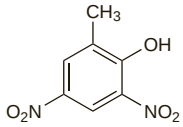
Dinitro-*o*-cresol

DNOC. 4,6-Dinitro-*o*-cresol.

$C_7H_6N_2O_5$ = 198.1.

CAS — 534-52-1.



Profile

Dinitro-*o*-cresol is a dinitrophenol formerly used as an insecticide and herbicide. It increases metabolism by uncoupling oxidative phosphorylation and was also formerly used in obesity. Fatal poisoning has occurred.

◊ References.

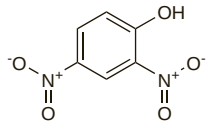
1. WHO. Dinitro-ortho-cresol. *Environmental Health Criteria 220*. Geneva: WHO, 2000. Available at: http://www.inchem.org/documents/ehc/ehc/ehc220.htm (accessed 26/04/04)

Dinitrophenol

Dinitrofenol. 2,4-Dinitrophenol.

$C_6H_4N_2O_5$ = 184.1.

CAS — 51-28-5.



Profile

Dinitrophenol has been used as a herbicide. Since dinitrophenol increases metabolism by uncoupling oxidative phosphorylation it was formerly used in the treatment of obesity. Fatal poisoning has occurred.

Dioctyl Adipate

DEHA; Di-(2-ethylhexyl)adipate; Dioctilo, adipato de.

$C_{22}H_{42}O_4$ = 370.6.

Profile

Dioctyl adipate is used as an insect repellent. It is also used as a plasticiser by the plastics industry; concern about the migration of this and other plasticisers into foodstuffs from polythene films used to wrap them ('cling film') have led to its use at lower concentrations.

Preparations

Proprietary Preparations (details are given in Part 3)
UK: Protec.

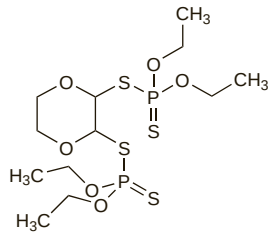
Dioxation *(BAN, rINN)*

Dioxathion; Dioxatión; Dioxationum. It consists mainly of *cis* and *trans* isomers of *S,S'*-1,4-dioxan-2,3-diyl bis(*O,O*-diethyl phosphorodithioate).

Диоксатион

$C_{12}H_{26}O_6P_2S_4$ = 456.5.

CAS — 78-34-2.



Profile

Dioxation is an organophosphorus insecticide (p.2047) that has been used in agriculture and as a topical ectoparasiticide in veterinary practice.

Diphenadione *(BAN, pINN)*

Difenadiona; Diphacinone; Diphénadione; Diphenadionum. 2-(Diphenylacetyl)indan-1,3-dione.

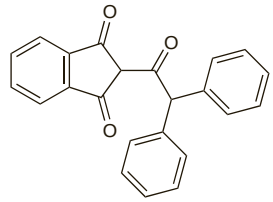
Дифенадион

$C_{23}H_{16}O_3$ = 340.4.

CAS — 82-66-6.

ATC — B01AA10.

ATC Vet — QB01AA10.



Profile

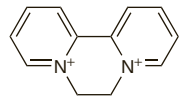
Diphenadione is used as an anticoagulant rodenticide.

Diquat Dibromide

Diquat, dibromuro de. 9,10-Dihydro-8a,10a-diazoniaphenanthrene dibromide; 1,1'-Ethylene-2,2'-bipyridyldiylium dibromide.

$C_{12}H_{12}Br_2N_2$ = 344.0.

CAS — 2764-72-9 (diquat); 85-00-7 (diquat dibromide).



(diquat)

Profile

Diquat dibromide is a contact herbicide used in agriculture and horticulture. It has similar adverse effects to those of paraquat (p.2047).

◊ References.

