11. Allwood MC. The effectiveness of preservatives in insulin injections. *Pharm J* 1982; **229:** 340.
12. Sunderland VB, Watts DW. Kinetics of the degradation of methyl, ethyl and n-propyl 4-hydroxybenzoate esters in aqueous solution. *Int J Pharmaceutics* 1984; **19:** 1–15.
13. Flora KP, *et al.* The loss of paraben preservatives during freeze drying. *J Pharm Pharmacol* 1980; **32:** 577–80.

Adverse Effects and Precautions

Hypersensitivity reactions occur with the hydroxybenzoates. Generally these are of the delayed type, appearing as contact dermatitis. Immediate reactions with urticaria and bronchospasm have occurred rarely.

Breast cancer. Some researchers[1] have questioned whether *p*-hydroxybenzoic acid esters, the most common preservatives found in body care cosmetic products, could increase the incidence of breast cancer in women. The esters have been shown to be oestrogenic *in vitro* and *in vivo* and have been detected in human breast tumour tissue, although a causal association cannot be confirmed.

1. Harvey PW, Darbre P. Endocrine disrupters and human health: could oestrogenic chemicals in body care cosmetics adversely affect breast cancer incidence in women? *J Appl Toxicol* 2004; **24:** 167–76.

Hypersensitivity. Immediate hypersensitivity reactions such as urticaria and bronchospasm with generalised pruritus, have been reported rarely on injection of preparations containing hydroxybenzoates.[1,2] Delayed contact dermatitis occurs more frequently, usually after use of topical medications, but has also occurred after use of an ester or of *p*-hydroxybenzoic acid in oral preparations.[3] Hypersensitivity reactions have also been reported in patients given local anaesthetics containing hydroxybenzoates[1,4] and cross-reactions with other para-amino compounds including benzocaine, paraphenylenediamine, and sulfonamides have occurred rarely.[5]

The incidence of sensitisation to hydroxybenzoates ranges from 0 to 3.5% but has tended to stay relatively constant over time.[5] A report from the North American Contact Dermatitis Group[6] in 1972 provided an incidence of 3%, while another later review[7] of a large number of patients gave an incidence of 2.2%. The Swiss Contact Dermatitis Research Group reported[8] a sensitisation rate of 1.7% based on a one-year study from 1989 to 1990 in 2295 patients.

Subjects with healthy skin exposed to hydroxybenzoates, for example in cosmetics, are considered to have a much lower incidence of reactions than patients with eczema or skin trauma. Unusually, patients who have reacted to a hydroxybenzoate with a contact dermatitis appear to be able to apply that preservative to another unaffected site and yet not suffer a reaction; this has been termed the 'paraben paradox'.[9]

1. Aldrete JA, Johnson DA. Allergy to local anaesthetics. *JAMA* 1969; **207:** 356–7.
2. Nagel JE, *et al.* Paraben allergy. *JAMA* 1977; **237:** 1594–5.
3. Kaminer Y, *et al.* Delayed hypersensitivity reaction to orally administered methylparaben. *Clin Pharm* 1982; **1:** 469–70.
4. Lederman DA, *et al.* An unusual skin reaction following local anesthetic injection: review of the literature and report of four cases. *Oral Surg* 1980; **49:** 28–33.
5. Sasseville D. Hypersensitivity to preservatives. *Dermatol Ther* 2004; **17:** 251–63.
6. North American Contact Dermatitis Group. Epidemiology of contact dermatitis in North America 1972. *Arch Dermatol* 1973; **108:** 537–40.
7. Moore J. Final report on the safety assessment of methylparaben, ethylparaben, propylparaben, and butylparaben. *J Am Coll Toxicol* 1984; **3:** 147–209.
8. Perrenoud D, *et al.* Frequency of sensitization to 13 common preservatives in Switzerland. *Contact Dermatitis* 1994; **30:** 276–9.
9. Fisher AA. Cortaid cream dermatitis and the "paraben paradox". *J Am Acad Dermatol* 1982; **6:** 116–7.

