Appendix D: Reaction Mechanisms

Amphetamine Reactions

A1
$$\begin{array}{c} O \\ H \\ O \\ O \\ \text{phenyl-2-propanone} \end{array} + \begin{array}{c} O \\ V \\ O \\ H \\ \text{formamide} \end{array} + \begin{array}{c} O \\ V \\ H \\ \text{2-formamido-1-phenyl propane} \end{array} + \begin{array}{c} HCI \\ WH_2 \\ \text{amphetamine} \end{array}$$

A2

benzaldehyde
$$NO_2$$
 LiAl H_4 N H_2 amphetamine 1 -phenyl-2-nitropropene

A3

A5

A6

$$+ CH_3CN \\ acetonitrile \\ allylbenzene \\ + HCl \\ NH_2 \\ amphetamine \\ N-acetylamphetamine$$

A7

$$\begin{array}{c} \text{OH} \\ \hline \\ \text{NH}_2 \\ \text{hydriodic acid} \\ \end{array} \\ \begin{array}{c} \text{NH}_2 \\ \text{amphetamine} \\ \end{array}$$

Methamphetamine Reactions

M1

M3

M4

M7

Phenylacetone Reactions

P1

P2

P3

P5

P6

P7

MDA/MDMA Reactions

MD2

$$\begin{array}{c} O \\ O \\ O \\ O \\ \end{array} \\ \begin{array}{c} O \\ H \\ \end{array} \\ \begin{array}{c} O \\ \\ NO_2 \\ \end{array} \\ \begin{array}{c} O \\ \\ NO_2 \\ \end{array} \\ \begin{array}{c} IiAlH_4 \\ O \\ \\ NH_2 \\ \end{array} \\ \begin{array}{c} O \\ \\ \\ NH_2 \\ \end{array} \\ \begin{array}{c} O \\ \\ \\ NH_2 \\ \end{array} \\ \begin{array}{c} O \\ \\ \\ \\ \\ \\ \\ \end{array}$$

MD3

MD4

MD5

Phencyclidine Analogs

PC1

PC2

bromide

TCM

BrMg'

morpholine

MCC