1. WHO. Paraquat and diquat. *Environmental Health Criteria 39*. Geneva: WHO, 1984. Available at: http://www.inchem.org/documents/ehc/ehc/ehc39.htm (accessed 26/04/04)
2. WHO. Diquat health and safety guide. *IPCS Health and Safety Guide 52*. Geneva: WHO, 1991. Available at: http://www.inchem.org/documents/hsg/hsg/hsg052.htm (accessed 26/04/04)
3. Proudfoot A, ed. Pesticide poisoning: notes for the guidance of medical practitioners. 2nd ed. London: DoH, The Stationery Office, 1996.
4. Jones GM, Vale JA. Mechanisms of toxicity, clinical features, and management of diquat poisoning: a review. *J Toxicol Clin Toxicol* 2000; **38:** 123–8.

Emamectin

Emamectina. A mixture of (4″-*R*)-5-*O*-Demethyl-4″-deoxy-4″-(methylamino)avermectin A_{1a} and (4″-*R*)-5-*O*-Demethyl-25-de(1-methylpropyl)-4″-deoxy-4″-(methylamino)-25-(1-methylethyl)avermectin A_{1a} in the ratio of 9:1.

CAS — 121124-29-6 (major component); 121424-52-0 (minor component); 137335-79-6.

ATC Vet — QP54AA06.

Profile

Emamectin is an avermectin insecticide used for the control of sea-lice infestation in salmon.

Endod

Profile

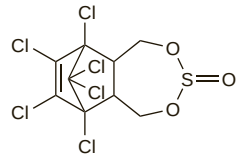
Endod is obtained from the dried fruits of *Phytolacca dodecandra* (Phytolaccaceae) and has molluscicidal properties. It has been investigated for the control of the snail vector of schistosomiasis.

Endosulfan

Endosulfán. 1,4,5,6,7,7-Hexachloro-8,9,10-trinorborn-5-en-2,3-ylenebismethylene sulphite.

$C_9H_6Cl_6O_3S$ = 406.9.

CAS — 115-29-7.



Profile

Endosulfan is a chlorinated insecticide (p.2037) used in agriculture.

◊ References.

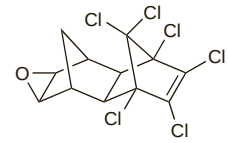
1. WHO. Endosulfan. *Environmental Health Criteria 40*. Geneva: WHO, 1984. Available at: http://www.inchem.org/documents/ehc/ehc/ehc40.htm (accessed 26/04/04)
2. WHO. Endosulfan health and safety guide. *IPCS Health and Safety Guide 17*. Geneva: WHO, 1988. Available at: http://www.inchem.org/documents/hsg/hsg/hsg017.htm (accessed 26/04/04)
3. Blanco-Coronado JL, *et al.* Acute intoxication by endosulfan. *J Toxicol Clin Toxicol* 1992; **30:** 575–83.
4. Boereboom FT, *et al.* Nonaccidental endosulfan intoxication: a case report with toxicokinetic calculations and tissue concentrations. *J Toxicol Clin Toxicol* 1998; **36:** 345–52.
5. Chugh SN, *et al.* Endosulfan poisoning in Northern India: a report of 18 cases. *Int J Clin Pharmacol Ther* 1998; **36:** 474–7.
6. Venkateswarlu K, *et al.* Endosulfan poisoning—a clinical profile. *J Assoc Physicians India* 2000; **48:** 323–5.
7. Karatas AD, *et al.* Characteristics of endosulfan poisoning: a study of 23 cases. *Singapore Med J* 2006; **47:** 1030–2.
8. Bektas M, *et al.* Management of acute endosulfan poisoning in an organophosphate poisoning clinic. *Clin Toxicol* 2007; **45:** 563–4.

Endrin

Endrín; Endryna. (1*R*,4*S*,4a*S*,5*S*,6*S*,7*R*,8*R*,8a*R*)-1,2,3,4,10,10-Hexachloro-1,4,4a,5,6,7,8,8a-octahydro-6,7-epoxy-1,4:5,8-dimethanonaphthalene.

$C_{12}H_8Cl_6O$ = 380.9.

CAS — 72-20-8.



Profile

Endrin is a chlorinated insecticide (p.2037), but its use was prohibited, at least in some countries, because of toxicity and persistence in the environment.

