

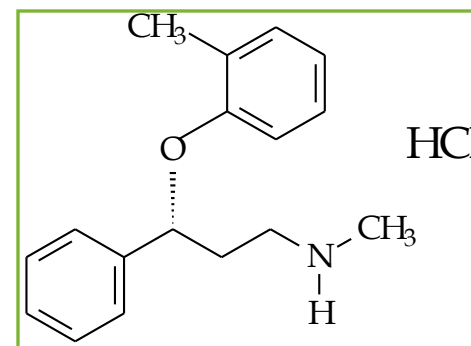
# Generic APIs

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competency at  
Archimica**



## Atomoxetine HCl

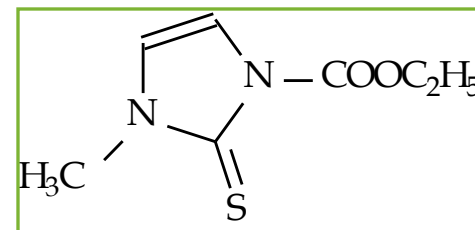
- Atomoxetine HCl is a white to practically white solid, which has a solubility of 27.8 mg/mL in water.
- The chemical designation is (-)-N-Methyl-3-phenyl-3-(o-tolyloxy)-propylamine hydrochloride.
- The precise mechanism by which atomoxetine produces its therapeutic effects in Attention-Deficit / Hyperactivity Disorder (ADHD) is unknown, but is thought to be related to selective inhibition of the pre-synaptic norepinephrine transporter, as determined in ex vivo uptake and neurotransmitter depletion studies.
- Its advantage over stimulants for the treatment of ADHD is that it has less abuse potential than stimulants, is not scheduled as a controlled substance and has proven to offer 24 hour coverage of symptoms associated with ADHD in adults and children.



CAS: [83015-26-3]  
Formula: C<sub>17</sub>H<sub>21</sub>NO·HCl  
M. Weight: 291.82

# Carbimazole

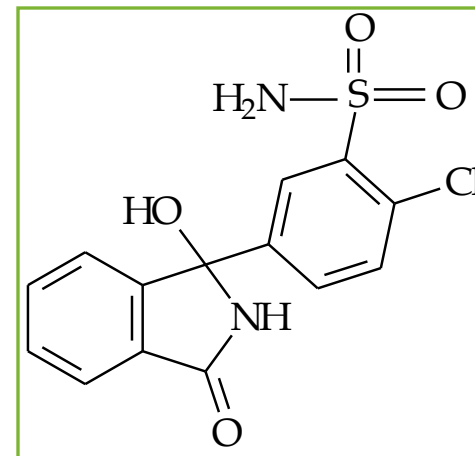
- Carbimazole is used to treat hyperthyroidism. It is a pro-drug as after absorption it is converted to the active form, methimazole. Methimazole prevents the peroxidase enzyme from coupling and iodinating the tyrosine residues on thyroglobulin, hence reducing the production of the thyroid hormones T3 and T4 (thyroxine).
- Therapy for hyperthyroidism generally starts at a high dose of 15 – 40 mg continued until the patient has normal thyroid function, and then reduced to a maintenance dose of 5 - 15mg. Treatment is usually given for 12 - 18 months followed by a trial withdraw.
- The onset of anti-thyroid effect is rapid but the onset of clinical effects on thyroid hormone levels in the blood is much slower. This is because the large store of pre-formed T3 and T4 in the thyroid gland has to be depleted before any beneficial clinical effect occurs.
- The chemical name is 2,3-dihydro-3-methyl-2-thioxo-1H-imidazole-1-carboxylic acid ethyl ester.



