

**CHEMICAL STRUCTURES OF THE  
MISUSE OF DRUGS ACT 1975  
(AS AMENDED)**

**ESR Drug Chemistry**

**June 2017**

**FORENSIC INTERNAL REPORT 2017/10**

# **Chemical Structures of the Misuse of Drugs Act 1975 (as amended)**

## **ESR Drug Chemistry**

**June 2017**

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# Contents

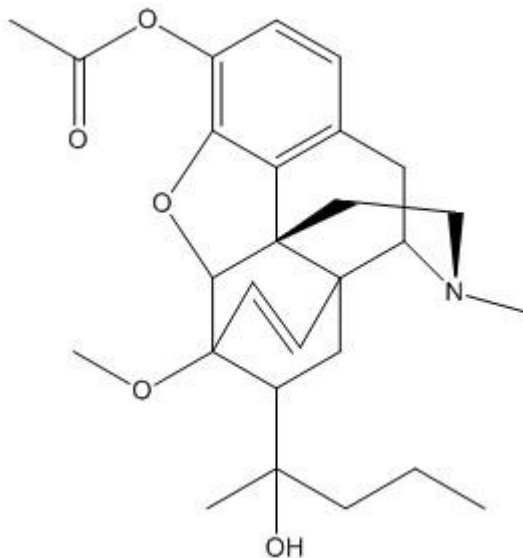
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- Schedule 1 – Class A
- Schedule 2 – Class B
- Schedule 3 – Class C
- Schedule 4 – Precursor substances
- Appendix 1. Controlled drugs with amphetamine analogue nuclei
- Appendix 2. Controlled drugs with pethidine analogue nuclei
- Appendix 3. Controlled drugs with phencyclidine analogue nuclei
- Appendix 4. Controlled drugs with fentanyl analogue nuclei
- Appendix 5. Controlled drugs with methaqualone analogue nuclei
- Appendix 6. Controlled drugs with DMT analogue nuclei

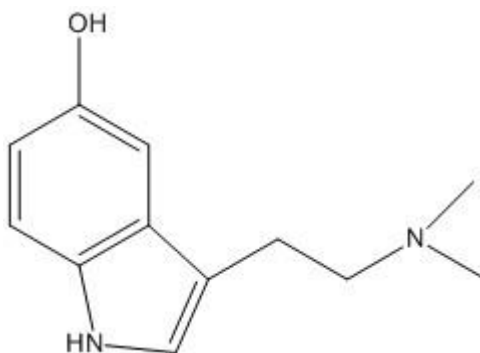
# Schedule 1 – Class A

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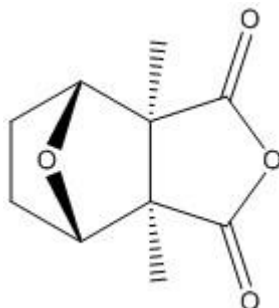
**Acetorphine** (*O*<sup>3</sup>-acetyl-7,8-dihydro-7  $\alpha$ -[1 (*R*)-hydroxy-1-methylbutyl]-*O*<sup>6</sup>-methyl-6,14-endoethenemorphine)



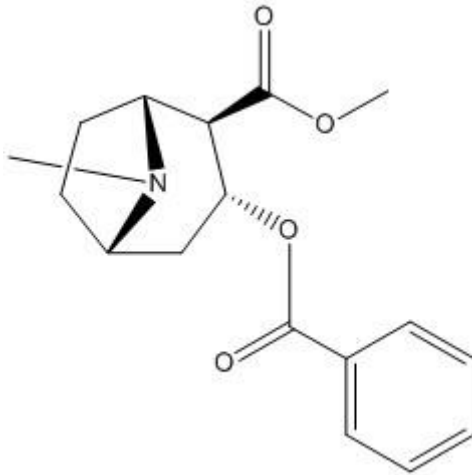
**Bufotenine** (3-(2-dimethylaminoethyl)-5-hydroxyindole)



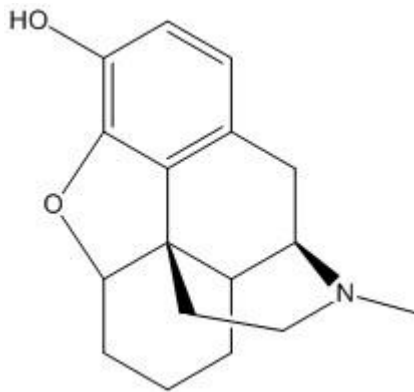
**Cantharidin** (hexahydro-3a,7a-dimethyl-4,7-epoxyisobenzofuran-1,3-dione)



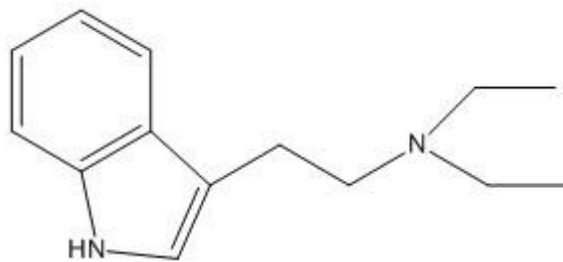
**Cocaine** (methyl ester of benzoylecgonine)



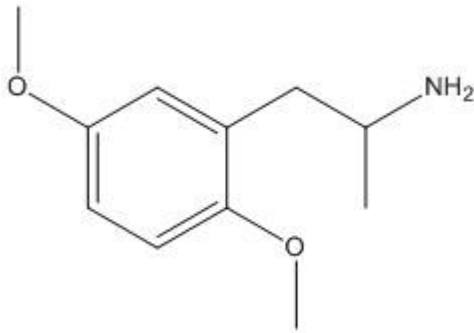
**Desomorphine** (dihydrodeoxymorphine)



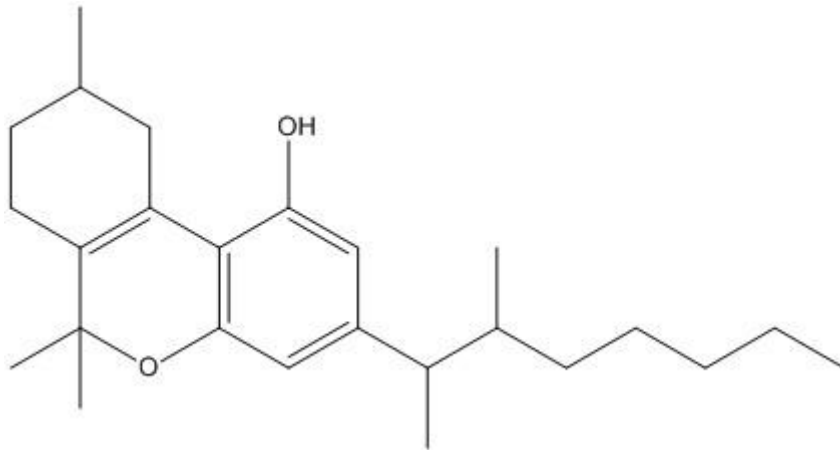
**DET** (*N,N*-diethyltryptamine)



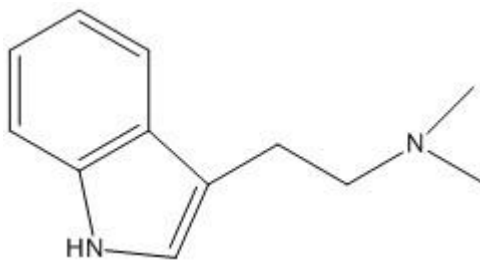
**DMA** (2-amino-1-(2,5-dimethoxyphenyl)propane)



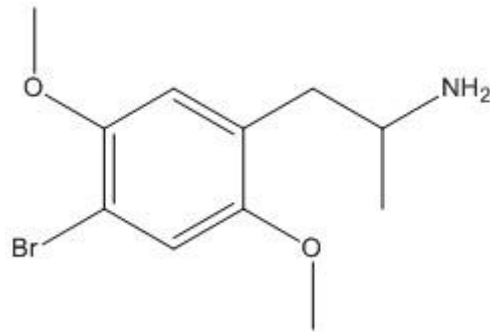
**DMHP** (3-(1,2-dimethylheptyl)-1-hydroxy-7,8,9,10-tetrahydro-6,6,9-trimethyl-6*H*-dibenzo [*b,d*] pyran)



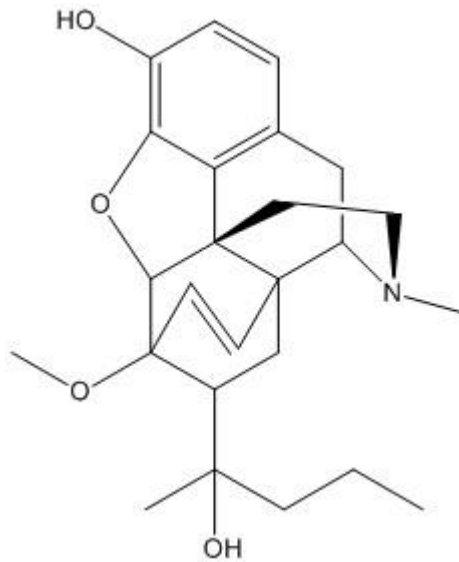
**DMT** (*N,N*-dimethyltryptamine)



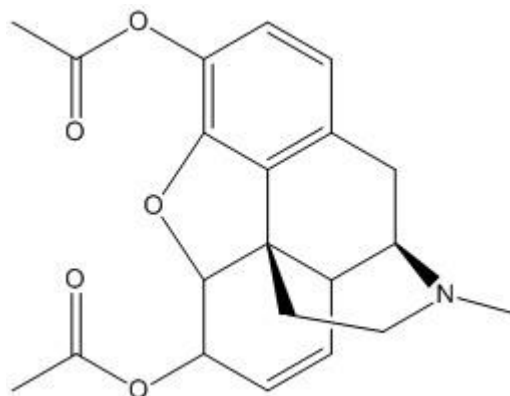
**DOB** (2-amino-1-(4-bromo-2,5-dimethoxyphenyl)propane), also known as **bromo-DMA**



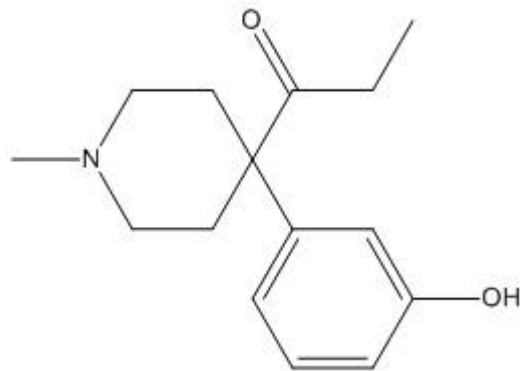
**Etorphine** (7,8-dihydro-7  $\alpha$ -[1 (*R*)-hydroxy-1-methylbutyl]-*O*<sup>6</sup>-methyl-6,14-endoethenomorphine)



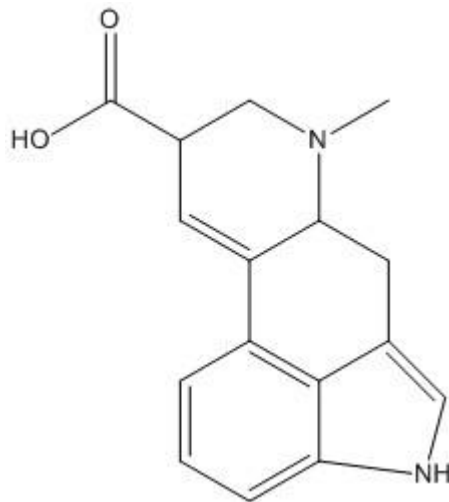
**Heroin** (diacetylmorphine)



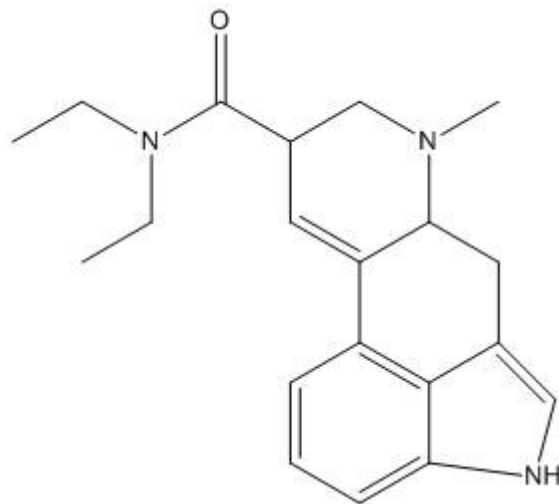
**Ketobemidone** (4-*meta*-hydroxyphenyl-1-methyl-4-propionylpiperidine)



**Lysergic acid**

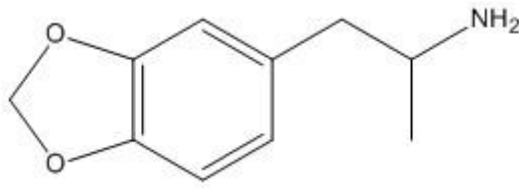


**Lysergide** (*N,N*-diethyllysergamide or lysergic acid diethylamide)

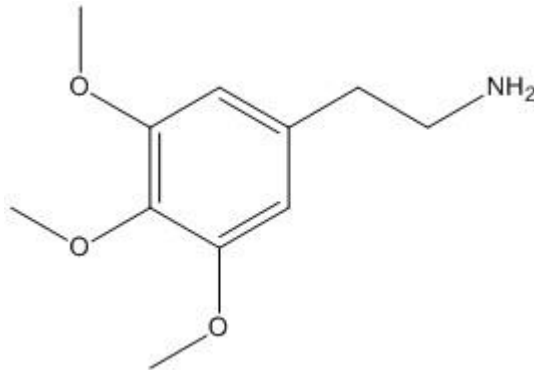




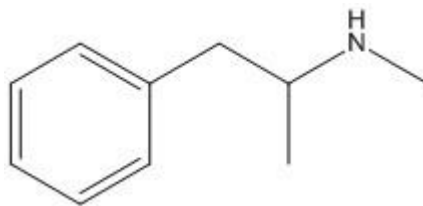
**MDA** (2-amino-1-(3,4-methylenedioxyphenyl)propane)



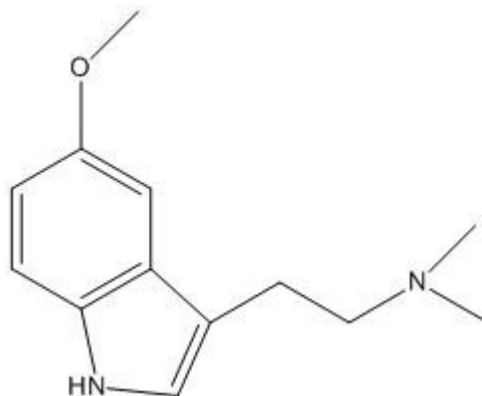
**Mescaline** (3,4,5-trimethoxyphenethylamine)



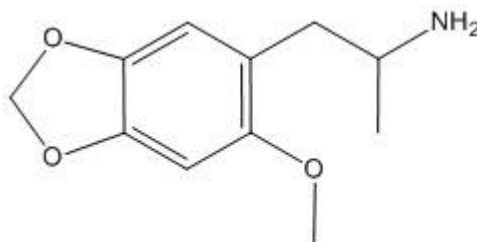
**Methamphetamine** (2-methylamino-1-phenylpropane)



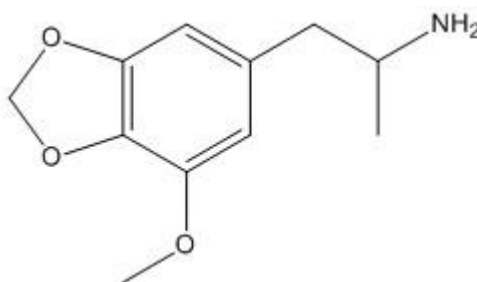
**5-methoxydimethyltryptamine** (5-methoxy-*N,N*-dimethyltryptamine)



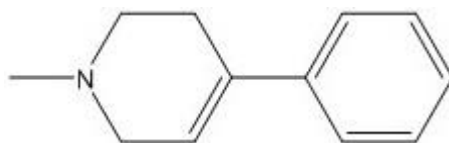
**2-methoxy-4,5-methylenedioxyamphetamine** (2-amino-1-(2-methoxy-4,5-methylenedioxyphenyl)propane), also known as **MMDA** or **MMDA-2**



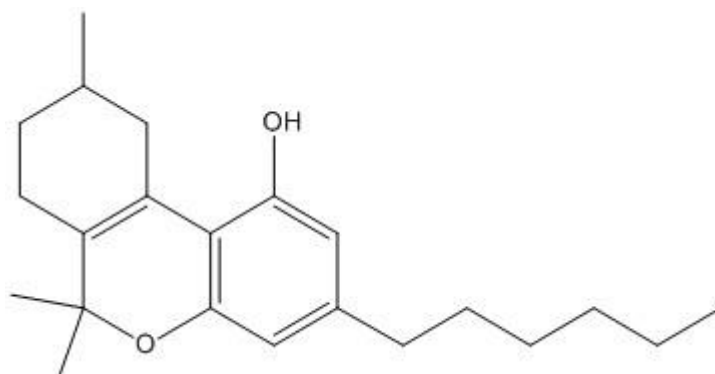
**3-methoxy-4,5-methylenedioxyamphetamine** (2-amino-1-(3-methoxy-4,5-methylenedioxyphenyl)propane), also known as **MMDA**



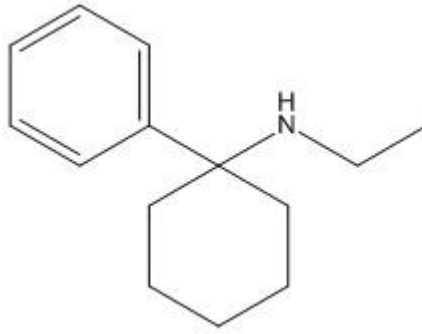
**MPTP** (1-methyl-4-phenyl-1,2,5,6-tetrahydropyridine)



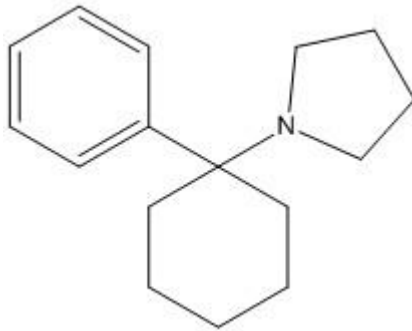
**Parahexyl** (3-hexyl-1-hydroxy-7,8,9,10-tetrahydro-6,6,9-trimethyl-6*H*-dibenzo [*b,d*] pyran)



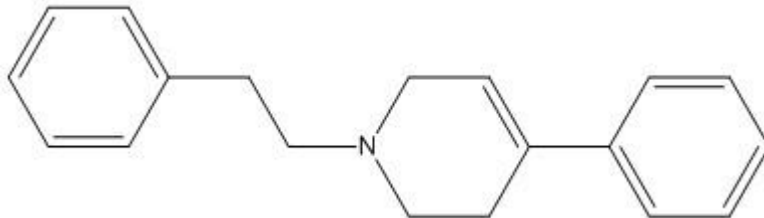
**PCE** (*N*-ethyl-1-phenylcyclohexylamine)



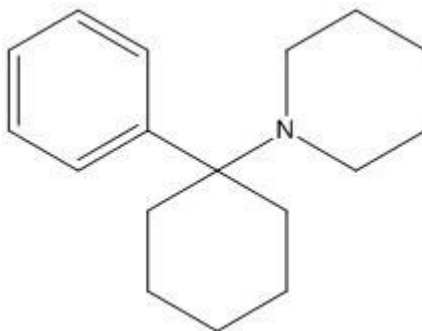
**PCPY** (1-(1-phenylcyclohexyl)pyrrolidine), also known as **PHP**



**PEPTP** (1-(2-phenylethyl)4-phenyl-1,2,5,6-tetrahydropyridine)

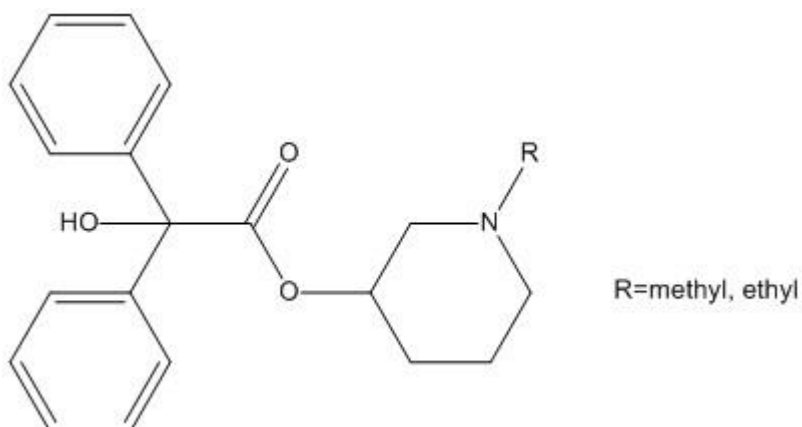


**Phencyclidine** (1-(1-phenylcyclohexyl)piperidine)

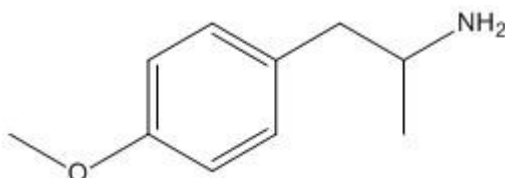


**PHP** (1-(1-phenylcyclohexyl)pyrrolidine), see **PCPY**

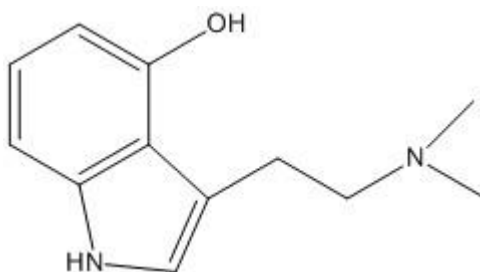
**Piperidyl benzilates** (*N*-methylpiperidyl benzilates and *N*-ethylpiperidyl benzilates, but excluding the methobromide salts)



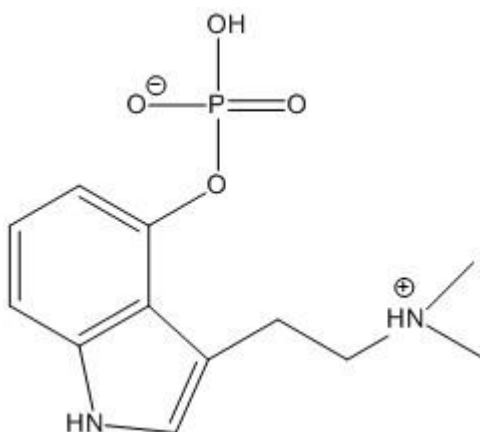
**PMA** (2-amino-1-(4-methoxyphenyl)propane)



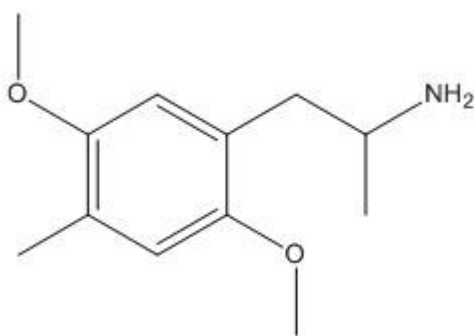
**Psilocine** (3-(2-dimethylaminoethyl)-4-hydroxyindole), also known as **Psilotsin**



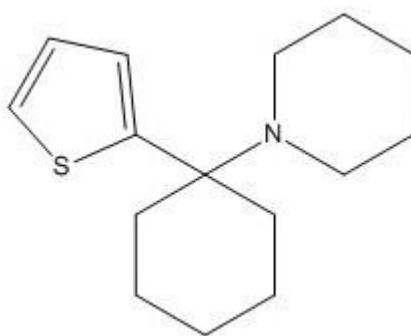
**Psilocybine** (3-(2-dimethylaminoethyl) indol-4-yl dihydrogen phosphate)



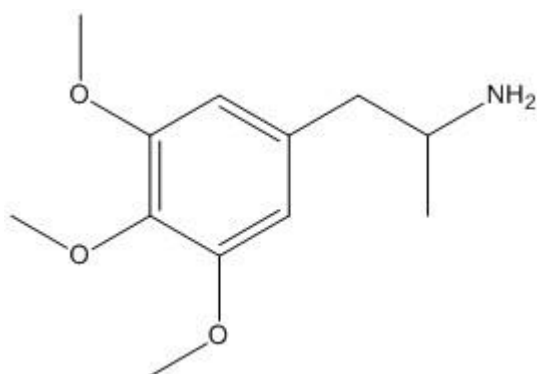
**STP,DOM** (2-amino-1-(2,5-dimethoxy-4-methyl)phenylpropane)



**TCP** (1-[1-(2-thienyl)cyclohexyl]piperidine)



**TMA** (2-amino-1-(3,4,5-trimethoxyphenyl)propane)

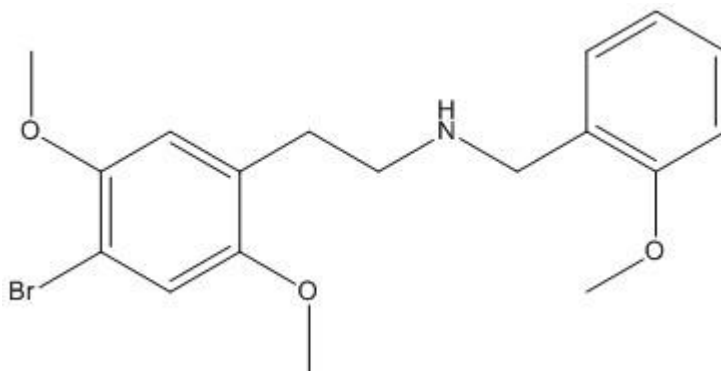


# Schedule 2 – Class B

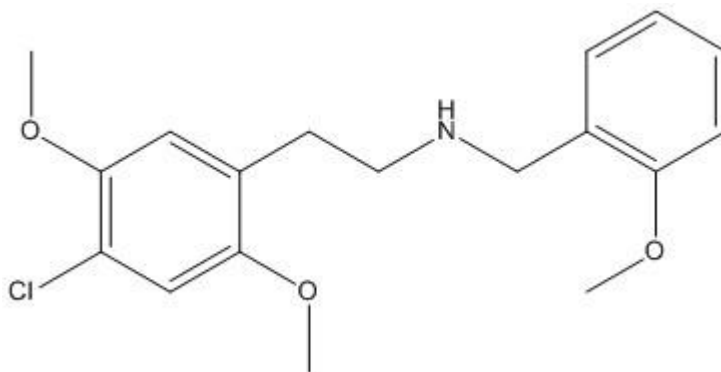
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## Part 1

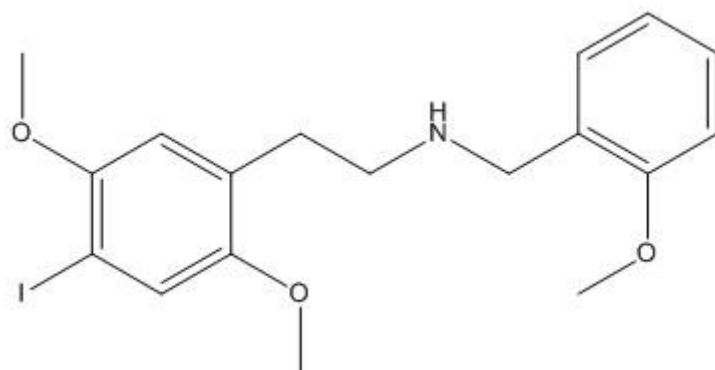
**25B-NBOMe** (2-(4-bromo-2,5-dimethoxyphenyl)-*N*-(2-methoxybenzyl)ethanamine)



