

Application of magnetic materials combined with Echo[®] MS system in ultra-fast and ultra-sensitive detection of illegal drugs in sewage

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Amphetamine

Calibration for AM-1: $y = 0.00200x + -8.92197e-4$ ($r = 0.99984$, $r^2 = 0.99968$) (weighting: $1/x$)

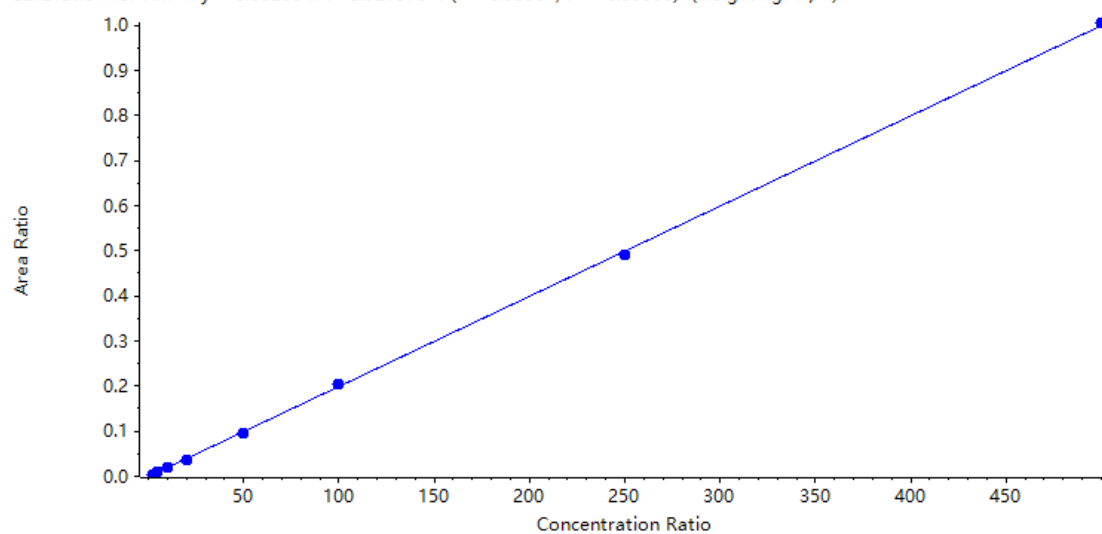


Figure S1. Calibration graph of Amphetamine

Calibration for MA-1: $y = 0.00625x + 0.00113$ ($r = 0.99801$, $r^2 = 0.99603$) (weighting: $1/x^2$)

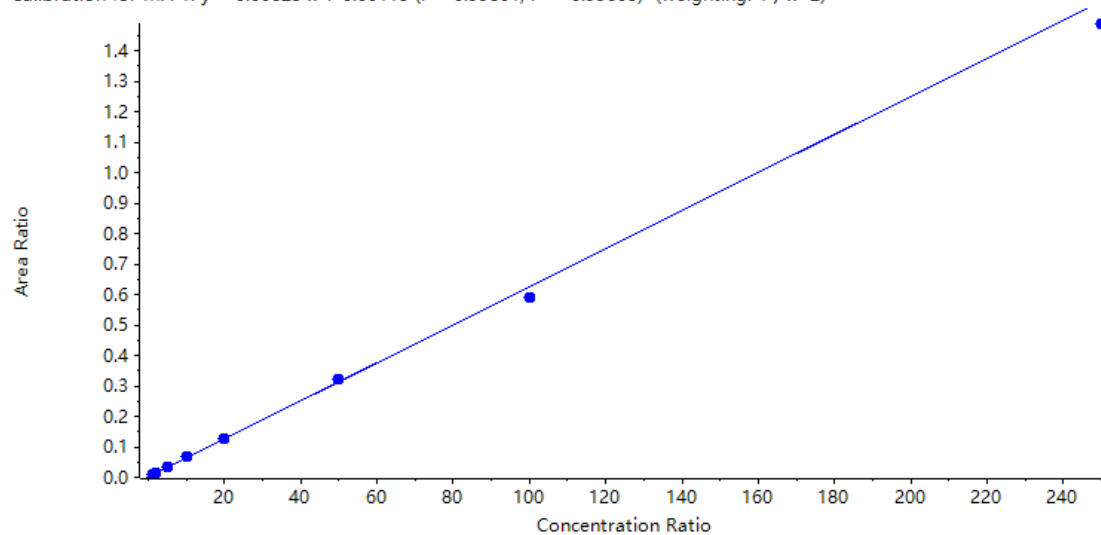


Figure S2. Calibration graph of Methamphetamine

Calibration for O6-1: $y = 0.00463x + 3.36531e-4$ ($r = 0.99913$, $r^2 = 0.99827$) (weighting: $1/x^2$)