CAS: [22232-54-8]  
 Formula: C<sub>7</sub>H<sub>10</sub>N<sub>2</sub>O<sub>2</sub>S  
 M. Weight: 186,23

# Chlorthalidone

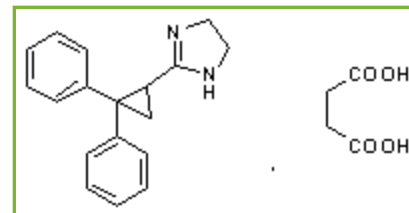
- Chlorthalidone is an antihypertensive/diuretic. It is a monosulfamyl that differs chemically from thiazide diuretics in that a double-ring is incorporated in its structure. It is 2-chloro-5-(1-hydroxy-3-oxo-1-isoindoliny) benzenesulfonamide. Chlorthalidone is indicated as adjunctive in associated with congestive failure, cirrhosis, and other therapy. Chlorthalidone has also been found useful in various forms of dysfunction, such as syndrome, glomerulonephritis, and failure. A new study just published in the US called "Allhat" (33.300 patients involved) shows how chlorthalidone is strongly effective against hypertension without the severe side-effects which occurs in patients being treated with some of the new ACE-Inhibitors.



CAS: [77-36-1]  
Formula: C<sub>14</sub>H<sub>11</sub>ClN<sub>2</sub>O<sub>4</sub>S  
M. Weight: 338,77

## Cibenzoline Succinate

- Cibenzoline Succinate is a Class I sodium channel blocker antiarrhythmic agent. It is used to treat patients with supraventricular or ventricular arrhythmias and in obstructive hypertrophic cardiomyopathy.
- Cibenzoline is mainly marketed in Europe and Japan.
- Administration is by tablets or i.v.
- The chemical name is 2-(2,2-Diphenylcyclopropyl)-4,5-dihydro-1H-imidazole succinate.



CAS: [100678-32-8]

Formula:  $C_{18}H_{18}N_2$

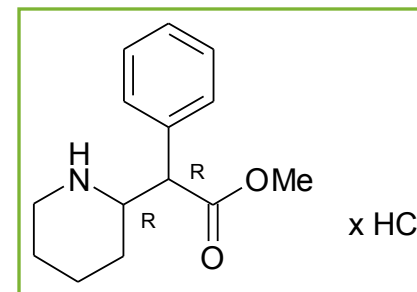
$C_4H_6O_4$

M. Weight: 262,35

118,09

## Dexmethylphenidate HCl

- The chemical name is (1R, 2R)- $\alpha$ -phenyl-2-piperidineacetic acid methyl ester. It is the pure and active enantiomer of Methylphenidate.
- It is a psychostimulant used, as Methylphenidate, in attention deficit disorder (ADD), and attention deficit hyperactivity disorder (ADHD). Administration of dexmethyl phenidate is done at half the normal dose for racemic methylphenidate to children with ADHD, resulting in statistically significant improvements in academic productivity with a better control of behavioral symptoms; dexmethyl phenidate has also a longer duration of action compared with dl-methylphenidate.



CAS: [19262-68-1]

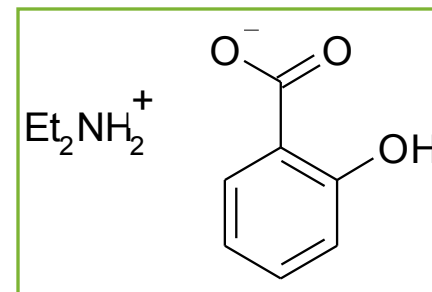
Formula:

$C_{14}H_{19}NO_2 \cdot HCl$

M. Weight: 269,77

## Diethylamine Salicylate

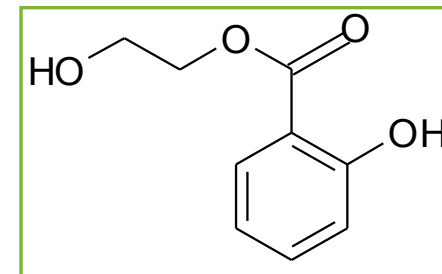
- Diethylamine Salicylate (Diethylammonium Salicylate) is an antirheumatic / anti-inflammatory used in topical creams and lotions. It is a white or off white crystalline solid.