◊ General references to endrin,[1-4] including reports of poisoning.[2,3]

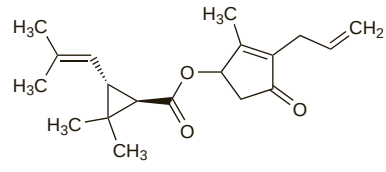
1. Anonymous. Acute convulsions associated with endrin poisoning—Pakistan. *JAMA* 1985; **253:** 334–5.
2. Runhaar EA, *et al.* A case of fatal endrin poisoning. *Hum Toxicol* 1985; **4:** 241–7.
3. WHO. Endrin health and safety guide. *IPCS Health and Safety Guide 60*. Geneva: WHO, 1991. Available at: http://www.inchem.org/documents/hsg/hsg/hsg060.htm (accessed 26/04/04)
4. WHO. Endrin. *Environmental Health Criteria 130*. Geneva: WHO, 1992. Available at: http://www.inchem.org/documents/ehc/ehc/ehc130.htm (accessed 26/04/04)

Esdepallethrine

Esdepaletrina. (*S*)-3-Allyl-2-methyl-4-oxocyclopent-2-enyl (1*R*,3*R*)-2,2-dimethyl-3-(2-methylprop-1-enyl)-cyclopropanecarboxylate.

$C_{19}H_{26}O_3$ = 302.4.

CAS — 28434-00-6.



Profile

Esdepallethrine is a pyrethroid insecticide (see Pyrethrum Flower, p.2049). It is used as an acaricide with piperonyl butoxide (p.2049) in the topical treatment of scabies (p.2035).

Esdepallethrine is also used in devices and sprays to control insects, including mosquitoes.

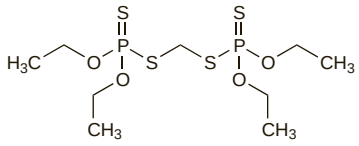
Preparations

Proprietary Preparations (details are given in Part 3)
Fr.: Cinq sur Cinq; Mousticologne.

Multi-ingredient: ***Arg.:*** Acardust†; ***Canad.:*** Scabene†; ***Fr.:*** A-Par; Acardust; Cinq sur Cinq; Spregal; ***Gr.:*** Spregal; ***Israel:*** Acardust; ***Neth.:*** Spregal; ***Rus.:*** Spregal (Спрегаль); ***S.Afr.:*** Spregal.

Ethion

Diethion; Etión; Ethion. *O,O,O′,O′*-Tetraethyl *S,S′*-methylenediphosphorodithioate.
$C_9H_{22}O_4P_2S_4$ = 384.5.
CAS — 563-12-2.

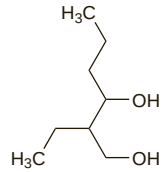


Profile

Ethion is an organophosphorus insecticide used as a topical ectoparasiticide in veterinary practice.

Ethohexadiol

Ethylhexanediol; Etohexadiol. 2-Ethylhexane-1,3-diol.
$C_8H_{18}O_2$ = 146.2.
CAS — 94-96-2.
ATC — P03BX06.
ATC Vet — QP53GX04.



Profile

Ethohexadiol is an insect repellent. It may be applied topically to the skin and to clothing. It has been used with dimethyl phthalate.

Preparations

Proprietary Preparations (details are given in Part 3)
Multi-ingredient: ***Fr.:*** Moustidose Adult et Enfant.

Ethyl Butylacetylaminopropionate

EBAAP; IR-3535; Merck-3535; Repellent 3535. (*N*-Butyl-*N*-acetyl)-3-ethylaminopropionate; *N*-Acetyl-*N*-butyl-beta-alanine ethyl ester; .
$C_{11}H_{21}NO_3$ = 215.3.
CAS — 52304-36-6.

Profile

Ethyl butylacetylaminopropionate is used as an insect repellent; it may be applied to the skin.