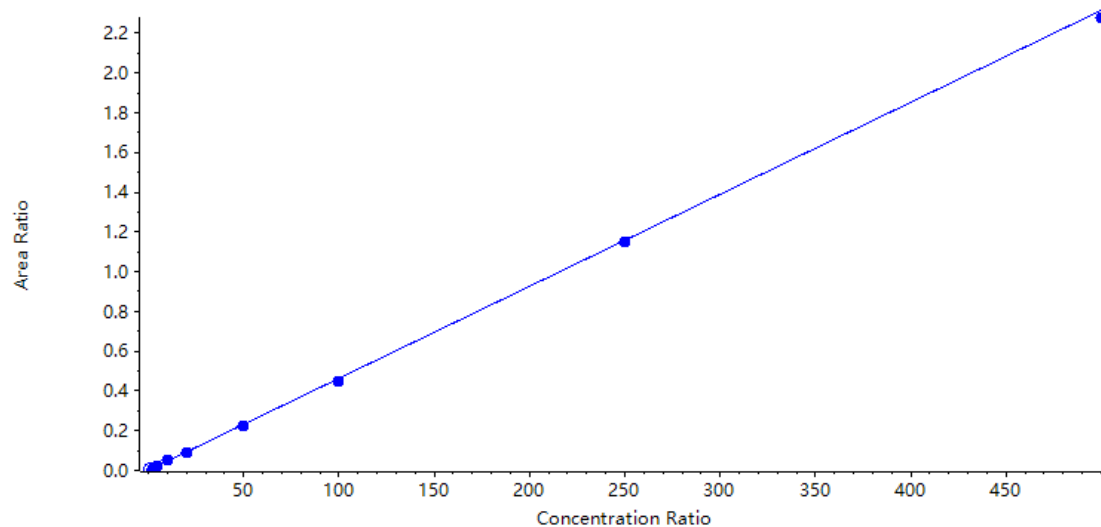


Figure S3. Calibration graph of O6-monoacetylmorphine

Calibration for Mor-1: $y = 0.00218x + 1.56023e-4$ ($r = 0.99754$, $r^2 = 0.99509$) (weighting: $1/x^2$)

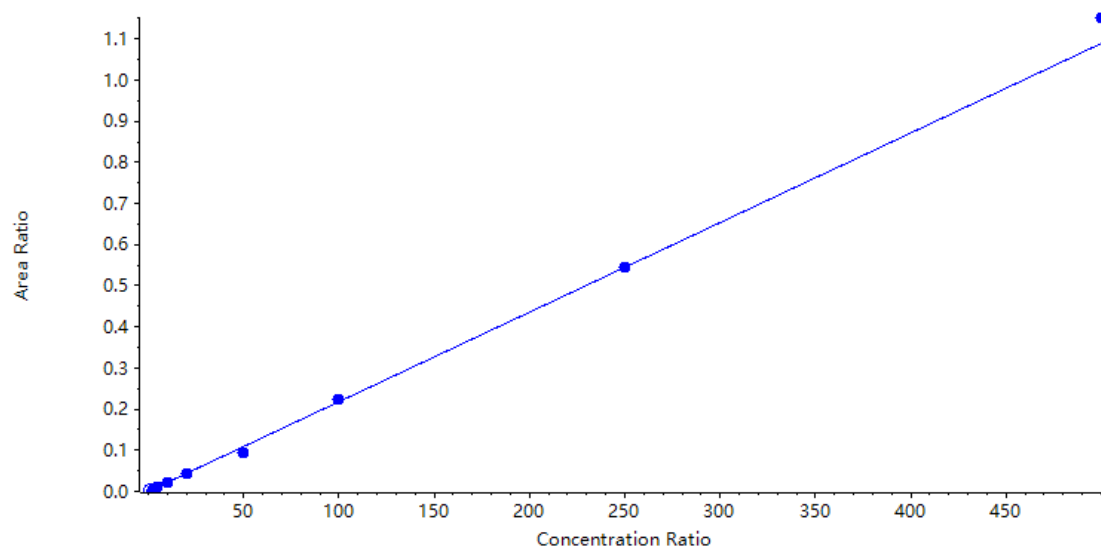


Figure S4. Calibration graph of Morphine

Calibration for K-1: $y = 0.00318x + 0.00102$ ($r = 0.99886$, $r^2 = 0.99772$) (weighting: $1/x^2$)