CAS: [4419-92-5]  
Formula :  $\text{C}_{11}\text{H}_{17}\text{NO}_3$   
M.Weight : 211.3

## Ethylene Glycol Monosalicylate

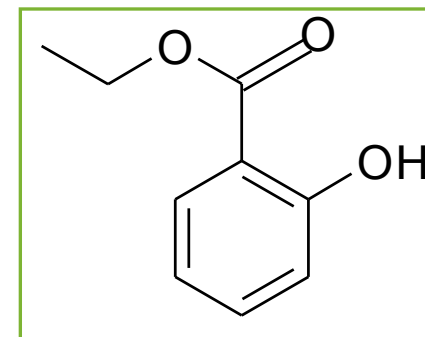
- Ethylene Glycol Monosalicylate (2-Hydroxyethyl Salicylate) is an antirheumatic / anti-inflammatory commonly used in topical creams and aerosols.
- It is a white crystalline solid or almost colourless viscous liquid with little or no odour.
- The Committee for Veterinary Medicinal Products has recommended the inclusion of 2-Hydroxyethyl Salicylate in Annex II of Council Regulation (EEC) No. 2377/90 as suitable for topical use on all animals with the exception of fish.



CAS: [87-28-5]  
Formula: C<sub>9</sub>H<sub>10</sub>O<sub>4</sub>  
M.Weight: 182

## Ethyl Salicylate

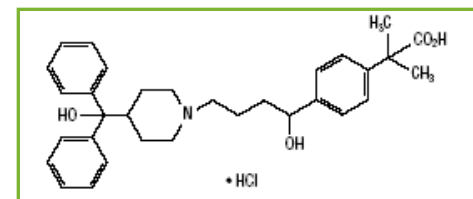
- Ethyl Salicylate (Ethyl-2-hydroxybenzoate) is an antirheumatic / anti-inflammatory commonly used in topical aerosols. It is a colourless liquid.
- It has a pleasant odour resembling wintergreen and is used as a flavour and fragrance ingredient.



CAS: [118-61-6]  
Formula: C<sub>9</sub>H<sub>10</sub>O<sub>3</sub>  
M.Weight: 166.17

# Fexofenadine HCl

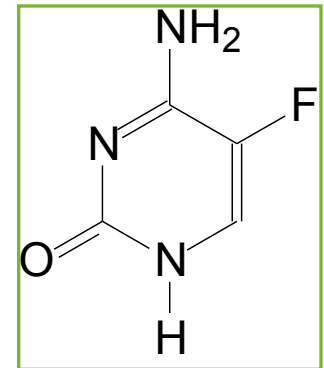
- Fexofenadine hydrochloride, is a histamine H1-receptor antagonist with the chemical name ( )-4-[1 hydroxy-4-[4-(hydroxydiphenyl-methyl)-1-piperidinyl]-butyl]-dimethyl benzeneacetic acid hydrochloride.
- Fexofenadine hydrochloride is a white to off-white crystalline powder. It is freely soluble in methanol and ethanol, slightly soluble in chloroform and water, and insoluble in hexane. It is formulated as a capsule or tablet for oral administration. Each capsule contains 60 mg fexofenadine hydrochloride and the following excipients: croscarmellose sodium, gelatin, lactose, micro-crystalline cellulose, and pregelatinized starch. Tablet contains 30, 60, or 180 mg fexofenadine hydrochloride (depending on the dosage strength) and the following excipients: croscarmellose sodium, magnesium stearate, microcrystalline cellulose, and pregelatinized starch.
- It is indicated for the relief of symptoms associated with seasonal allergic rhinitis in adults and children 6 years of age and older, and also for treatment of uncomplicated skin manifestations of chronic idiopathic urticaria. It significantly reduces pruritus and the number of wheals.



