

# Appendix C: Drug Precursor/ Reagent Table A

Compound	Amphetamine	MDA/ MDMA	Methamphetamine	PCP Analog	P-2-P
Acetic acid	r A2,3	r MD1,2,5			p P4
Acetic anhydride					p P1
Acetaldehyde			p M4		
Acetonitrile	p A6				
$\alpha$ -Acetylphenylaceto- nitrile					p P2
Allyl benzene	p A6				
Allyl chloride	p A5		p M6		
4-Allyl-1,2-methylene- dioxy benzene		p MD1			
Aluminum foil	r A4		r M1		
Aluminum chloride		r MD1,2			r P5,7
Ammonia gas	p A4	r MD3 p MD5	r M(7)		
Ammonium acetate	p A1	r MD2			
Ammonium chloride			r M(7)		
Ammonium formate	p A1	p MD1			
Ammonium hydroxide	p A1			All	
Benzaldehyde	p A2				p P5
Benzene	p A5				p P7
Benzyl chloride			p M4		
Benzyl cyanide					p P2
Bromobenzene				p PC1a,2a,3a p PC1b,2b,3b	
Bromothiophene					
Butylamine	r A2				
Chloroacetone					p P7
3-Chloropropene	p A5		p M6		
Copper sulfate			r M1		
Cuprus oxide		r MD5			
Cyclohexanone				All	

Compound	Amphetamine	MDA/ MDMA	Methamphetamine	PCP Analog	P-2-P
Dibromomethane		r MD2			
Ephedrine/ pseudoephedrine			p M2,3,7		
Ethyl acetate					p P2
Formamide	p A1	p MD1			
Formic acid	r A1	r MD4	r M5		
HBr		r MD5			
HCl	r All	r All	r All	r All	
Hydrogen	r A2,3		r M2		
Hydrogen peroxide		r MD1			
HI	r A7		r M3		
Hydroxylamine HCl	p A3				
Iodine			r M3		
Iron fillings					r P5
Isosafrole		p MD1			
Lithium			r M(7)		
Lithium aluminum hydride	r A2,3	r MD2			
Magnesium turnings			r M4	r All	
Manganous carbonate					r P4
Manganous chloride					r P4
Mercuric chloride	r A4	r MD3,4,5	r M1		
Mercury	r A2				
Methylamine		p MD3,4	p M1,4,5		
Methylformamide		p MD4	p M5		
Nitroethane		p MD2			p P5
Norpseudoephedrine	p A7				
Palladium sulfate			r M2		
Perchloric acid			r M2		
Phenylacetic acid					p P1,3,4
Phenylacetonitrile					p P2
Phenylmagnesium bromide				p PC1a,2a,3a	
Phenylacetone	p A1,3,4		p M1,5		
Phosphorous	r A7		r M3		
Phosphorous pentachloride			r M2		
Piperonal		p MD2			
Piperidine				p PC1	
Platinum			r M2		
Platinum chloride			r M2		
Platinum oxide			r M2		
Potassium carbonate				r All	
Potassium cyanide				r All	
Potassium hydroxide	r All	r All	r All	r All	r All
Pumic					r P4
Pyridine				p PC2	
Raney nickel	r A2,3		r M2		
Sodium			r M1		
Sodium acetate					r P1

Compound	Amphetamine	MDA/ MDMA	Methamphetamine	PCP Analog	P-2-P
Sodium amalgam	r A2,3				
Sodium bisulfite				r All	r All
Sodium hydroxide	r All	r All	r All	r All	r All
Sodium sulfate	r All				r P1,2,5
Sulfuric acid	r All	r MD1	r All		r P2
Thionyl chloride			r M2		

# Appendix C: Drug Precursor/ Reagent Table B

Reaction	Precursors	Reagents
A1	Ammonia Ammonium formate Formamide Phenylacetone	Formic acid Hydrochloric acid Sulfuric acid
A2	Benzaldehyde Nitroethane	Acetic acid Butylamine Hydrogen Lithium aluminum hydride Sodium amalgam Raney nickel
A3	Hydroxylamine HCl Phenylacetone	Acetic acid Hydrogen Lithium aluminum hydride Raney nickel Palladium black Sodium acetate Sodium amalgam
A4	Ammonia Phenylacetone	Aluminum Mercuric chloride
A5	Benzene Allyl chloride Ammonia	Ferric chloride