Neonates. An *in-vitro* study on serum from neonates with hyperbilirubinaemia indicated that methyl hydroxybenzoate at a concentration of 200 micrograms/mL of serum increased the concentration of free unconjugated bilirubin and interfered with the binding of bilirubin to serum proteins. Methyl hydroxybenzoate was present in an injection of gentamicin sulfate at a concentration of 1.3 to 1.8 mg/mL. Neither gentamicin nor propyl hydroxybenzoate had a significant effect on bilirubin.[1]

1. Loria CJ, *et al.* Effect of antibiotic formulations in serum protein: bilirubin interaction of newborn infants. *J Pediatr* 1976; **89:** 479–82.

Pharmacokinetics

Neonates. After intramuscular injection, methyl hydroxybenzoate present in a gentamicin preparation was excreted in the urine of preterm infants to a variable extent and mainly in the conjugated form.[1] *p*-Hydroxybenzoic acid was detected as a metabolite. The injection contained methyl hydroxybenzoate 3.6 mg, propyl hydroxybenzoate 400 micrograms, and gentamicin 80 mg. Propyl hydroxybenzoate was also detected in the urine samples.

1. Hindmarsh KW, *et al.* Urinary excretion of methylparaben and its metabolites in preterm infants. *J Pharm Sci* 1983; **72:** 1039–41.

Uses

The hydroxybenzoate preservatives are alkyl esters of *p*-hydroxybenzoic acid with antibacterial and antifungal properties. They are more active against Gram-positive than against Gram-negative bacteria. They are active over a broad pH range (4 to 8), though are generally more active in acidic solutions. Activity increases with increasing alkyl chain length but aqueous solubility decreases, although this may be overcome by employing the more soluble sodium salts as long as the pH of the preparation is not increased. Activity may also be increased by combining two hydroxybenzoates with short alkyl chains. Another way of increasing activity is to use a hydroxybenzoate with propylene glycol.

Hydroxybenzoates are used as preservatives in pharmaceutical preparations in usual concentrations of up to 0.25%. Methyl hydroxybenzoate and propyl hydroxybenzoate are used together in some preparations. There have been reports of the hydroxybenzoates not being satisfactory preservatives for ophthalmic preparations because of their relative lack of efficacy against some Gram-negative bacteria, particularly *Pseudomonas aeruginosa*. The hydroxybenzoate preservatives are widely used in cosmetics and are also used for food preservation.

Hydroxybenzoates have been used in preparations promoted for the management of skin infections or pruritus.

Preparations

Proprietary Preparations (details are given in Part 3)
Fr.: Nisapulvol; Nisaseptol; Nisasol; ***Malaysia:*** Nisapulvol.

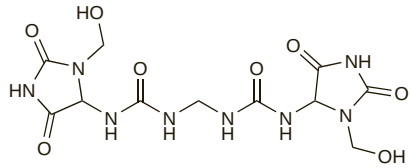
Multi-ingredient: ***Austral.:*** Mycoderm; ***Hong Kong:*** Mycoderm†; ***Malaysia:*** Mycoderm; ***Neth.:*** Trachitol; ***UK:*** Brushtox; ***Venez.:*** Glizigen.

Imidurea

N,N″-Methylenebis{*N′*-[3-(hydroxymethyl)-2,5-dioxo-4-imidazolidinyl]urea}.

$C_{11}H_{16}N_8O_8$ = 388.3.

CAS — 39236-46-9.



Pharmacopoeias. In *USNF*.

USNF 26 (Imidurea). A white odourless powder. Soluble in water and in glycerol; sparingly soluble in propylene glycol; insoluble in most organic solvents. A 1% solution in water has a pH of 6.0 to 7.5. Store in airtight containers.

Profile

Imidurea is used as an antimicrobial preservative in topical pharmaceutical and cosmetic preparations.

Iodoform

Iodoformo. Tri-iodomethane.

CHI_3 = 393.7.

CAS — 75-47-8.