CAS: [83799-24-0]  
 Formula: C<sub>32</sub>H<sub>39</sub>NO<sub>4</sub> HCl  
 M. Weight: 538,13

## 5-Fluorocytosine

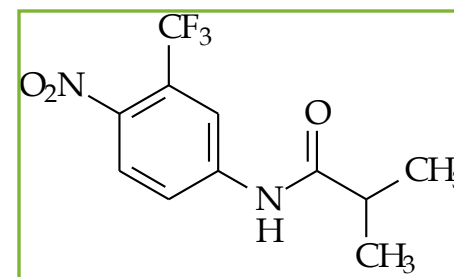
- The chemical name of Flucytosine (5-FC) 4-amino-5-fluoropyrimidin-2(1H)-one.
- It is a white or almost white crystalline powder. It is sparingly soluble in water, slightly soluble in ethanol and practically insoluble in ether.
- Flucytosine is an antifungal agent which is believed to act by interfering with the synthesis of nucleic acids in fungal cells.
- It is used to treat serious infections due to Candida and Cryptococcus.



CAS: [2022-85-7]  
Formula: C<sub>4</sub>H<sub>4</sub>FN<sub>3</sub>O  
M. Weight: 129,09

## Flutamide

- Flutamide is a nonsteroidal, orally active anti-androgen and antineoplastic. Its chemical name is 2-Methyl-N-[4-nitro-3-(trifluoromethyl)phenyl] propane amide.
- In animal studies, flutamide demonstrates potent antiandrogenic effects. It exerts its antiandrogenic action by inhibiting androgen uptake and/or by inhibiting nuclear binding of androgen in target tissues or both. Prostatic carcinoma is known to be androgen-sensitive and responds to treatment that counteracts the effect of androgen and/or removes the source of androgen, e.g. castration. Elevations of plasma testosterone and estradiol levels have been noted following flutamide administration.
- It is used in prostatic disease, and generally the final dosage form (capsules) contains 125 mg flutamide.

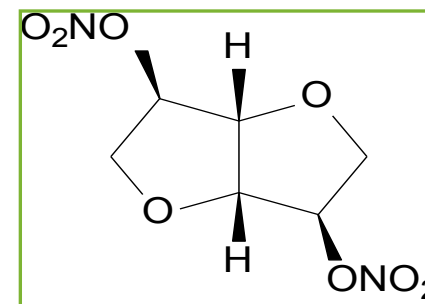


CAS: [13311-84-7]  
Formula: C<sub>11</sub>H<sub>11</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>  
M. Weight: 276,20



## Isosorbide dinitrate

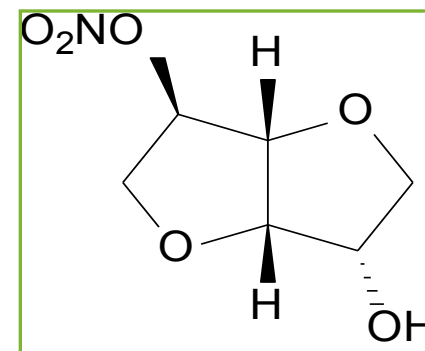
- The chemical name of Isosorbide Dinitrate is 1,4:3,6-dianhydro-D-glucitol dinitrate.
- It is a white, crystalline, virtually odour free powder.
- It is slightly soluble in water, sparingly soluble in alcohol and very soluble in acetone.
- It is supplied as a mixture with lactose or other suitable excipients in a range of dilutions. Isosorbide dinitrate is a vasodilator which may be administered orally or sublingually in tablet or spray form.
- It is used to manage angina pectoris crisis.



CAS: [87-33-2]  
Formula: C<sub>6</sub>H<sub>8</sub>FN<sub>2</sub>O<sub>8</sub>  
M. Weight: 236,14

## Isosorbide-5-mononitrate

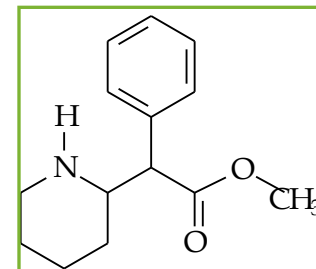
- Isosorbide-5-mononitrate is a bicyclic ether derivative of glucitol. The chemical name is 1,4:3,6-dianhydro-D-glucitol mono nitrate.
- The nitric acid esters of isosorbide are used as osmotic diuretic to reduce intraocular pressure with effects on both arteries and veins and to treat coronary insufficiency and angina pectoris. The monoester is a white crystalline powder; melting point 140 °C; freely soluble in water, alcohol and chloroform.



