Compounds are measured and listed below in ng/g

DRUG ABBREVIATION	DRUG OR DRUG CLASS	COMMON URINE CUP	IMMUNO-ANALYZER	QUANTITATIVE LC-MS/MS
ALC	Alcohol	-	100	50
AMP	Amphetamines	1000	1000	100 1
BAR	Barbiturates	-	200	200 1
BENZO	Benzodiazepines	300	200	20-50 1,2
COC	Cocaine	300	300	50
MET	Methamphetamine	1000	-	100 1
OPI	Opiates	300	300	5-50 1,2
MTD	Methadone	300	300	100
OXY	Oxycodone	100	100	50
PCP	Phencyclidine	25	25	25
THC	Marijuana	-	50	25

1. Multiple compounds within the drug class can be identified, providing specificity to the actual drug being detected.  
2. Compounds within the drug class may have different minimal quantity cut-off limits.

Immunoassays are only about ~99% accurate, as their detection relies on the antibody for the drug or drug class to bind to the compound of interest. This method is susceptible to false positives because binding could happen to similarly shaped compounds. They are also susceptible to false negatives because their sensitivity may not be as good as other devices, such as LC-MS/MS. LC-MS/MS detects the ion of the compound of interest, providing a quantitative result using molecular weights to identify the concentration within the sample rather than provide a simple positive/negative result. Assurance Laboratories recommends definitive testing be performed on samples where an exact drug or quantification of a compound is necessary, often seen within medication monitoring programs. Assurance currently has more than 100 compounds validated for detection in urine. Saliva and blood testing is available for several compounds upon request. If we do not currently have a compound available in urine, blood, or saliva we will gladly validate the new compound of interest for you.