ATC — D09AA13.

ATC Vet — QD09AA13.

Pharmacopoeias. In *Jpn* and *US*.

USP 31 (Iodoform). A lustrous greenish-yellow powder or lustrous crystals. It is slightly volatile at ordinary temperatures and distils slowly with steam. It decomposes at high temperatures emitting vapours of iodine. Practically insoluble in water; sparingly soluble in alcohol, in glycerol, and in olive oil; soluble in boiling alcohol; freely soluble in chloroform and in ether. Store in airtight containers at a temperature not exceeding 40°. Protect from light.

Profile

Iodoform slowly releases iodine (p.2169) when applied to the tissues and is used for its mild antiseptic action. Bismuth Subnitrate and Iodoform Paste (BPC 1954) (BIPP) has been applied to wounds and abscesses. Sterile gauze impregnated with the paste has also been used for packing cavities after oral and otorhinological surgery.

Adverse effects on the nervous system. Encephalopathy has been associated with the use of bismuth subnitrate and iodoform paste (BIPP) for the packing of wound cavities after ear, nose, and throat, oral, and maxillofacial surgery,[1,2] although there is some debate as to whether the bismuth or the iodoform component is responsible.[1-3] However, encephalopathy has been reported after application of iodoform gauze without bismuth.[4,5] CNS toxicity due to both iodine and bismuth has been reported[6] in an 86-year-old woman from an intra-oral plug of BIPP following partial maxillectomy. Five days after surgery the patient started to experience loss of appetite and lightheadedness, and by day 11 was suffering from fainting episodes, confusion, and paranoid ideation and was becoming increasingly aggressive. On day 14 the BIPP pack was removed; 7 days later the patient's condition improved and when discharged 5 days later she was alert and cooperative.

1. Wilson APR. The dangers of BIPP. *Lancet* 1994; **344:** 1313–14.
2. Youngman L, Harris S. BIPP madness; an iatrogenic cause of acute confusion. *Age Ageing* 2004; **33:** 406–7.
3. Farrell RWR. Dangers of bismuth iodoform paraffin paste. *Lancet* 1994; **344:** 1637–8.
4. Roy P-M, *et al.* Dangers of bismuth iodoform paraffin paste. *Lancet* 1994; **344:** 1708.
5. Yamasaki K, *et al.* Delirium and a subclavian abscess. *Lancet* 1997; **350:** 1294.
6. Harris RA, Poole A. Beware of bismuth: post maxillectomy delirium. *Aust N Z J Surg* 2002; **72:** 846–7.

Hypersensitivity. A retrospective analysis of 185 patients[1] who were treated with a bismuth-iodoform-paraffin paste (BIPP) impregnated ribbon gauze pack after ear surgery found the incidence of allergic reactions to be 5.9%. A fivefold increase risk of developing allergic reactions was also found in those with previous exposure to BIPP. Three cases of allergic contact otitis externa have been reported following the use of bismuth subnitrate and iodoform paste to pack the ear after surgery.[2]

1. Lim PVH, *et al.* Hypersensitive allergic reactions to bismuth-iodoform-paraffin paste following ear surgery. *J Laryngol Otol* 1998; **112:** 335–7.
2. Roest MAB, *et al.* Allergic contact otitis externa due to iodoform in BIPP cavity dressings. *Contact Dermatitis* 2002; **46:** 360.

Preparations

BPC 1954: Bismuth Subnitrate and Iodoform Paste; Compound Iodoform Paint.

Proprietary Preparations (details are given in Part 3)
Ger.: Jodoform†; Opraclean.

Multi-ingredient: ***Arg.:*** Aseptobron; ***Ital.:*** Pasta Iodoformica Radiopaca; ***Spain:*** Alvogil; ***Switz.:*** Alvogyl; ***UK:*** OxBipp.

