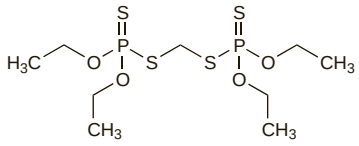
Preparations

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.

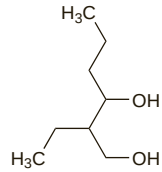


Profile

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.

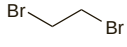
Preparations

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.

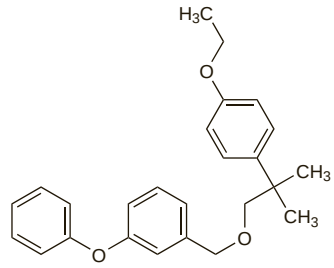
Ethylene dichloride has been reported to be carcinogenic in *animals*.

◊ 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.

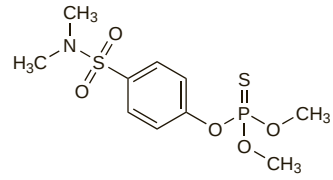


Profile

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.

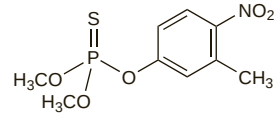


Profile

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

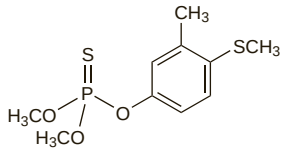
Fenitrothion is an organophosphorus insecticide (p.2047) used as a topical ectoparasiticide in veterinary practice. It is also used as an agricultural insecticide.

◊ 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

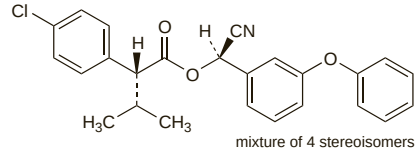
Fenthion is an organophosphorus insecticide (p.2047) used as a systemic ectoparasiticide in veterinary practice; it is applied topically to the host animal. Fenthion has also been used in agriculture.

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

Profile
Fenvalerate is a pyrethroid insecticide (see Pyrethrum Flower, p.2049) used as a topical ectoparasiticide in veterinary practice. It has also been used as an insecticide in agriculture and horticulture.

Esfenvalerate, one of the stereoisomers of fenvalerate, is also used as an agricultural insecticide.

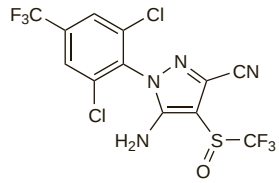
◊ References.

1. WHO. Fenvalerate health and safety guide. *IPCS Health and Safety Guide 34*. Geneva: WHO, 1989. Available at: http://www.inchem.org/documents/hsg/hsg/hsg034.htm (accessed 26/04/04)
2. WHO. Fenvalerate. *Environmental Health Criteria 95*. Geneva: WHO, 1990. Available at: http://www.inchem.org/documents/ehc/ehc/ehc95.htm (accessed 26/04/04)

Fipronil *(BAN)*

Fiproniili; Fipronilo; MB-46030; RM-1601. (*RS*)-5-Amino-1-(2,6-dichloro-4-trifluoromethylphenyl)-4-(trifluoromethylsulfinyl)pyrazole-3-carbonitrile.

$C_{12}H_4Cl_2F_6N_4OS$ = 437.1.
CAS — 120068-37-3.
ATC Vet — QP53AX15.

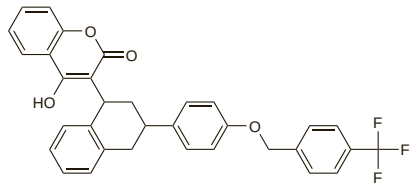


Profile
Fipronil is used as a topical ectoparasiticide in veterinary practice. It has also been investigated for the treatment of head lice.

Flocoumafen

Flocoumafene; Flocumafeno; OMS-3047. 4-Hydroxy-3-[1,2,3,4-tetrahydro-3-[4-(4-trifluoromethylbenzyloxy)phenyl]-1-naphthyl]coumarin.

$C_{33}H_{25}F_3O_4$ = 542.5.
CAS — 90035-08-8.



Profile
Flocoumafen is a coumarin derivative used as an anticoagulant rodenticide. It is said to be effective in rodents resistant to other anticoagulant rodenticides.

◊ References.

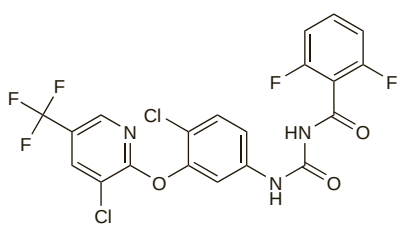
1. WHO. Anticoagulant rodenticides. *Environmental Health Criteria 175*. Geneva: WHO, 1995. Available at: http://www.inchem.org/documents/ehc/ehc/ehc175.htm (accessed 26/04/04)

Fluazuron *(rINN)*

CGA-157419; Fluazurón; Fluazuronum. 1-(4-Chloro-3-{[3-chloro-5-(trifluoromethyl)-2-pyridyl]oxy}phenyl)-3-(2,6-difluorobenzoyl)urea.

Флуазурон

$C_{20}H_{10}Cl_2F_5N_3O_3$ = 506.2.
CAS — 86811-58-7.

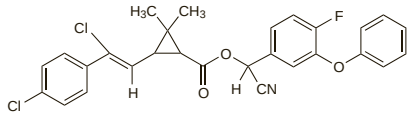


Profile
Fluazuron is used as a topical ectoparasiticide in veterinary practice.

