

in excess of the recommended concentrations. Water-borne infections are also a hazard.

Fluoride is regarded as an essential constituent of drinking water but may endanger health if present in excess—see Sodium Fluoride, p.1962. Ingestion of water containing large quantities of nitrates may cause methaemoglobinemia in infants; many countries have standards for nitrates in water.

The use of tap water containing metal ions (such as aluminium, copper, and lead), fluoride, or tosylchloramide sodium, for dialysis may be hazardous.

Hard water contains soluble calcium and magnesium salts, which form scale and sludge in boilers, water pipes, and autoclaves; they also cause the precipitation of soap and prevent its lathering. Temporary hardness in water is due to the presence of bicarbonates which are converted to insoluble carbonates on heating. Permanent hardness is due to dissolved chlorides, nitrates, and sulfates, which do not form a precipitate on heating. The presence or absence of such salts can play a part in cardiovascular health.

Without further purification, potable water may be unsuitable for certain pharmaceutical purposes. In such instances, purified water should always be used. Most pharmacopoeias include monographs on various preparations of water, such as water suitable for injections. Potable water should not be used when such preparations of water are specified.

Excessive ingestion of water can lead to water intoxication with disturbances of the electrolyte balance.

References.

1. Manz F, et al. The most essential nutrient: defining the adequate intake of water. *J Pediatr* 2002; **141**: 587–92.

Preparations

Proprietary Preparations (details are given in Part 3)

Fin.: Aquasteril; **Hung.:** Humaqua; Rins-Aqua; **Port.:** Estericlean†; **UK:** Aquasoli; Urilflex W; **USA:** Fleet Bagenema.

Wheat

Blé; Froment; Frumento; Grano; Trigo; Weizen.

Пшеница Мягкая

NOTE. Distinguish from Triticum, a synonym for Couch-grass (see p.2288).

Profile

Wheat (*Triticum* spp., Poaceae) is a grass cultivated worldwide as a cereal crop. Common wheat (*Triticum aestivum*, (*T. vulgare*)) is the source of wheat germ and wheat-germ oil (below). Malted grain of wheat is used in the preparation of malt extract (p.1955). Wheat is also used as a source of bran (p.1712) and starch (p.1968).

Wheat germ and wheat-germ oil are used in preparations for lesions of the skin and mucous membranes and as nutritional supplements.

Preparations

Proprietary Preparations (details are given in Part 3)

Braz.: Dermocrem; Vagitrene; **Canad.:** Dermatix Fitocream; **Ger.:** Vulnostimulin; **Ital.:** Fitostimoline; Step 2; **Turk.:** Fito; **Venez.:** Derain; Gynoderain.

Multi-ingredient: Arg.: Amenite Plus†; Cicalut; Microlift; **Fr.:** Phytolong-bronze; **Ital.:** Decon Oculi; Fitostimoline; Sclerovis H; Solecin; **Mex.:** Fitostimulina; Italdermol; **Port.:** Fitocreme; **UK:** S.P.H.P.

Wheat-germ Oil

Búzacsíraolaj; Germes de blé, huile de; Kviečių gemalų aliejus; Oleum Tritici Germinis; Pšeničný olej; Tritici aestivi oleum; Tritici Oleum; Vehnänalkioölly; Vetegroddolja.

Масло Пшеничных Зародышей

CAS — 8006-95-9.

Pharmacopoeias. *Eur.* (see p.vii) includes Wheat-germ Oil, Refined, and Wheat-germ Oil, Virgin.

Ph. Eur. 6.2 (Wheat-germ Oil, Refined; Tritici Aestivi Oleum Raffinatum). The fatty oil obtained from the germ of the grain of *Triticum aestivum* by cold expression or by other suitable mechanical means and/or by extraction. It is then refined. A suitable antioxidant may be added. A clear, light yellow liquid. Practically insoluble in water and in alcohol; miscible with light petroleum at 40° to 60°. Relative density about 0.925. Store in an airtight container. Protect from light.

Ph. Eur. 6.2 (Wheat-germ Oil, Virgin; Tritici Aestivi Oleum Virginalis). The fatty oil obtained from the germ of the grain of *Triticum aestivum* by cold expression or other suitable mechanical means. A clear, light yellow or golden-yellow liquid. Practically insoluble in water and in alcohol; miscible with light petroleum at 40° to 60°. Relative density about 0.925. Store in an airtight container. Protect from light.

Profile

Wheat-germ oil is a rich source of vitamin E (p.1992). It is included in dietary supplements and in preparations for lesions of the skin and mucous membranes.

The symbol † denotes a preparation no longer actively marketed

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: Braz.: Gamaline-V; **Fr.:** Bio-Selenium; Phytophanere; **Indon.:** Eviprostat; **Ital.:** Babigoz Crema Protettiva; Babysteril; Ottovis; **Jpn.:** Eviprostat; **Singapore:** Eviprostat; **Switz.:** Sanhelios Capsules a la vitamine A†; **UK:** No-Sor Nose Balm.