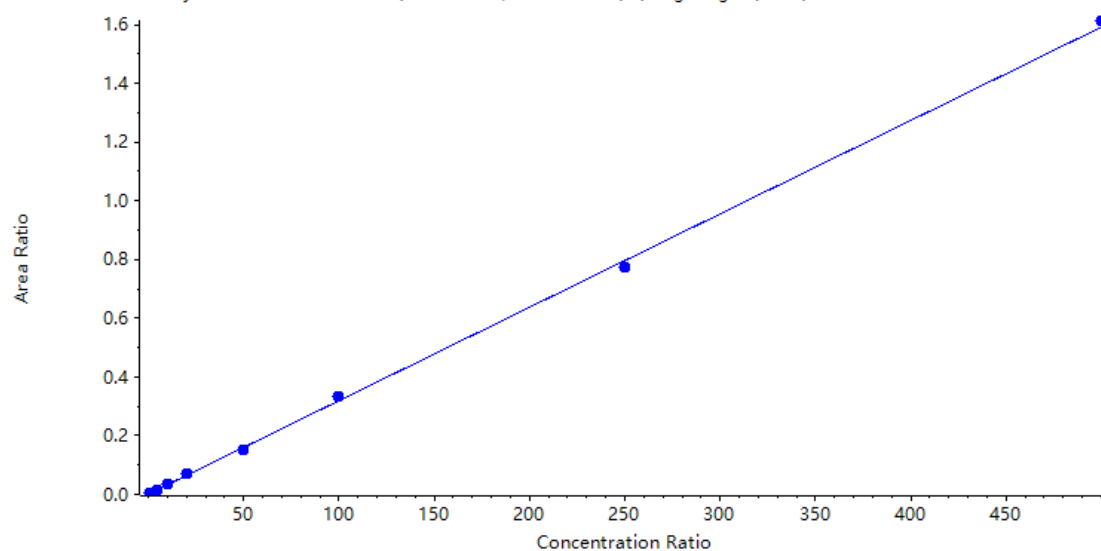


Figure S5. Calibration graph of Ketamine

Calibration for NK-1: $y = 0.00256x + 0.00136$ ($r = 0.99796$, $r^2 = 0.99593$) (weighting: $1/x^2$)

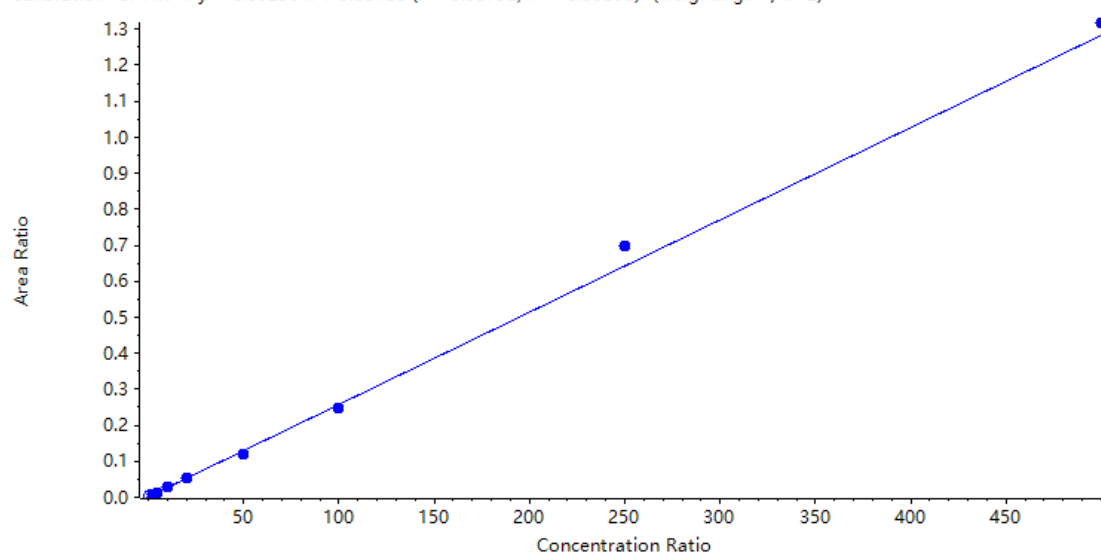


Figure S6. Calibration graph of Norketamine

Calibration for Coc-1: $y = 0.00721x + 0.00269$ ($r = 0.99847$, $r^2 = 0.99694$) (weighting: $1/x^2$)

