

Identification and semi-quantification of drugs of abuse in urine using Solid Phase Extraction and STIP-doa system

V2009

EXTRACTION PROTOCOL

CONDITIONING STEP
1x1 ml 3% ammonia in acetonitrile
1x1 ml citrate buffer pH 3.0

SAMPLE MATRIX Urine

SORBENT BAKERBOND™ Narc-2 *Speedisk*
PN 8175-04

SAMPLE LOADING STEP
Load sample
Note: Flow 1-2 ml/min

SAMPLE PREPARATION

To 0.1 ml of urine add 3 ml of the citrate buffer pH 3.0 .
The sample is applied to the spe column.
See extraction protocol.

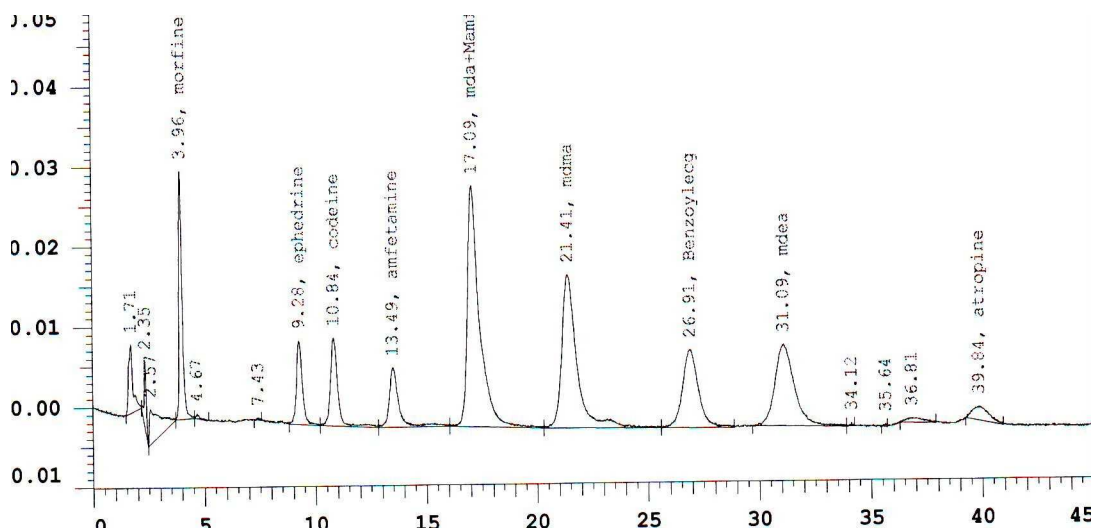
WASHING STEP
1 x 3 ml Water

ELUTION STEP 1+2
Vial A1
1x 3 ml acetonitrile*
Vial A2
1 x 3 ml 3% ammonia in acetonitrile **

* A₁ fraction - elution of acidic and neutral compounds –vial A1
** A₂ fraction - elution of basic compounds – vial A2

EVAPORATION STEP
Evaporate in a water bath (40 °C)
Solve to 100 µl eluens and
Inject in the system

FINAL ANALYTICAL METHOD: HPLC-DAD According to STIP-doa system



Validation/storage life

	Linearity 0.5-4.0 mg/l	Accuracy/precision Standard mg/l	Within-Run / Between-Run	
			Cor. of Var %	
Morphine	:0.9941	2.0	4.6	/ 3.8
Ephedrine	:0.9974	2.0	4.0	/ 1.4
Codeine	:0.9983	2.0	4.1	/ 0.6
Amphetamine	:0.9942	2.0	7.1	/ 0.0
MDA	:0.9963	2.0	6.3	/ 0.0
MDMA	:0.9947	2.0	4.7	/ 0.0
Benzoyllecgonine	:0.9985	2.0	4.1	/ 0.0
MDEA	:0.9962	2.0	4.3	/ 3.4
Atropine	:0.9952	2.0	5.2	/ 5.0

	Recovery	Storage life test solution refrigerator
Morphine	>90%	: min. 1 year
Ephedrine	>90%	: min. 1 year
Codeine	>90%	: min. 1 year
Amphetamine	>90%	: min. 1 year
MDA	>90%	: min. 1 year
MDMA	>90%	: min. 1 year
Benzoyllecgonine	>90%	: min. 1 year
MDEA	>90%	: min. 1 year
Atropine	>90%	: min. 1 year

For more information on the STIPsearch and STIP/doa system with Solid Phase Extraction Procedure visit. www.zanob.nl (H.v.d.Burgt and A.v.Rooy)

For more info on Solid Phase Extraction Products and application database, visit www.mallbaker.com