Isopropyl Alcohol

Alcohol isopropílico; Alcohol isopropylicus; Alkohol izopropylowy; Dimethyl Carbinol; Isopropanol; Isopropylalkohol; Isopropylique, alcool; Isopropyylialkoholi; Izopropil Alkol; Izopropil-alkohol; Izopropilo alkoholis; 2-Propanol; Secondary Propyl Alcohol. Propan-2-ol.

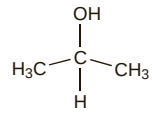
Изопропиловый Спирт

$(CH_3)_2CHOH$ = 60.10.

CAS — 67-63-0.

ATC — D08AX05.

ATC Vet — QD08AX05.



Pharmacopoeias. In *Eur.* (see p.vii), *Int.*, *Jpn*, and *US*.

Ph. Eur. 6.2 (Isopropyl Alcohol). A clear colourless liquid. Miscible with water and with alcohol. Protect from light.

USP 31 (Isopropyl Alcohol). A transparent, colourless, mobile, volatile, flammable liquid with a characteristic odour. Miscible with water, with alcohol, with chloroform, and with ether. Store in airtight containers remote from heat.

Adverse Effects, Treatment, and Precautions

Isopropyl alcohol is considered to be more toxic than ethyl alcohol (p.1625), and the symptoms of intoxication appear to be similar, except that isopropyl alcohol has no initial euphoric action and gastritis, haemorrhage, pain, nausea, and vomiting are more prominent.

The lethal oral dose is reported to be about 120 to 240 mL in adults; however, toxic symptoms may be produced by as little as 20 mL. Ketoacidosis and ketonuria commonly occur due to the presence of the major metabolite, acetone, in the circulation. Inhalation of isopropyl alcohol vapour has been reported to produce coma.

Application of isopropyl alcohol to the skin may cause dryness and irritation; suitable precautions should be taken to prevent absorption through the skin, particularly in infants.

Treatment of adverse effects is as for Alcohol, p.1626.

◊ General references.

1. WHO. 2-Propanol. *Environmental Health Criteria 103*. Geneva: WHO, 1990. Available at: http://www.inchem.org/documents/ehc/ehc/ehc103.htm (accessed 15/03/06)

Children. Reports of chemical skin burns caused by the topical application of isopropyl alcohol in premature infants.[1,2]

Haemorrhagic gastritis in a 2-year-old febrile child was attributed to topical absorption of isopropyl alcohol that had been used for sponge bathing and followed by wrapping the child tightly in a blanket.[3]

1. Schick JB, Milstein JM. Burn hazard of isopropyl alcohol in the neonate. *Pediatrics* 1981; **68:** 587–8.
2. Weintraub Z, Iancu TC. Isopropyl alcohol burns. *Pediatrics* 1982; **69:** 506.
3. Dyer S, *et al*. Hemorrhagic gastritis from topical isopropanol exposure. *Ann Pharmacother* 2002; **36:** 1733–5.

Rectal absorption. Intoxication and raised serum-creatinine concentrations due to absorption of isopropyl alcohol followed its use as a rectal douche.[1] An 85-year-old woman who accidentally received an isopropyl alcohol enema developed rapid CNS depression, renal failure, and metabolic acidosis. She became comatose within 15 minutes and died 12 hours later after a cardiac arrest. Post-mortem examination showed necrosis of the colon.[2]

1. Barnett JM, *et al*. Intoxication after an isopropyl alcohol enema. *Ann Intern Med* 1990; **113:** 638–9.
2. Haviv YS, *et al*. Accidental isopropyl alcohol enema leading to coma and death. *Am J Gastroenterol* 1998; **93:** 850–1.

Pharmacokinetics

Isopropyl alcohol is readily absorbed from the gastrointestinal tract but there appears to be little absorption through intact skin. The vapour may be absorbed through the lungs. Isopropyl alcohol is metabolised more slowly than ethyl alcohol and about 15% of an ingested dose is metabolised to acetone.

◊ For reports of rectal absorption of isopropyl alcohol, see above.