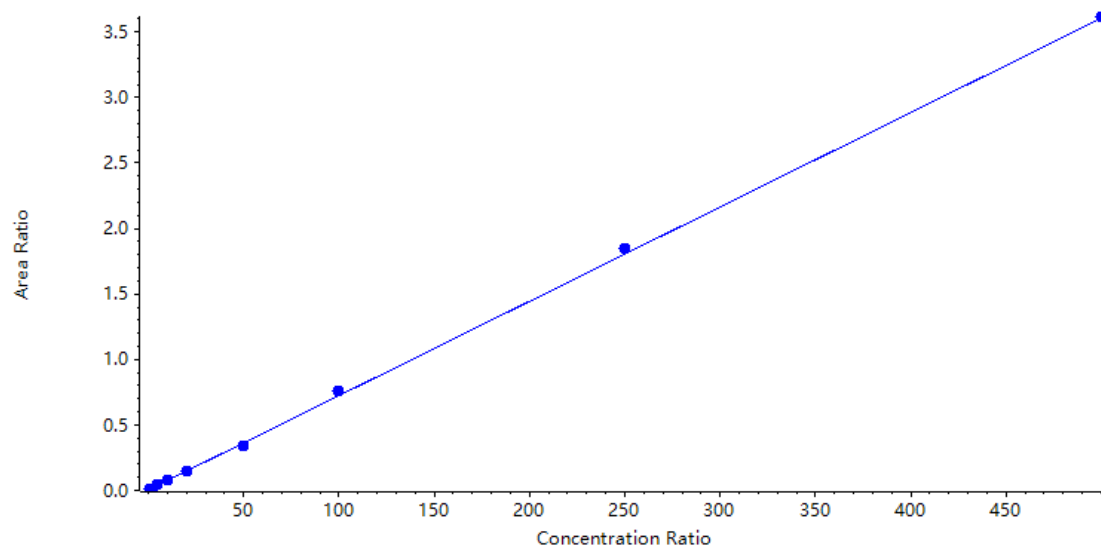


Figure S7. Calibration graph of Benzoylecgonine

Calibration for BZE-1: $y = 0.00299x + 0.00105$ ($r = 0.99750$, $r^2 = 0.99501$) (weighting: $1/x^2$)

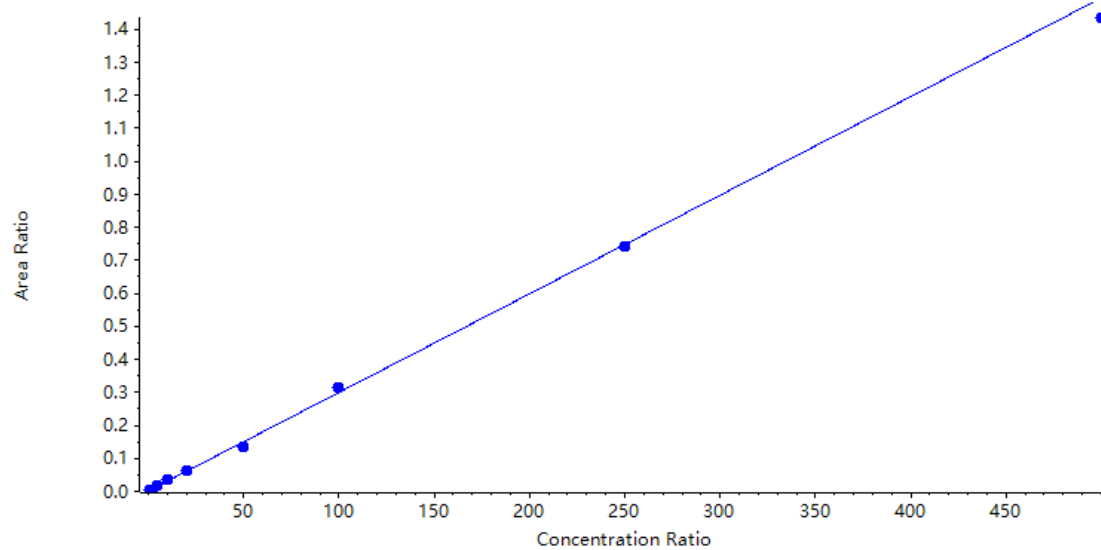


Figure S8. Calibration graph of Benzoylecgonine

Calibration for MDA-1: $y = 0.04854x + -0.00804$ ($r = 0.99976$, $r^2 = 0.99952$) (weighting: $1 / x^2$)

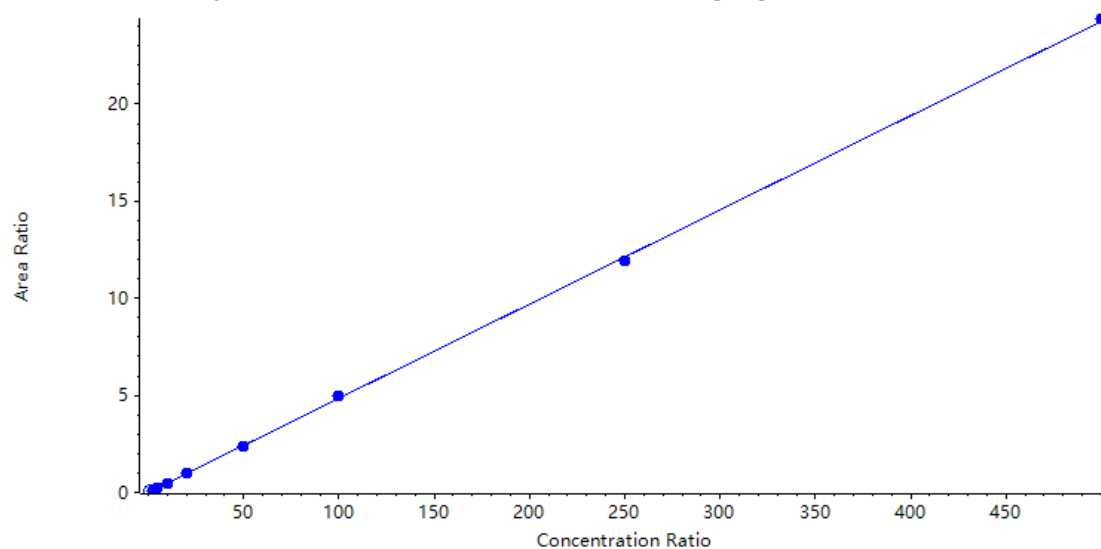


Figure S9. Calibration graph of 3,4-Methylenedioxyamphetamine, MDA

Calibration for MDMA-1: $y = 0.00244x + -5.97610e-4$ ($r = 0.99761$, $r^2 = 0.99522$) (weighting: $1 / x^2$)