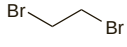
Preparations

Proprietary Preparations (details are given in Part 3)
Belg.: Mouskito; Shampoux Repel; ***Braz.:*** Johnson's Baby Locao Anti-Mosquito; ***Fr.:*** Cinq sur Cinq; Prebutix; ***Thai.:*** Johnson's Baby Clear†; ***UK:*** Mijex Extra.

Multi-ingredient: ***Arg.:*** Standard XXI; ***Austral.:*** Apex Repel Super; Apex Repel Ultra; ***Belg.:*** Mouskito Sun; ***Fr.:*** Guep'Away†; Mousticologne; Moustidose Bebe-Nourrisson; Prebutix; ***NZ:*** Apex Repel Super; Apex Repel Ultra.

Ethylene Dibromide

EDB; Etileno, dibromuro de. 1,2-Dibromoethane.
$C_2H_4Br_2$ = 187.9.
CAS — 106-93-4.



Profile

Ethylene dibromide is an insecticidal fumigant and a lead scavenger used in the petroleum industry. Its use has been restricted in certain areas because of carcinogenicity in *animals* and because of evidence of persistence in fruit and cereals that have undergone fumigation.

Ethylene dibromide is more toxic than carbon tetrachloride or ethylene dichloride. It is irritant to the eyes, skin, and mucous membranes. Inhalation leads to drowsiness, CNS depression, and possibly pulmonary oedema. Contact with the skin causes blistering and it is readily absorbed. Kidney and liver damage may occur.

◊ Reports of poisoning due to ethylene dibromide.

1. Letz GA, *et al*. Two fatalities after acute occupational exposure to ethylene dibromide. *JAMA* 1984; **252:** 2428–31.
2. Singh S, *et al*. Non-fatal ethylene dibromide ingestion. *Hum Exp Toxicol* 2000; **19:** 152–3.
3. Mehrotra P, *et al*. Two cases of ethylene dibromide poisoning. *Vet Hum Toxicol* 2001; **43:** 91–2.
4. Singh N, *et al*. Outcome of sixty four cases of ethylene dibromide ingestion treated in tertiary care hospital. *J Assoc Physicians India* 2007; **55:** 842–5.

Ethylene Dichloride

Brocide; Dutch Liquid; Etileno, dicloruro de. 1,2-Dichloroethane.
$C_2H_4Cl_2$ = 98.96.
CAS — 107-06-2.

Profile

Ethylene dichloride is an insecticidal fumigant. It is also used in the petroleum industry and as an industrial solvent. Exposure to the vapour may cause lachrymation and corneal clouding, nasal irritation, and vertigo due to the depressant effect on the CNS. Contact with the skin may cause dermatitis. Kidney and liver damage, hypotension and cardiac impairment, gastrointestinal disturbances, haemorrhage, coma, and pulmonary oedema may follow absorption after inhalation, topical application, or ingestion.

Ethylene dichloride has been reported to be carcinogenic in *animals*.

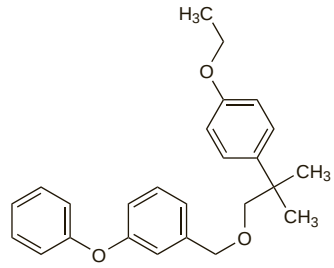
◊ References.

1. WHO. 1,2 Dichloroethane. *Environmental Health Criteria 176*. Geneva: WHO, 1995. Available at: http://www.inchem.org/documents/ehc/ehc/ehc176.htm (accessed 06/06/06)
2. WHO. 1,2-Dichloroethane health and safety guide. *IPCS Health and Safety Guide 55*. Geneva: WHO, 1991. Available at: http://www.inchem.org/documents/hsg/hsg/hsg055.htm (accessed 26/04/04)
3. Proudfoot A, ed. Pesticide poisoning: notes for the guidance of medical practitioners. 2nd ed. London: DoH, The Stationery Office, 1996.

Etofenprox *(rINN)*

Étofenprox; Etofenproxum. α-[(*p*-Ethoxy-β,β-dimethylphenethyl)oxy]-*m*-phenoxytoluene.

Этофенпрокс
$C_{25}H_{28}O_3$ = 376.5.
CAS — 80844-07-1.