Uses and Administration

Isopropyl alcohol is an antiseptic with bactericidal properties similar to those of alcohol (p.1627). It is used for pre-operative skin cleansing in concentrations of about 60 to 70%, and is an ingredient of preparations used for disinfection of hands and surfaces. Its marked degreasing properties may limit its usefulness in preparations used repeatedly. It is also used as a solvent, especially in cosmetics, perfumes and pharmaceutical preparations, and as a vehicle for other disinfectant compounds.

Propyl alcohol (p.1660) is also used as an antiseptic.

Preparations

USP 31: Azeotropic Isopropyl Alcohol; Isopropyl Rubbing Alcohol.

Proprietary Preparations (details are given in Part 3)

Canad.: Alcojel†; Auro-Dri; Duonalc; ***Ger.:*** Aktivin; ***S.Afr.:*** Medi-Swab; ***Switz.:*** Avitracid†; ***Turk.:*** Opak; ***UK:*** Alcowipe; Medi-Swab; Sterets; Steriwipe; ***USA:*** Auro-Dri; ***Venez.:*** Gel Secante†.

Multi-ingredient: ***Arg.:*** Sincerum Dry; ***Austral.:*** Aqua Ear; Ear Clear for Swimmer's Ear; Unisolve†; ***Austria:*** Braunoderm; Dodesept; Dodesept Gefarbt; Dodesept N; Kodan; Marcocid; Mycopol; Octeniderm; Skinsept; ***Belg.:*** Braunoderm; ***Canad.:*** Baxedin 2% - 70%; Duonalc-E; Swim-Ear†; ***Chile:*** NP-27; Solarcaine Spray Aerosol; ***Cz.:*** Promanum N; Softa-Man; ***Fr.:*** Clinogel; Manugel; Spitaderm†; Sterillium†; ***Ger.:*** Autoderm Extra; Bacillol; Bacillol AF; Bacillol plus; Betaseptic; Braunoderm; Cutasept; Desmanol†; Dibromol; Freka-Steril; Gercid forte†; Helipur H plus N; Incidin; Incidin M Spray Extra†; Kodan Tinktur Forte†; Mucasept-A; Neo Kodan†; Olbas; Poly-Alkohol; Primasept Med†; Promanum N; Rutisept extra; Sagrosept†; Sekucid konz†; Skinman Soft; Skinsept F; Skinsept G; Softasept N; Spitacid; St-Tissues; Sterillium; ***Gr.:*** Chiro Des; Cutasept; Octeniderm; Sterillium; ***Hong Kong:*** Hibisol†; ***Indon.:*** Mexochrome; Spitaderm; ***Irl.:*** Biofreeze; Hibisol; ***Israel:*** Dryears; Monorapid; Skin Des; Sterets H; ***Ital.:*** Bergon†; Braunoderm; Citromed; Clorexan; Eso Ferri Alcolico Plus; Eso Ferri Plus; Esocetic Plus; Esocetic†; Panseptil; SaniSteril Strumenti Alcolico†; Sekucid; Spitaderm; ***Neth.:*** Hibisol; Spitaderm; Sterillium; ***NZ:*** Aqua Ear†; ***Port.:*** Braunoderm; Promanum; Softasept; ***Singapore:*** Tri-Cidal†; ***Switz.:*** Betaseptic; Braunoderm; Cutasept; Desamon; Dolo-Arthrosenex sine Heparino†; Ederphyt†; Hibital; Hibitane Teinture; Kodan Teinture forte; Octeniderm; Promanum N; Softa-Man; Softasept N; Sterillium†; ***UK:*** ChloraPrep; Hibisol; Manusept; Medi-Swab H; Sterets H; Swim-Ear; ***USA:*** BactoShield; Blue Ice Gel; Cresylate; Dri/Ear; Ear-Dry; Fungi-Nail; Klout; Swim-Ear; Tinver.

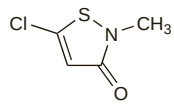
Isothiazolinones

Isotiazolinonas.

Methylchloroisothiazolinone

Metilcloroisotiazolinona. 5-Chloro-2-methyl-3(2*H*)-isothiazolone; 5-Chloro-2-methyl-4-isothiazolin-3-one.

