been to give amyl nitrite by inhalation for up to 30 seconds every minute until other measures can be instituted. It has also been suggested for use in the management of hydrogen sulfide poisoning (p.1690).

Amyl nitrite has an action similar to that of glyceryl trinitrate (p.1297) and used to be given by inhalation for the relief of acute attacks of angina pectoris but is seldom used now.

Homoeopathy. Amyl nitrite has been used in homoeopathic medicines under the following names: Amyl nitrosum; Am. nit.

Preparations

USP 31: Amyl Nitrite Inhalant.

Proprietary Preparations (details are given in Part 3)

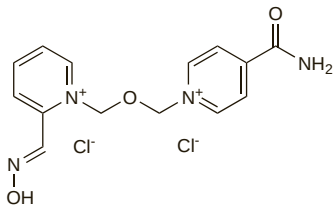
Multi-ingredient: ***Austria:*** Percucor†; ***S.Afr.:*** Tripac-Cyano; ***USA:*** Cyanide Antidote Package; Emergent-Ez.

Asoxime Chloride

Asoxima, cloruro de; HI-6. 1-({[4-(Aminocarbonyl)pyridinio]methoxy}methyl)-2-[(hydroxyimino)methyl]pyridinium dichloride.

$C_{14}H_{16}Cl_2N_4O_3$ = 359.2.

CAS — 34433-31-3.



Profile

Asoxime chloride is a cholinesterase reactivator that has been tried in the treatment of poisoning by organophosphorus pesticides and related compounds, including nerve agents.

◊ References.

1. Jovanović D, *et al.* A case of unusual suicidal poisoning by the organophosphorus insecticide dimethoate. *Hum Exp Toxicol* 1990; **9:** 49–51.
2. Kušić R, *et al.* HI-6 in man: efficacy of the oxime in poisoning by organophosphorus insecticides. *Hum Exp Toxicol* 1991; **10:** 113–18.

AST-120

CAS — 90597-58-3.

Profile

AST-120 is an adsorbent consisting of spherical microcrystalline carbonaceous particles with oxygen complex including surface oxides. It is given orally to delay the progression of chronic renal failure by removing uraemic toxins and their precursors from the gastrointestinal tract. It is also under investigation in gastrointestinal disorders.

◊ References.

1. Takahashi N, *et al.* Therapeutic effects of long-term administration of an oral adsorbent in patients with chronic renal failure: two-year study. *Int J Urol* 2005; **12:** 7–11.

Preparations

Proprietary Preparations (details are given in Part 3)

Jpn: Kremezin.

Atipamezole *(BAN, USAN, rINN)*

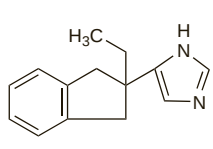
Atipamezol; Atipamézole; Atipamezolum; MPV-1248. 4-(2-Ethyl-2-indanyl)imidazole.

Атипамезол

$C_{14}H_{16}N_2$ = 212.3.

CAS — 104054-27-5.

ATC Vet — QV03AB90.



Atipamezole Hydrochloride *(BANM, rINNM)*

Atipametsolihydrokloridi; Atipamézole, Chlorhydrate d'; Atipamezolhydroklorid; Atipamezoli Hydrochloridum; Hidrocloruro de atipamezol.

Атипамезола Гидрохлорид

$C_{14}H_{16}N_2$,HCl = 248.8.

CAS — 104075-48-1.

Profile

Atipamezole is a selective alpha$_2$-adrenergic receptor antagonist that is used as the hydrochloride in veterinary medicine to reverse the sedative effects of medetomidine.

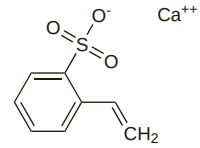
Calcium Polystyrene Sulfonate

Calcium Polystyrene Sulphonate; Poliestirenosulfonato cálcico; Polistiren Sülfonat Kalsiyum.

CAS — 37286-92-3.

ATC — V03AE01.

ATC Vet — QV03AE01.



Pharmacopoeias. In *Br.* and *Jpn*.

BP 2008 (Calcium Polystyrene Sulphonate). A cream to light brown, fine powder. The calcium content is not less than 6.5% and not more than 9.5%, calculated with reference to the dried substance. Each g exchanges not less than 1.3 mmol and not more than 2.0 mmol of potassium, calculated with reference to the dried substance. Practically insoluble in water and in alcohol. Store in airtight containers.

Adverse Effects and Precautions

As for Sodium Polystyrene Sulfonate, p.1465. Sodium overloading is not a problem with calcium polystyrene sulfonate, but calcium overloading and hypercalcaemia may occur. It should therefore be avoided in patients with conditions such as hyperparathyroidism, multiple myeloma, sarcoidosis, or metastatic carcinoma who may present with renal failure together with hypercalcaemia. Patients should be monitored for electrolyte disturbances, especially hypokalaemia and hypercalcaemia.

Effects on the lungs. An elderly man who died from cardiac arrest was found at autopsy to have bronchopneumonia associated with inhalation of calcium polystyrene sulfonate;[1] the resin had been given by mouth to treat hyperkalaemia.

1. Chaplin AJ, Millard PR. Calcium polystyrene sulphonate: an unusual cause of inhalation pneumonia. *BMJ* 1975; **3:** 77–8.

Interactions

As for Sodium Polystyrene Sulfonate, p.1465. Calcium ions are released from the resin in the gastrointestinal tract and this may reduce the absorption of tetracycline given by mouth.