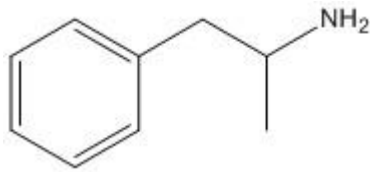
**25C-NBOMe** (2-(4-chloro-2,5-dimethoxyphenyl)-*N*-(2-methoxybenzyl)ethanamine)



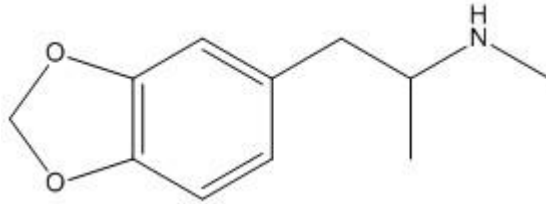
**25I-NBOMe** (2-(4-iodo-2,5-dimethoxyphenyl)-*N*-(2-methoxybenzyl)ethanamine)



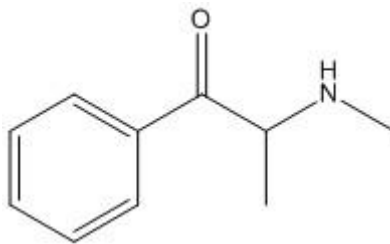
**Amphetamine** (2-amino-1-phenylpropane)



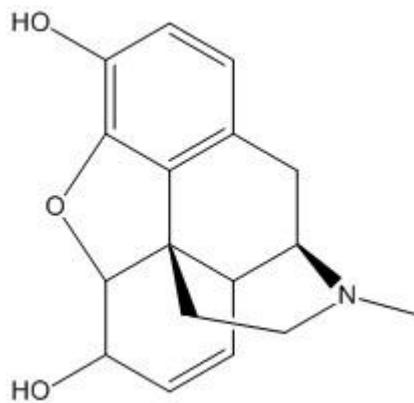
**MDMA** (2-methylamino-1-(3,4-methylenedioxyphenyl)propane)



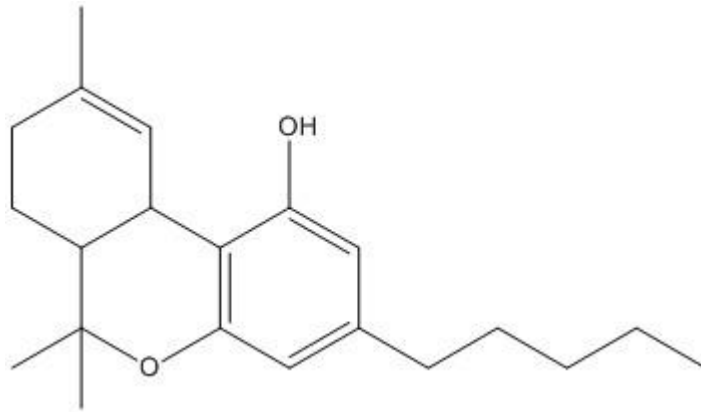
**Methcathinone**



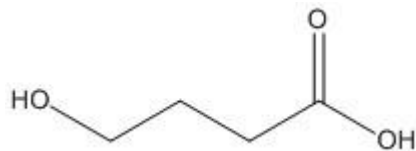
**Morphine**



**Tetrahydrocannabinols**



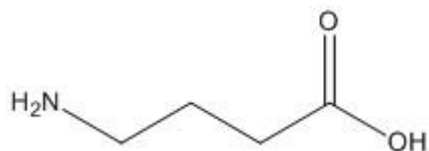
**Gamma-hydroxybutyrate (GHB)**



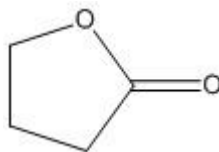
**1,4-butanediol**



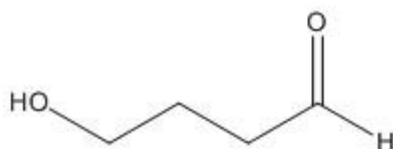
**Gamma-aminobutyric acid**



**Gamma-butyrolactone**



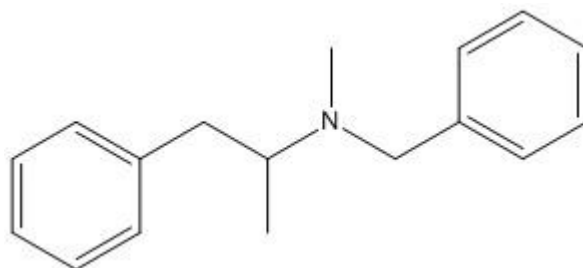
**Gamma-hydroxybutyraldehyde**



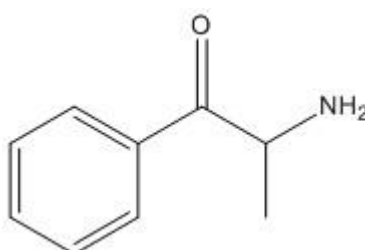


## Part 2

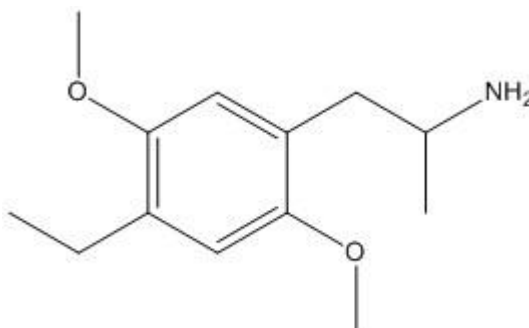
**Benzphetamine** (2-benzylmethylamino-1-phenylpropane)



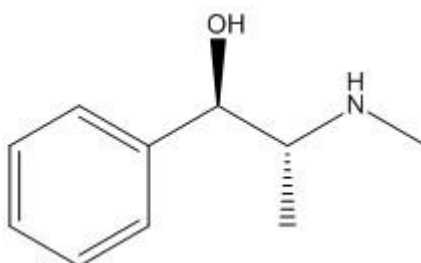
**Cathinone** (2-amino-1-phenylpropan-1-one)



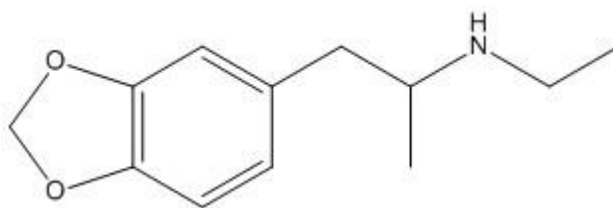
**DOET** (2-amino-1-(2,5-dimethoxy-4-ethylphenyl)propane)



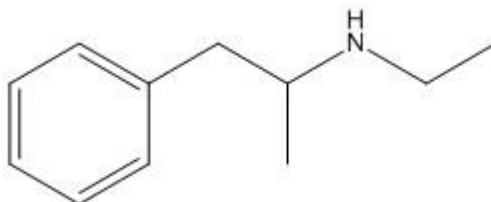
**Ephedrine**



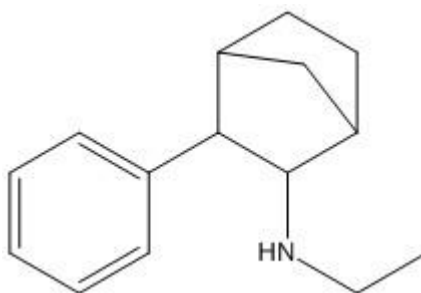
**N-ethyl MDA** (2-ethylamino-1-(3,4-methylenedioxyphenyl)propane)



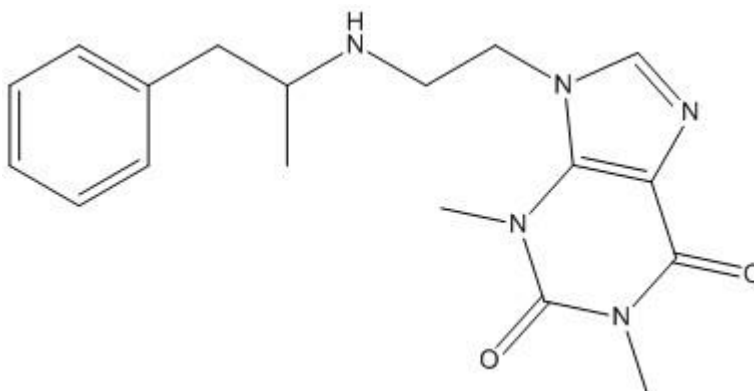
**N-ethylamphetamine** (2-ethylamino-1-phenylpropane)



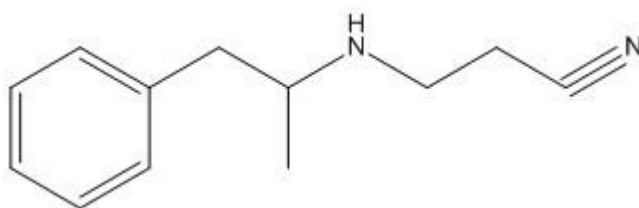
**Fencamfamine** (N-ethyl-3-phenylbicyclo[2.2.1]heptan-2-amine)



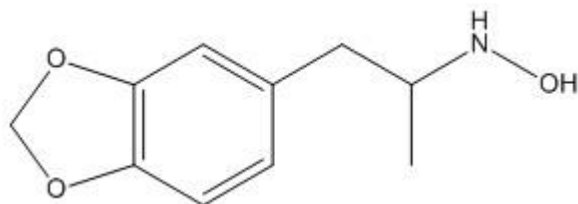
**Fenethylline** (3,7-dihydro-1,3-dimethyl-7-[2-[(1-methyl-2-phenylethyl)-amino]ethyl]-1H-purine-2,6-dione)



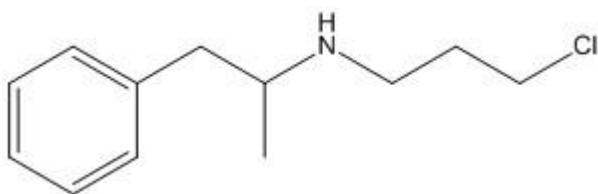
**Fenproporex** (2-(2-cyanoethylamino)-1-phenylpropane)



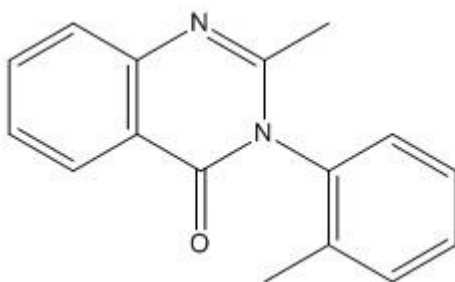
**N-hydroxy MDA** (2-hydroxyamino-1-(3,4-methylenedioxyphenyl)propane)



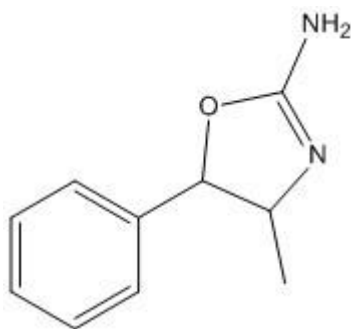
**Mefenorex** (2-(3-chloropropylamino)-1-phenylpropane)



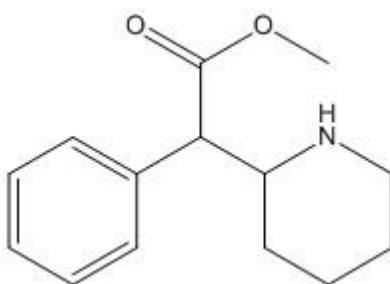
**Methaqualone** (2-methyl-3-(2-methylphenyl)-4(3*H*)-quinazolinone)



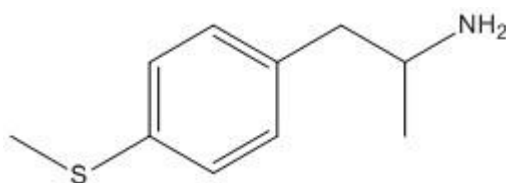
**4-methylaminorex** (*cis*-2-amino-4-methyl-5-phenyl-2-oxazoline)



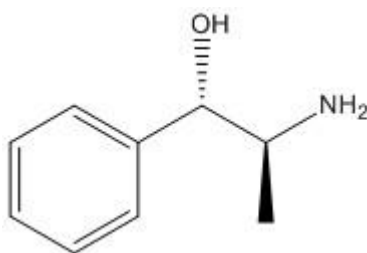
**Methylphenidate** ( $\alpha$ -phenyl-2-piperidineacetic acid methyl ester)



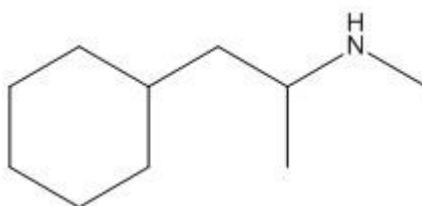
**4-methylthioamphetamine**



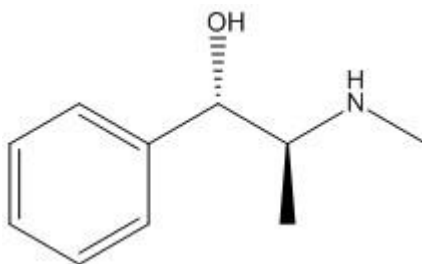
**Norpseudoephedrine** (*threo*-2-amino-1-hydroxy-1-phenylpropane)



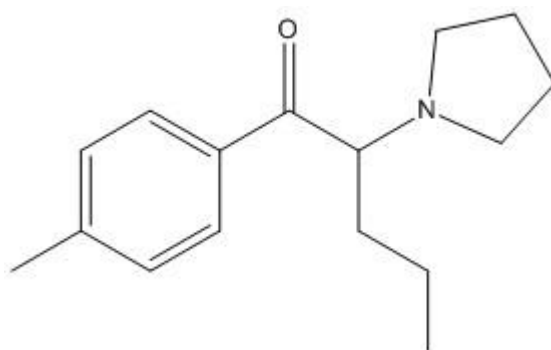
**Propylhexedrine** (1-cyclohexyl-2-methylaminopropane)



**Pseudoephedrine**

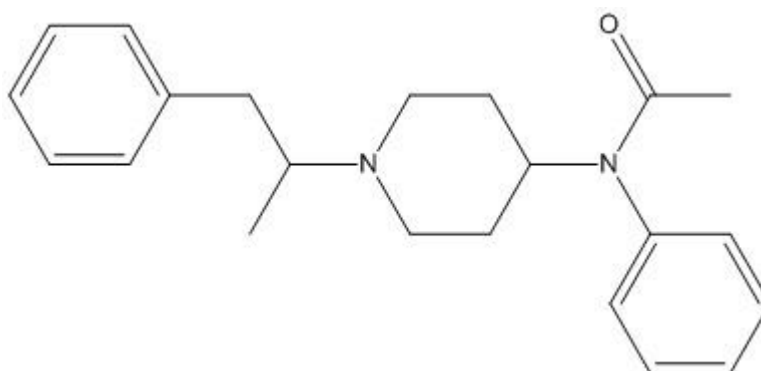


**Pyrovalerone** (1-(4-methylphenyl)-2-(1-pyrrolidinyl)-1-pentanone)

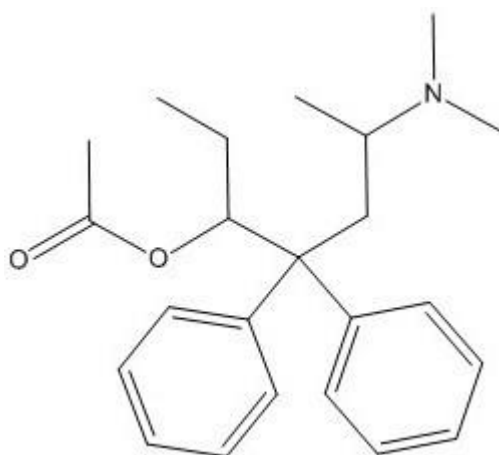


### Part 3

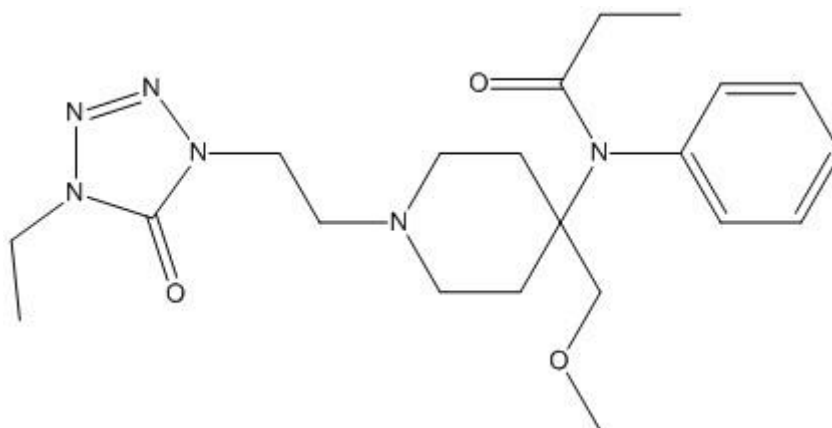
**Acetyl- $\alpha$ -methylfentanyl** (*N*-[1-( $\alpha$ -methylphenethyl)-4-piperidyl] acetanilide)



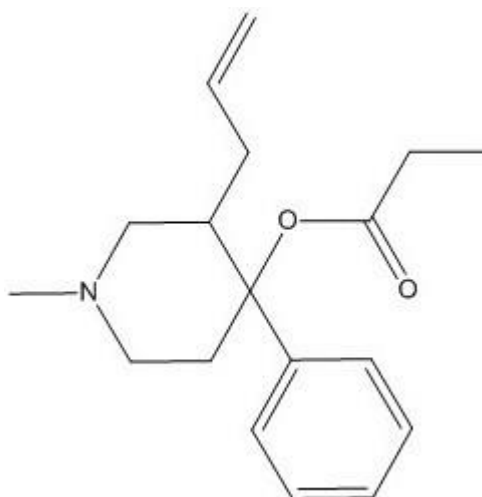
**Acetylmethadol** (3-acetoxy-6-dimethylamino-4,4-diphenylheptane)



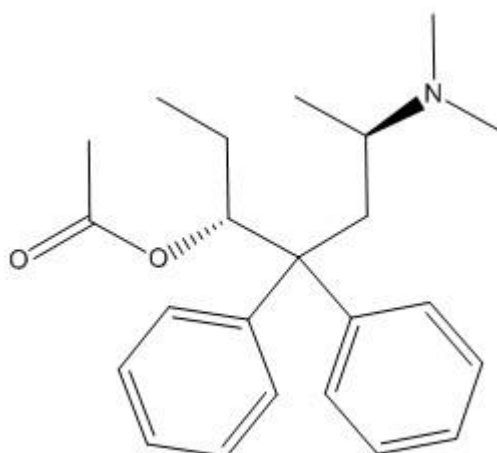
**Alfentanil** (*N*-[1-[2-(4-ethyl-4,5-dihydro-5-oxo-1*H*-tetrazol-1-yl)ethyl]-4-(methoxymethyl)-4-piperidinyl]-*N*-phenylpropanamide)



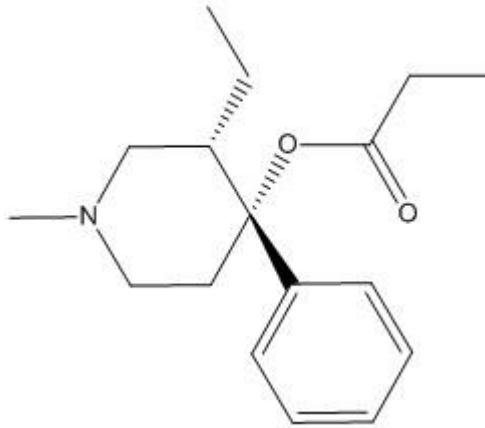
**Allylprodine** (3-allyl-1-methyl-4-phenyl-4-propionoxypiperidine)



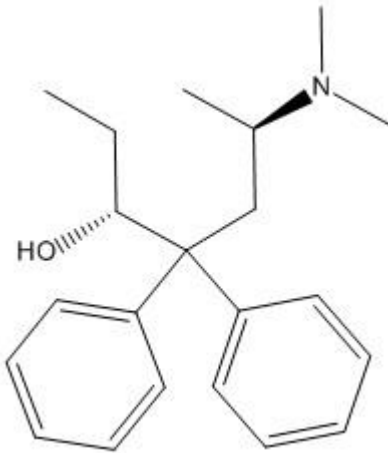
**Alphacetylmethadol** ( $\alpha$ -3-acetoxy-6-dimethylamino-4,4-diphenylheptane)



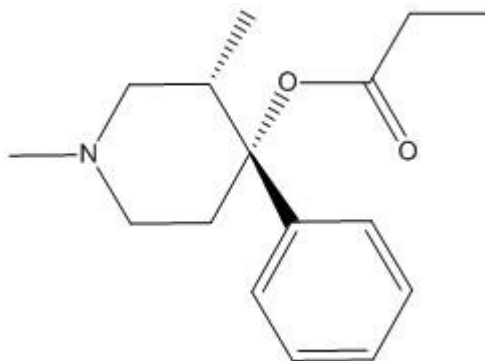
**Alphameprodine** ( $\alpha$ -3-ethyl-1-methyl-4-phenyl-4-propionoxypiperidine)



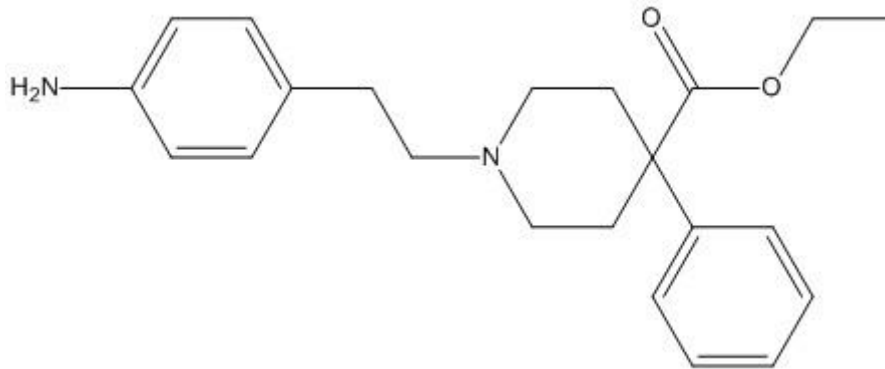
**Alphamethadol** ( $\alpha$ -6-dimethylamino-4,4-diphenyl-3-heptanol)



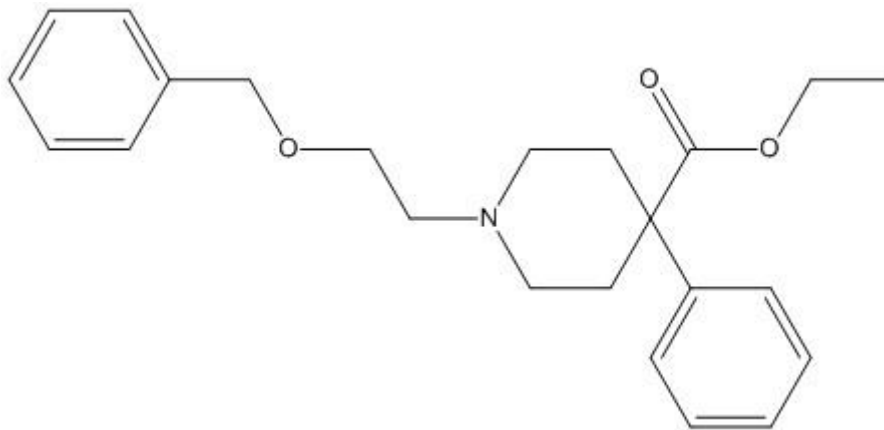
**Alphaprodine** ( $\alpha$ -1,3-dimethyl-4-phenyl-4-propionoxypiperidine)



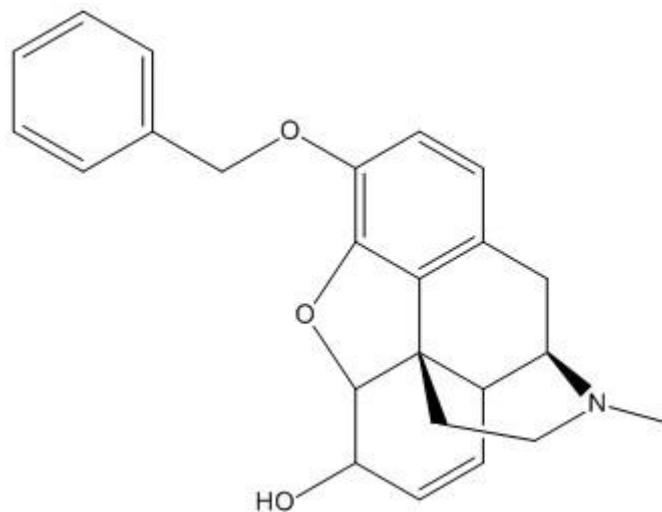
**Anileridine** (1-*para*-aminophenethyl-4-phenylpiperidine-4-carboxylic acid ethyl ester)



**Benzethidine** (1-(2-benzyloxyethyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester)

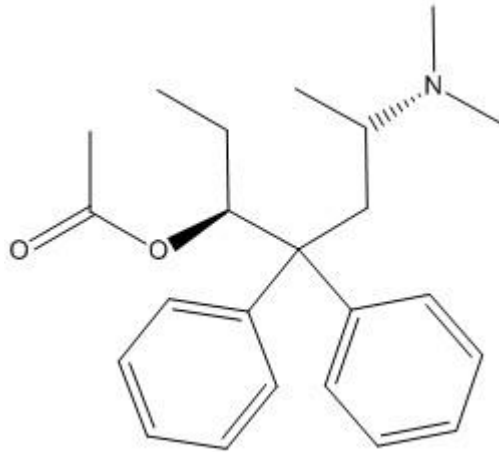


**Benzylmorphine** (3-benzylmorphine)

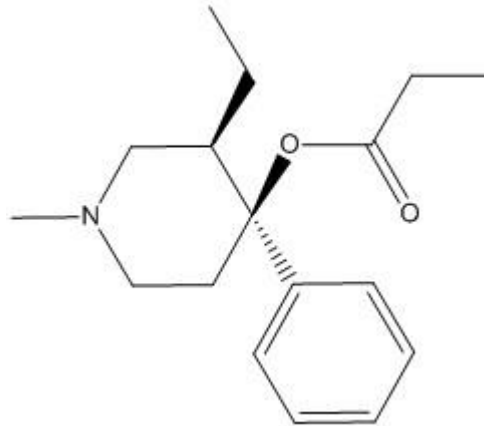




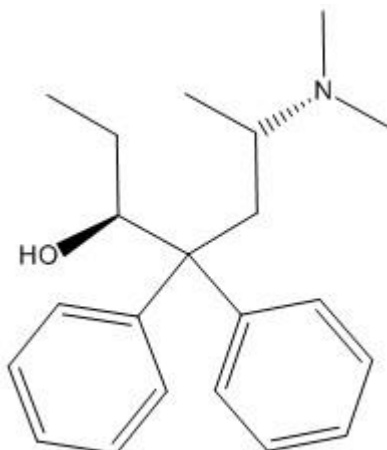
**Betacetylmethadol** ( $\beta$ -3-acetoxy-6-dimethylamino-4,4-diphenylheptane)



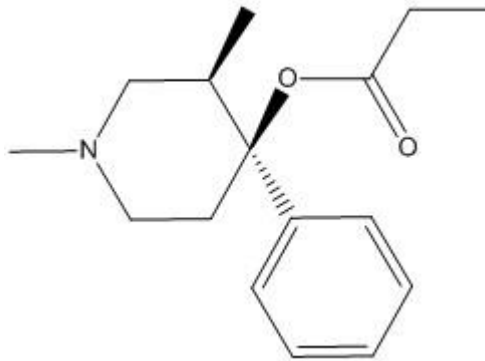
**Betameprodine** ( $\beta$ -3-ethyl-1-methyl-4-phenyl-4-propionoxypiperidine)