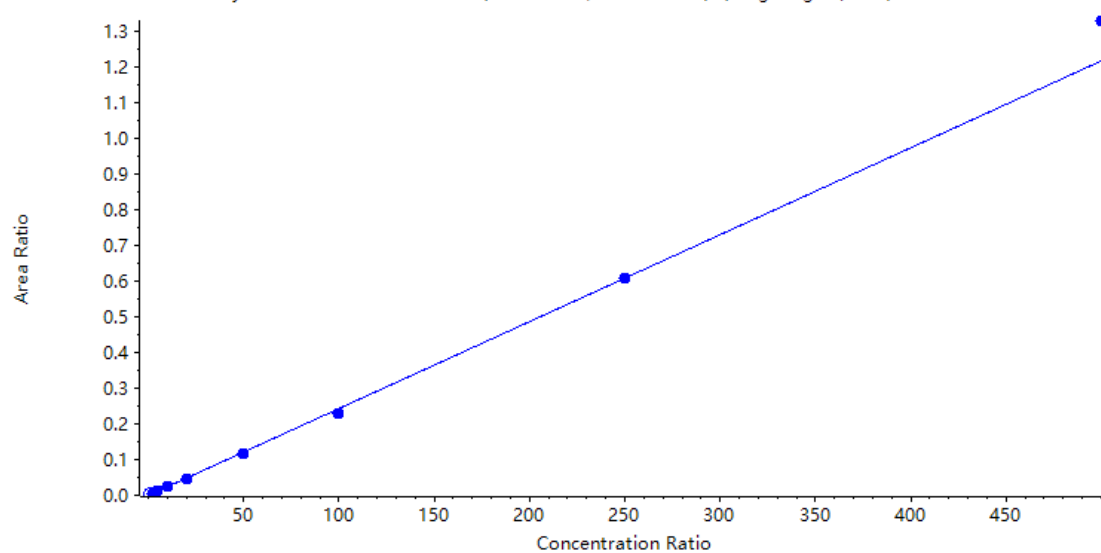


Figure S10. Calibration graph of MDMA

Calibration for Cathinone-1: $y = 0.00341x + 0.00402$ ($r = 0.99775$, $r^2 = 0.99550$) (weighting: $1/x^2$)

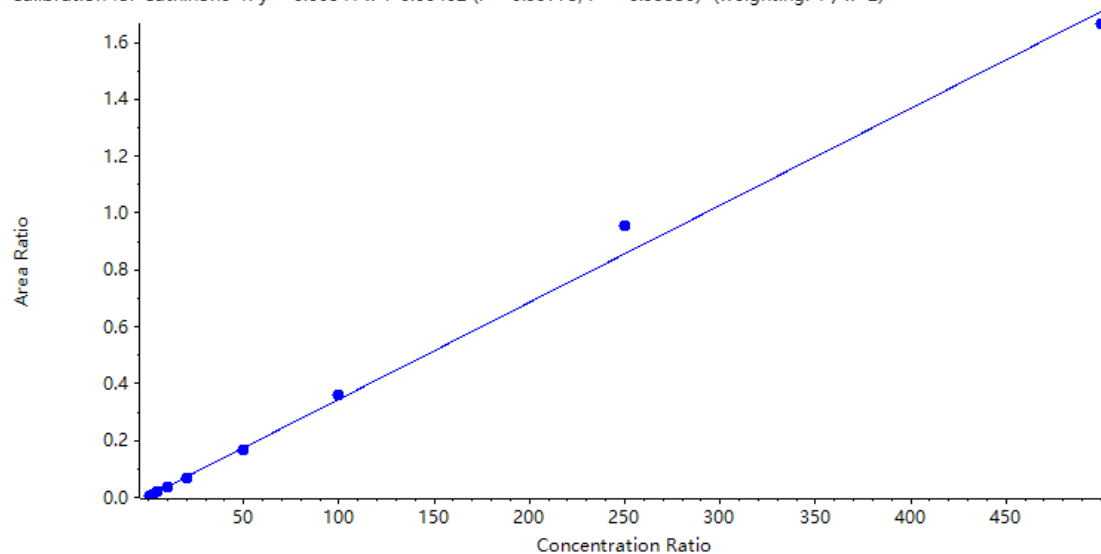


Figure S11. Calibration graph of Cathinone

Calibration for MC-1: $y = 0.00162x + -0.00110$ ($r = 0.99631$, $r^2 = 0.99264$) (weighting: $1/x^2$)