CAS: [16051-77-7]  
Formula: C<sub>6</sub>H<sub>9</sub>NO<sub>6</sub>  
M. Weight: 191,14

# Methylphenidate HCl

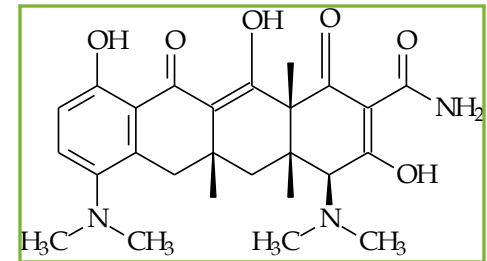
- Methylphenidate hydrochloride is Methyl- $\alpha$ -phenyl-2-piperidine-acetate hydrochloride.
- It is a white, odourless, fine crystalline powder. Its solutions are acid to litmus. It is freely soluble in water and in methanol, soluble in alcohol, and slightly soluble in chloroform and in acetone.
- Methylphenidate hydrochloride is a mild central nervous system (CNS) stimulant, the main applications are Attention Deficit Disorders and Narcolepsy.
- It is available as 5, 10, and 20 mg tablets for oral administration. A 20 mg extended-release tablet for oral administration is also available. The mode of action in man is not completely understood, but methylphenidate presumably activates the brain stem arousal system and cortex to produce its stimulant effect.
- There is neither specific evidence which clearly establishes the mechanism whereby methylphenidate produces its mental and behavioral effects in children, nor conclusive evidence regarding how these effects relate to the condition of the central nervous system.



CAS: [113-45-1]  
Formula:  
 $C_{14}H_{19}NO_2 \cdot HCl$   
M. Weight: 269,77

## Minocycline HCl

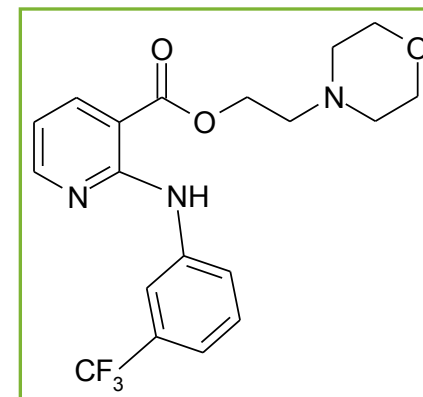
- Minocycline hydrochloride, a semisynthetic derivative of tetracycline, is 4S-(4a,4aa,5aa,12aa)]-4,7-bis(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,10,12,12a-tetrahydroxy-1,11-dioxo-2-naphthacene-carboxamide monohydrochloride. Minocycline capsules contain Minocycline HCl to 50 mg or 100 mg of minocycline in cellulose. The drug is available also for i.v. injection (100 mg in 5 ml of sterile water). Minocycline hydrochloride is indicated and used against a wide range of microorganisms such as rickettsiae, mycoplasma pneumoniae, agents of ornithosis and agents of lymphogranuloma venereum.



CAS: [13614-98-7]  
 Formula: C<sub>23</sub>H<sub>27</sub>N<sub>3</sub>O<sub>7</sub>·HCl  
 M. Weight: 493,48

# Morniflumate

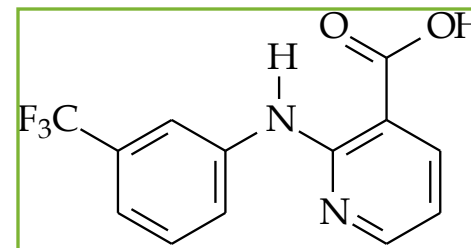
- Morniflumate is an anti-inflammatory. It is a very effective, analgesic and antipyretic agent that could be used with acute bronchitis, pharyngitis or tonsillitis, otitis media, acute sinusitis, minor rheumatic disorders, genitourinary inflammation and minor surgical pain.



