

Preparations

Proprietary Preparations (details are given in Volume B)

Multi-ingredient Preparations. *Austria:* Apozema†; Galle-Donau; Spasmo Claim†; *China:* Galle-Donau (加诺).

Dimethyltryptamine

Dimethyltryptamina; DMT; *N,N*-Dimethyltryptamine.

3-(2-Dimethylaminoethyl)indole.

$C_{13}H_{16}N_2=188.3$

CAS — 61-50-7.

UNII — WUB601BHA.

Street names. The following terms have been used as 'street names' (see p. vii) or slang names for various forms of dimethyltryptamine:

45 Minute Psychosis; 45 Minute Trip; AMT; Businessman's LSD; Businessman's special; Businessman's trip; DET; Disneyland; Disneyworld; Dmitri; DMT; Fantasia; Instant psychosis; Psychosis.

Profile

Dimethyltryptamine is an active principle obtained from the seeds and leaves of *Piptadenia peregrina* (Mimosaceae) from which the hallucinogenic snuff cohoba is prepared. It may also be obtained from other South American plants. It has been reported to be present in the tropical legume *Mucuna pruriens*.

Dimethyltryptamine produces hallucinogenic and sympathomimetic effects that are similar to those of lysergide (p. 2547.1), but of shorter duration. It has no therapeutic use. Related synthetic hallucinogens subject to abuse include:

- diethyltryptamine (DET)
- dipropyltryptamine (DPT)
- 5-methoxy-*N,N*-diisopropyltryptamine (5-MeO-DiPT; Foxy; Foxy Methoxy; Methoxy Foxy)

References

1. Alatrash G, et al. Rhabdomyolysis after ingestion of 'foxy', a hallucinogenic tryptamine derivative. *Mayo Clin Proc* 2006; **81**: 550-1.

Dimevamide (rINN)

Aminopentamide; Dimevamida; Dimévamide; Dimevamidum; Димевамид.

α -[2-(Dimethylamino)propyl]- α -phenylbenzeneacetamide.

$C_{19}H_{24}N_2O=296.4$

CAS — 60-46-8.

UNII — IP1B47L61M.

Dimevamide Sulfate (rINN)

Aminopentamide Sulfate; Dimevamida, sulfato de; Dimévamide, Sulfate de; Dimevamidi Sulfas; Sulfato de dimevamida; Димевамид Сульфат.

$C_{19}H_{24}N_2O_4 \cdot H_2SO_4=394.5$

CAS — 35144-63-9 (xH_2SO_4).

UNII — 20P9NI883O.

Pharmacopoeias. In *US* for veterinary use only.

Profile

Dimevamide is a tertiary amine and has been used as an antimuscarinic.

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Multi-ingredient Preparations. *S.Afr.:* Kantrexil.

2,4-Dinitrochlorobenzene

2,4-Dinitrochlorobenceno; DNCB; 2,4-Динитрохлорбензол.

1-Chloro-2,4-dinitrobenzene.

$C_6H_3ClN_2O_4=202.6$

CAS — 97-00-7.

Profile

2,4-Dinitrochlorobenzene is a potent sensitiser that has been applied topically in the evaluation of delayed hypersensitivity. It has also been used as an immunostimulant in various conditions including some forms of cancer, and in the treatment of alopecia and warts. It has also been investigated in HIV infection and leprosy.

2,4-Dinitrochlorobenzene has been reported to be mutagenic *in vitro*.

References

1. Happle R. The potential hazards of dinitrochlorobenzene. *Arch Dermatol* 1985; **121**: 330-2.
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4. Strobbe LJ, et al. Topical dinitrochlorobenzene combined with systemic dacarbazine in the treatment of recurrent melanoma. *Melanoma Res* 1997; **7**: 507-12.
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7. Yoshizawa Y, et al. Systemic immunotherapy with topical dinitrochlorobenzene as additional treatment of alopecia areata. *Acta Derm Venereol* 2002; **82**: 136-8.
8. von Nida J, Quirk C. Successful treatment of in-transit melanoma metastases using topical 2-4 dinitrochlorobenzene. *Australas J Dermatol* 2003; **44**: 277-80.

Dioxins

NOTE. The name Dioxin has also been applied to dimethoxane.

Profile

The term 'dioxins' encompasses a large group of closely related chemicals known as polychlorinated dibenzo-*p*-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs). The most toxic is 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD).

Dioxins are byproducts in the manufacture of commercial chemical products such as chlorinated phenols and polychlorinated biphenyls (PCBs), and can also be produced in smaller quantities by combustion processes and industrial waste. They first came to public attention during the Vietnam war, when they were found to be present in the herbicide Agent Orange used as a defoliant. They are incriminated as causing chloracne (a severe and persistent acne caused by chlorinated compounds). They are potent teratogens and carcinogens in *animals*. An increased incidence of cancer at different organs due to dioxins has been claimed but this has not been substantiated by clinical and follow-up studies. An effect on cell-mediated immunity has been noted.

Exposure should be limited to the lowest feasible concentration.