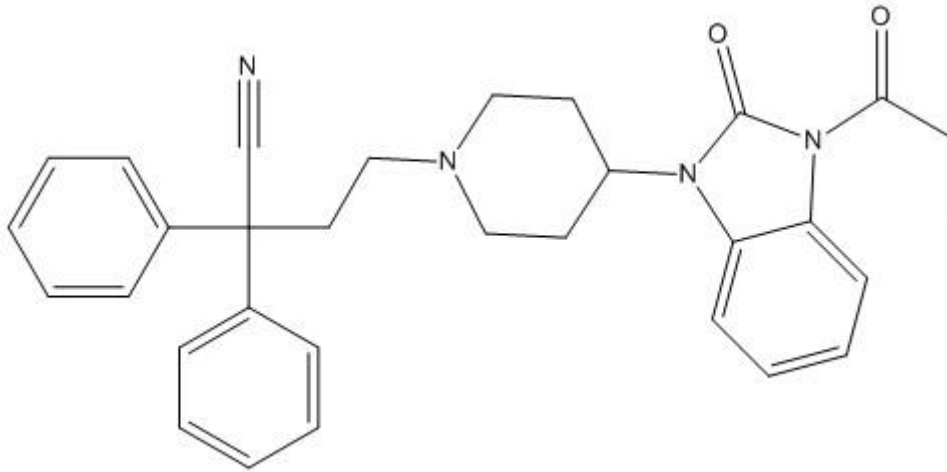
**Betamethadol** ( $\beta$ -6-dimethylamino-4,4-diphenyl-3-heptanol)



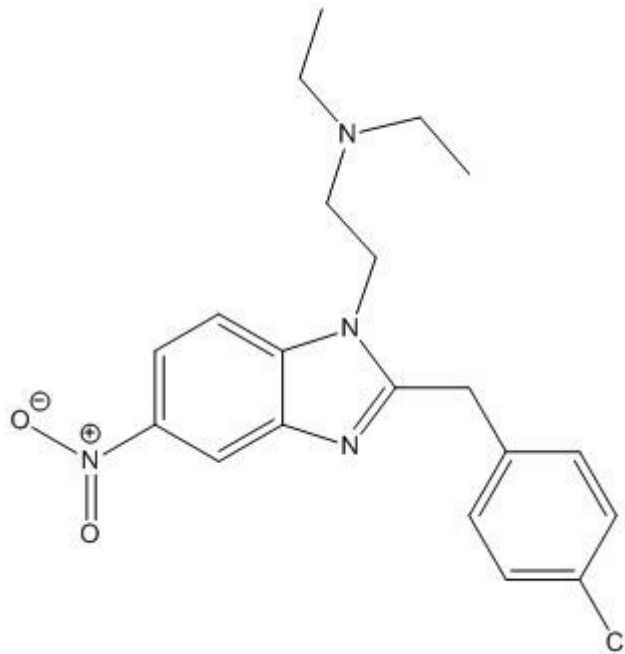
**Betaprodine** ( $\beta$ -1,3-dimethyl-4-phenyl-4-propionoxypiperidine)



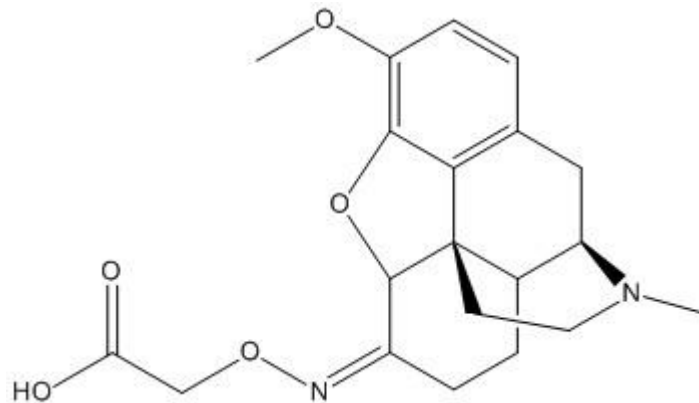
**Bezitramide** (1-(3-cyano-3,3-diphenylpropyl)-4-(2-oxo-3-propionyl-1-benzimidazoliny)piperidine)



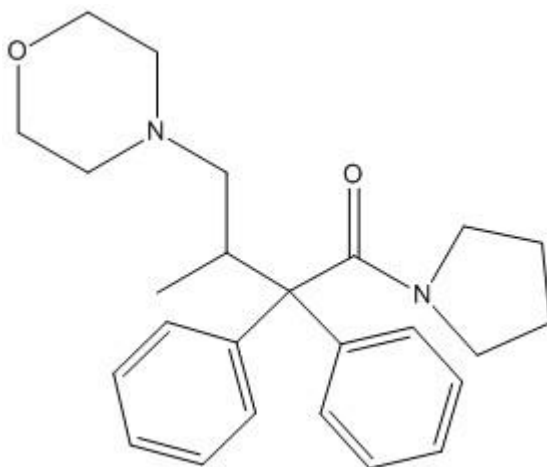
**Clonitazene** (2-*para*-chlorobenzyl-1-diethylaminoethyl-5-nitrobenzimidazole)



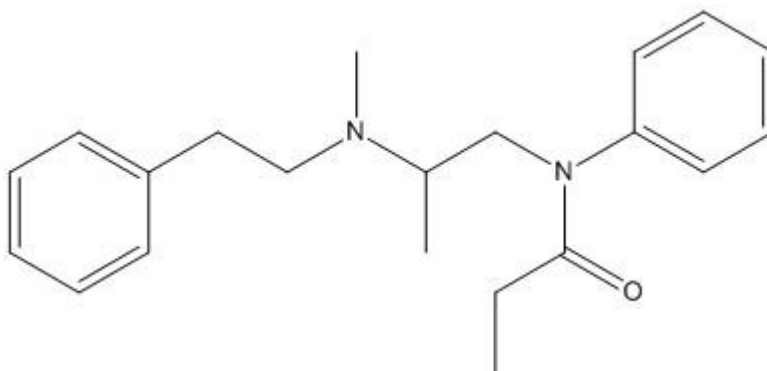
**Codoxime** (dihydrocodeinone-6-carboxymethyloxime)



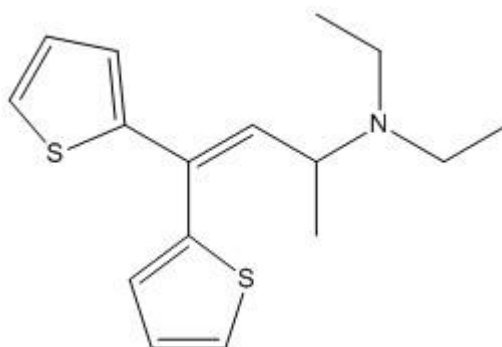
**Dextromoramide** ((+)-4-[2-methyl-4-oxo-3,3-diphenyl-4-(1-pyrrolidinyl) butyl] morpholine)



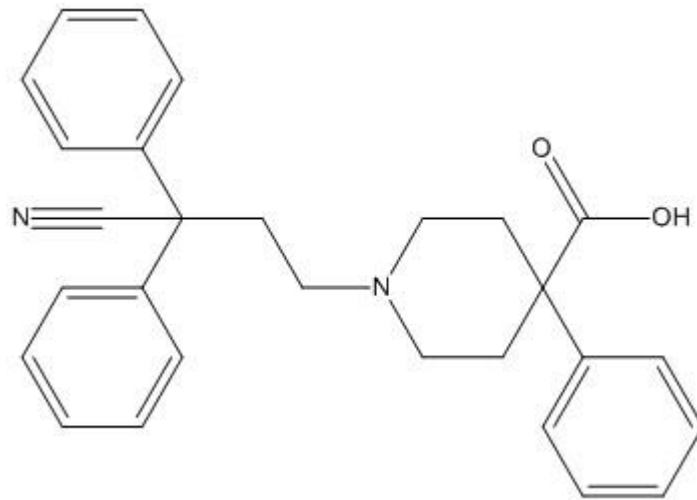
**Diampromide** (N-[2-(methylphenethylamino) propyl] propionanilide)



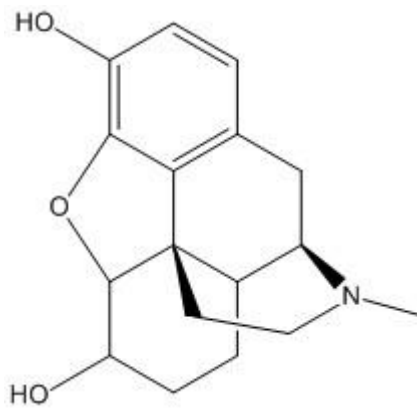
**Diethylthiambutene** (3-diethylamino-1,1-di-(2'-thienyl)-1-butene)



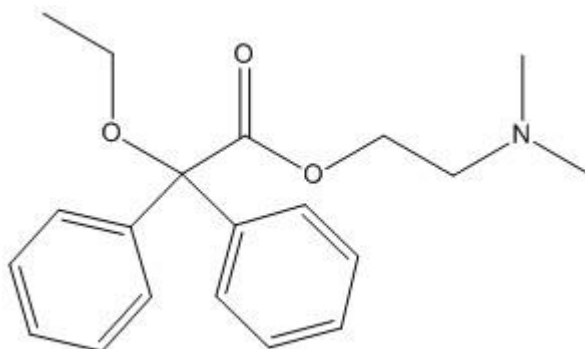
**Difenoxin** (1-(3-cyano-3,3-diphenylpropyl)-4-phenylisonipecotic acid)



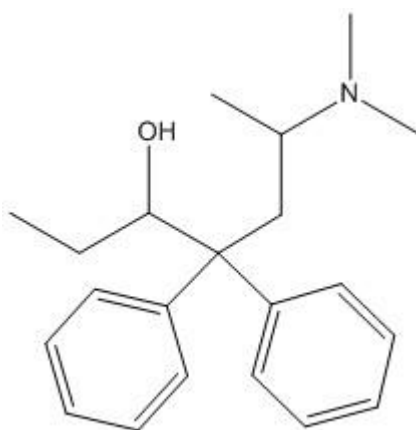
**Dihydromorphine**



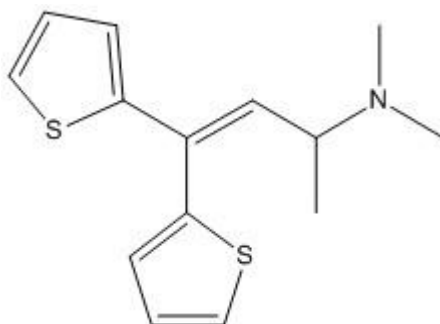
**Dimenoxadol** (2-dimethylaminoethyl-1-ethoxy-1,1-diphenylacetate)



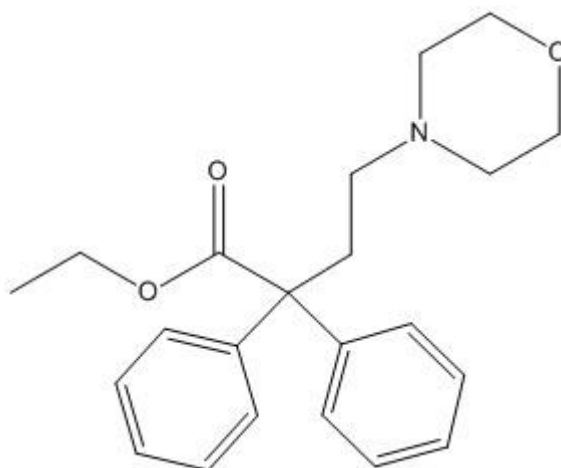
**Dimepheptanol** (6-dimethylamino-4,4-diphenyl-3-heptanol)



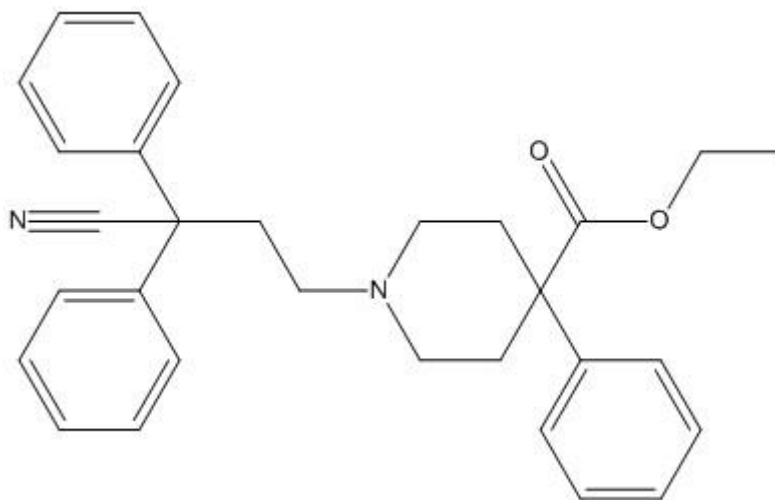
**Dimethylthiambutene** (3-dimethylamino-1,1-di-(2'-thienyl)-1-butene)



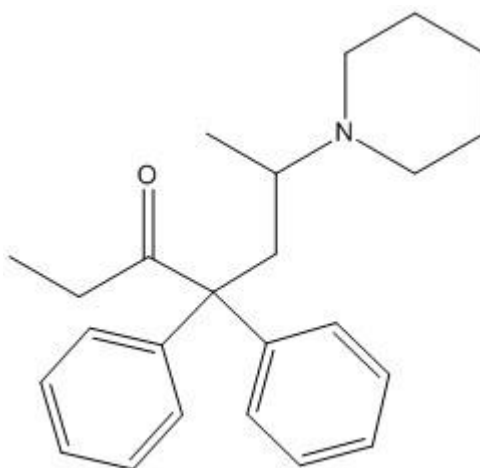
**Dioxaphetyl butyrate** (ethyl-4-morpholino-2,2-diphenylbutyrate)



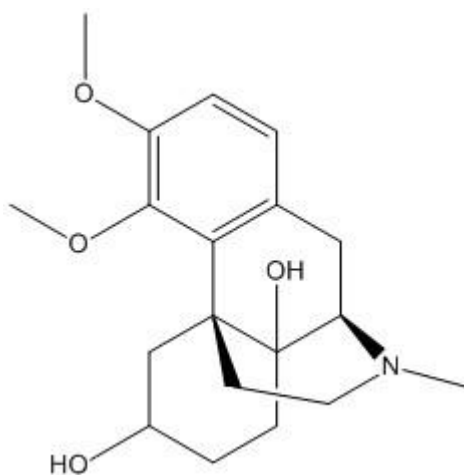
**Diphenoxylate** (1-(3-cyano-3,3-diphenylpropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester)



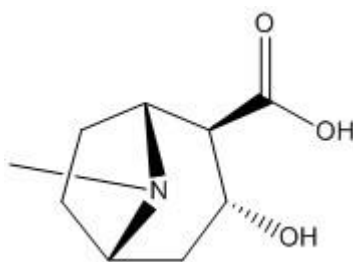
**Dipipanone** (4,4-diphenyl-6-piperidine-3-heptanone)



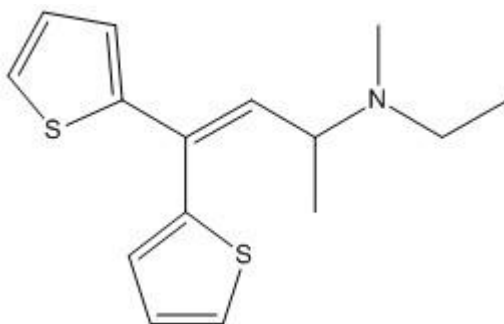
**Drotebanol** (3,4-dimethoxy-17-methylmorphinan-6 $\beta$ ,14-diol)



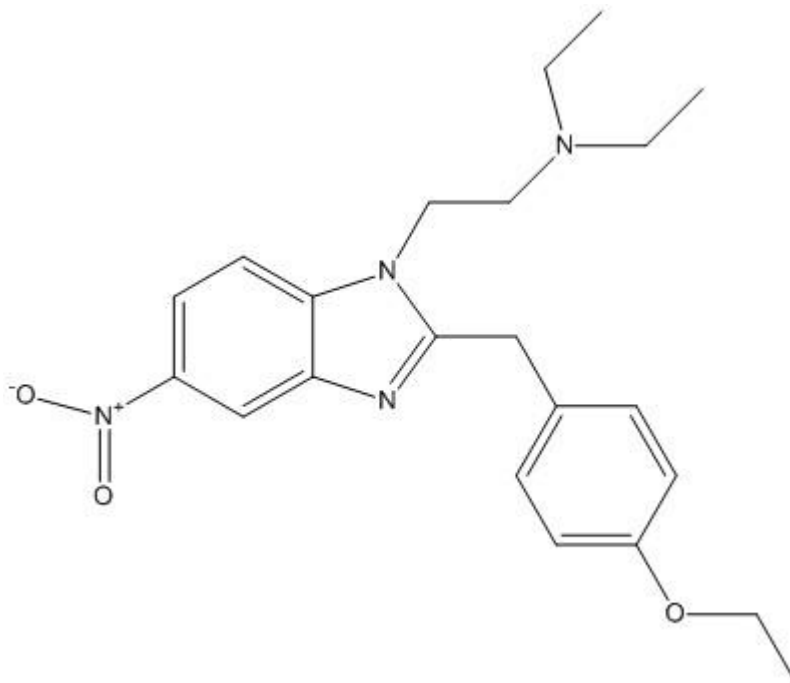
**Ecgonine**



**Ethylmethylthiambutene** (3-ethylmethylamino-1,1-di-(2'-thienyl)-1-butene)

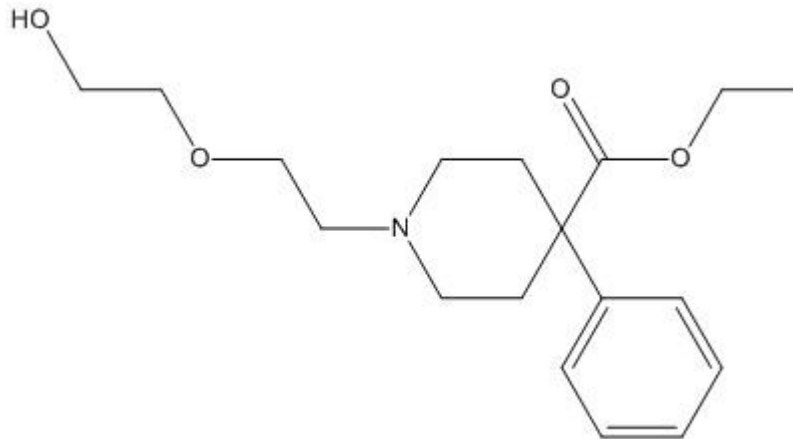


**Etonitazene** (1-diethylaminoethyl-2-*para*-ethoxybenzyl-5-nitrobenzimidazole)

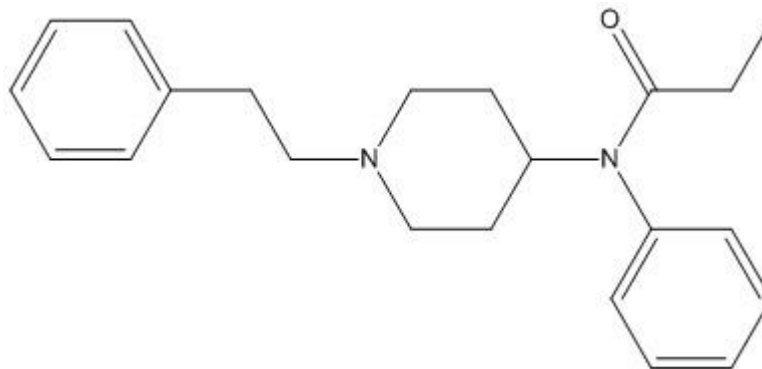




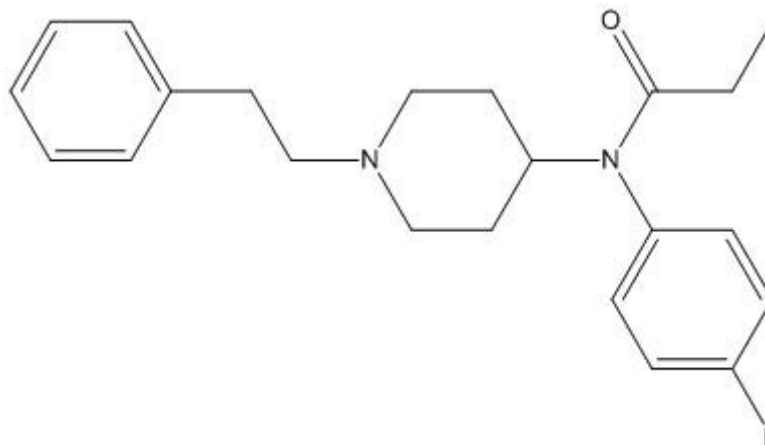
**Etoxidine** (1-[2-(2-hydroxyethoxy)ethyl]-4-phenylpiperidine-4-carboxylic acid ethyl ester)



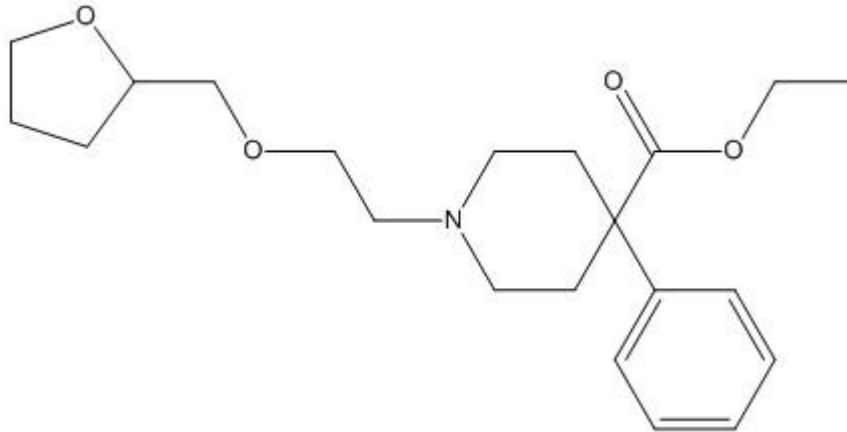
**Fentanyl** (1-phenethyl-4-(*N*-propionylanilino)piperidine)



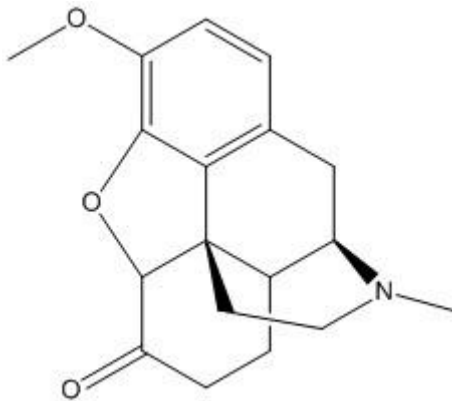
***p*-fluorofentanyl** (4'-fluoro-*N*-1-(phenethyl-4-piperidyl)propionanilide)



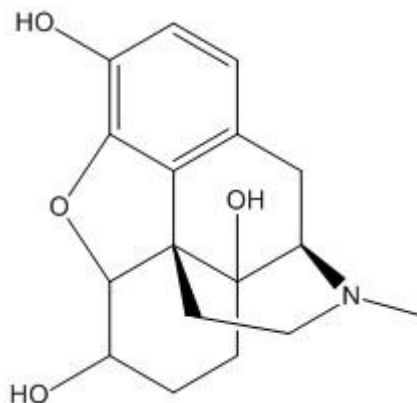
**Furethidine** (1-(2-tetrahydrofurfuryloxyethyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester)



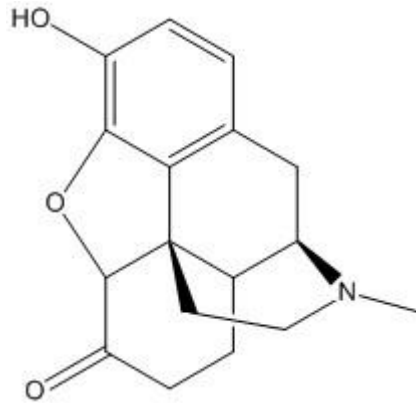
**Hydrocodone** (dihydrocodeinone)



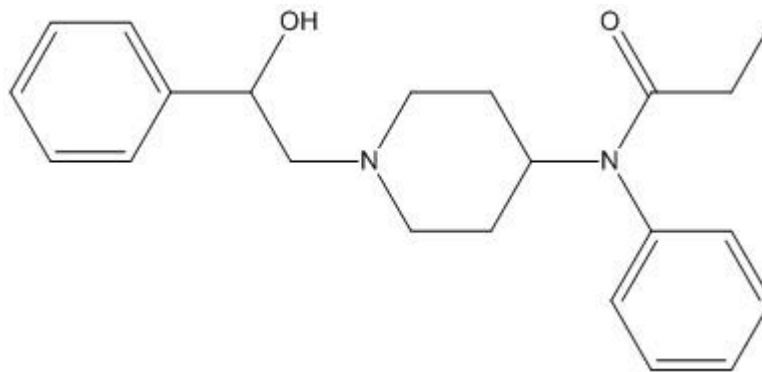
**Hydromorphenol** (14-hydroxydihydromorphine)



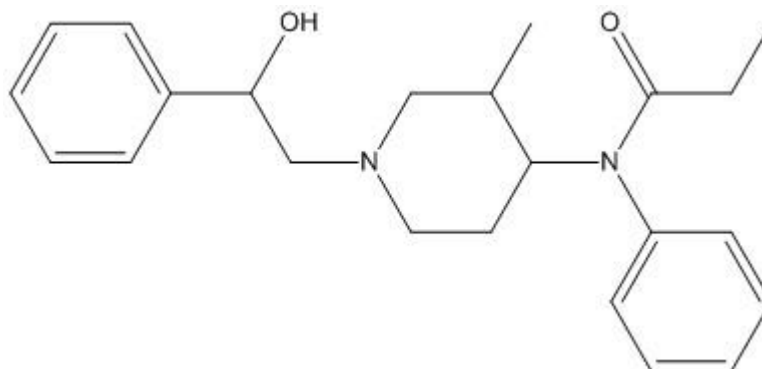
**Hydromorphone** (dihydromorphinone)



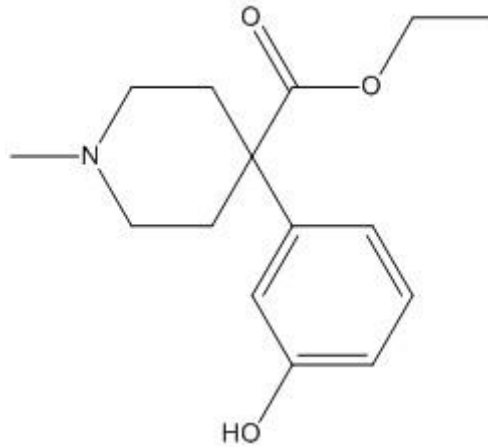
**$\beta$ -hydroxyfentanyl** (*N*-[1-( $\beta$ -hydroxyphenethyl)-4-piperidyl]propionanilide)



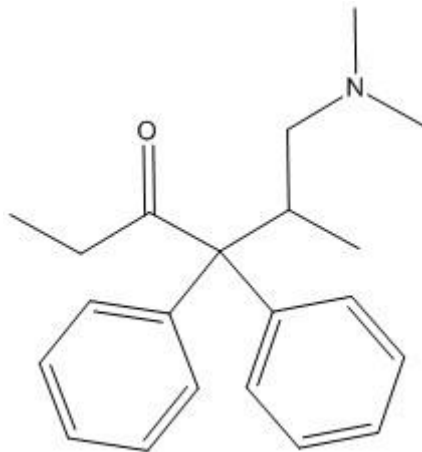
**$\beta$ -hydroxy-3-methylfentanyl** (*N*-[1-( $\beta$ -hydroxyphenethyl)-3-methyl-4-piperidyl]propionanilide)