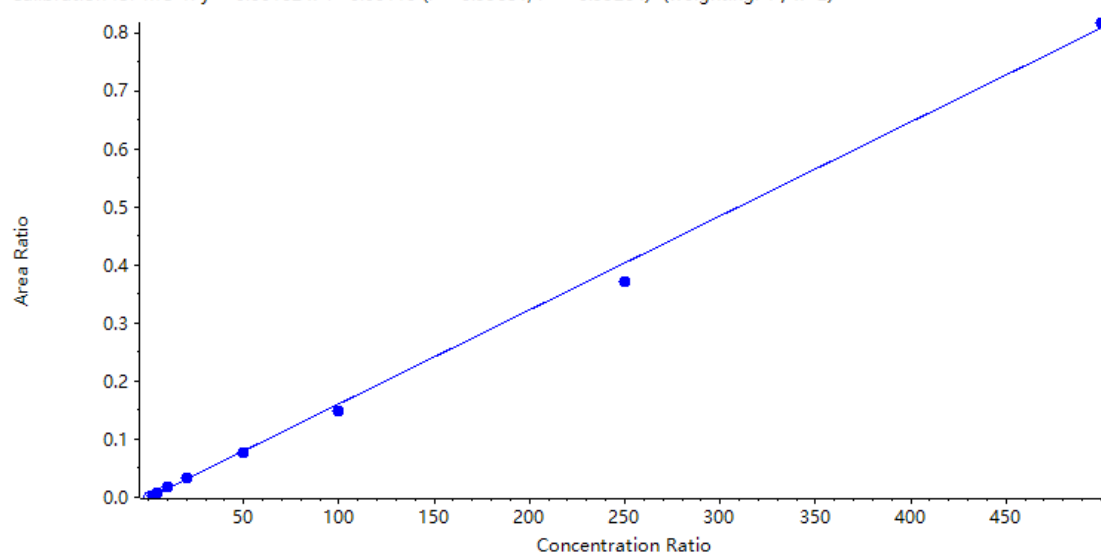


Figure S12. Calibration graph of Methcathinone

Calibration for Fentanyl-1: $y = 0.00608x - 0.00142$ ($r = 0.99955$, $r^2 = 0.99910$) (weighting: $1/x^2$)

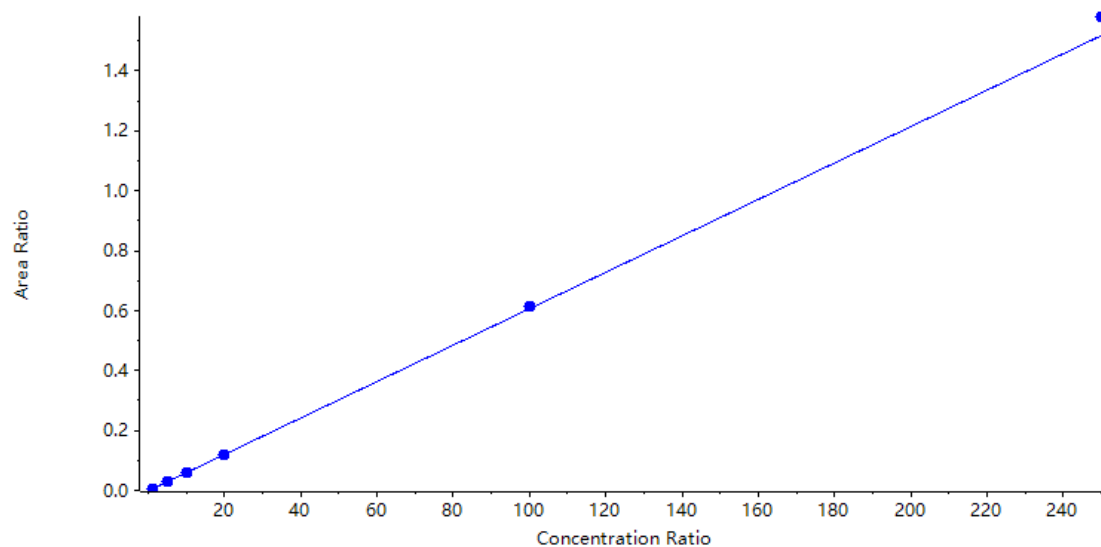


Figure S13. Calibration graph of Fentanyl

Calibration for diazepam 1: $y = 0.00313x + 0.00316$ ($r = 0.99911$, $r^2 = 0.99822$) (weighting: $1/x^2$)