*Continued.*

Reaction	Precursors	Reagents
A6	Allylbenzene Acetonitrile	Hydrochloric acid
A7	Phenylpropanolamine	Hydriodic acid Red phosphorous
MD1	Ammonia Ammonium formate Formamide Isosafrole	Acetic acid Formic acid Hydrochloric acid Hydrogen peroxide Sulfuric acid
MD2	Nitroethane Piperonal	Acetic acid Ammonium acetate Lithium aluminum hydride
MD3	Isosafrole Methylamine	Aluminum foil Mercuric chloride
MD4	Isosafrole Methylamine Methylformamide	Acetic acid Formic acid Hydrochloric acid Hydrogen peroxide Sulfuric acid
MD5	Ammonia (MDA) Methylamine (MDMA) Safrole	Cuprus oxide Hydrobromic acid Mercuric chloride Sodium carbonate Sodium hydroxide
M1	Phenylacetone Methylamine	Aluminum Mercuric chloride
M2	Ephedrine	Hydrogen Palladium black Palladium sulfate Perchloric acid Phosphorous pentachloride Platinum Platinum chloride Sodium acetate Sulfuric acid Thionyl chloride
M3	Ephedrine	Hydriodic acid Iodine Red phosphorous
M4	Acetaldehyde Benzylchloride Methylamine	Iodine Magnesium

*Continued.*

Reaction	Precursors	Reagents
M5	Phenylacetone Methylamine Methylformamide	Formic acid Hydrochloric acid
M6	Allylchloride Benzene Methylamine	Ferric chloride
M7	Ephedrine	Ammonia Ammonium chloride Lithium or sodium Sodium chloride Tetrahydrofuran
PC analogs	Bromobenzene Bromothiophene Cyclohexanone Morpholine Phenylmagnesiumbromide Piperidine Pyridine Pyrolodine	Magnesium Potassium cyanide Sodium cyanide
P1	Phenylacetic acid Acetic anhydride	Sodium acetate
P2	Benzylcyanide Ethyl acetate	Acetic acid Phosphoric acid Sodium Sulfuric acid
P3	Phenylacetic acid	Lead acetate
P4	Phenyl acetic acid Acetic acid	Hydrochloric acid Manganous carbonate Manganous chloride Nitric acid Pumic Sodium carbonate Thorium nitrate
P5	Benzaldehyde Nitroethane	Butylamine Ferric chloride Iron filings
P6	Phenyl-2-propanol	Potassium dichromate
P7	Benzene Chloroacetone	Aluminum chloride Sodium bisulfate

*Continued.*

## Drug Precursor/Reagent Table Methods Key

A1	Amphetamine via Leuckart reaction
A2	Amphetamine via benzaldehyde/nitroethane
A3	Amphetamine via P-2-P/hydroxylamine
A4	Amphetamine via P-2-P/ammonia
A5	Amphetamine via benzene/allyl chloride/ammonia
A6	Amphetamine via allylbenzene/acetonitrile
A7	Amphetamine via phenylpropanolamine/HI
MD1	MDA via isosafrole to 3,4-methylenedioxy P-2-P, using the Leuckart reaction
MD2	MDA via piperonal/nitroethane
MD3	MDMA via 3,4-methylenedioxy P-2-P/methylamine
MD4	MDMA via 3,4-methylenedioxy P-2-P using the Leuckart reaction
MD5a	MDA via safrole/HBr/ammonia
MD5b	MDMA via safrole/HBr/methylamine
M1	Methamphetamine via P-2-P/methylamine
M2	Methamphetamine via ephedrine/H <sub>2</sub>
M3	Methamphetamine via ephedrine/HI
M4	Methamphetamine via benzyl chloride/acetaldehyde/methylamine
M5	Methamphetamine via Leuckart reaction
M6	Methamphetamine via benzene/allyl chloride/methylamine
M7	Methamphetamine via Birch reduction
PC1	Piperidine/cyclohexane intermediate
PC1a	Phenyl addition
PC1b	Thiophene addition
PC2	Pyridine/cyclohexane intermediate
PC2a	Phenyl addition
PC2b	Thiophene addition
PC3	Morpholine/cyclohexane intermediate
PC3a	Phenyl addition
PC3b	Thiophene addition
P1	P-2-P via phenylacetic acid/acetic anhydride
P2	P-2-P via benzyl cyanide/ethyl acetate
P3	P-2-P via phenylacetic acid/lead acetate
P4	P-2-P via phenylacetic acid/acetone
P5	P-2-P via benzaldehyde/nitroethane
P6	P-2-P via phenyl-2-propanol/dichromate
P7	P-2-P via benzene/chloroacetone