

Supplementary Table 1. List of compounds evaluated as potential interferences.

aspirin	dextromethorphan	ecgonine	noroxymorphone
caffeine	phentermine	anhydroecgonine methyl ester	amphetamine
ibuprofen	pseudoephedrine	cocaethylene	methamphetamine
acetaminophen	ephedrine	norcocaethylene	3,4-methylenedioxy-methamphetamine
pentazocine	ketamine	<i>m</i> -hydroxycocaine	3,4-methylenedioxy-ethylamphetamine
diphenhydramine	phenylpropanolamine	<i>p</i> -hydroxycocaine	3,4-methylenedioxy-amphetamine
brompheniramine	fenfluramine	<i>m</i> -hydroxybenzoylecgonine	4-hydroxy-3-methoxy-methamphetamine
chlorpheniramine	nicotine	<i>p</i> -hydroxybenzoylecgonine	4-hydroxy-3-methoxy-amphetamine
imipramine	cotinine	morphine	<i>p</i> -methoxy-methamphetamine
clomipramine	<i>trans</i> -3'-hydroxycotinine	normorphine	<i>p</i> -methoxy-amphetamine
clonidine	norcotinine	codeine	<i>p</i> -hydroxy-methamphetamine
fluoxetine	Δ 9-tetrahydrocannabinol (THC)	norcodeine	propoxyphene
norfluoxetine	11-hydroxy-THC	6-acetylmorphine	3,4-methylenedioxyphenyl-2-butanamine
parexetine	11-nor-9-carboxy-THC	6-acetylcodeine	N-methyl-1-(3,4-methylenedioxyphenyl)-2-butylamine
nitrazepam	cannabidiol	buprenorphine	cathinone
flunitrazepam	cocaine	norbuprenorphine	4-bromo-2,5-dimethoxyphenethylamine
temazepam	benzoylecgonine	hydrocodone	phencyclidine
nordiazepam	norcocaine	hydromorphone	11-nor-9-carboxy-THC-glucuronide
7-aminoclonazepam	norbenzoylecgonine	oxycodone	morphine-3-beta-D-glucuronide
7-aminoflunitrazepam	ecgonine ethyl ester	noroxycodone	morphine-6-beta-D-glucuronide
7-aminonitrazepam	ecgonine methyl ester	oxymorphone	

Supplemental Table 2. Mean extraction efficiencies and matrix effects for synthetic cannabinoids and metabolites extracted from urine by Resprep C18, Strata C8 and supported-liquid extraction (SLE).

Analyte	% Extraction efficiency (% Matrix Effect), N=3		
	Resprep C18	Strata C8	SLE
JWH-018	19.9 (1.6)	27.2 (-14.0)	61.3 (-8.5)
RCS8	18.5 (1.7)	27.3 (-12.3)	68.2 (-12.1)
JWH-250 N-5-hydroxypentyl	83.1 (6.0)	85.5 (1.7)	103.3 (4.5)
JWH-250 N-5-carboxypentyl	87.7 (1.6)	98.7 (-14.2)	87.1 (0.4)

All analyte concentrations were 1 µg/l