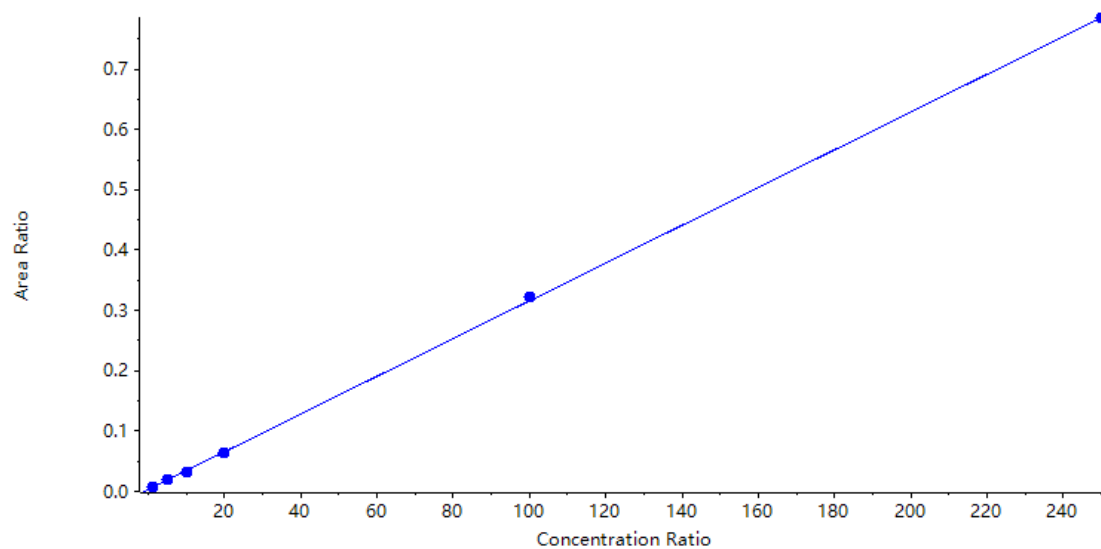


Figure S14. Calibration graph of Diazepam

Calibration for Estazolam 1: $y = 0.00394x + 5.11284 \times 10^{-4}$ ($r = 0.99873$, $r^2 = 0.99747$) (weighting: $1/x^2$)

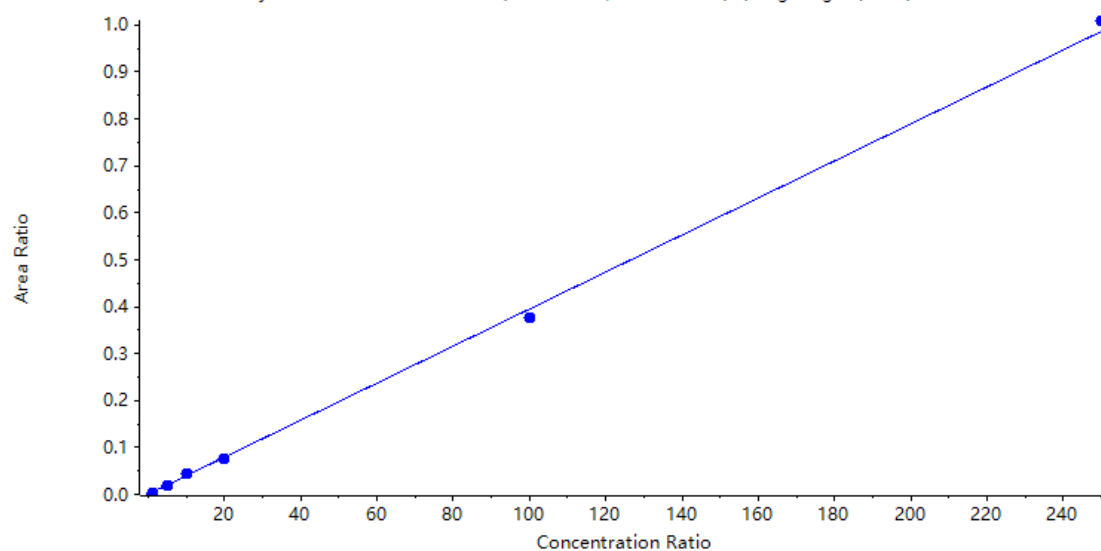


Figure S15. Calibration graph of Estazolam

Calibration for Methadone-1: $y = 0.00664x + 0.00565$ ($r = 0.99715$, $r^2 = 0.99431$) (weighting: $1/x^2$)

