

Supplementary File S1

1.

Methamphetamine and captagon

Method 1.1:

Acetonitrile	4
Methanol	6
2-Propanol	4
Sodium hydroxide	2
B-Glucuronidase	0
Ammonium acetate	1
Formic acid	6
Water	0

Energy used: 2

Waste: 6

Occupational hazard: 0

Total PPs: 31

Analytical eco-scale: 69

Method 1.2:

6	Methanol
4	Ethyl acetate
0	Potassium hydrogen carbonate
1	Helium

Energy used: 2

Occupational hazard: 3

Waste: 5

Total PPs: 21

Analytical eco-scale: 79

Method 1.3:

Acetonitrile	4
acetone	4
Ammonium hydroxide solution	6
Methylene chloride	4
Formic acid	6
Water	0
Methanol	6
K ₂ HPO ₄	0
KOH	4
2-propanol	4
Phosphoric acid	2
Butyl acetate	2
Ammonium formate	1
Ammonium acetate	1
Sodium chloride	0

Energy used: 2

Waste 3

Occupational hazard: 0

Total PPs: 49

Analytical eco-scale: 51

2.

Methamphetamine and cannabis

Method 2.1:

Acetonitrile	4
Methanol	6
2-Propanol	4
Sodium hydroxide	2
B-Glucuronidase	0
Ammonium acetate	1
Formic acid	6
Water	0

Energy used: 2

Waste 6

Occupational hazard 0

Total PPs: 28

Analytical eco-scale: 69

Method 2.2:

Acetonitrile	4
Methanol	6
Ethanol	4
Isopropanol	4
Formic acid	6

Energy used: 1

Waste 5

Occupational hazard 0

Total PPs: 30

Analytical eco-scale: 70

Method 2.3:

Methanol	6
Ammonium formate	1
Formic acid	6
Acetonitrile	4

Energy used: 2

Waste 3

Occupational hazard 0

Total PPs: 22

Analytical eco-scale: 78

Method 2.4:

Acetonitrile	4
Methanol	6
Ammonium acetate	1
Formic acid	6
Acetone	4
Chloroform	6
Acetic acid	4

Energy used: 2

Waste 3

Occupational hazard 0

Total PPs: 31

Analytical eco-scale: 69

Method 2.5:

Acetonitrile	4
Methanol	6
Formic acid	6
CBN (Cubic boron nitride)	4
Water	

Energy used: 2

Waste: 8

Occupational hazard 0

Total PPs: 30

Analytical eco-scale: 70

Method 2.6:

Acetonitrile	4
Methanol	6
Formic acid	6

Energy used: 2

Waste: 8

Occupational hazard 0

Total PPs: 26

Analytical eco-scale: 74

3. Methamphetamine and tramadol

Method 3.1:

Ethyl acetate	4
Hydrochloric salt	4
Methanol	6
Sodium carbonate	1

Energy used: 2

Waste: 5

Occupational hazard: 0

Total PPs: 22

Analytical eco-scale: 78

Method 3.2:

Formic acid	6
Ammonium acetate	1
Acetic acid	4
Acetonitrile	4
Methanol	6
β -Glucuronidase	0
Water	0

Energy used: 2

Waste: 5

Occupational hazard: 0

Total PPs: 28

Analytical eco-scale: 72

Method 3.3:

Methanol	6
Ammonium formate	1
Ammonium acetate	1
Formic acid	6
Water	0

Energy used: 2

Waste: 3

Occupational hazard: 0

Total PPs: 19

Analytical eco-scale: 81

Method 3.4:

Benzoyllecgonine	2
Acetonitrile	4
6-Acetylmorphine	2
Formic Acid	6
Water	0
Methanol	6
2-Propanol	4
Ammonium Formate	1

Energy used: 2

Waste: 3

Occupational hazard: 0

Total PPs: 30

Analytical eco-scale: 70

Method 3.5:

Acetonitrile	4
Acetone	4
Ammonium hydroxide solution	6
Methylene chloride	4
Formic acid	6
Water	0
Methanol	6
K ₂ HPO ₄	0
KOH	4
2-Propanol	4
Phosphoric acid	2
Butyl acetate	2
Ammonium formate	1
Ammonium acetate	1
Sodium chloride	0

Energy used: 2

Waste: 3

Occupational hazard: 0

Total PPs: 49

Analytical eco-scale: 51

Method 3.6:

Acetonitrile	4
Acetic acid	4
Ethanol	4
Water	0
Methanol	6
Formic acid	6
Dibenzepin	0
Sodium	2

Energy used: 2

Waste: 3

Occupational hazard: 1

Total PPs: 32

Analytical eco-scale: 68

4. Methamphetamine and Heroin

Method 4.1:

Acetonitrile	4
Methanol	6
Methylene chloride	4
Hydrogen gas	4

Energy used: 1

Waste: 9

Occupational hazard: 3

Total penalty points: 31

Analytical eco-scale: 69

Method 4.2:

Monoacetylmorphine	4
Methanol	6
Theophylline	2

Barbital	1
Phenobarbitals	6
Phosphoric acid	2

Energy used: 1

Waste 3

Occupational hazard 0

Total PPs: 25

Analytical eco-scale: 75

Method 4.3:

Acetonitrile	4
Methanol	6
2-Propanol	4
Sodium hydroxide	2
Ammonium acetate	1
Formic acid	6

Energy used: 2

Waste 3

Occupational hazard 0

Total PPs: 28

Analytical eco-scale: 72

Method 4.4:

Acetonitrile	4
Methanol	6
Ammonium formate	1
Ammonium acetate	1
Formic acid	6

Energy used: 1

Waste 5

Occupational hazard 0

Total PPs: 24

Analytical eco-scale: 76

Method 4.5:

Acetonitrile	4
Methanol	6
Sodium hydroxide	2
Trifluoroacidic acid	4
Phosphoric acid	2

Energy used: 1

Waste: 3

Occupational hazard 0

Total PPs: 22

Analytical eco-scale: 78

Method 4.6:

Acetonitrile	4
Acetone	4
Ammonium hydroxide solution	6
Water	0
Methanol	6
Isopropanol	4
Ammonium acetate	1
Sodium hydroxide	2

Energy used: 0

Waste: 3

Occupational hazard: 3

Total PPs: 33

Analytical eco-scale: 67

Method 4.7:

Acetonitrile	4
Acetone	4
Ammoniumhydroxide solution	6
Methylenechloride	4
Formic Acid	6
Methanol	6
K ₂ HPO ₄	0
KOH	4
2-Propanol	4
Phosphoricacid	2
Butyl acetate	2
Ammonium formate	1
Ammonium acetate	1

Energy used: 2

Waste 3

Occupational hazard: 0

Total PPs: 49

Analytical eco-scale: 51

Method 4.8:

Acetonitrile	4
Acetic acid	4
Ammonium hydroxide solution	6
Formic acid	6
Water	0
Methanol	6
Phosphoric acid	2
Ammonium formate	1

Energy used: 0

Waste: 3

Occupational hazard: 3

Total PPs: 35

Analytical eco-scale