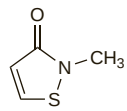
CAS — 26172-55-4.



Methylisothiazolinone

Metilisotiazolinona. 2-Methyl-3(2*H*)-isothiazolone; 2-Methyl-4-isothiazolin-3-one.

CAS — 2682-20-4.



Profile

A mixture of isothiazolinones consisting of methylchloroisothiazolinone and methylisothiazolinone (MCI/MI) in a ratio of about 3:1 is used as a preservative in industry and in cosmetic and household products. It is effective at very low concentrations against a wide spectrum of Gram-positive and -negative bacteria, yeasts, and fungi. The mixture is often referred to as Kathon CG, one of its proprietary names.

Isothiazolinones may cause contact dermatitis and local irritation.

Hypersensitivity. There have been reports of sensitisation and allergic contact dermatitis arising from the use of isothiazolinones in cosmetics, paints and from industrial exposure.[1-11] The incidence of allergy to methylchloroisothiazolinone and methylisothiazolinone (MCI/MI) is reported be dose-related and ranges from less than 1% to 8.4%.[4,8] A study[6] conducted in 4713 patients at 22 European contact dermatitis clinics over a 12 month period from 1988 to 1989 reported the frequency of positive reactions to 100 ppm MCI/MI to be 3%.

Most hypersensitivity reports are related to use in cosmetics, especially 'leave-on' products such as moisturising creams, while the risk attributed to their use in 'rinse-off' products such as shampoos is considered to be minimal.[4,7] A review[7] of such rinse-off products found that they were even well tolerated in MCI/MI sensitised people. Airborne contact dermatitis has been reported in people exposed to MCI/MI in paints.[9,10] Occupational contact allergy and dermatitis due to MCI/MI have also been reported,[11] and there has been a case report of occupational asthma developing in a worker 5 months after starting work in an isothiazolinone manufacturing plant.[5]

1. Björkner B, *et al*. Contact allergy to the preservative Kathon CG. *Contact Dermatitis* 1986; **14:** 85–90.
2. De Groot AC, Bos JD. Preservatives in the European standard series for epicutaneous testing. *Br J Dermatol* 1987; **116:** 289–92.
3. Fransway AF. Sensitivity to Kathon CG: findings in 365 consecutive patients. *Contact Dermatitis* 1988; **19:** 342–7.
4. De Groot AC, Herxheimer A. Isothiazolinone preservative: cause of a continuing epidemic of cosmetic dermatitis. *Lancet* 1989; **i:** 314–16.
5. Bourke SJ, *et al*. Occupational asthma in an isothiazolinone manufacturing plant. *Thorax* 1997; **52:** 746–8.
6. Menné T, *et al*. Contact sensitization to 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one (MCI/MI): a European multicentre study. *Contact Dermatitis* 1991; **24:** 334–41.
7. Fewings J, Menné T. An update of the risk assessment for methylchloroisothiazolinone/methylisothiazolinone (MCI/MI) with focus on rinse-off products. *Contact Dermatitis* 1999; **41:** 1–13.
8. Mowad CM. Methylchloro-isothiazolinone revisited. *Am J Contact Dermat* 2000; **11:** 115–18.
9. Bohn S, *et al*. Airborne contact dermatitis from methylchloroisothiazolinone in wall paint: abolition of symptoms by chemical allergen inactivation. *Contact Dermatitis* 2000; **42:** 196–201.
10. Reinhard E, *et al*. Preservation of products with MCI/MI in Switzerland. *Contact Dermatitis* 2001; **45:** 257–64.
11. Isaksson M, *et al*. Occupational contact allergy and dermatitis from methylisothiazolinone after contact with wallcovering glue and after a chemical burn from a biocide. *Dermatitis* 2004; **15:** 201–5.