Adverse effects. The impact of dioxins in food and the environment has been reviewed.¹⁻⁴

An excess of soft tissue sarcomas was found in workers exposed to chlorophenoxy herbicides including those contaminated with TCDD,⁵ but cautious interpretation of these results was advised.⁶ In Vietnam veterans the risk of non-Hodgkin's lymphoma was about 50% higher than control subjects, but was not related to exposure to Agent Orange, nor was there evidence for an increase in other cancers.⁷ Exposure to TCDD was implicated in an increase in cancer mortality in chemical workers,^{8,9} but confounding factors such as smoking may have been present.^{9,10} Other studies^{11,12} have not shown an association between dioxin exposure and an increase in the incidence of human cancer, and epidemiological studies after occupational or accidental exposures have found no clear persistent systemic effects, except for chloracne, and no clear association with carcinogenesis or reproductive disorders.^{1,2} Decreased plasma immunoglobulin G concentrations were measured in people after exposure to TCDD 20 years earlier as a result of accidental environmental contamination in Seveso, Italy.¹³ A statistically significant increase in the incidence of breast cancer related to serum levels of TCDD was seen in a cohort of 981 women who ranged in age from infancy to 40 years in 1976 at the time of the Seveso accident.¹⁴ The authors pointed out that this cohort is relatively young and continued follow-up would clarify any possible pathogenic role of TCDD.

In the USA, the National Academy of Sciences' Institute of Medicine is reported to have carried out an evaluation of publications on herbicide exposure, largely in industrial and agricultural workers.¹⁵ They concluded that exposure to herbicides or dioxin was associated with soft-tissue sarcomas, Hodgkin's disease, non-Hodgkin lymphoma, chloracne, and porphyria cutanea tarda, and that there was limited evidence of an association with respiratory and prostate cancers and multiple myeloma. An update to the report has also suggested a link between Agent Orange exposure and spina bifida in veterans' offspring.¹⁶ There is some evidence that exposure of men to TCDD is associated with a decreased male to female sex ratio in their offspring.¹⁷ Results from studies¹⁸⁻²⁰ suggest that prenatal exposure to PCBs has an effect on mental and motor development in early childhood, although this may be counteracted by an advantageous home environment. However, virtually no adverse effects in relation to postnatal exposure to PCBs present in breast milk were shown.²⁰

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4. FAO. Dioxins in the food chain: prevention and control of contamination (issued April 2008). Available at: http://www.fao.org/ag/agn/agns/files/Dioxin_fact%20sheet.pdf (accessed 24/07/08)
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16. Stephenson J. New IOM report links Agent Orange Exposure to risk of birth defect in Vietnam vets' children. *JAMA* 1996; **275**: 1066-7.
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18. Walkowiak J, et al. Environmental exposure to polychlorinated biphenyls and quality of the home environment: effects on psychodevelopment in early childhood. *Lancet* 2001; **358**: 1602-7.
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20. Jacobson JL, Jacobson SW. Association of prenatal exposure to an environmental contaminant with intellectual function in childhood. *J Toxicol Clin Toxicol* 2002; **40**: 467-75.

Diphepanil Metilsulfate (BAN, rINN)

Difemanilo, metilsulfato de; Diphepanil Methylsulfate; Diphepanil Methylsulphate; Diphémanil, Métilsulfate de; Diphemanil Metilsulfas; Diphenmethanil Methylsulphate; Metilsulfato de difemanilo; Vagophemanil Methylsulphate; Дифеманила Метилсульфат.

4-Benzhydrylidene-1,1-dimethylpiperidinium methylsulphate.

$C_{20}H_{24}N_2 \cdot CH_3SO_4=389.5$

CAS — 62-97-5.

ATC — A03AB15.

ATC Vet — QA03AB15.

UNII — WZZG23MGYI.

Profile

Diphepanil metilsulfate is a quaternary ammonium antimuscarinic with peripheral effects similar to those of atropine (p. 1312.1). It has been used topically as a 2% cream or powder to treat hyperhidrosis (p. 1685.1).

Diphepanil metilsulfate, given orally, has been used for the treatment of symptomatic bradycardia in infants.

References

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3. Pariente-Khayat A, et al. Pharmacokinetics of diphepanil methylsulphate in neonates and in premature infants. *Eur J Clin Pharmacol* 1996; **50**: 429-30.

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Single-ingredient Preparations. *Austral.:* Prantal; *NZ:* Prantal†.

Diphenyl

Bifenilo; Difenilo; E230; Fenilbenceno; Phenylbenzene; Дифенил.

Biphenyl.

$C_{12}H_{10}=154.2$

CAS — 92-52-4.

UNII — 2L9GJK6MGN.

Profile

Diphenyl is fungistatic against a limited number of moulds and has been employed for impregnating the material used for wrapping citrus fruits.

Adverse effects. Workers exposed to high concentrations of diphenyl (up to 128 mg/m³) developed toxic symptoms that included irritation of the throat and eyes, headache, nausea, diffuse abdominal pain, numbness, aching of limbs, and general fatigue.¹ One of the workers, who also had somnolence, icterus, ascites, and oedema of the legs,