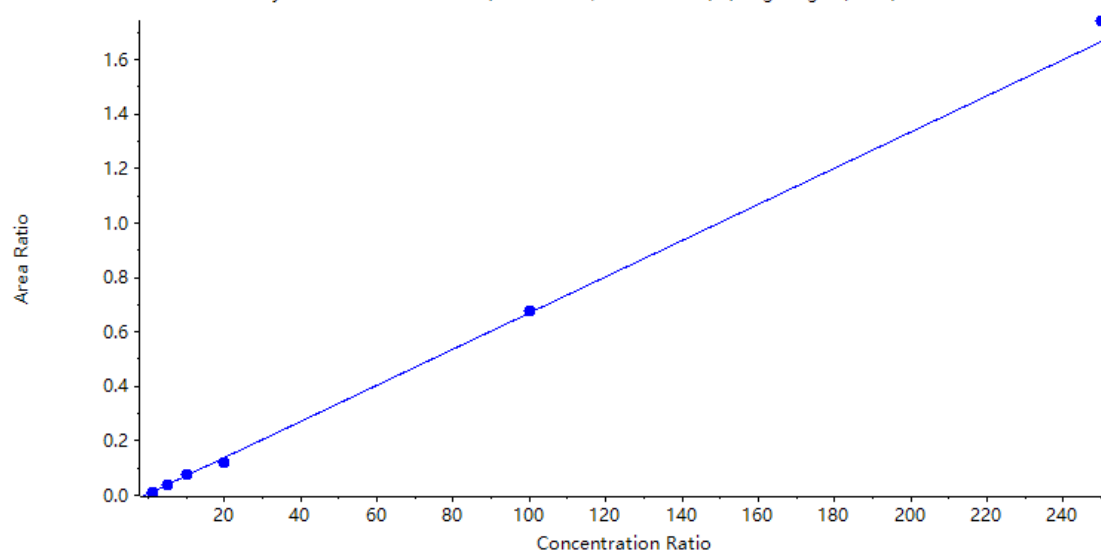


Figure S16. Calibration graph of Methadone

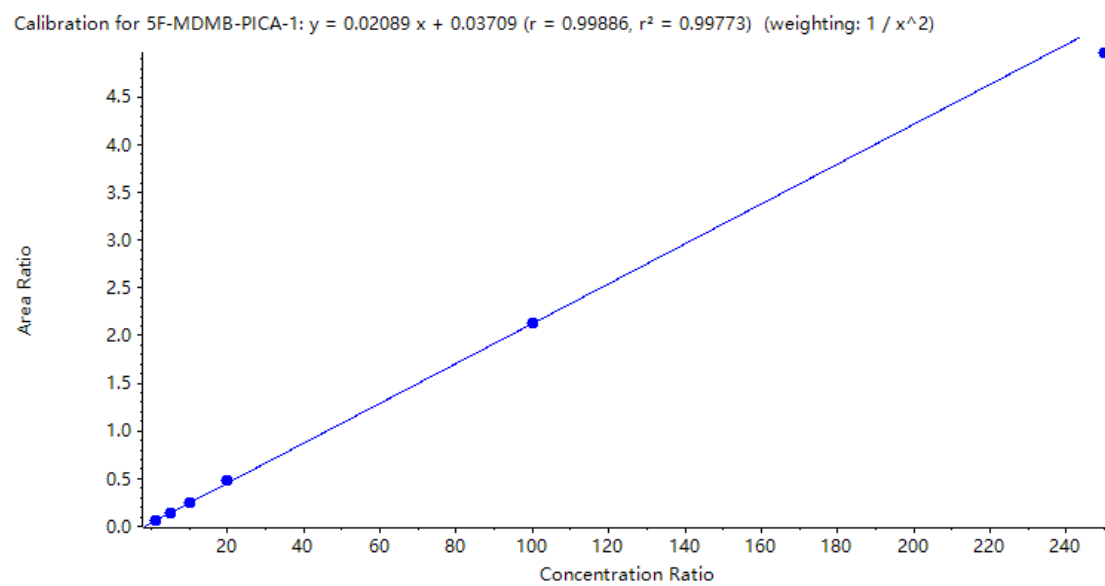


Figure S17. Calibration graph of
N-(1-methoxy-3,3-dimethyl-1-oxobutan-2-yl)-1-(5-fluoropentyl)-1H-indole-3-carboxamide

Table S1 The purity of each standard (native and mass-labelled)

No.	Drugs	Purity
1	amphetamine	100ug/mL
	amphetamine-D5	100ug/mL
2	methamphetamine	100ug/mL
	methamphetamine-D5	100ug/mL
3	O ⁶ -monoacetylmorphine	100ug/mL
	O ⁶ -monoacetylmorphine-D3	100ug/mL
4	morphine	100ug/mL
	morphine-D3	100ug/mL
5	ketamine	100ug/mL
	ketamine-D4	100ug/mL
6	Norketamine	100ug/mL
	Norketamine-D4	100ug/mL
7	Cocaine	100ug/mL
	Cocaine-D3	100ug/mL
8	Benzoylecgonine	100ug/mL
	Benzoylecgonine-D3	100ug/mL
9	3,4-Methylenedioxyamphetamine	100ug/mL
	3,4-Methylenedioxyamphetamine-D4	100ug/mL
	3,4-methylenedioxymethamphetamine	100ug/mL
10	3,4-methylenedioxymethamphetamine-D4	100ug/mL
11	Cathinone	100ug/mL
	Cathinone-D5	100ug/mL
12	Methcathinone	100ug/mL
	Methcathinone-D5	100ug/mL
13	Fentanyl	100ug/mL
	Fentanyl-D5	100ug/mL
14	Diazepam	100ug/mL
	Diazepam-D5	100ug/mL
15	Estazolam	100ug/mL
	Estazolam-D5	100ug/mL
16	methadone	100ug/mL
	methadone-D10	100ug/mL
17	N-(1-methoxy-3,3-dimethyl-1-oxobutan-2-yl)-1-(5-fluoropentyl)-1H-indole-3-carboxamide(5F-MDMB-PICA)	100ug/mL
	N-(1-methoxy-3,3-dimethyl-1-oxobutan-2-yl)-1-(5-fluoropentyl)-1H-indole-3-carboxamide-D4	100ug/mL