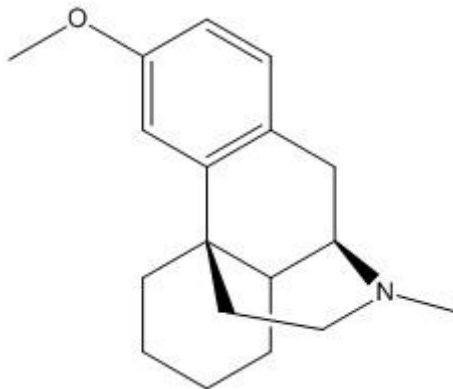
**Hydroxypethidine** (4-*meta*-hydroxyphenyl-1-methylpiperidine-4-carboxylic acid ethyl ester)



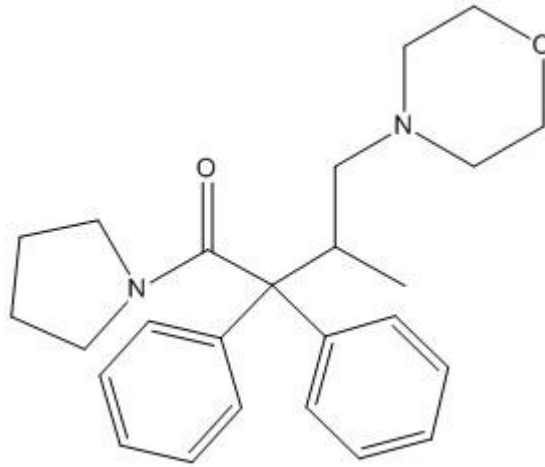
**Isomethadone** (6-dimethylamino-5-methyl-4,4-diphenyl-3-hexanone)



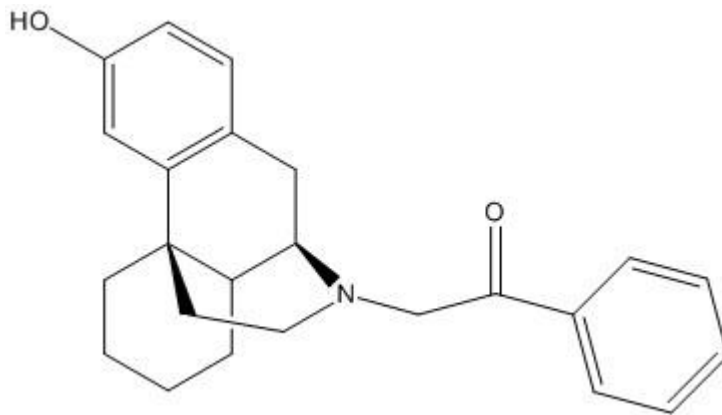
**Levomethorphan** ((-)-3-methoxy-*N*-methylmorphinan)



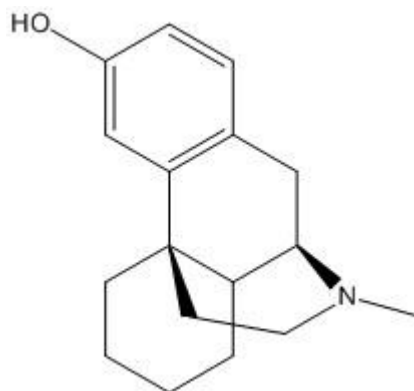
**Levomoramide** ((-)-4-[2-methyl-4-oxo-3,3-diphenyl-4-(1-pyrrolidinyl)butyl]morpholine)



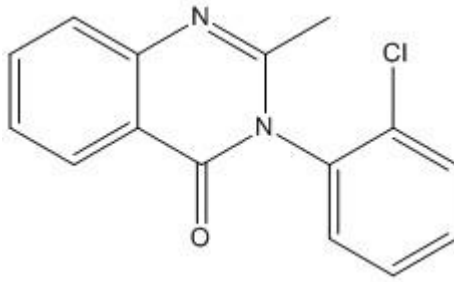
**Levophenacymorphan** ((-)-3-hydroxy-*N*-phenacymorphinan)



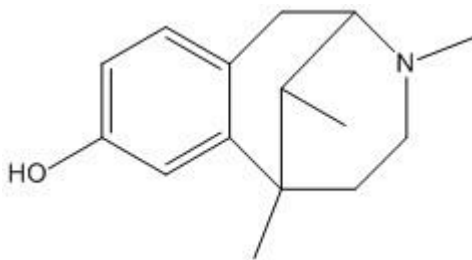
**Levorphanol** ((-)-3-hydroxy-*N*-methymorphinan)



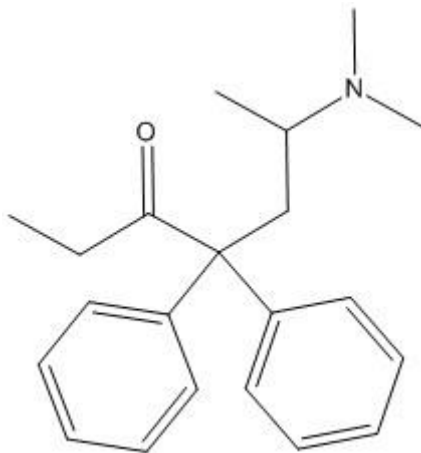
**Mecloqualone** (3-(2-chlorophenyl)-2-methyl-4-(3*H*)-quinazolinone)



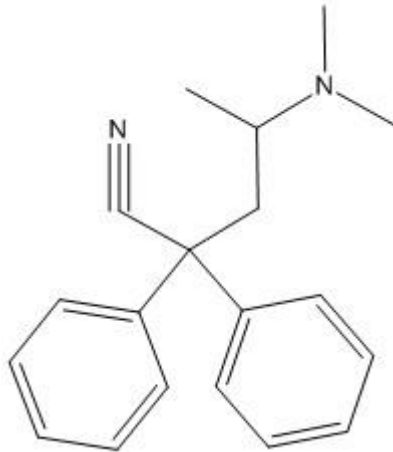
**Metazocine** (2'-hydroxy-2,5,9-trimethyl-6,7-benzomorphan)



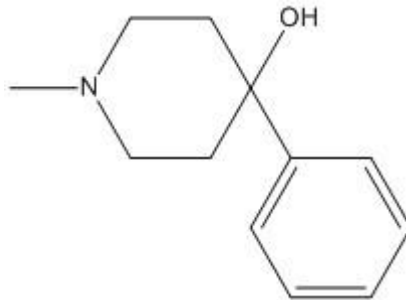
**Methadone** (6-dimethylamino-4,4-diphenyl-3-heptanone)



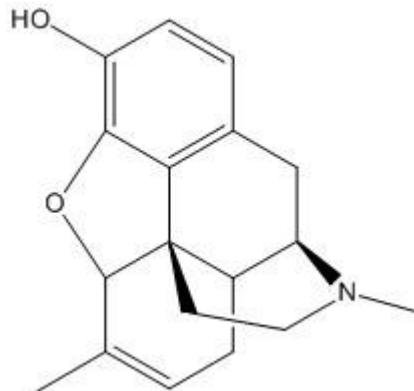
**Methadone-intermediate** (4-cyano-2-dimethylamino-4,4-diphenylbutane)



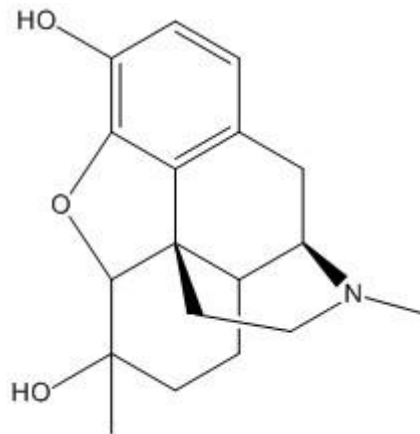
**1-methyl-4-phenyl-4-piperidinol**



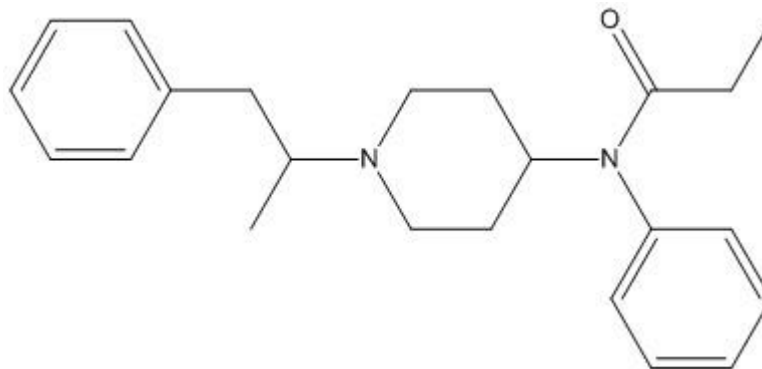
**Methyldesorphine** (6-methyl- $\Delta^6$ -deoxymorphine)



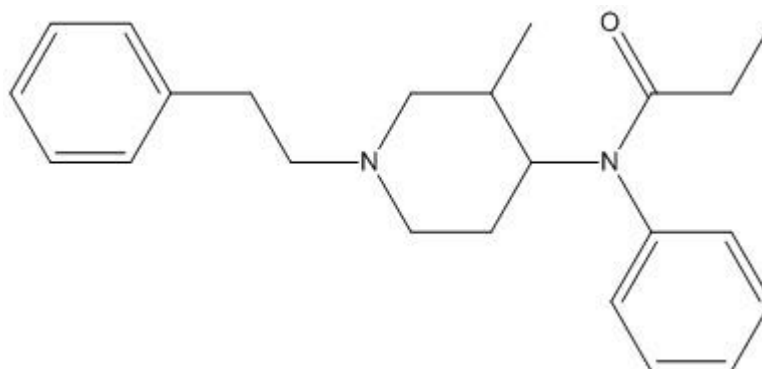
**Methyldihydromorphine** (6-methyldihydromorphine)



**$\alpha$ -methylfentanyl** (*N*-[1-( $\alpha$ -methylphenethyl)-4-piperidyl]propionanilide)

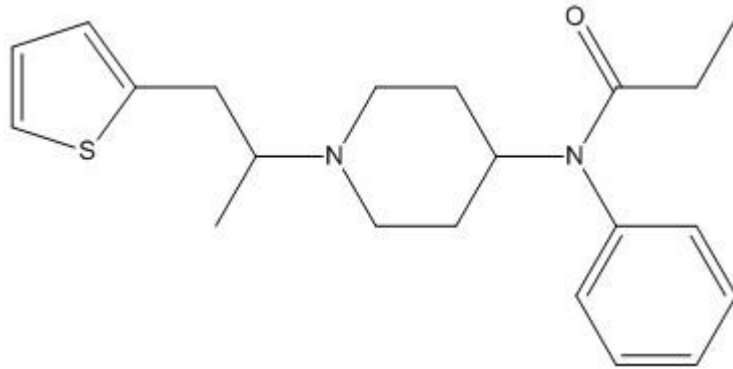


**3-methylfentanyl** (*N*-[3-methyl-1-phenethyl-4-piperidyl]propionanilide)

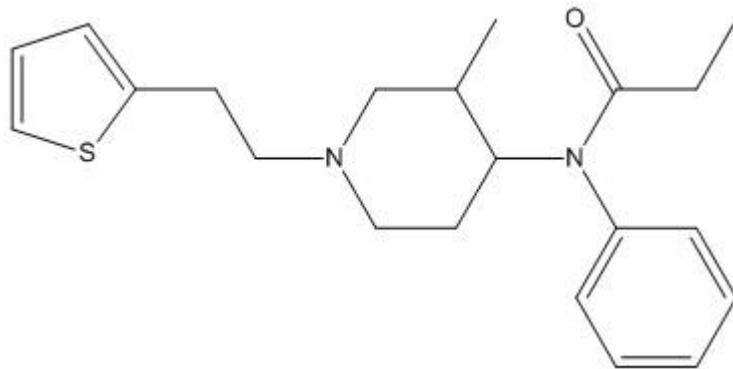




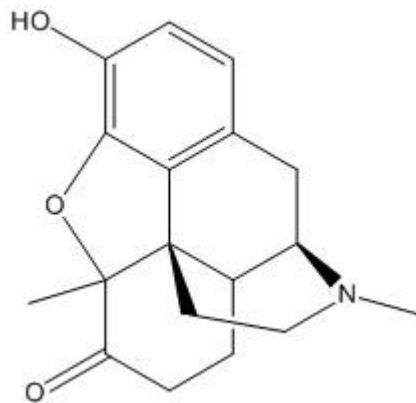
**$\alpha$ -methylthiofentanyl** (*N*-[1-[1-methyl-2-(2-thienyl)ethyl]-4-piperidyl]propionanilide)



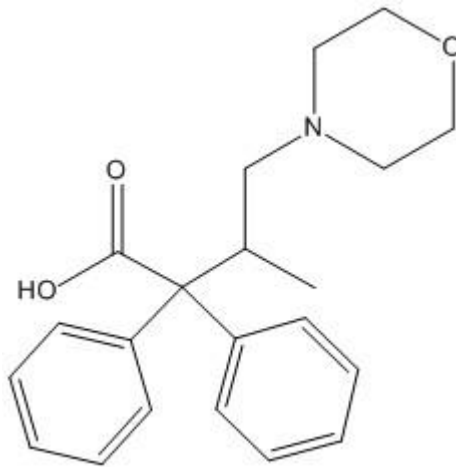
**3-methylthiofentanyl** (*N*-[3-methyl-1-[2-(2-thienyl)ethyl]-4-piperidyl]propionanilide)



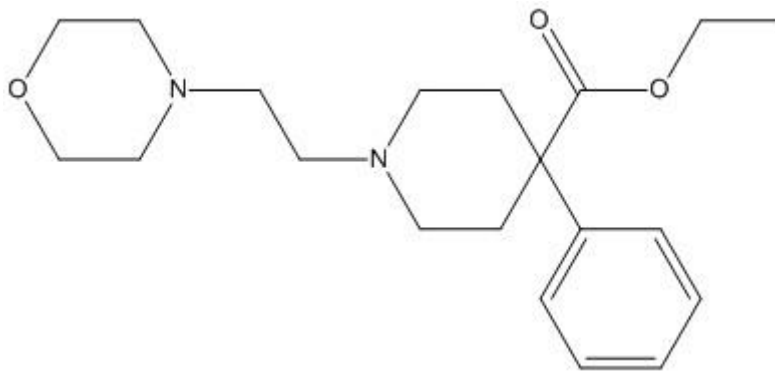
**Metopon** (5-methyldihydromorphinone)



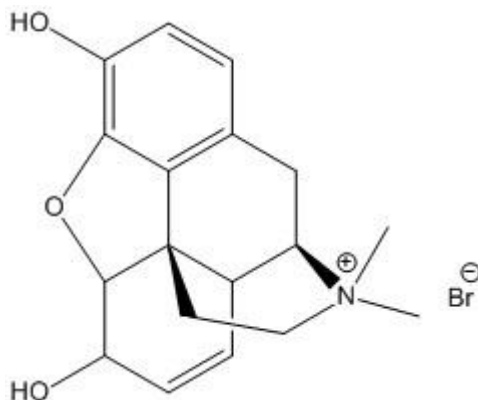
**Moramide-intermediate** (2-methyl-3-morpholino-1,1-diphenylpropane carboxylic acid)



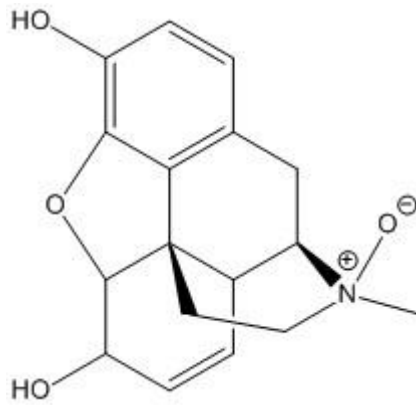
**Morpheridine** (1-(2-morpholinoethyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester)



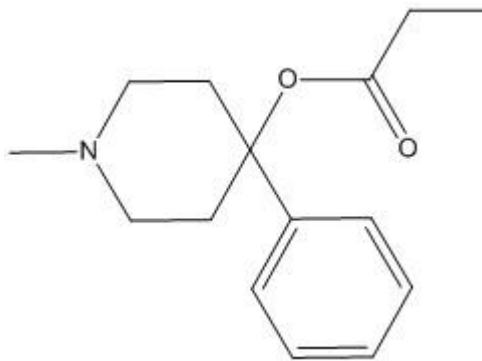
**Morphine methobromide** and other pentavalent nitrogen morphine derivatives



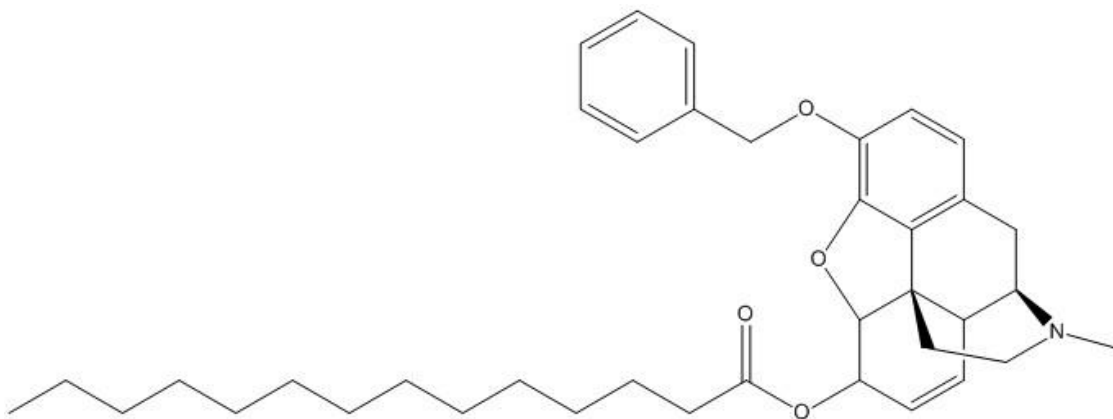
**Morphine-n-oxide**

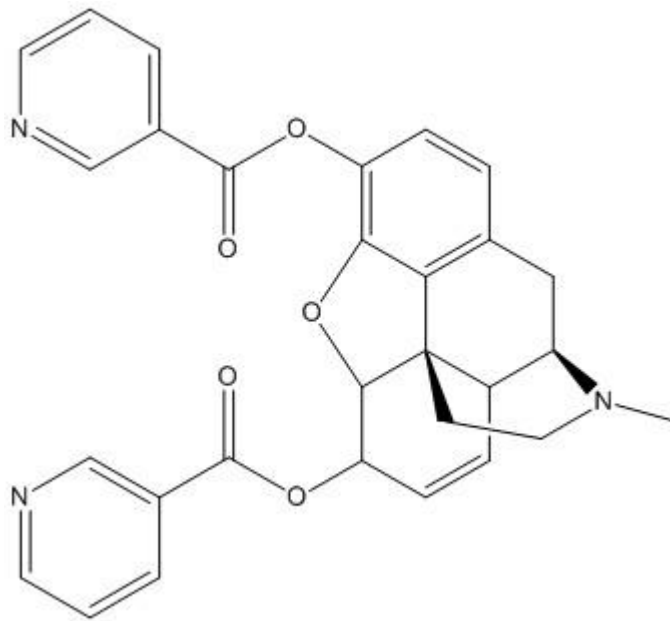
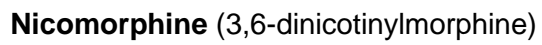


**MPPP** (1-methyl-4-phenyl-4-piperidinol propionate (ester))

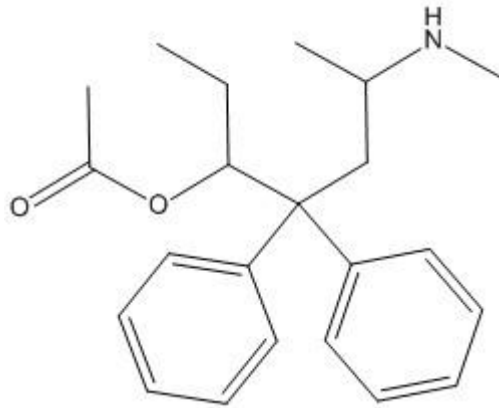


**Myrophine** (myristylbenzylmorphine)

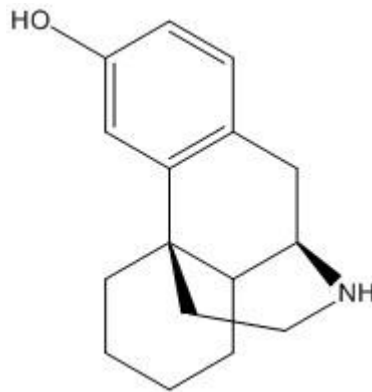




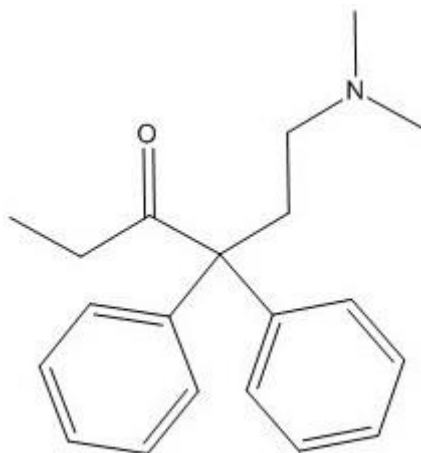
**Noracymethadol** ( $\alpha$ -3-acetoxy-6-methylamino-4,4-diphenylheptane)



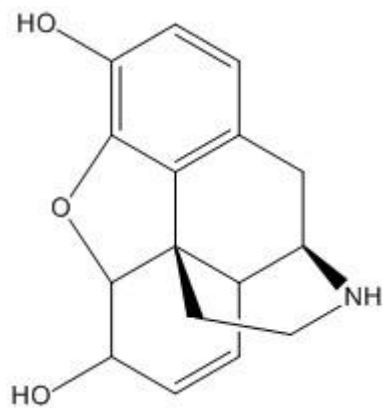
**Norlevorphanol** ((-)-3-hydroxymorphinan)



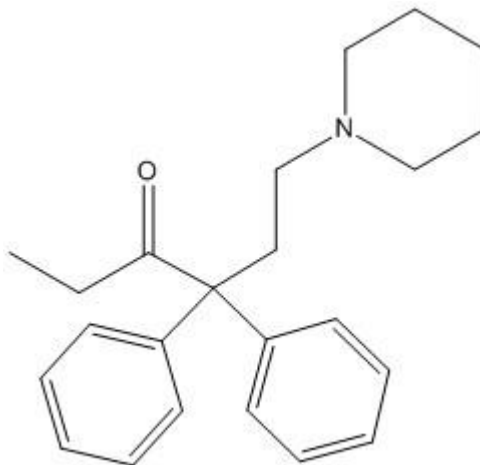
**Normethadone** (6-dimethylamino-4,4-diphenyl-3-hexanone)



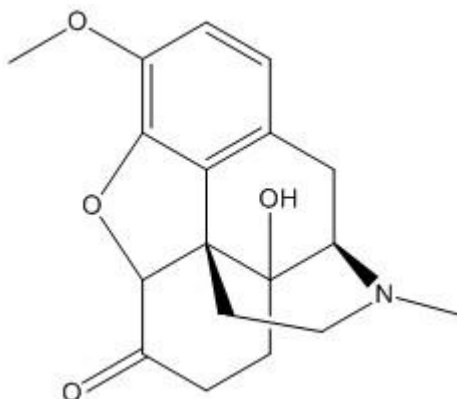
**Normorphine** (demethylmorphine)



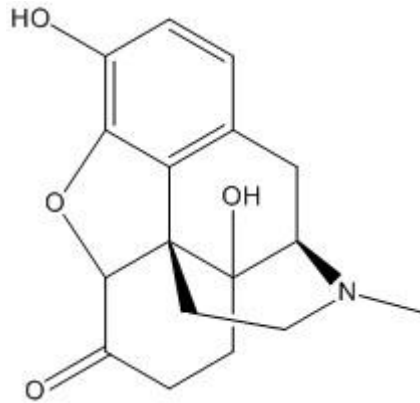
**Norpipanone** (4,4-diphenyl-6-piperidino-3-hexanone)



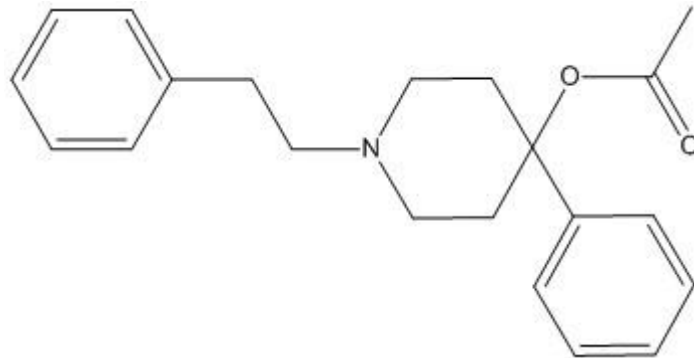
**Oxycodone** (14-hydroxydihydrocodeinone)



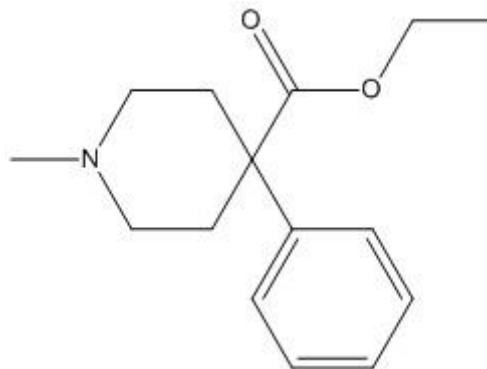
**Oxymorphone** (14-hydroxydihydromorphinone)



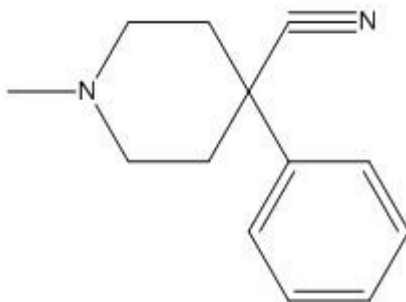
**PEPAP** (1-phenethyl-4-phenyl-4-piperidinol acetate (ester))



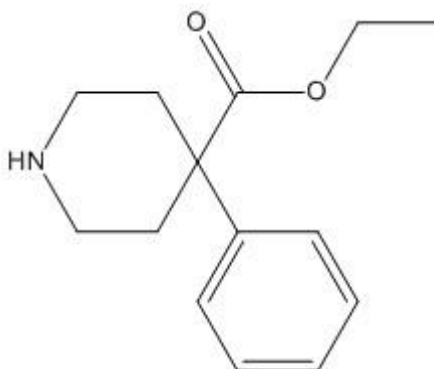
**Pethidine** (1-methyl-4-phenylpiperidine-4-carboxylic acid ethyl ester)



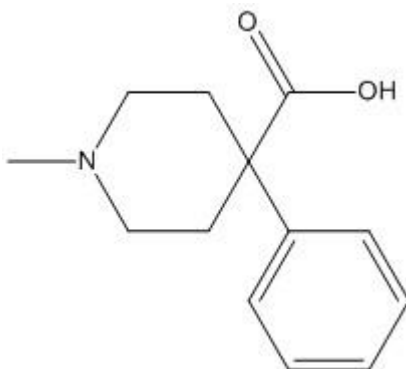
**Pethidine-intermediate-A** (4-cyano-1-methyl-4-phenylpiperidine)