CAS: [65487-85-0]  
Formula: C<sub>19</sub>H<sub>20</sub>N<sub>3</sub>O<sub>3</sub>  
M. Weight: 395,38

## Niflumic Acid

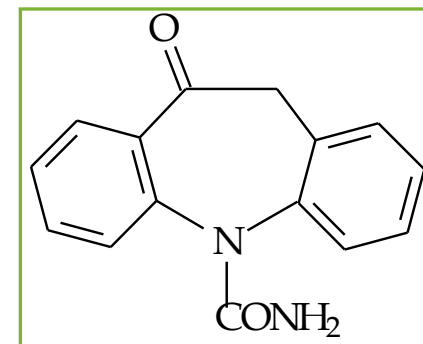
- The chemical name of Niflumic acid is 2-[[3-(trifluoromethyl) phenyl]amino]-3-pyridine carboxylic acid.
- It is a nonsteroidal analgesic and anti-inflammatory agent used in the treatment of rheumatoid arthritis, which works as a Cyclooxygenase inhibitor.



CAS: [4394-00-7]  
Formula: C<sub>13</sub>H<sub>9</sub>F<sub>3</sub>N<sub>2</sub>O<sub>2</sub>  
M. Weight: 282,22

# Oxcarbazepine

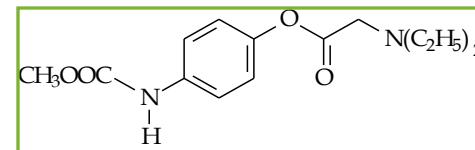
- Oxcarbazepine is an antiepileptic drug available as 150 mg, 300 mg and 600 mg film coated tablets for oral administration. Oxcarbazepine is 10,11-Dihydro-10-oxo-5*H*-dibenz[*b,f*]azepine-5-carboxamide.
- Oxcarbazepine is a white to faintly orange crystalline powder. It is slightly soluble in chloroform, dichloromethane, acetone, and methanol and practically insoluble in ethanol, ether and water. Its molecular weight is 252.27.
- The pharmacological activity of oxcarbazepine is primarily exerted through the 10-monohydroxy metabolite (MHD) of oxcarbazepine. The precise mechanism by which oxcarbazepine and MHD exert their antiseizure effect is unknown; however, in vitro electrophysiological studies indicate that they produce blockade of voltage-sensitive sodium channels, resulting in stabilization of hyperexcited neural membranes, inhibition of repetitive neuronal firing, and diminution of propagation of synaptic impulses. These actions are thought to be important in the prevention of seizure spread in the intact brain. In addition, increased potassium conductance and modulation of high-voltage activated calcium channels may contribute to the anticonvulsant effects of the drug. No significant interactions of oxcarbazepine or MHD with brain neurotransmitter or modulator receptor sites have been demonstrated.



CAS: [28721-07-5]  
Formula: C<sub>15</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub>  
M. Weight: 282,0

# Propacetamol

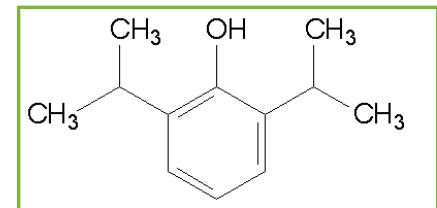
- The chemical name of Propacetamol is N,N-diethylglycine 4-(acetamino) phenyl ester, and it is a prodrug that in vivo is transformed in acetaminophen.
- It is an analgesic and antipyretic widely used in postoperative pain management after surgery.
- Propacetamol is generally administrated i.v., and has the benefit to reduce opioid dosage.