Flumethrin *(BAN)*

Flumethrinum; Flumetriini; Flumetrin; Flumetrina. α-Cyano-4-fluoro-3-phenoxybenzyl 3-(β,4-dichlorostyryl)-2,2-dimethylcyclopropanecarboxylate.

$C_{28}H_{22}Cl_2FNO_3$ = 510.4.
CAS — 69770-45-2.
ATC Vet — QP53AC05.



Profile
Flumethrin is a pyrethroid insecticide (see Pyrethrum Flower, p.2049) used as a topical ectoparasiticide in veterinary practice.

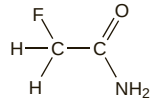
◊ Reports of poisoning with flumethrin.

1. Box SA, Lee MR. A systemic reaction following exposure to a pyrethroid insecticide. *Hum Exp Toxicol* 1996; **15:** 389–90.

Fluoroacetamide

Compound 1081; Fluoroacetamida.

$FCH_2.CONH_2$ = 77.06.
CAS — 640-19-7.

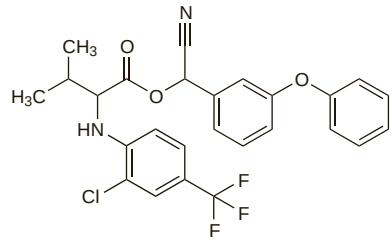


Profile
Fluoroacetamide is a rodenticide and produces adverse effects similar to those of sodium fluoroacetate (p.2050).

Fluvalinate

Fluvalinato; ZR-3210. Cyano(3-phenoxyphenyl)methyl ester of *N*-[2-chloro-4-(trifluoromethyl)phenyl]-DL-valine.

$C_{26}H_{22}ClF_3N_2O_3$ = 502.9.
CAS — 69409-94-5.
ATC Vet — QP53AC10.

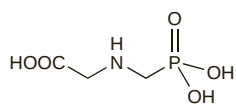


Profile
Fluvalinate is a pesticide used in beekeeping.

Glyphosate

Glifosato. *N*-(Phosphonomethyl)glycine.

$C_3H_8NO_5P$ = 169.1.
CAS — 1071-83-6.



Profile
Glyphosate is used as a herbicide.

◊ References.

1. WHO. Glyphosate. *Environmental Health Criteria 159*. Geneva: WHO, 1994. Available at: http://www.inchem.org/documents/ehc/ehc/ehc159.htm (accessed 26/04/04)

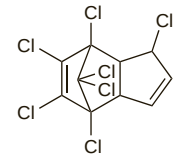
Toxicity. Reports[1-3] and reviews[4] of poisoning with glyphosate products, prognostic factors,[5] guidelines for treatment[6] have been published. The toxicity has been believed to be largely due to the inclusion of surfactants, particularly polyoxyethyleneamine, in the herbicide (Roundup) formulation but products vary considerably as to the surfactant contained and the concentration and salt of glyphosate used, and the evidence that surfactants potentiate glyphosate toxicity is unclear.[6]

1. Sawada Y, *et al.* Probable toxicity of surface-active agent in commercial herbicide containing glyphosate. *Lancet* 1988; **i:** 299.
2. Talbot AR, *et al.* Acute poisoning with a glyphosate-surfactant herbicide ('Roundup'): a review of 93 cases. *Hum Exp Toxicol* 1991; **10:** 1–8.
3. Menkes DB, *et al.* Intentional self-poisoning with glyphosate-containing herbicides. *Hum Exp Toxicol* 1991; **10:** 103–7.
4. Bradberry SM, *et al.* Glyphosate poisoning. *Toxicol Rev* 2004; **23:** 159–67.
5. Lee CH, *et al.* The early prognostic factors of glyphosate-surfactant intoxication. *Am J Emerg Med* 2008; **26:** 275–81.
6. Proudfoot A, ed. *Pesticide poisoning: notes for the guidance of medical practitioners*. 2nd ed. London: DoH, The Stationery Office, 1996.

Heptachlor

Heptacloro. 1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-tetrahydro-4,7-methanoindene.

$C_{10}H_5Cl_7$ = 373.3.
CAS — 76-44-8.



Profile
Heptachlor is a chlorinated insecticide (p.2037), but its use was prohibited, at least in some countries, because of its persistent nature.

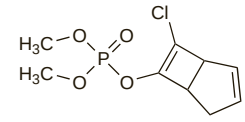
◊ References.

1. WHO. Heptachlor. *Environmental Health Criteria 38*. Geneva: WHO, 1984. Available at: http://www.inchem.org/documents/ehc/ehc/ehc38.htm (accessed 26/04/04)
2. WHO. Heptachlor health and safety guide. *IPCS Health and Safety Guide 14*. Geneva: WHO, 1988. Available at: http://www.inchem.org/documents/hsg/hsg/hsg014.htm (accessed 26/04/04)

Heptenophos

Heptenofós; Hoe-02982. 7-Chlorobicyclo[3.2.0]hepta-2,6-dien-6-yl dimethyl phosphate.

$C_9H_{12}ClO_4P$ = 250.6.
CAS — 23560-59-0.

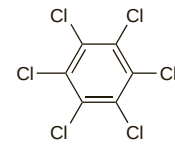


Profile
Heptenophos is an organophosphorus insecticide (p.2047) that has been used in veterinary practice for the control of ectoparasites. It is also used in agriculture.

Hexachlorobenzene

HCB; Heksachlorobenzen; Hexaclorobenceno.

C_6Cl_6 = 284.8.
CAS — 118-74-1.



NOTE. Hexachlorobenzene should not be confused with gamma benzene hexachloride (lindane).

Profile
Hexachlorobenzene has been used as an agricultural fungicide. It is not biodegradable to any significant extent and hexachlorobenzene residues in food have arisen as a result of its occur-