**Pethidine-intermediate-B** (4-phenylpiperidine-4-carboxylic acid ethyl ester)

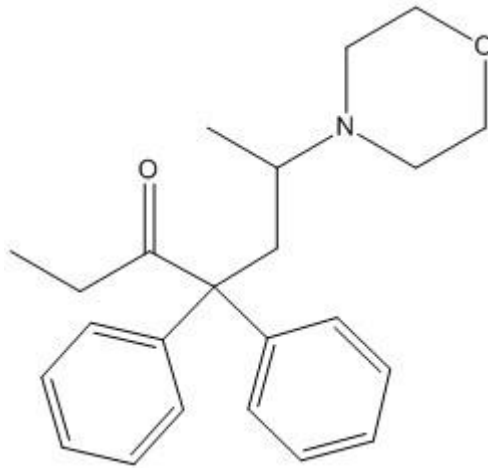


**Pethidine-intermediate-C** (1-methyl-4-phenylpiperidine-4-carboxylic acid)

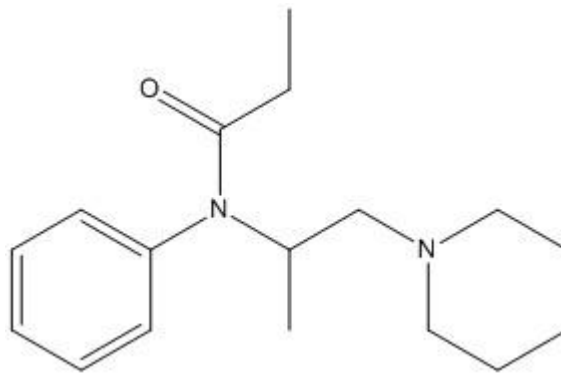




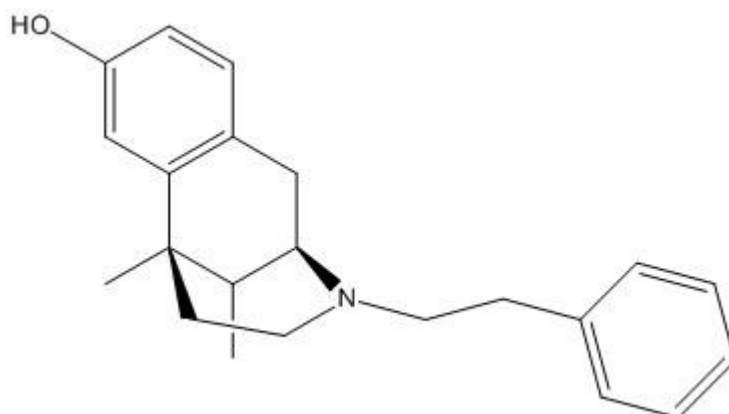
**Phenadoxone** (6-morpholino-4,4-diphenyl-3-heptanone)



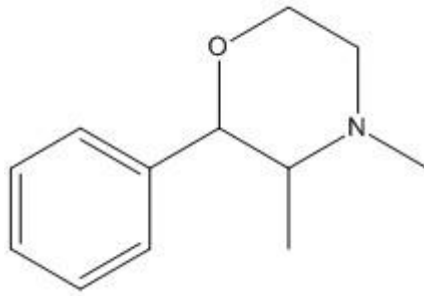
**Phenampromide** (*N*-(1-methyl-2-piperidinoethyl)propionanilide)



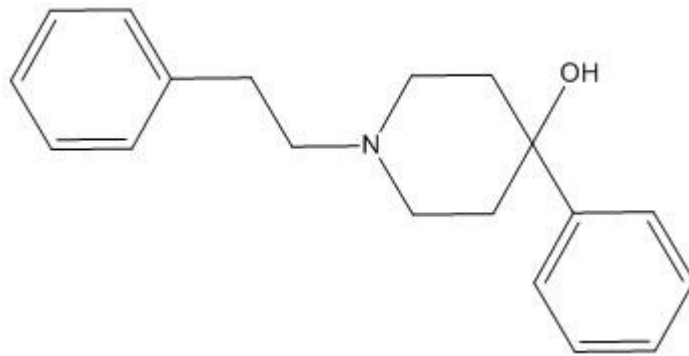
**Phenazocine** (2'-hydroxy-5,9-dimethyl-2-phenethyl-6,7-benzomorphan)



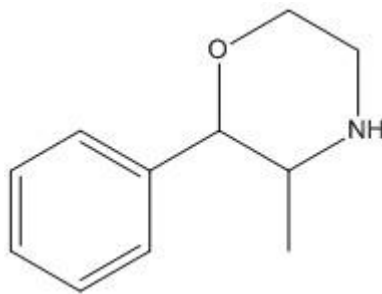
**Phendimetrazine** (3,4-dimethyl-2-phenylmorpholine)



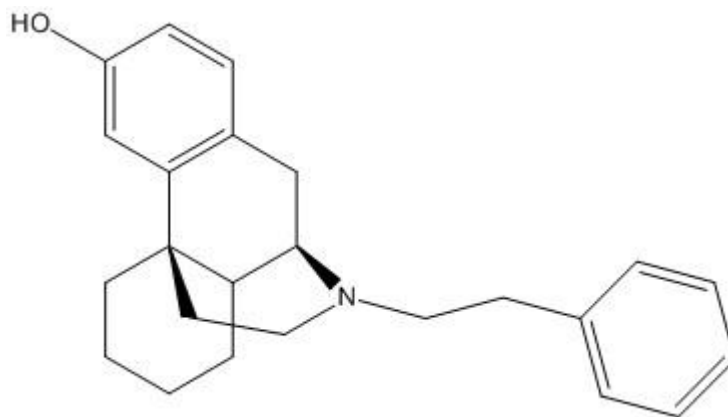
**1-phenethyl-4-phenyl-4-piperidinol**



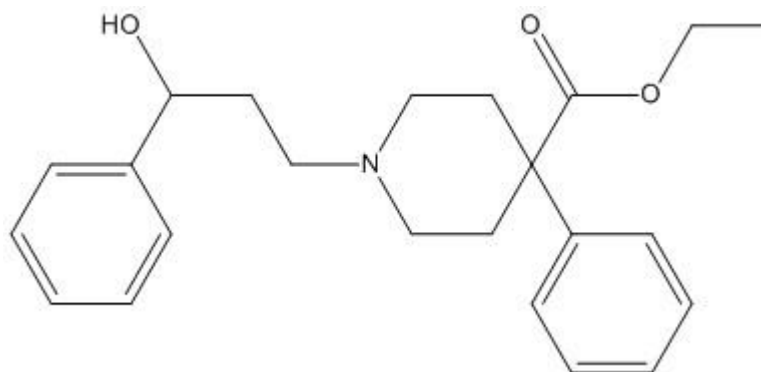
**Phenmetrazine** (3-methyl-2-phenylmorpholine)



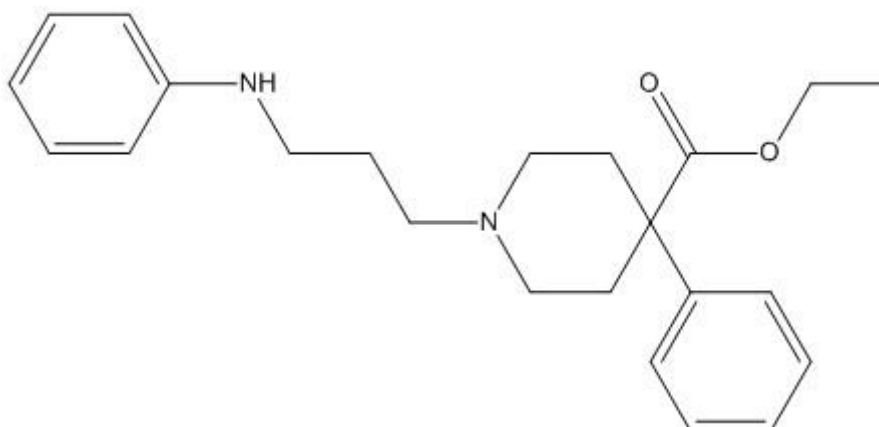
**Phenomorphin** (3-hydroxy-*N*-phenethylmorphinan)



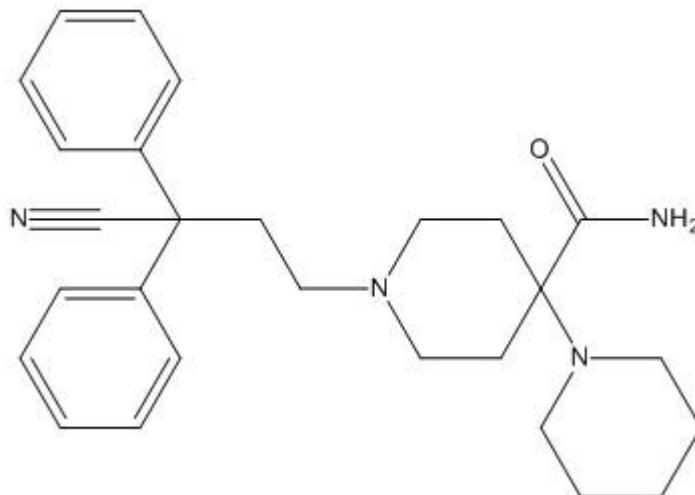
**Phenoperidine** (1-(3-hydroxy-3-phenylpropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester)



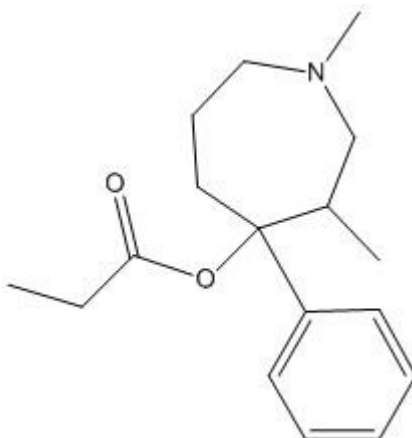
**Piminodine** (4-phenyl-1-(3-phenylaminopropyl)piperidine-4-carboxylic acid ethyl ester)



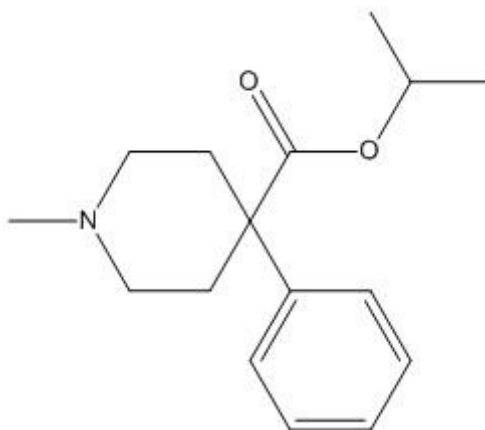
**Piritramide** (1-(3-cyano-3,3-diphenylpropyl)-4-(1-piperidino) piperidine-4-carboxylic acid amide)



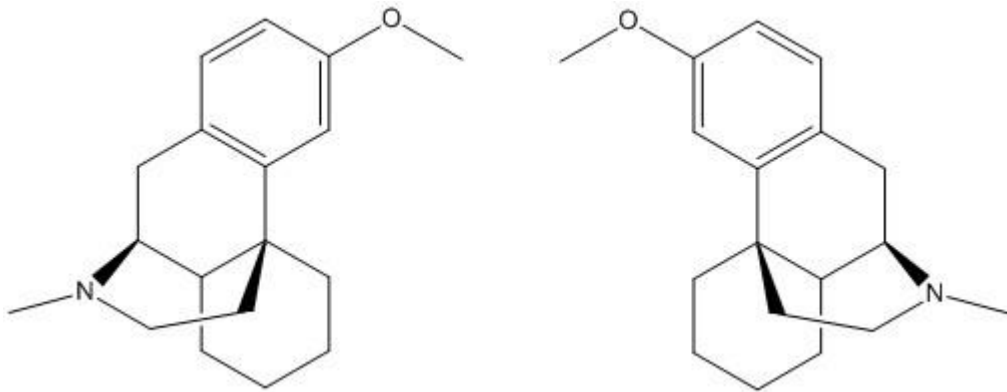
**Proheptazine** (1,3-dimethyl-4-phenyl-4-propionyloxazacycloheptane)



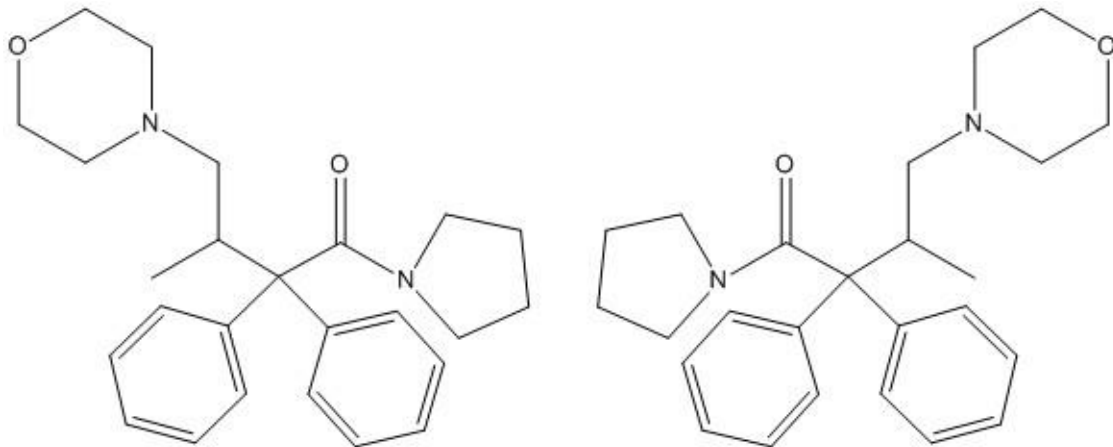
**Properidine** (1-methyl-4-phenylpiperidine-4-carboxylic acid isopropyl ester)



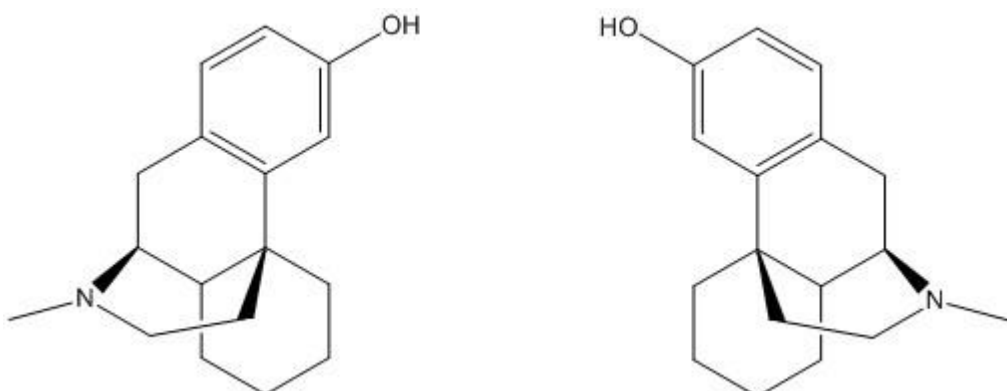
**Racemethorphan** ((±)-3-methoxy-*N*-methylmorphinan)



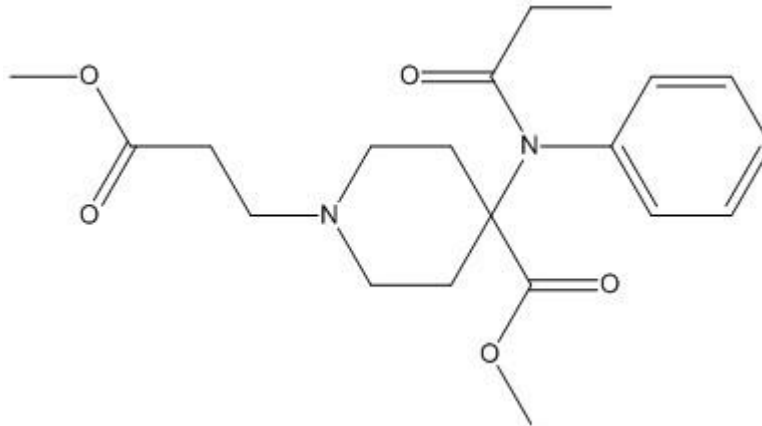
**Racemoramide** ((±)-4-[2-methyl-4-oxo-3,3-diphenyl-4-(1-pyrrolidinyl)butyl]morpholine)



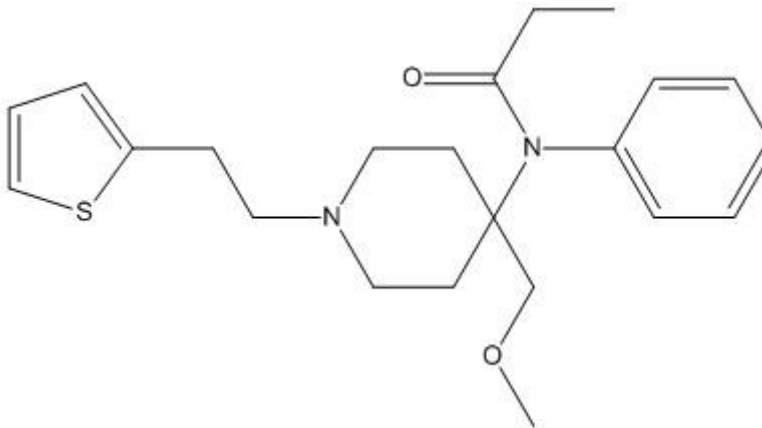
**Racemorphan** ((±)-3-hydroxy-*N*-methylmorphinan)



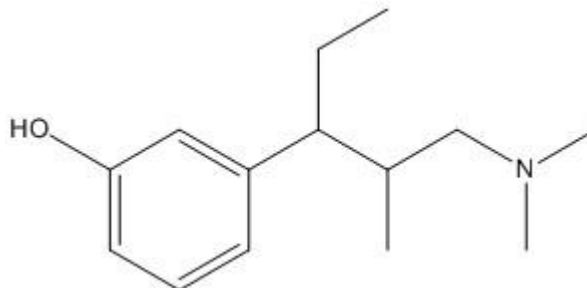
**Remifentanyl** (1-(2-methoxycarbonyl-ethyl)-4-(phenylpropionyl-amino)-piperidine-4-carboxylic acid methyl ester)



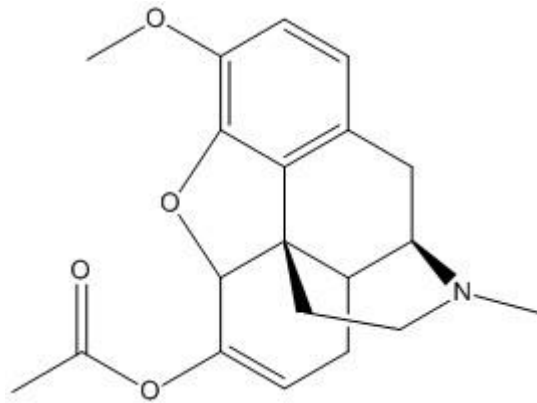
**Sufentanyl** (*N*-[4-(methoxymethyl)-1-[2-(2-thienyl)ethyl]-4-piperidyl]propionanilide)



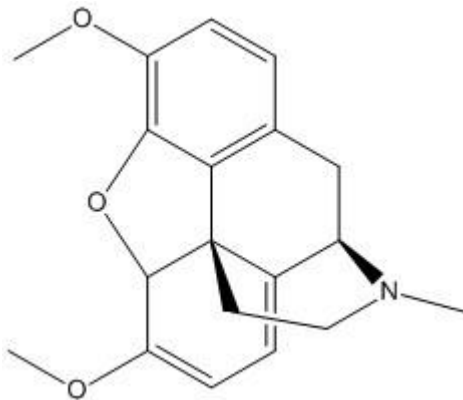
**Tapentadol** (3-[(1*R*,2*R*)-3-(dimethylamino)-1-ethyl-2-methylpropyl]phenol hydrochloride)



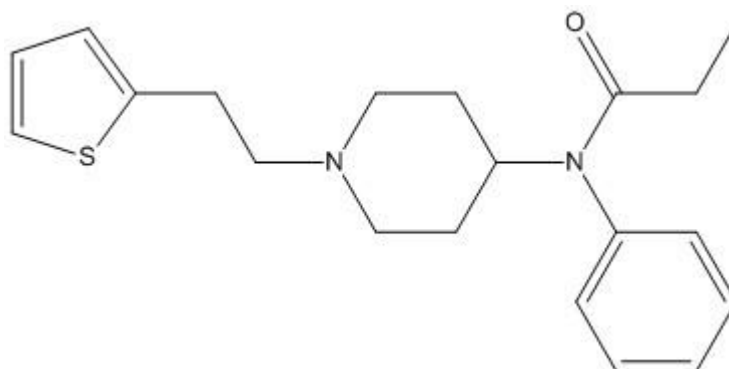
**Thebacon** (acetyldihydrocodeinone)



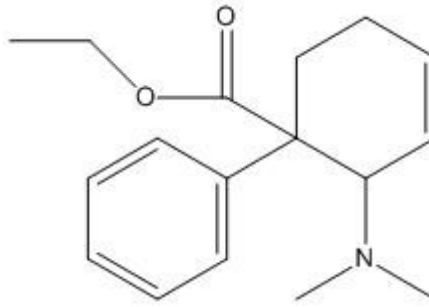
**Thebaine**



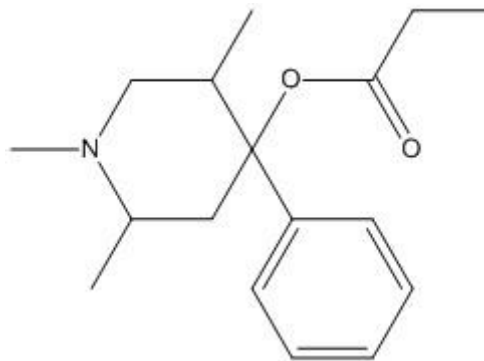
**Thiofentanyl** (*N*-[1-[2-(2-thienyl)ethyl]-4-piperidyl]propionanilide)



**Tilidine** ((±)-ethyl *trans*-2-(dimethylamino)-1-phenyl-3-cyclohexene-1-carboxylate)



**Trimeperidine** (1,2,5-trimethyl-4-phenyl-4-propionoxypiperidine)



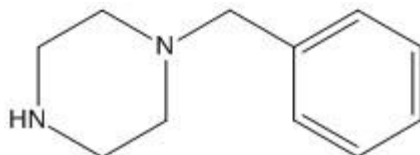


# Schedule 3 – Class C

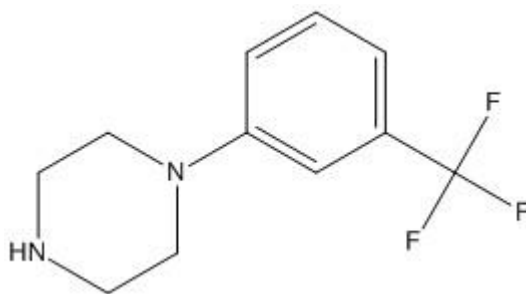
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## Part 1

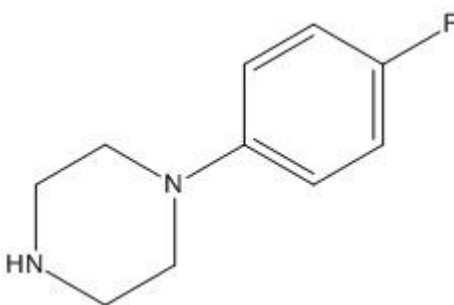
**BZP** (1-benzylpiperazine or A2 benzylpiperazine or *N*-benzylpiperazine (1-benzyl-1,4-diazacyclohexane))



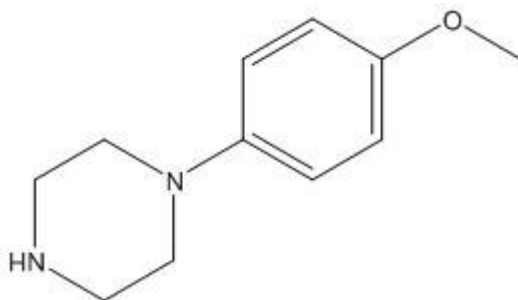
**TFMPP** (1-(3-trifluoromethylphenyl)piperazine or *N*-(3-trifluoromethylphenyl)piperazine)



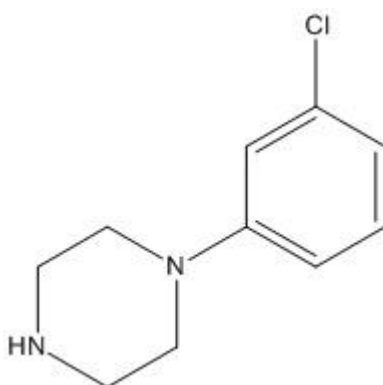
**pFPP** (1-(4-fluorophenyl)piperazine)



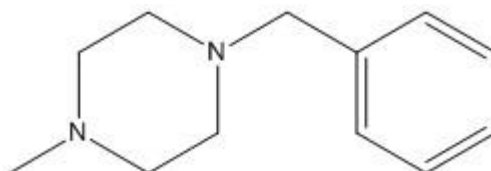
**MeOPP** (1-(4-methoxyphenyl)piperazine)



**mCPP** (1-(meta-chlorophenyl)piperazine) or 1-(3-chlorophenyl)piperazine)

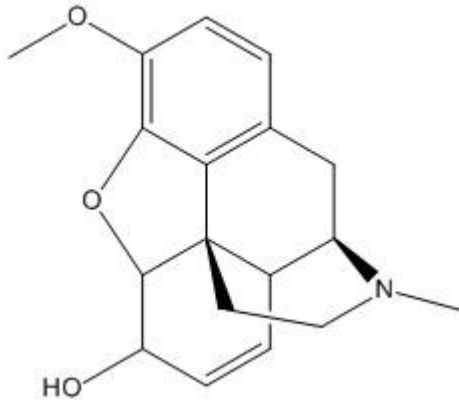


**MBZP** (1-methyl-4-benzylpiperazine)

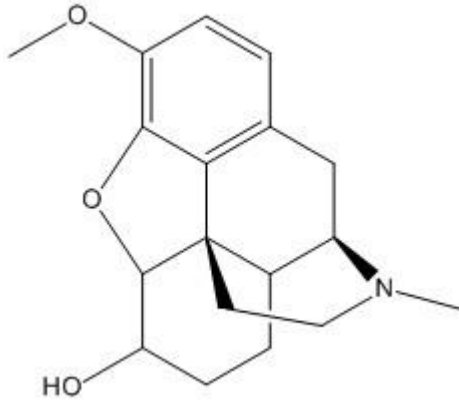


## Part 2

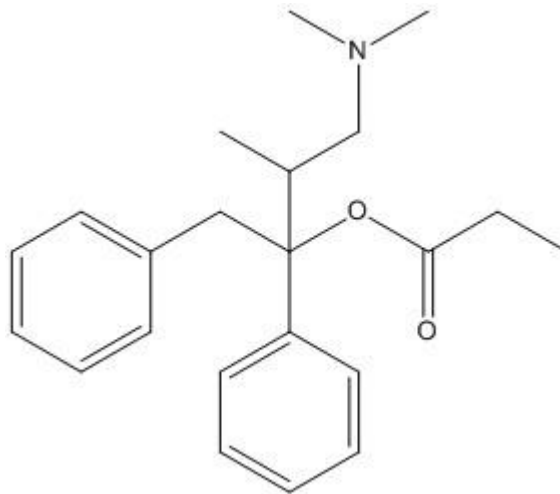
**Codeine** (3-methylmorphine)