CAS: [66532-85-2]  
Formula: C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub>  
M. Weight:

# Propofol

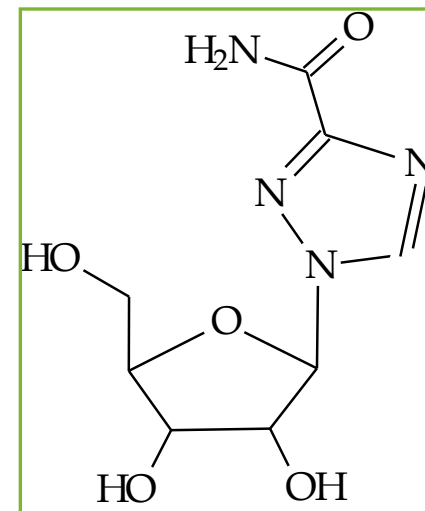
- Propofol is 2,6-diisopropylphenol, applicable as an anaesthetic. It is the first of a new class of intravenous anesthetic agents - the alkylphenols. Injectable emulsions are an intravenous-hypnotic agent for use in the induction and maintenance of anesthesia or sedation. Intravenous injection of a therapeutic dose of Propofol produces hypnosis rapidly with minimal excitation, usually within 40 seconds from the start of an injection (the time for one arm-brain circulation). As with other rapidly acting intravenous anesthetic agents, the half-time of the blood-brain equilibration is approximately 1 to 3 minutes, and this accounts for the rapid induction of anesthesia. Propofol is only slightly soluble in water and is formulated in a white oil-in-water emulsion. The injectable emulsion has a pH of 7-8.5.



CAS: [2078-54-8]  
Formula: C<sub>12</sub>H<sub>18</sub>O  
M. Weight: 178,27

# Ribavirin

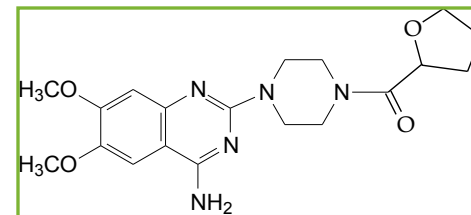
- The chemical name of Ribavirin is 1 $\beta$ -D-ribofuranosyl-1*H*-1,2,4-triazole-3-carboxamide.
- Ribavirin is a white, crystalline powder. It is freely soluble in water and slightly soluble in anhydrous alcohol. Ribavirin / Interferon  $\alpha$ -2b, recombinant are used in hepatitis C. The mechanism of inhibition of hepatitis C virus (HCV) RNA by combination therapy has not been established.
- Ribavirin is also indicated for the treatment of hospitalised infants and young children with severe lower infections due to syncytial virus. Treatment early in the course of severe lower infection may be necessary to achieve efficacy.



CAS: [36791-04-5]  
Formula: C<sub>8</sub>H<sub>12</sub>N<sub>4</sub>O<sub>5</sub>  
M. Weight: 244,21

# Terazosin HCl

- Terazosin hydrochloride, an  $\alpha_1$ -selective adrenoceptor blocking agent, is a quinazoline represented by the following chemical name and formula: (R,S)-Piperazine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-[(tetrahydro-2-furanyl) carbonyl]-, monohydrochloride, dihydrate. Terazosin is a white substance, freely soluble in water. Terazosin hydrochloride is indicated for the treatment of symptomatic benign prostatic hyperplasia (BPH). There is a rapid response with approximately 70 % of patients experiencing an increase in urinary flow and improvement in symptoms of BPH when treated with terazosin hydrochloride. Terazosin hydro-chloride is also indicated for the treatment of hypertension. It can be used alone or in combination with other antihypertensive agents. Capsules (terazosin capsules) are supplied in four strengths containing 1 mg, 2 mg, 5 mg, or 10 mg of terazosin.



CAS: [70024-40-7]  
Formula:  $C_{19}H_{25}N_5O_4 \cdot HCl$   
M. Weight: 459,93