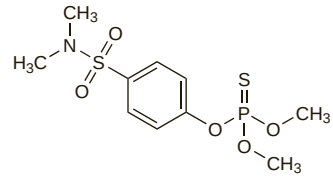


Profile

Etofenprox is a pyrethroid insecticide (see Pyrethrum Flower, p.2049) used in the vector control of malaria (p.594).

Famphur

Famfur; Famophos.
$C_{10}H_{16}NO_5PS_2$ = 325.3.
CAS — 52-85-7.

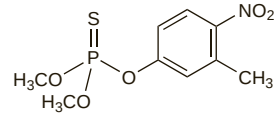


Profile

Famphur is an organophosphorus insecticide (p.2047) used as a systemic ectoparasiticide in veterinary practice; it is applied topically to the host animal.

Fenitrothion *(BAN)*

Fenitrotión. *O,O*-Dimethyl *O*-4-nitro-*m*-tolyl phosphorothioate.
$C_9H_{12}NO_5PS$ = 277.2.
CAS — 122-14-5.



Profile

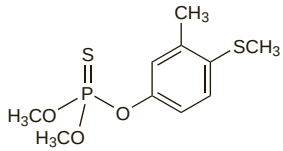
Fenitrothion is an organophosphorus insecticide (p.2047) used as a topical ectoparasiticide in veterinary practice. It is also used as an agricultural insecticide.

◊ References.

1. WHO. Fenitrothion health and safety guide. *IPCS Health and Safety Guide 65*. Geneva: WHO, 1991. Available at: http://www.inchem.org/documents/hsg/hsg/hsg065.htm (accessed 26/04/04)
2. WHO. Fenitrothion. *Environmental Health Criteria 133*. Geneva: WHO, 1992. Available at: http://www.inchem.org/documents/ehc/ehc/ehc133.htm (accessed 26/04/04)
3. Bouma MJ, Nesbit R. Fenitrothion intoxication during spraying operations in the malaria programme for Afghan refugees in North West Frontier Province of Pakistan. *Trop Geogr Med* 1995; **47:** 12–14.
4. Inoue S, *et al*. Prognostic factors and toxicokinetics in acute fenitrothion self-poisoning requiring intensive care. *Clin Toxicol* 2008; **46:** 528–33.

Fenthion *(BAN)*

Bayer-29493; Fentión; S-752. *O,O*-Dimethyl *O*-4-methylthio-*m*-tolyl phosphorothioate.
$C_{10}H_{15}O_3PS_2$ = 278.3.
CAS — 55-38-9.
ATC Vet — QP53BB02.



Pharmacopoeias. In *BP(Vet)*.
BP(Vet) 2008 (Fenthion). A yellowish-brown oily substance. Immiscible with water; miscible with alcohol and with chloroform.

Profile

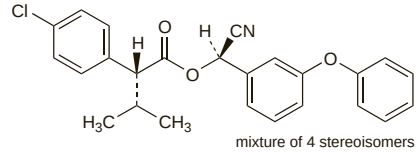
Fenthion is an organophosphorus insecticide (p.2047) used as a systemic ectoparasiticide in veterinary practice; it is applied topically to the host animal. Fenthion has also been used in agriculture.

Toxicity. Macular changes have been detected in the eyes of workers regularly exposed to fenthion.[1] It was considered that there was a need for long-term studies on subjects exposed to different organophosphorus compounds to assess their role in producing macular changes.

1. Misra UK, *et al*. Some observations on the macula of pesticide workers. *Hum Toxicol* 1985; **4:** 135–45.

Fenvalerate *(BAN)*

Fenvalerato; Fenwalerianian; OMS-2000; Pydrin; S-5602; SD-43775; WL-43775. (*RS*)-α-Cyano-3-phenoxybenzyl (*RS*)-2-(4-chlorophenyl)-3-methylbutyrate.
$C_{25}H_{22}ClNO_3$ = 419.9.
CAS — 51630-58-1.
ATC Vet — QP53AC14; QP53AX02.



mixture of 4 stereoisomers