**Dihydrocodeine**

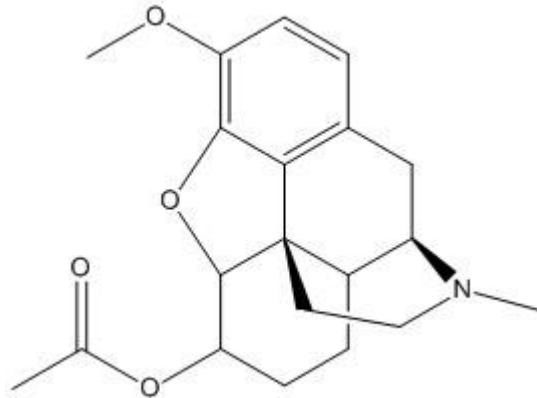


**Propoxyphene** ( $\alpha$ -4 (*N,N*-dimethylamino)-1,2-diphenyl-3-methyl-2-propionyloxybutane)

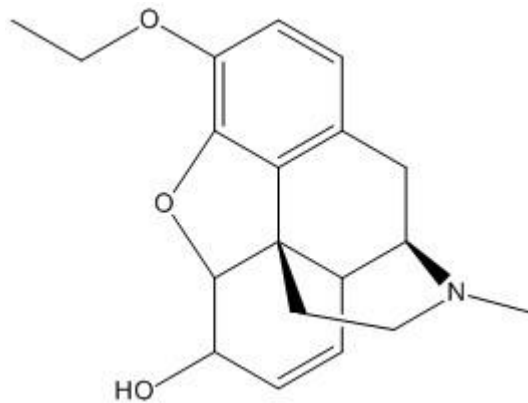


## Part 3

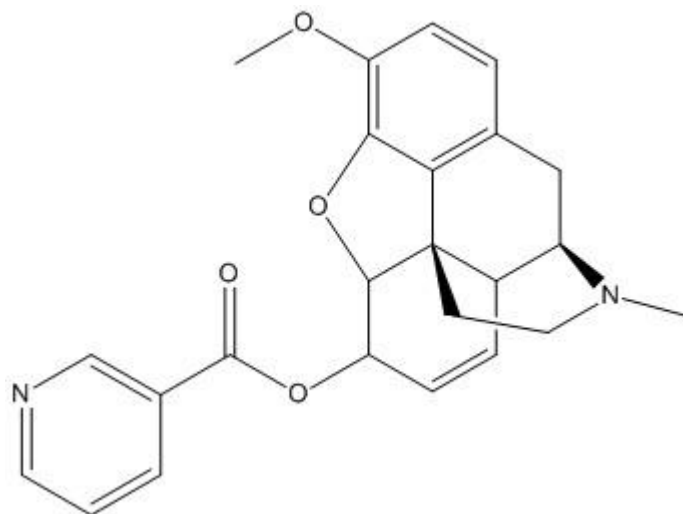
### Acetyldihydrocodeine



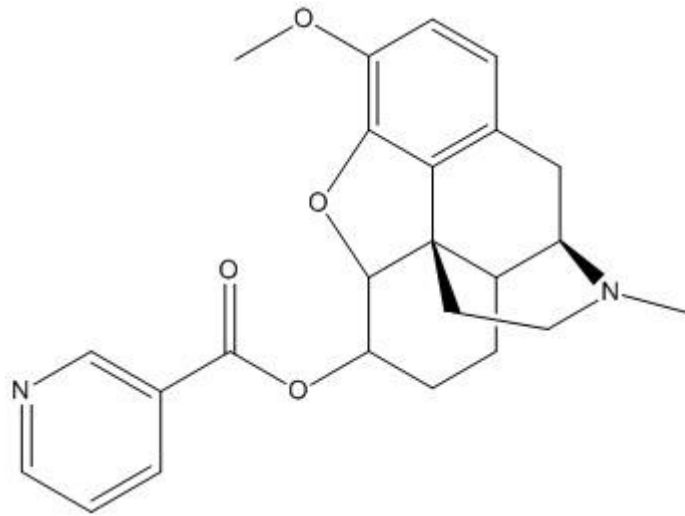
### Ethylmorphine (3-ethylmorphine)



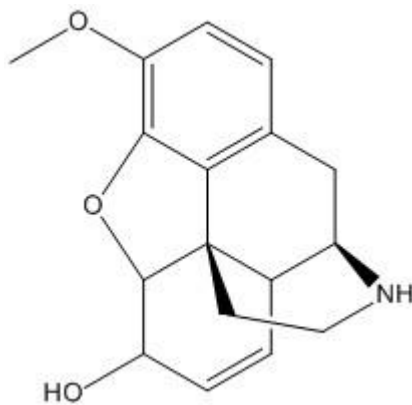
### Nicocodine (6-nicotinylcodeine)



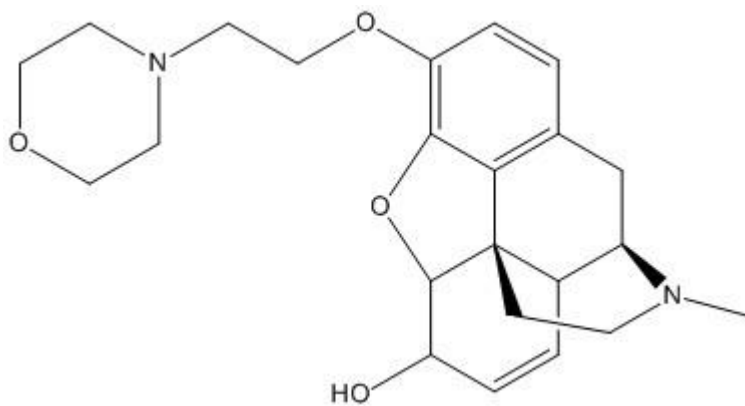
**Nicodicodine** (6-nicotinyldihydrocodeine or nicotinic acid ester of dihydrocodeine)



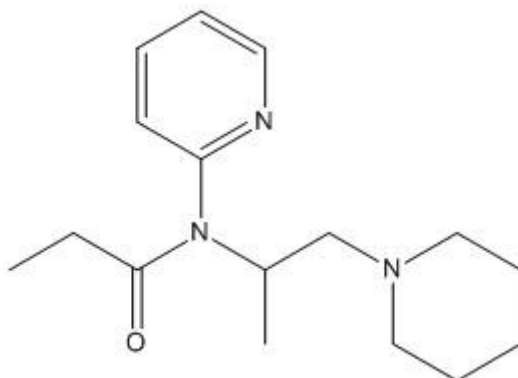
**Norcodeine** (*N*-demethylcodeine)



**Pholcodine** (morpholinylethylmorphine)

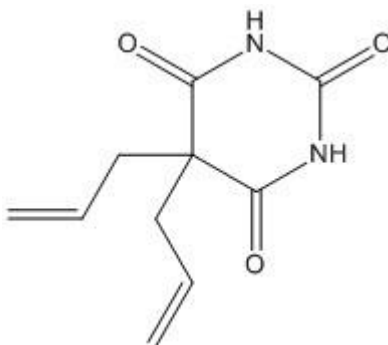


**Propiram** (*N*-(1-methyl-2-piperidinoethyl)-*N*-2-pyridylpropionamide)

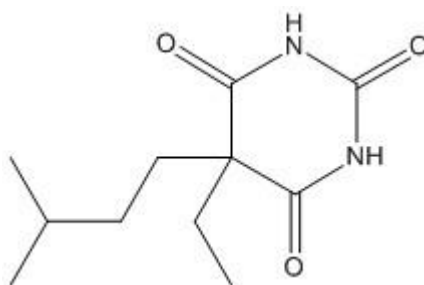


## Part 4

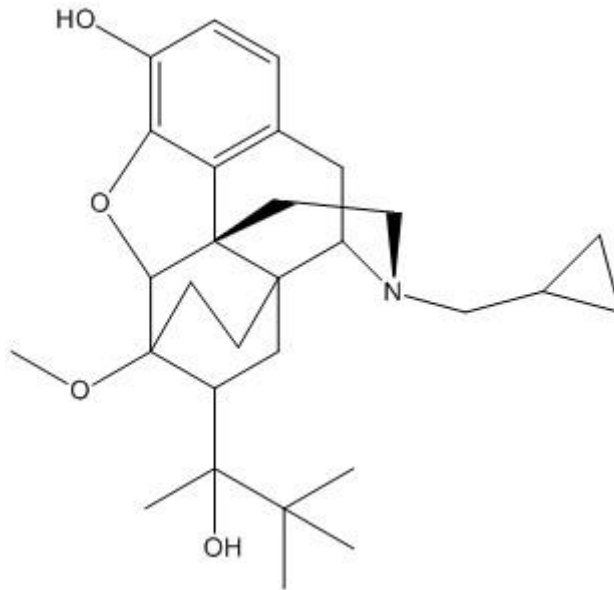
**Allobarbital** (5,5-diallylbarbituric acid)



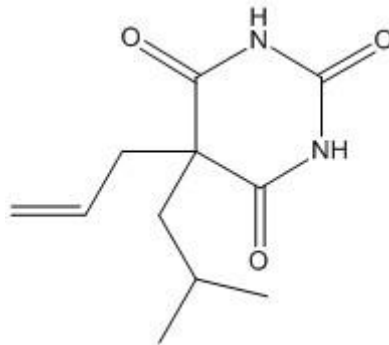
**Amobarbital** (5-ethyl-5-(3-methylbutyl) barbituric acid)



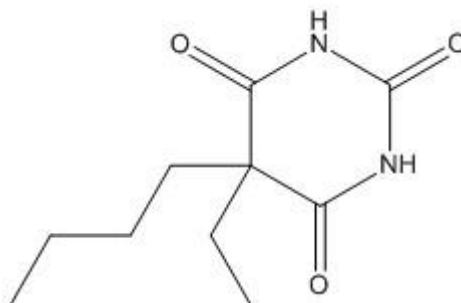
**Buprenorphine** (17-cyclopropylmethyl-7,8-dihydro-7-(1-hydroxy-1,2,2-trimethylpropyl)-6-0-methyl-6, 14-ethano-17-normorphine)



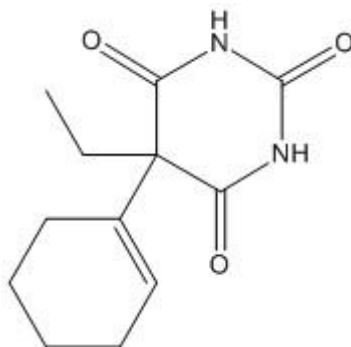
**Butalbital** (5-allyl-5-isobutylbarbituric acid)



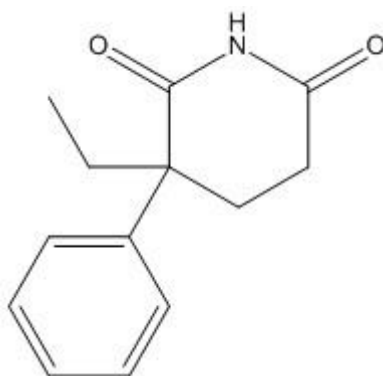
**Butobarbitone** (5-butyl-5-ethylbarbituric acid)



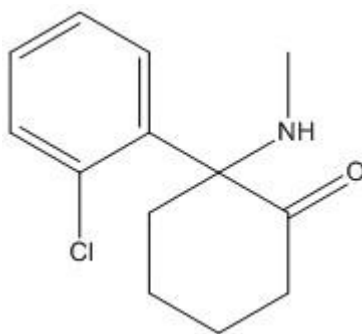
**Cyclobarbital** (5-(1-cyclohexen-1-yl)-5-ethylbarbituric acid)



**Glutethimide** (2-ethyl-2-phenylglutarimide)

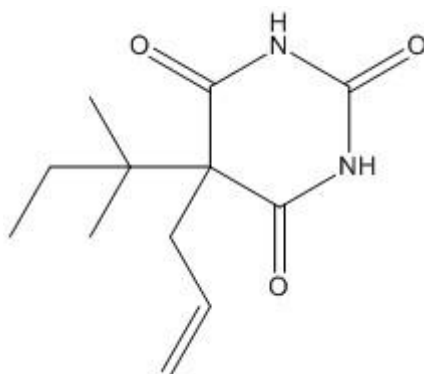


**Ketamine** (2-(2-chlorophenyl)-2-(methylamino)-cyclohexanone)

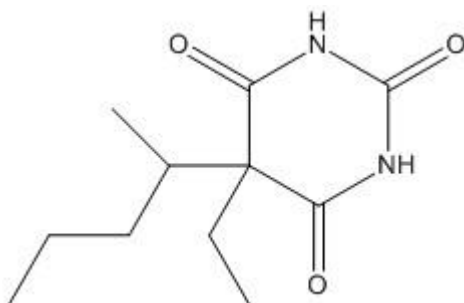




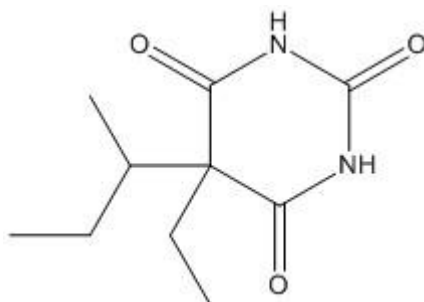
**Nealbarbitone** (5-allyl-5-neopentylbarbituric acid)



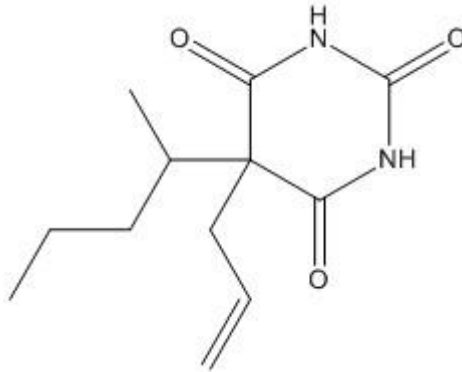
**Pentobarbital** (5-ethyl-5-(1-methylbutyl)barbituric acid)



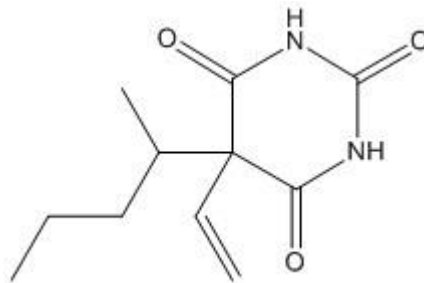
**Secbutabarbital** (5-sec-butyl-5-ethylbarbituric acid)



**Secobarbital** (5-allyl-5-(1-methylbutyl)barbituric acid)

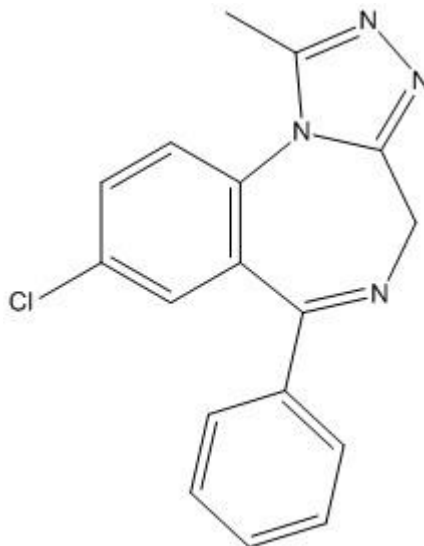


**Vinylbital** (5-(1-methylbutyl)-5-vinylbarbituric acid)

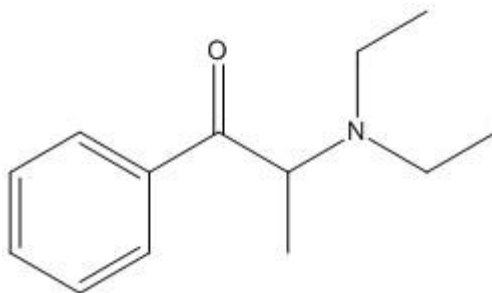


## Part 5

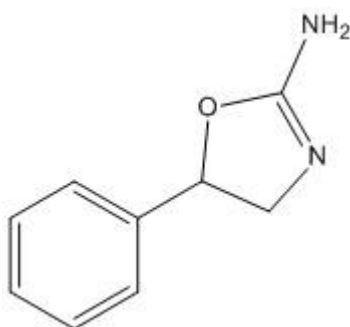
**Alprazolam**



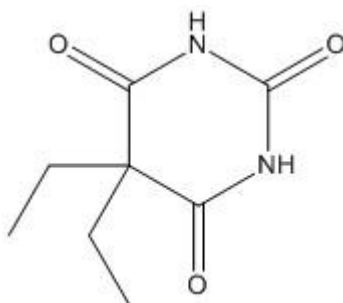
**Amfepramone** (2-(diethylamino)propiofenone)



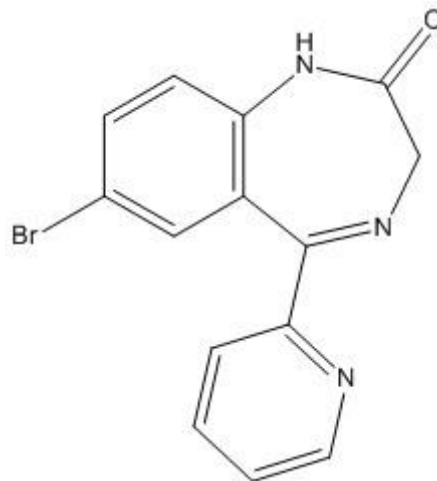
**Aminorex**



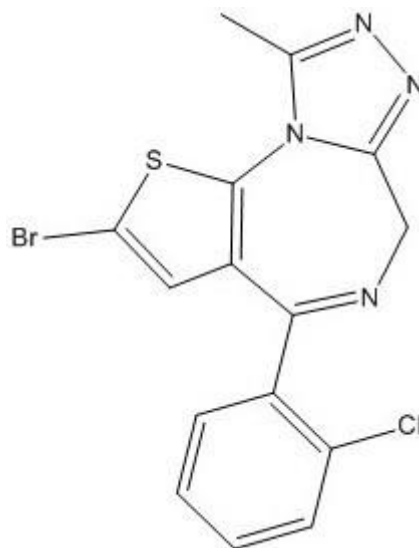
**Barbital** (5,5-diethylbarbituric acid)



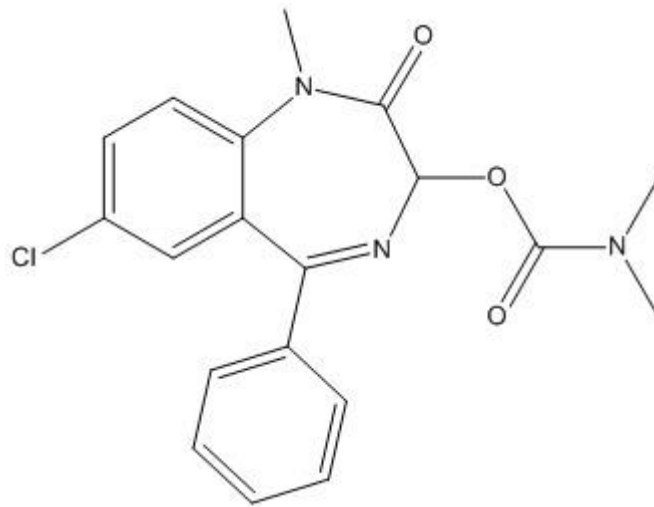
**Bromazepam**



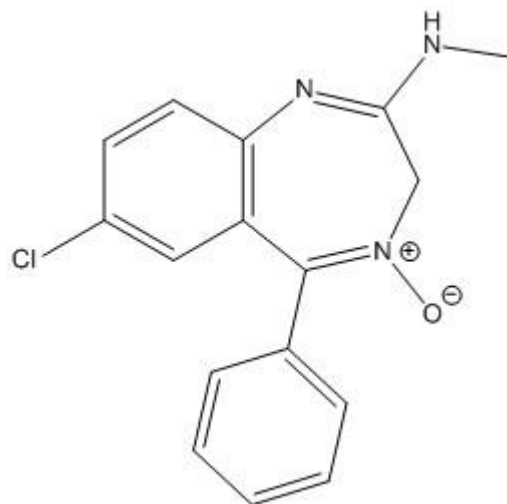
**Brotizolam**



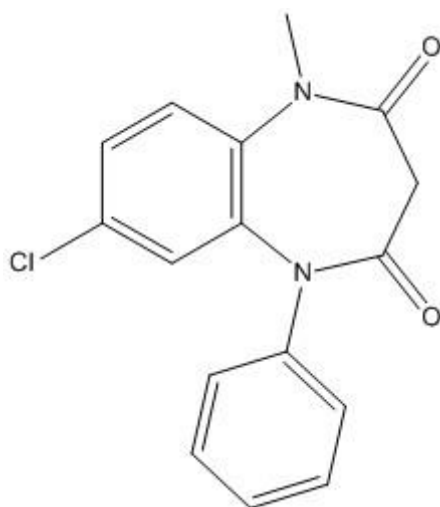
**Camazepam**



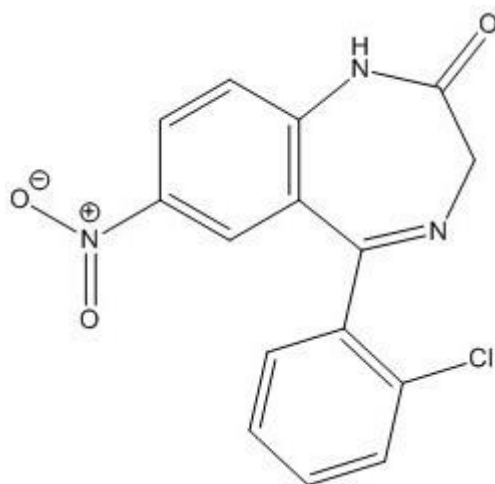
**Chlordiazepoxide**



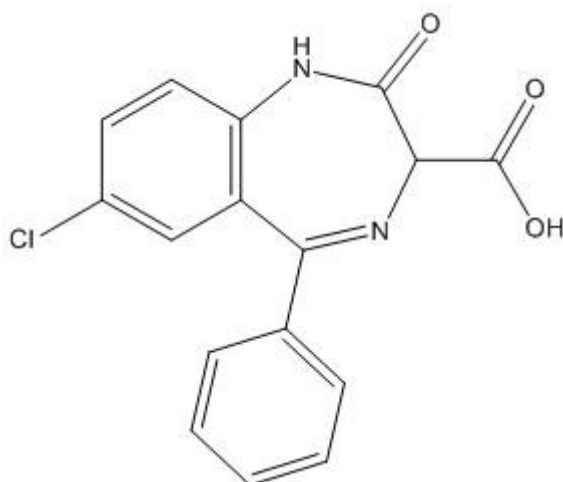
**Clobazam**



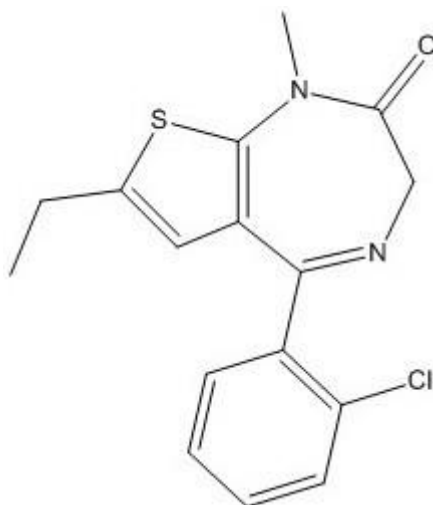
**Clonazepam**



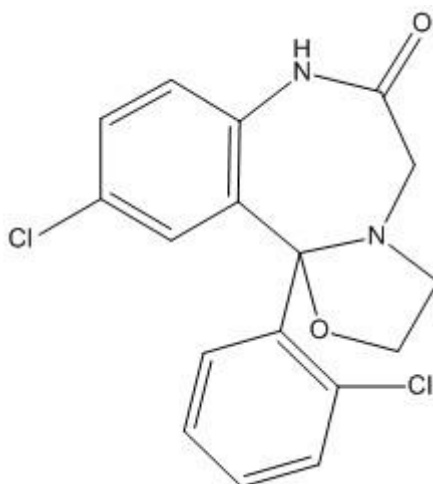
**Clorazepate**



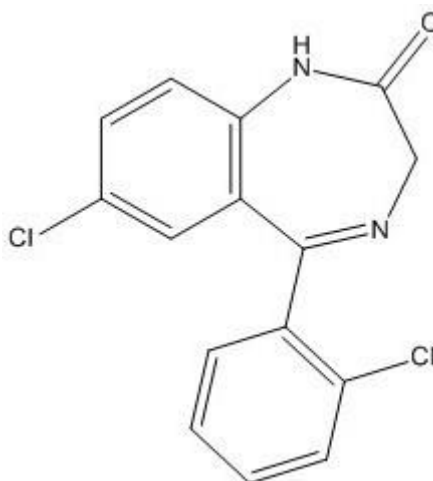
**Clotiazepam**



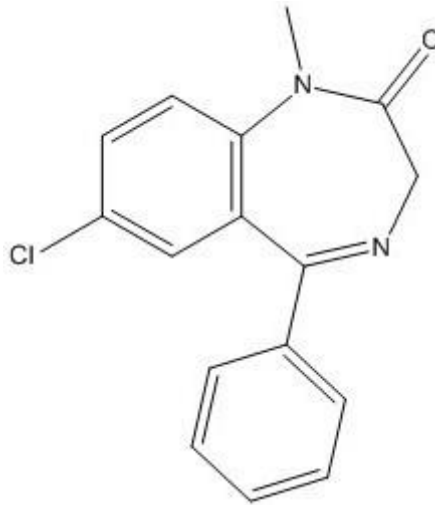
**Cloxazolam**



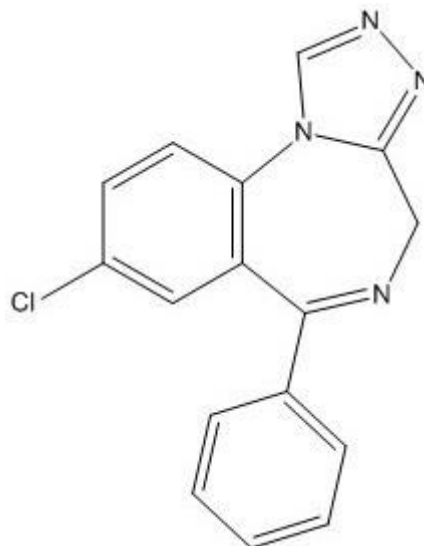
**Delorazepam**



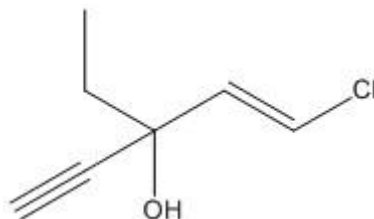
**Diazepam**



**Estazolam**

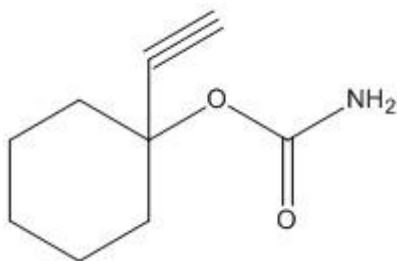


**Ethchlorvynol** (ethyl-2-chlorovinylethynyl-carbinol)

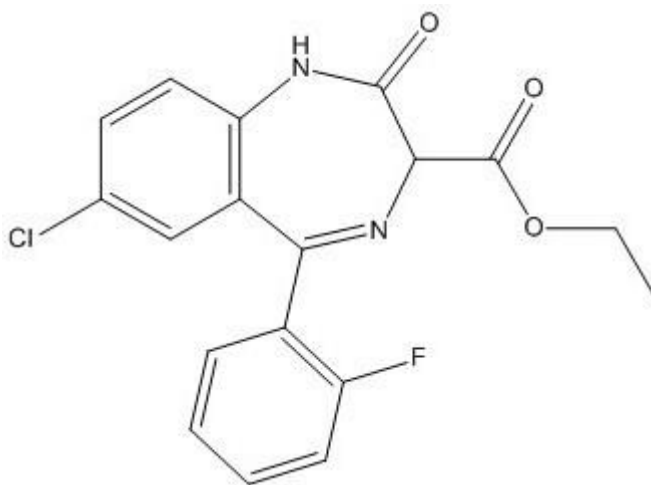




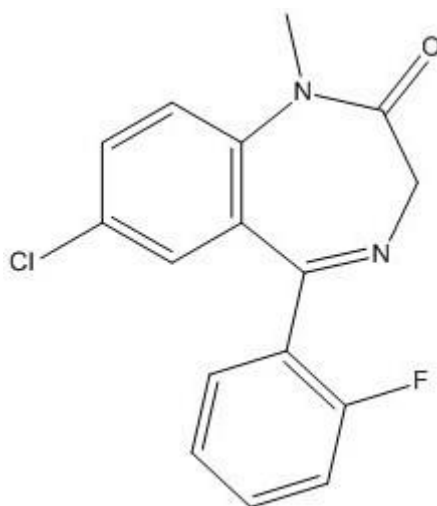
**Ethinamate** (1-ethynylcyclohexanol carbamate)



