

VALIDATION SUMMARY	
Procedure Name	Solid Phase Extraction of Alkaline Drugs from Biological Fluids
Validation Summary	<p>Three lots of urine and blood (in duplicate) were extracted with 24 drug/metabolite LOD's listed in TOX203-10, along with a positive control at 3 times the LOD. Additionally, fentanyl, norfentanyl and gabapentin were extracted in 3 batches in each matrix. Carryover studies were conducted in urine and blood (in triplicate). Carry over solutions were as follows: 100 ng/mL fentanyl, norfentanyl, and naloxone; 1000 ng/mL a-hydroxyalprazolam, alprazolam, amitriptyline, amphetamine, cetirizine, citalopram, cocaine, cyclobenzaprine, doxylamine, ecgonine methyl ester, methamphetamine, (dextro)methorphan, metoprolol, morphine, naloxone, norchlorcyclizine, nortriptyline, phenylpropanolamine, and sertraline; 2500 ng/mL benzoylecgonine and diphenhydramine; and 30,000 ng/mL gabapentin.</p> <p>Urine LOD's:            1 ng/mL: fentanyl and norfentanyl            5 ng/mL: a-hydroxyalprazolam, alprazolam, amitriptyline, benzoylecgonine, cetirizine, citalopram, cocaine, cyclobenzaprine, diphenhydramine, doxylamine, ecgonine methyl ester, methamphetamine, (dextro)methorphan, metoprolol, morphine, naloxone, and sertraline            25 ng/mL: amphetamine, phenylpropanolamine, norchlorcyclizine, nortriptyline,            1000 ng/mL: gabapentin</p> <p>Blood LOD's: morphine LOD of 5 ng/mL not confirmed. Evidence of interference in old blood samples but other early eluters are not affected. See additional experiments for details.            1 ng/mL: fentanyl and norfentanyl            5 ng/mL: a-hydroxyalprazolam, alprazolam, amitriptyline, benzoylecgonine, citalopram, cocaine, cyclobenzaprine, diphenhydramine, doxylamine, ecgonine methyl ester, methamphetamine, (dextro)methorphan, metoprolol, naloxone (2/3), and sertraline            10 ng/mL: cetirizine            25 ng/mL: amphetamine, phenylpropanolamine, norchlorcyclizine, nortriptyline,            1000 ng/mL: gabapentin (1/3 interferant in full scan only)</p> <p>Carryover:            &lt; 5% urine and blood: norchlorcyclizine            1 to 2.5% urine: amitriptyline and sertraline            &lt; 1% urine: cyclobenzaprine, dextromethorphan, and diphenhydramine</p>

APPROVALS			
Technical Approval	<b>Redacted</b>	Date	7/7/2023
Unit Chief Approval		Date	7/7/2023