Uses and Administration

Calcium polystyrene sulfonate, the calcium salt of sulfonated styrene polymer, is a cation-exchange resin that exchanges calcium ions for potassium ions and other cations in the gastrointestinal tract. It is used similarly to sodium polystyrene sulfonate (p.1465) to enhance potassium excretion in the treatment of hyperkalaemia (p.1669) and may be preferred to the sodium resin in patients who cannot tolerate an increase in their sodium load. It is estimated that 1 g of calcium polystyrene sulfonate could bind 1.3 to 2 mmol of potassium but it is unlikely that such figures could be achieved in practice.

It is given orally, in a dose of 15 g three or four times daily, as a suspension in water or syrup or as a sweetened paste. It should not be given in fruit juices that have a high potassium content. A dose for children is 1 g/kg daily in divided doses for acute hyperkalaemia, reduced to a maintenance dose of 500 mg/kg daily in divided doses; the oral route is not recommended for neonates.

When oral administration is difficult, calcium polystyrene sulfonate may be given rectally as an enema. The usual daily dose is 30 g given as a suspension in 100 mL of 2% methylcellulose '450' and 100 mL of water and retained, if possible, for at least 9 hours. Initial therapy may involve both oral and rectal routes. Following retention of the enema the colon should be irrigated to remove the resin. Children and neonates may be given rectal doses similar to the oral doses suggested for children.

Preparations

Proprietary Preparations (details are given in Part 3)

Arg.: Resincalcio; RIC Calcio†; ***Austral.:*** Calcium Resonium; ***Austria:*** CPS Pulver; Sorbisterit; ***Belg.:*** Kayexalate; ***Braz.:*** Sorcal; ***Canad.:*** Resonium Calcium; ***Chile:*** Sorbisterit; ***Cz.:*** Calcium Resonium; Resical; Sorbisterit†; ***Denm.:*** Resonium Calcium; ***Ger.:*** Anti-Kalium; Calcium Resonium; CPS Pulver; Elutit-Calcium; Sorbisterit; ***Gr.:*** Calcium Resonium†; ***Hong Kong:*** Calcium Resonium; ***Indon.:*** Kalitake; ***Irl.:*** Calcium Resonium; ***Jpn:*** Kalimate; ***Malaysia:*** Kalimate; ***Neth.:*** Sorbisterit; ***Norw.:*** Resonium Calcium; ***NZ:*** Calcium Resonium; ***Philipp.:*** Kalimate; ***Pol.:*** Calcium Resonium; ***Port.:*** Resical; ***Spain:*** Resincalcio; ***Swed.:*** Resonium Calcium; ***Switz.:*** Sorbisterit; ***Thai.:*** Kalimate; Resincalcio; ***Turk.:*** Anti-potasium; ***UK:*** Calcium Resonium.

Deferasirox *(USAN, rINN)*

CGP-72670; Déférasirox; Deferasiroxum; ICL-670; ICL-670A. 4-[3,5-Bis(2-hydroxyphenyl)-1*H*-1,2,4-triazol-1-yl]benzoic acid.

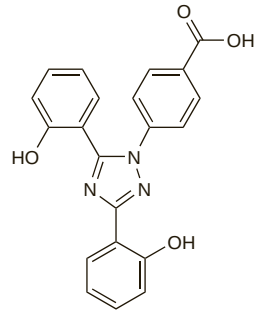
Деферазирокс

$C_{21}H_{15}N_3O_4$ = 373.4.

CAS — 201530-41-8.

ATC — V03AC03.

ATC Vet — QV03AC03.



Adverse Effects and Precautions

The commonest adverse effects with deferasirox are dose-related gastrointestinal disorders, such as nausea, vomiting, diarrhoea, and abdominal pain; diarrhoea may be more common in young children. Skin rashes are also common and may respond to a reduction in dose. Other adverse effects include headache, pyrexia, and cough.

Dose-dependent increases in serum creatinine are common and proteinuria may also occur; there have been reports of acute renal failure, including fatalities. Serum creatinine should be measured before starting deferasirox, and renal function should be assessed weekly for the first month (particularly in patients with risk factors for renal disease) and for a month after dosage increases, then monthly thereafter; tests for proteinuria should also be performed monthly. The dose should be reduced or treatment stopped if persistent increases in serum creatinine occur.

Liver enzyme values may increase in patients receiving deferasirox, and cases of hepatitis have occurred; gallstones and related biliary disorders have also been reported. Liver enzymes should be monitored monthly and treatment should be stopped if persistent increases occur.

As with other iron chelators, hearing loss and visual disorders, including cataracts, have occurred. Audiological and ophthalmological tests should be performed before starting deferasirox and then every 12 months. Serum ferritin should be measured monthly. In children, annual assessment of growth and development is also recommended.

There have been rare reports of blood disorders, some of which have been fatal, including agranulocytosis, neutropenia, and thrombocytopenia, in patients taking deferasirox. Blood counts should be monitored regularly.

Interactions

Deferasirox should not be given with aluminium-containing antacids since there is a possibility that it may chelate aluminium.

Pharmacokinetics

Deferasirox is absorbed from the gastrointestinal tract and peak plasma concentrations occur about 1.5 to 4 hours after ingestion. The absolute bioavailability is about 70% but is increased in the presence of food. Deferasirox is about 99% bound to plasma proteins, mainly albumin. It is metabolised by glucuronidation and is excreted mainly in the faeces via bile, as metabolites and as unchanged drug; there is a possibility that enterohepatic recycling may occur. About 8% of a dose is excreted in the urine. The mean elimination half-life is about 8 to 16 hours.

Uses and Administration

Deferasirox is an orally active iron chelator that is used in the management of chronic iron overload (p.1442) due to blood transfusion. It is available as tablets that are made into a suspen-