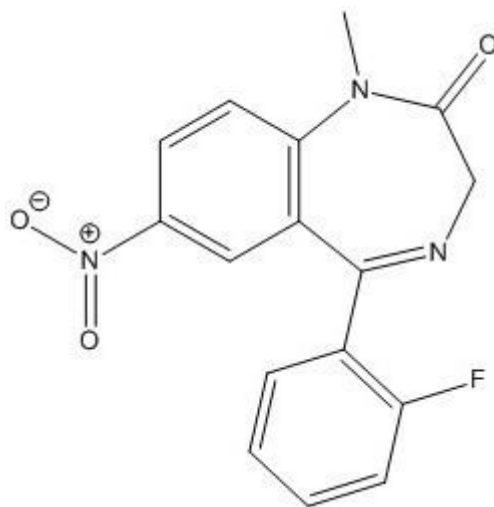
**Ethyl loflazepate**



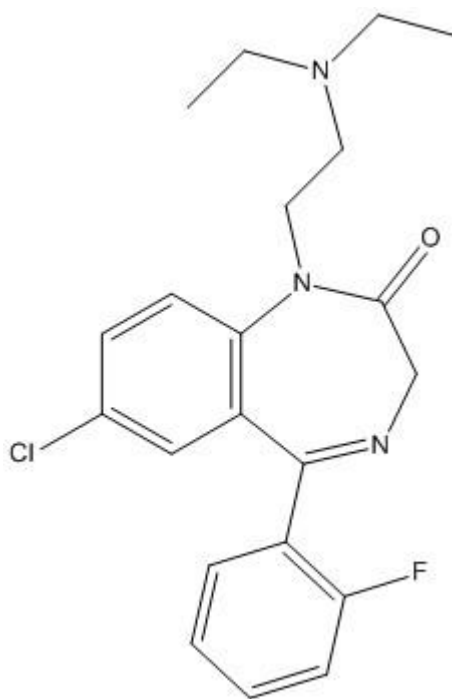
**Fludiazepam**



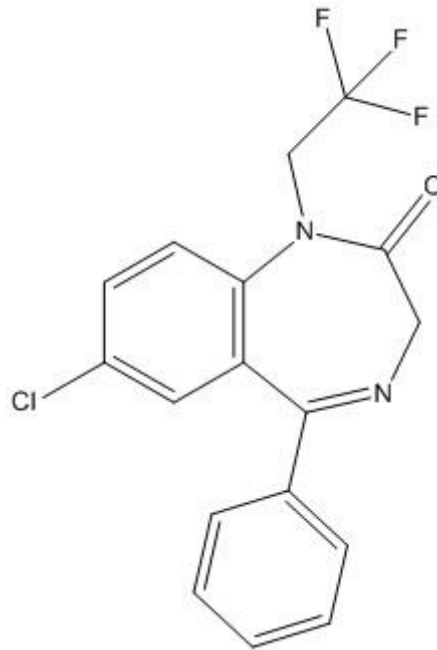
**Flunitrazepam**



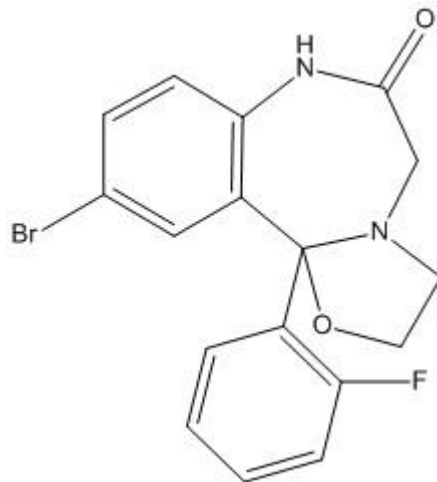
**Flurazepam**



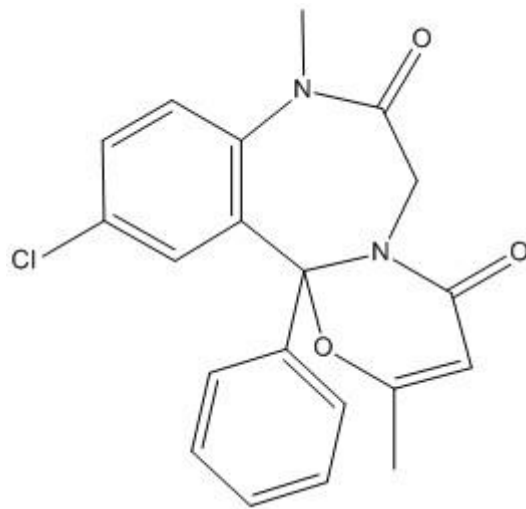
**Halazepam**



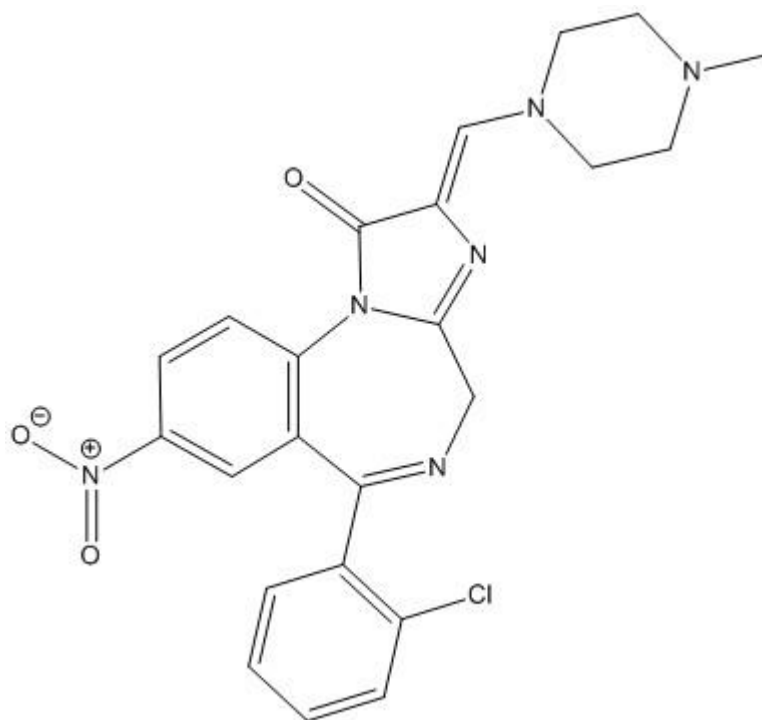
**Haloxazolam**



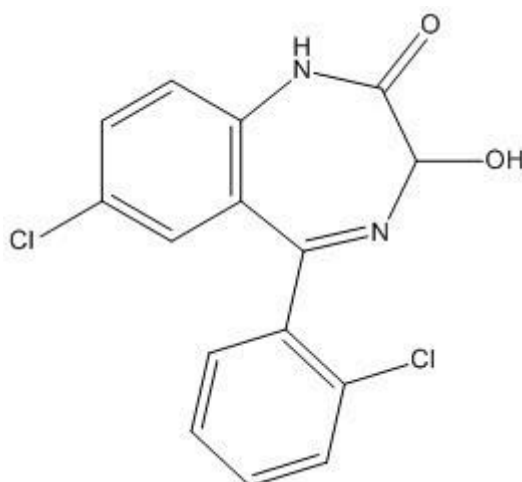
**Ketazolam**



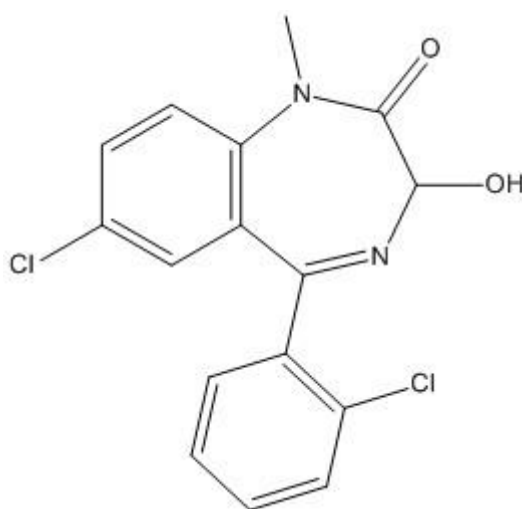
**Loprazolam**



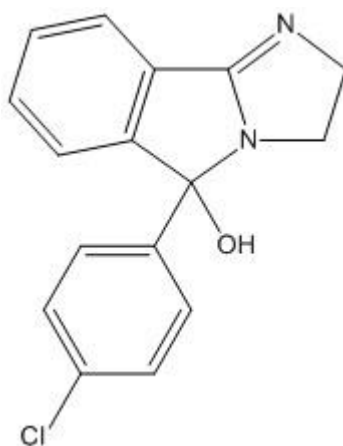
**Lorazepam**



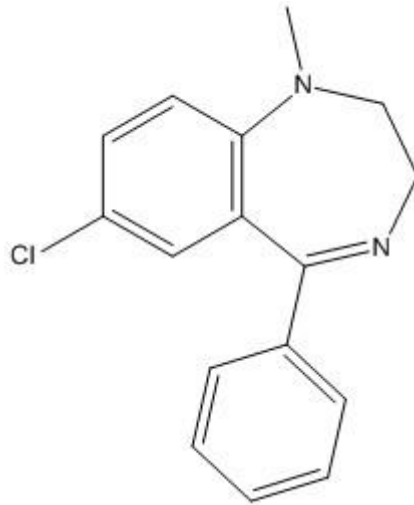
**Lormetazepam**



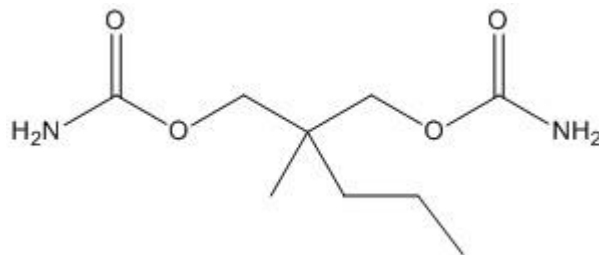
**Mazindol** (5-(4-chlorophenyl)-2,5-dihydro-3*H*-imidazo[2,1-*a*]-isoindol-5-ol)



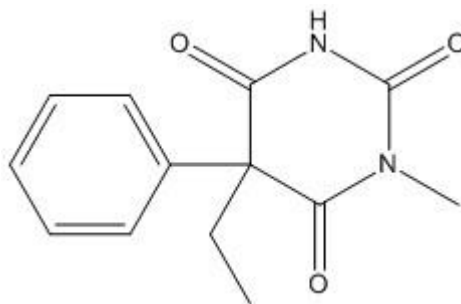
**Medazepam**



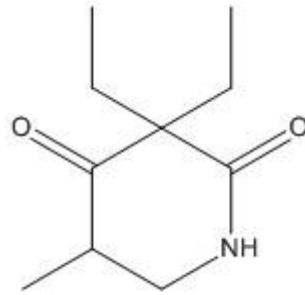
**Meproamate** (2-methyl-2-propyl-1,3-propanediol dicarbamate)



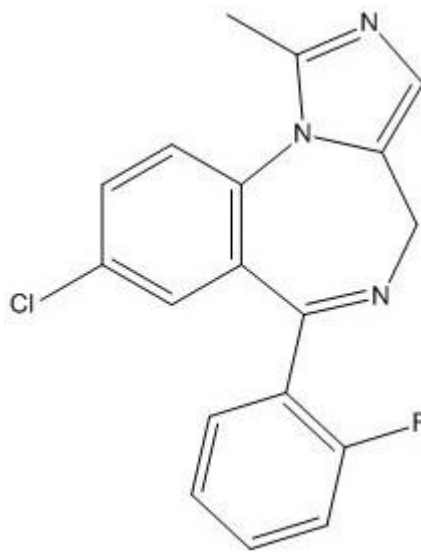
**Methylphenobarbital** (5-ethyl-1-methyl-5-phenylbarbituric acid)



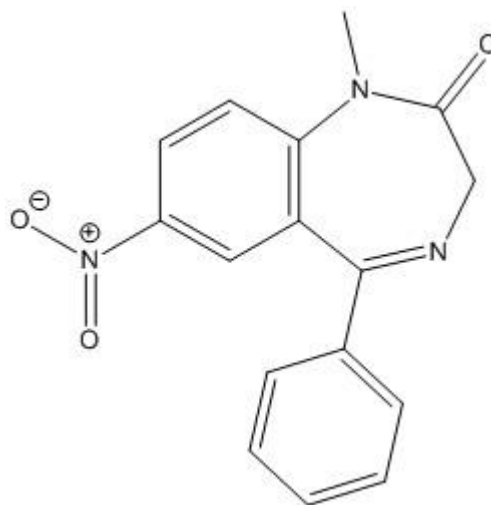
**Methylprylon** (3,3-diethyl-5-methylpiperidine-2,4-dione)



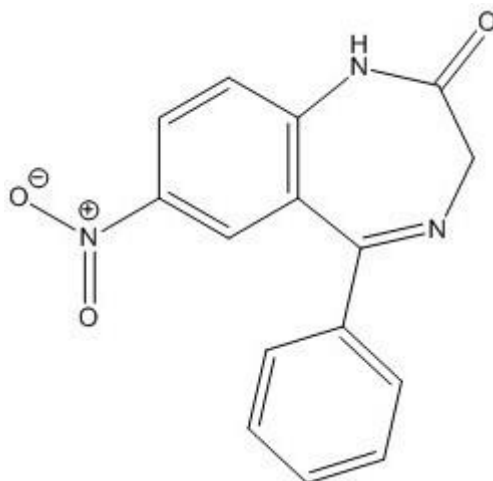
**Midazolam**



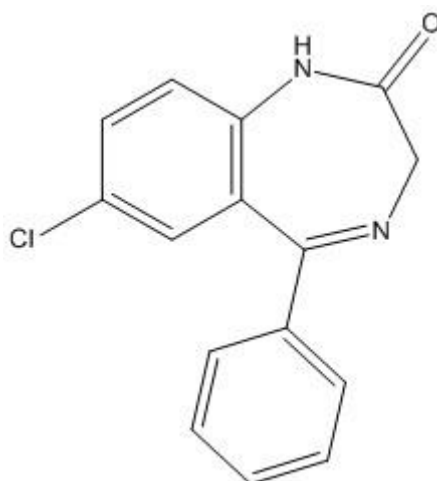
**Nimetazepam**



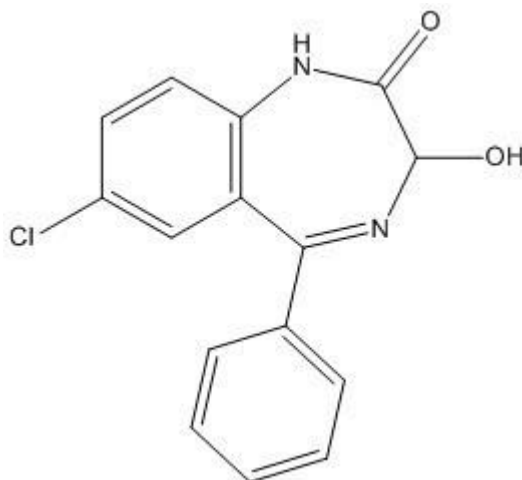
**Nitrazepam**



**Nordazepam**

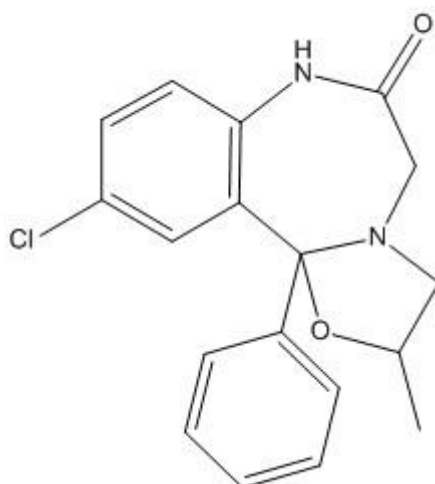


**Oxazepam**

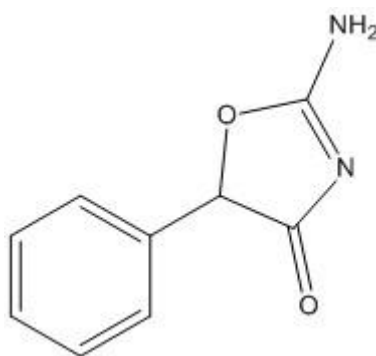




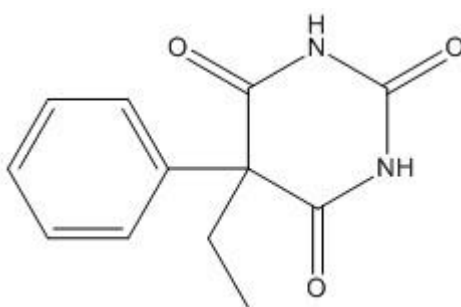
**Oxazolam**



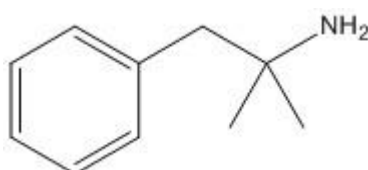
**Pemoline**



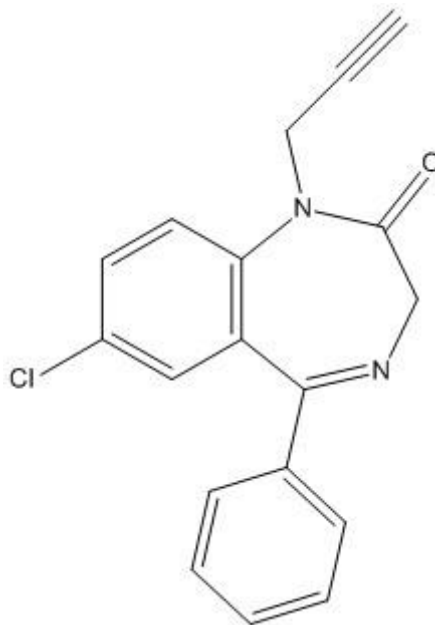
**Phenobarbital** (5-ethyl-5-phenylbarbituric acid)



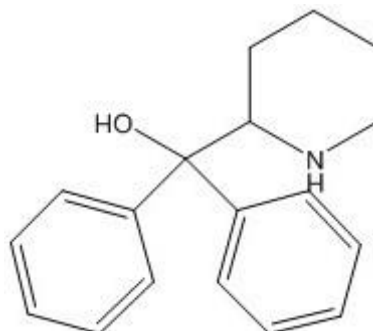
**Phentermine** (2-amino-2-methyl-1-phenylpropane)



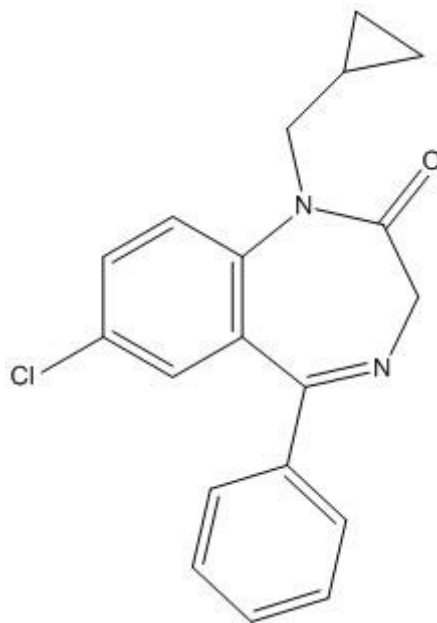
**Pinazepam**



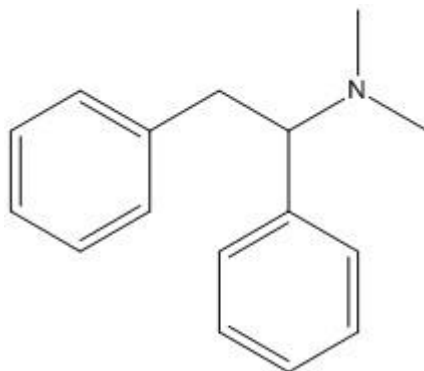
**Pipradrol** (1,1-diphenyl-1-(2-piperidyl)methanol)



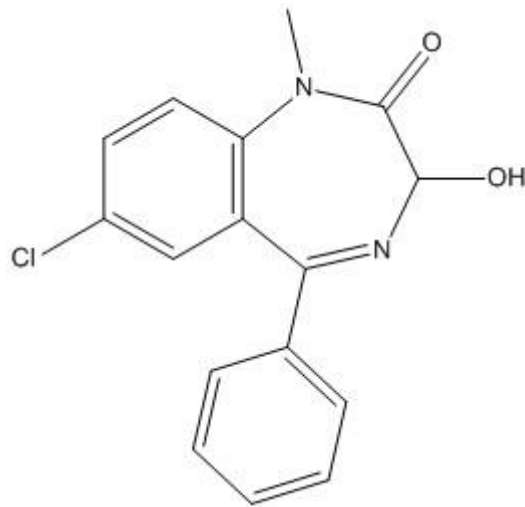
**Prazepam**



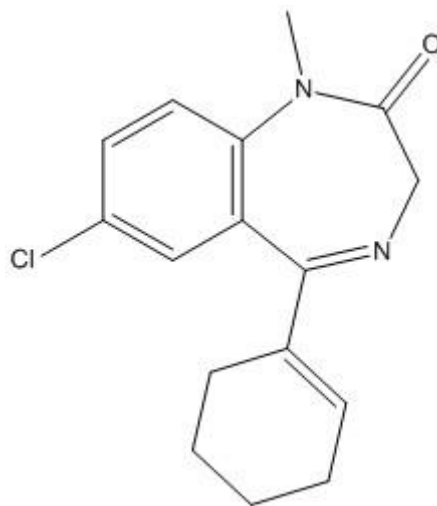
**SPA ((-)-1-dimethylamino-1,2-diphenylethane)**



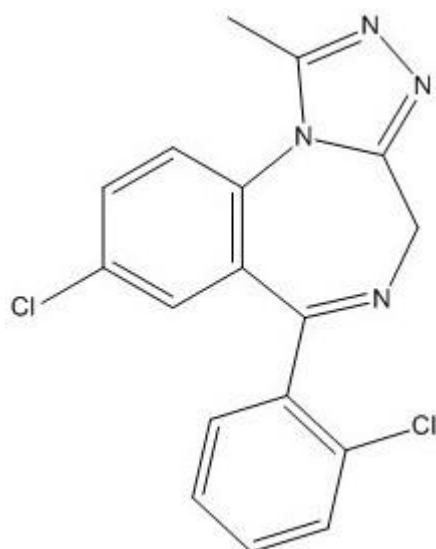
**Temazepam**



**Tetrazepam**

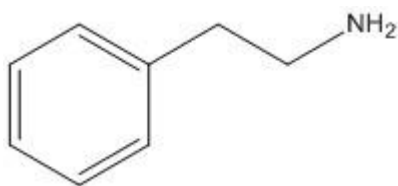


## Triazolam

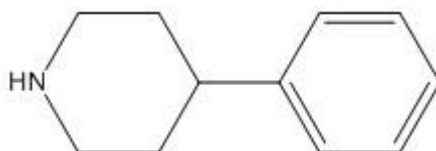


## Part 7

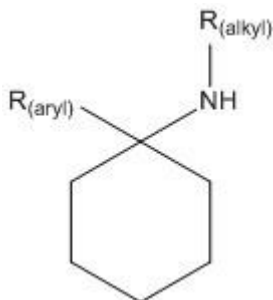
**Amphetamine analogues** (1-amino-2-phenylethane nucleus)



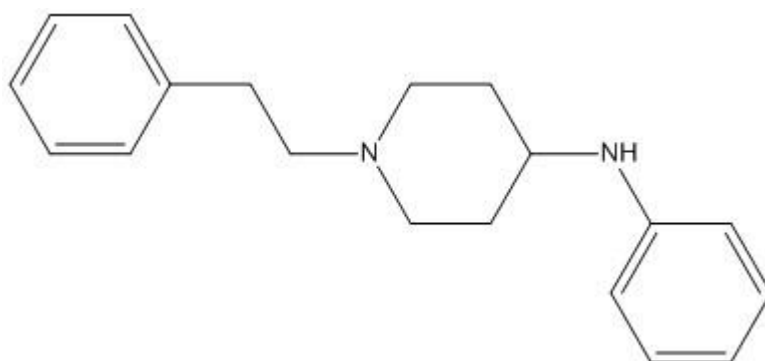
**Pethidine analogues** (4-phenylpiperidine nucleus)



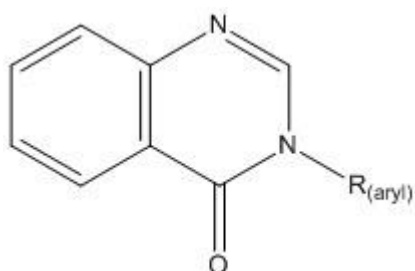
**Phencyclidine analogues** (1-alkylamino-1-arylcyclohexane nucleus)



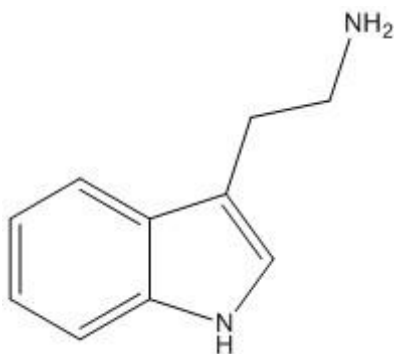
**Fentanyl analogues** (*N*-[1-(2-phenethyl)-4-piperidyl]aniline nucleus)



**Methaqualone analogues** (3-arylquinazolin-4-one nucleus)



**DMT (dimethyltryptamine) analogues** (3-(2-aminoethyl)indole nucleus)

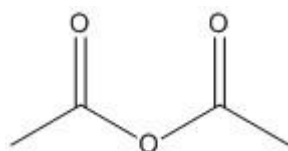


# Schedule 4 – Precursor substances

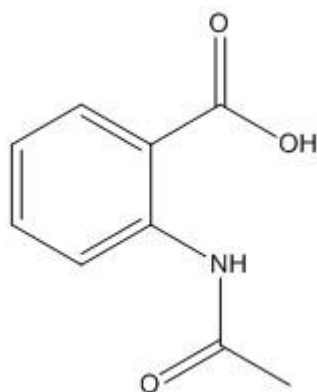
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## Part 1