Preparations

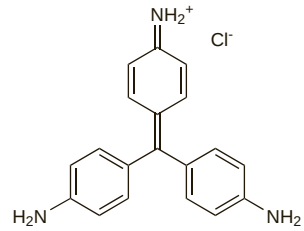
Proprietary Preparations (details are given in Part 3)

Multi-ingredient: ***Switz.:*** Saltrates†.

Magenta

Aniline Red; Basic Fuchsin; Basic Magenta; CI Basic Violet 14; Colour Index No. 42510; Fuchsine; Fucsina.

CAS — 569-61-9 (pararosaniline hydrochloride); 632-99-5 (rosaniline hydrochloride).



(pararosaniline hydrochloride)

Description. Magenta is a mixture of the hydrochlorides of pararosaniline {4-[(4-aminophenyl)(4-iminocyclohexa-2,5-dien-1-ylidene)-methyl]aniline} and rosaniline {4-[(4-aminophenyl)-(4-iminocyclohexa-2,5-dien-1-ylidene)methyl]-2-methylaniline}.

Pharmacopoeias. In *US*.

USP 31 (Basic Fuchsin). A mixture of rosaniline and pararosaniline hydrochlorides. It contains the equivalent of not less than 88% of rosaniline hydrochloride ($C_{20}H_{20}ClN_3$ = 337.8), calculated on the dried basis. A dark green powder or greenish glistening crystalline fragments with a bronze-like lustre and not more than a faint odour. Soluble in water, in alcohol, and in amyl alcohol; insoluble in ether.

Profile

Magenta is a triphenylmethane antiseptic dye effective against Gram-positive bacteria and some fungi. Magenta Paint (BPC 1973) (Castellani's Paint) was formerly used in the treatment of superficial dermatophytoses.

Decolorised magenta solution (Schiff reagent) is used as a test for the presence of aldehydes.

Concerns about possible carcinogenicity have restricted the use of magenta.

Carcinogenicity. The handling of magenta was not thought to induce carcinogenesis but its actual manufacture may produce tumours. The International Agency for Research on Cancer has concluded that the manufacturing process of magenta involves exposure to substances that are considered to be definite human carcinogens. Pararosaniline hydrochloride (Basic Red 9), and magenta containing it, are considered possibly carcinogenic to humans.[1] Magenta was also considered to be unsafe for use in food.[2]

1. IARC/WHO. Occupational exposures of hairdressers and barbers and personal use of hair colourants; some hair dyes, cosmetic colourants, industrial dyestuffs and aromatic amines. *IARC monographs on the evaluation of carcinogenic risks to humans volume 57* 1993. Available at: http://monographs.iarc.fr/ENG/Monographs/vol57/volume57.pdf (accessed 23/05/06)
2. FAO/WHO. Specifications for the identity and purity of food additives and their toxicological evaluation: food colours and some antimicrobials and antoxidants: eighth report of the joint FAO/WHO expert committee on food additives. *WHO Tech Rep Ser 309* 1965. Also available at: http://libdoc.who.int/trs/WHO_TRS_309.pdf (accessed 28/08/08)

Preparations

BPC 1973: Magenta Paint;
USP 31: Carbol-Fuchsin Topical Solution.

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: ***Ital.:*** Fucsina Fenica; ***Pol.:*** Pigmentum Castellani.

Magnesium Peroxide

Magnesii peroxidum; Magnesium Perhydrolum; Magnésium, peroxyde de; Magnesiumperoksidi; Magnesiumperoxid; Magnéziumperoxid; Magnio peroksidas; Peroxid hořečnatý; Peróxido de magnesio.

CAS — 1335-26-8; 14452-57-4.
ATC — A02AA03; A06AD03.
ATC Vet — QA02AA03; QA06AD03.

Pharmacopoeias. In *Eur.* (see p.vii).

Ph. Eur. 6.2 (Magnesium Peroxide). A mixture of magnesium peroxide and magnesium oxide. It contains not less than 22% and not more than 28% of MgO_2. A white or slightly yellow, amorphous, light powder. Practically insoluble in water and in alcohol; dissolves in mineral acids. Protect from light.