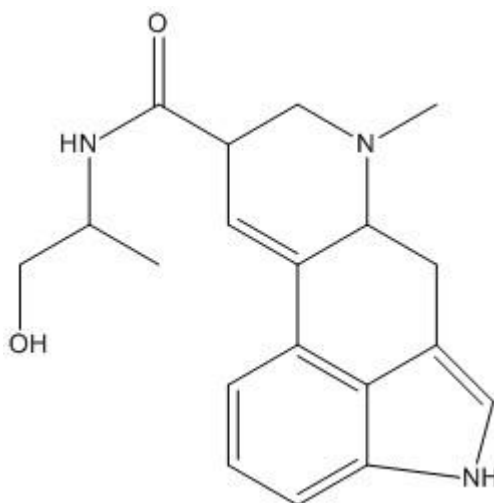
Acetic anhydride



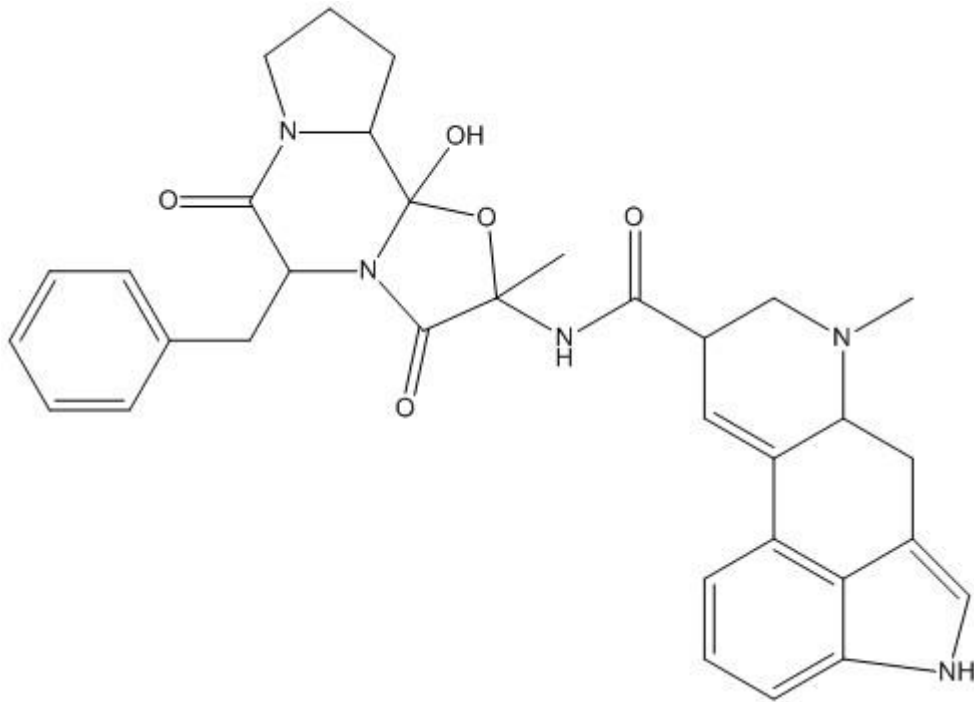
*N*-acetylanthranilic acid



Ergometrine



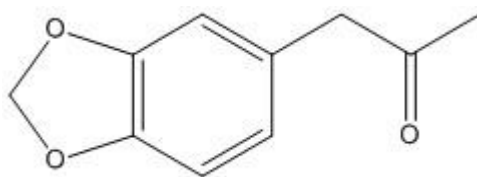
**Ergotamine**



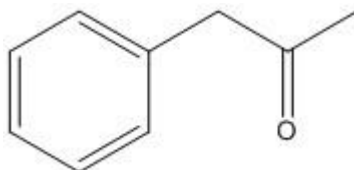


Schedule 4 – Precursor substances

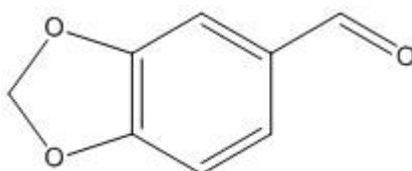
**3,4-methylenedioxyphenyl-2-propanone**



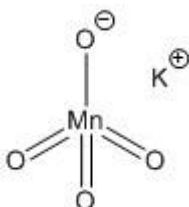
**1-phenyl-2-propanone**



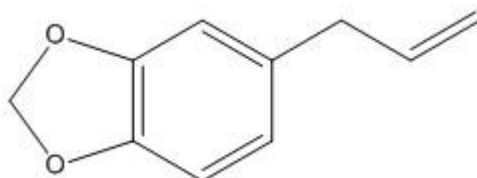
**Piperonal**



**Potassium permanganate**



**Safrole**

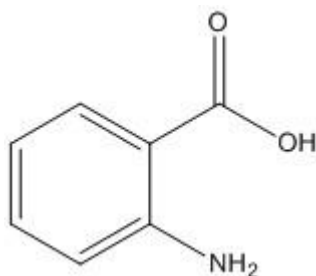


## Part 2

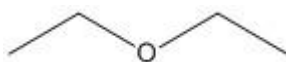
### Acetone



### Anthranilic acid



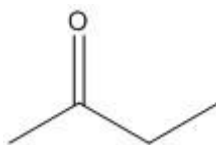
### Ethyl ether



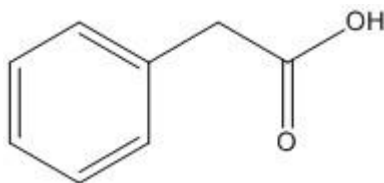
### Hydrochloric acid



### Methyl ethyl ketone

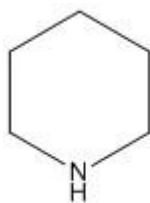


### Phenylacetic acid

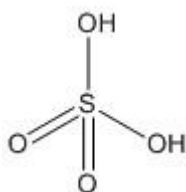


## Schedule 4 – Precursor substances

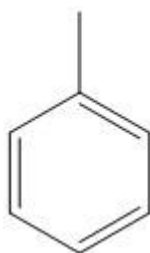
### Piperidine



### Sulphuric acid

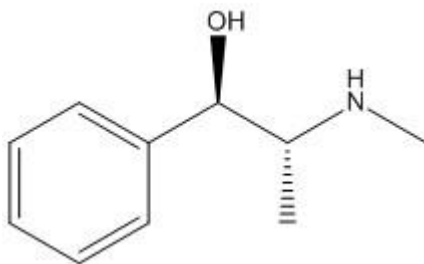


### Toluene

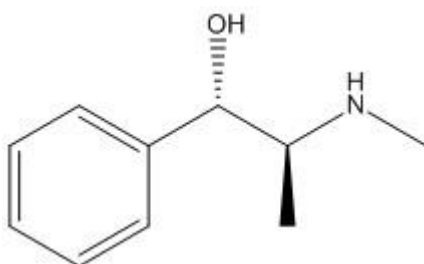


## Part 3

### Ephedrine

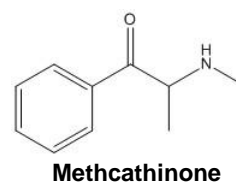
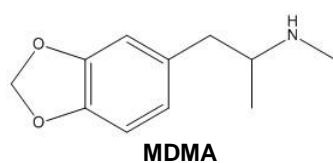
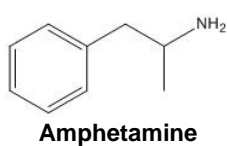
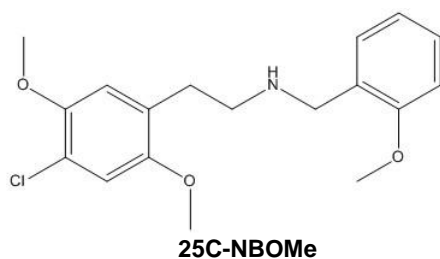
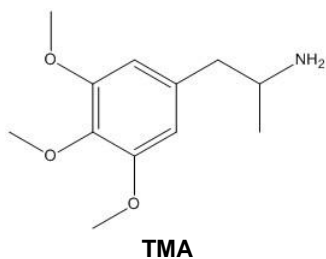
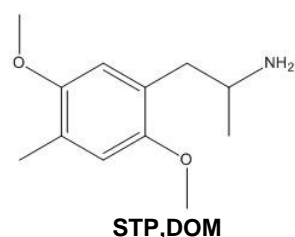
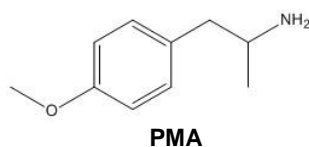
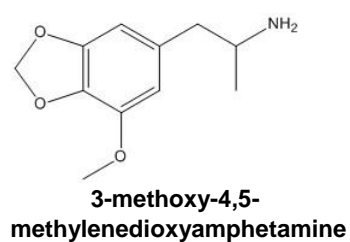
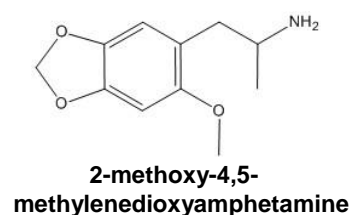
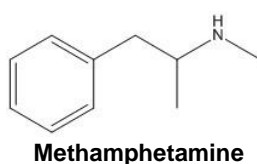
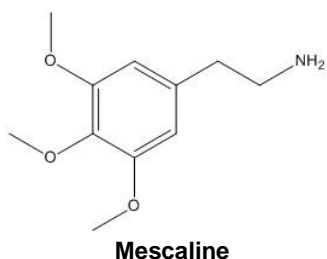
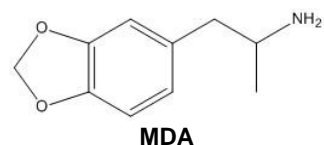
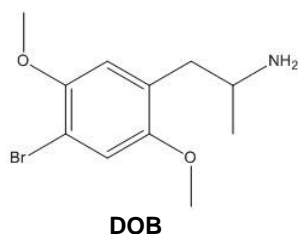
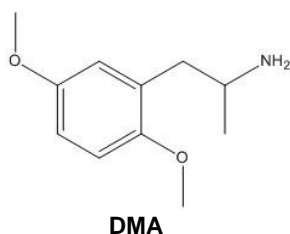


### Pseudoephedrine

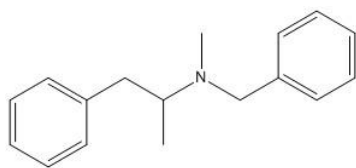


# Appendix 1

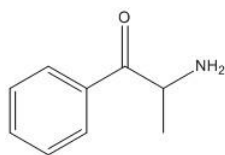
## Controlled drugs with amphetamine analogue nuclei



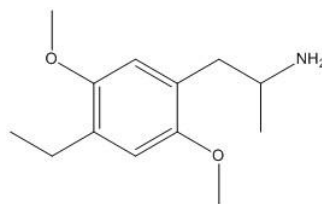
## Appendix 1 – amphetamine analogue nuclei



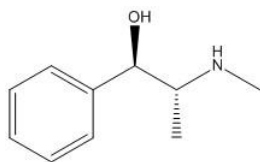
**Benzphetamine**



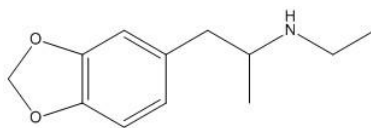
**Cathinone**



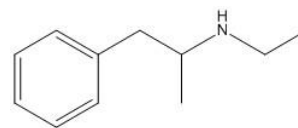
**DOET**



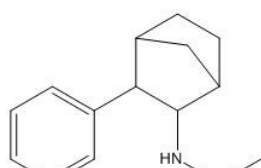
**Ephedrine**



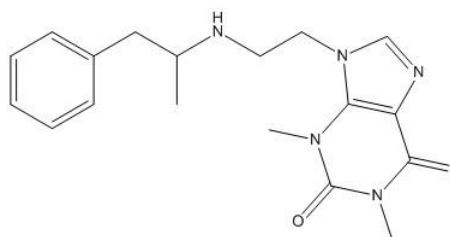
**N-ethyl MDA**



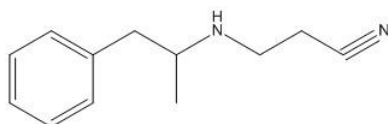
**N-ethylamphetamine**



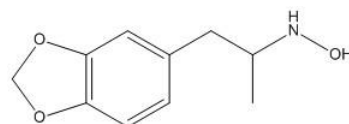
**Fencamfamine**



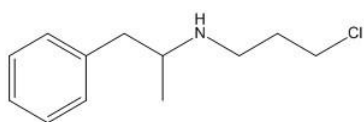
**Fenethylamine**



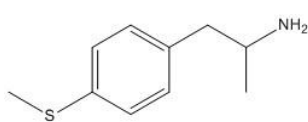
**Fenproporex**



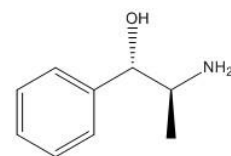
**N-hydroxy MDA**



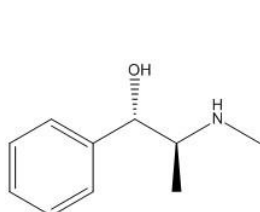
**Mefenorex**



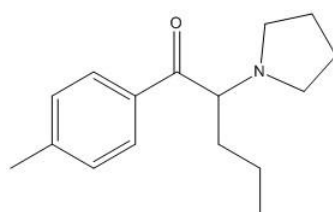
**4-methylthioamphetamine**



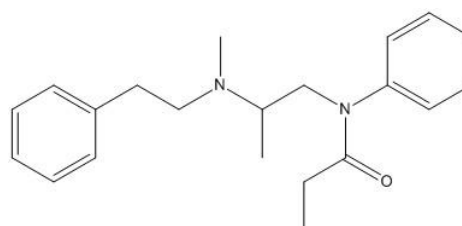
**Norpseudoephedrine**



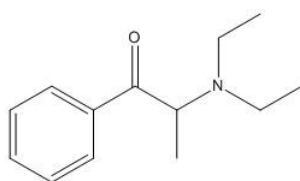
**Pseudoephedrine**



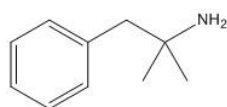
**Pyrovalerone**



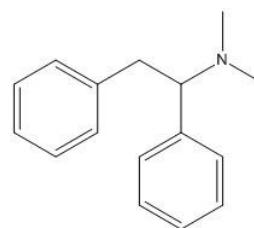
**Diampromide**



**Amfepramone**



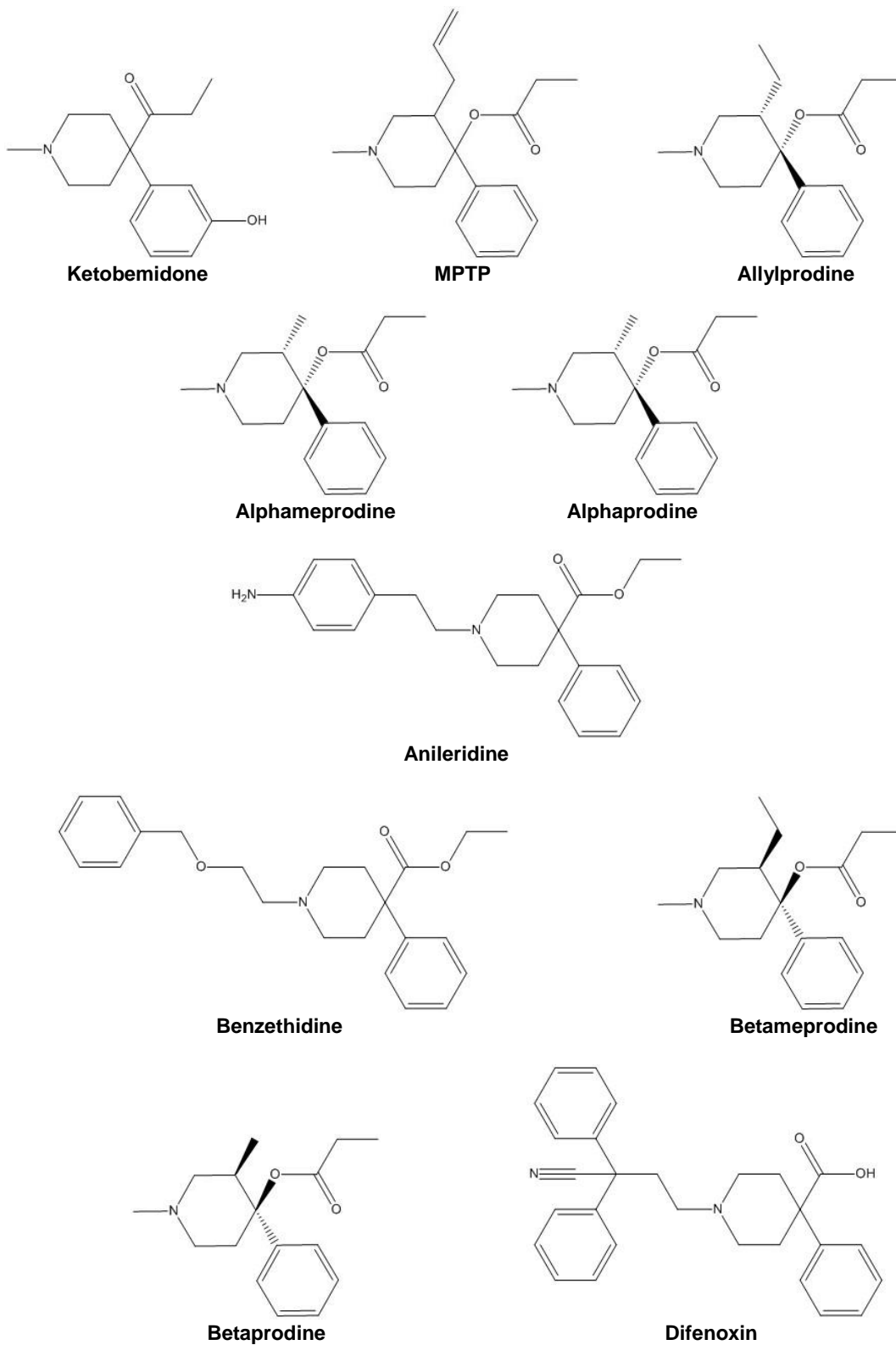
**Phentermine**



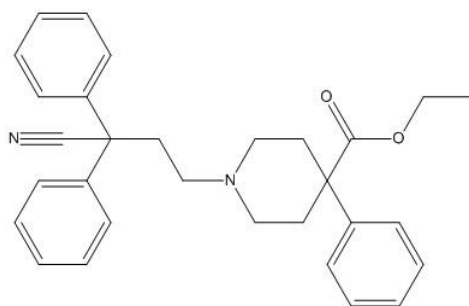
**SPA**

## Appendix 2

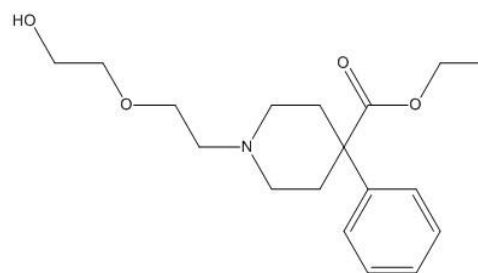
### Controlled drugs with pethidine analogue nuclei



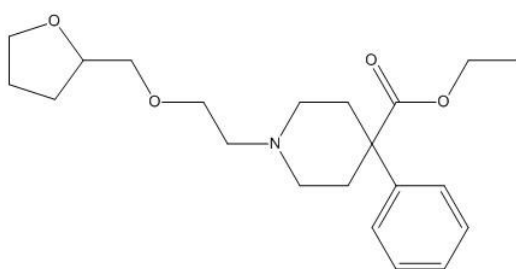
## Appendix 2 – pethidine analogue nuclei



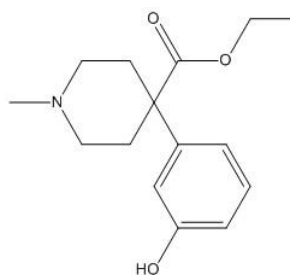
**Diphenoxylate**



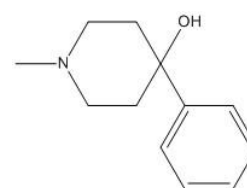
**Etoxeridine**



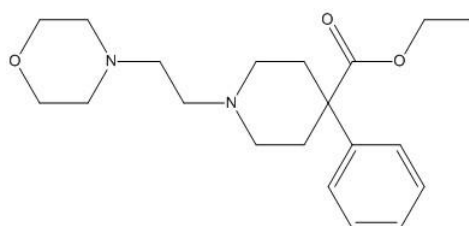
**Furethidine**



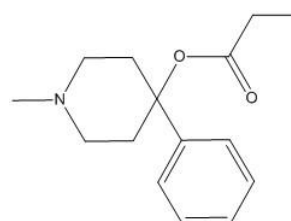
**Hydroxypethidine**



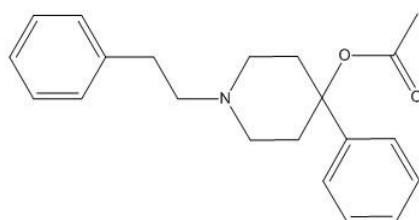
**1-methyl-4-phenyl-4-piperidinol**



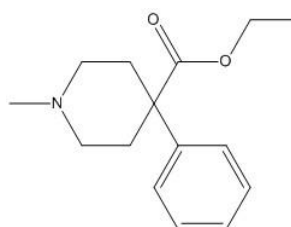
**Morpheridine**



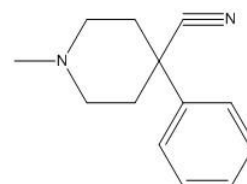
**MPPP**



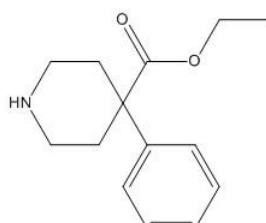
**PEPAP**



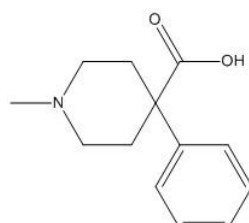
**Pethidine**



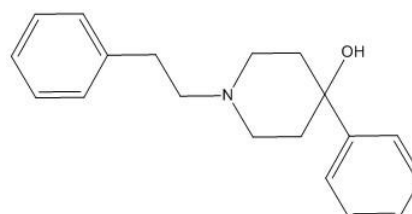
**Pethidine-intermediate-A**



**Pethidine-intermediate-B**



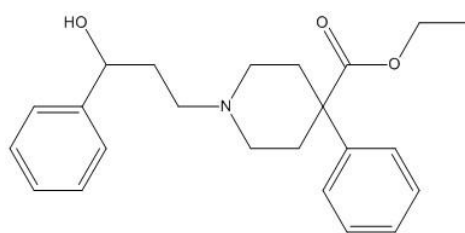
**Pethidine-intermediate-C**



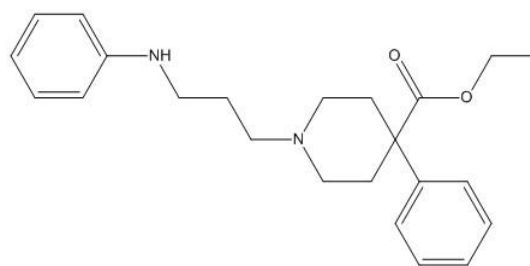
**1-phenethyl-4-phenyl-4-piperidinol**



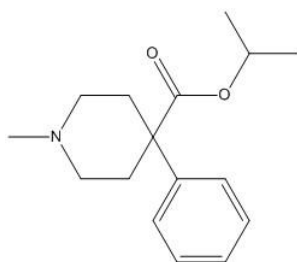
## Appendix 2 – pethidine analogue nuclei



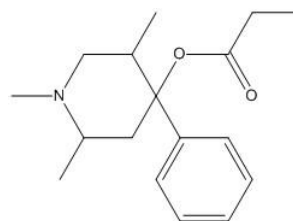
**Phenoperidine**



**Piminodine**



**Properidine**

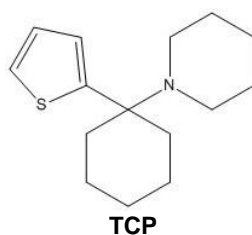
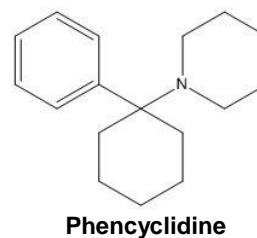
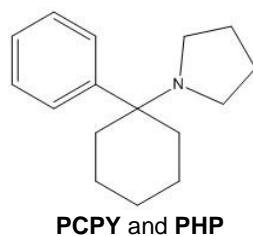
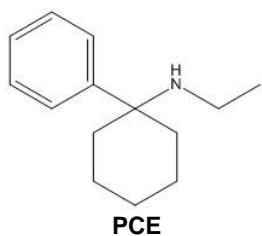


**Trimeperidine**

## Appendix 3

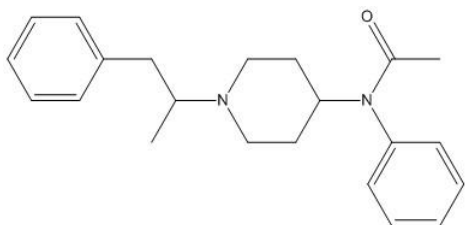
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### Controlled drugs with phencyclidine analogue nuclei

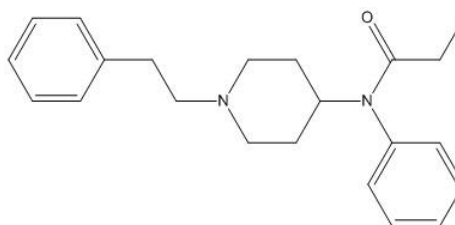


# Appendix 4

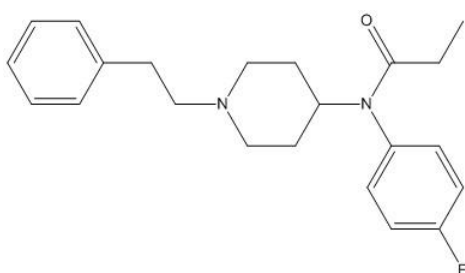
## Controlled drugs with fentanyl analogue nuclei



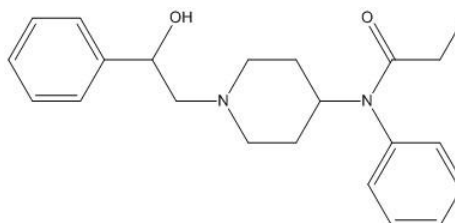
**Acetyl-α-methylfentanyl**



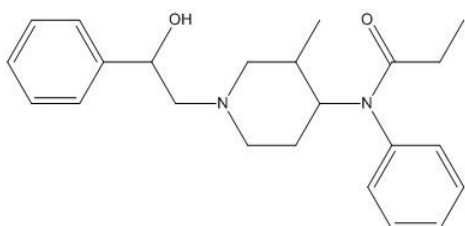
**Fentanyl**



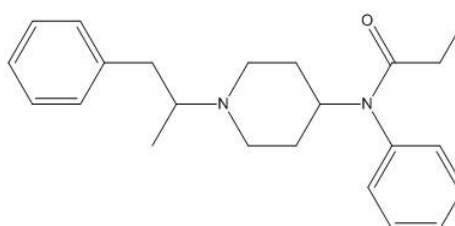
**p-fluorofentanyl**



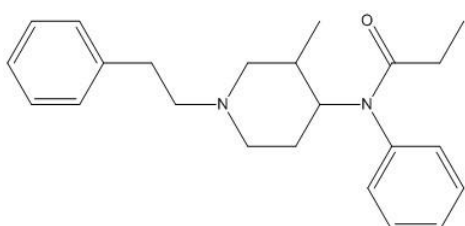
**β-hydroxyfentanyl**



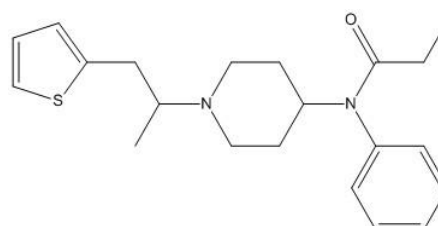
**β-hydroxy-3-methylfentanyl**



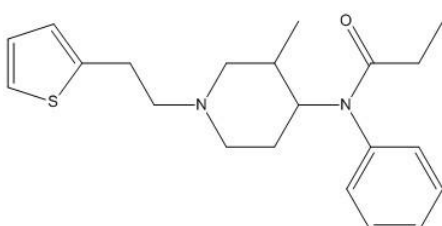
**α-methylfentanyl**



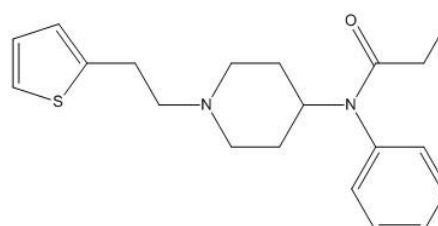
**3-methylfentanyl**



**α-methylthiofentanyl**



**3-methylthiofentanyl**

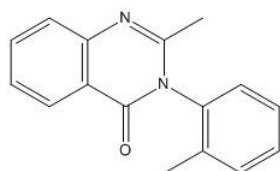


**Thiofentanyl**

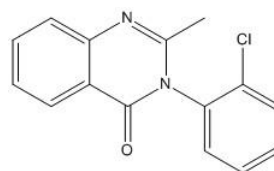
# Appendix 5

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## Controlled drugs with methaqualone analogue nuclei



**Methaqualone**



**Mecloqualone**

# Appendix 6

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## Controlled drugs with DMT analogue nuclei