Wild Carrot

Dauci Herba; Daucus; Queen Anne's Lace; Zannahoria silvestre.

NOTE. The name Queen Anne's lace has also been used for cow parsley (*Anthriscus sylvestris*), another umbellifer.

Pharmacopoeias. In *Chin*.

Profile

The fruits of the wild carrot, *Daucus carota* (Umbelliferae) have been used as a diuretic and antelmintic, and are included in herbal preparations for various indications. Other parts of the plant have been used in folk medicine. Carrot seed oil is used in aromatherapy. The root of the cultivated form, *D. carota* subsp. *sativus*, is a culinary item and a source of carotenoids in the diet.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: Arg.: Hepatolgina; Metiogen; Palatrobil; **Chile:** Natur-Zin; Natursel-C; **Ital.:** Evamilk; **Malaysia:** Eyebright Plus†; **UK:** Sciargo; Watershed.

Wild Cherry Bark

Corteza de cerezo silvestre; Prunus Serotina; Virginian Prune; Virginian Prune Bark; Wild Black Cherry Bark; Wild Cherry.

Profile

Wild cherry bark is the dried bark of the wild or black cherry, *Prunus serotina* (Rosaceae), known in commerce as Thin Natural Wild Cherry Bark, containing not less than 10% of water-soluble extractive. It has a slight odour and an astringent, aromatic, bitter taste, recalling that of bitter almonds. It contains (+)-mandelonitrile glucoside (prunasin) and an enzyme system, which interact in the presence of water yielding benzaldehyde, hydrocyanic acid, and glucose.

Wild cherry bark, in the form of the syrup, has been used in the treatment of cough but it has little therapeutic value. It has also been used as a flavour.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: Canad.: Bronchial Cough; Mielocol; Rophelin†; Wampole Bronchial Cough Syrup†; **Venez.:** Cerylana.

Wild Lettuce

Herba Lactucae Virosoe; Laitue Vireuse; Lechuga silvestre.

Profile

The wild lettuce, *Lactuca virosa* (Compositae), has been given in herbal medicine as a sedative and antitussive. The dried latex extract (lactuarius; lettuce opium) is also used.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: Canad.: Sirop Cocillana Codeine; Sirop Cocillana Compose; **S.Afr.:** Choats Extract of Lettuce Cough Mixture; **UK:** Anased; Antibron; Gerard House Somnus HRI Night; Kalms Sleep; Quiet Life; Quiet Nite; Slumber; Unwind Herbal Nytol; **Venez.:** Cerylana.

Wild Pansy

European Field Pansy (*Viola arvensis*); European Wild Pansy (*Viola arvensis* or *V. tricolor*); Field Pansy (*Viola arvensis* or *V. tricolor*); Heart's Ease; Heartsease (*Viola tricolor*); Johnny-jump-up (*Viola tricolor*); Keto-orvokki; Love-in-idleness (*Viola tricolor*); Pansy (*Viola tricolor*); Pensée sauvage; Viol; Viola herb; Viola Tricoloris Herba (*viola tricolor*); Ziele fiołka trójbarwnego (*viola tricolor*).

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

Ph. Eur. 6.2 (Wild Pansy (Flowering Aerial Parts); Viola Herbicum Flore). The dried flowering aerial parts of *Viola arvensis* and/or *V. tricolor*. It contains a minimum of 1.5% of flavonoids, expressed as violanthin (C₂₇H₃₀O₁₄ = 578.5), calculated with reference to the dried drug. Protect from light.

Profile

Wild pansy, *Viola tricolor* or *V. arvensis* (Violaceae) is used in herbal medicine in topical preparations for minor skin disorders, in particular for seborrhoeic skin diseases. Wild pansy is also included in oral preparations for gastrointestinal and respiratory-tract disorders.

Homoeopathy. Wild Pansy has been used in homoeopathic medicines under the following names: *Viola tricolor*.

Adverse effects. Haemolysis was reported in a 9-month-old infant with G6PD deficiency given an extract of wild pansy orally.¹

1. Behmanesh Y, Abdollahi M. Haemolysis after consumption of *Viola tricolor*. *WHO Drug Inf* 2002; **16**: 15–16.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: Austral.: Bioglan Bioage Peripheral; **Cz.:** Antirevmaticky Caj; Bronchialtee N†; **Fr.:** Depuratif Parnel; Evacrine; Fitacnol†; **Ital.:** Neoderma 47; **Switz.:** Antidry; Viola; **UK:** Gerard House Skin.

Wild Thyme

Backtimjan; Kangasajuruoho; Mateřidoušková nat' (Nat' mateřidoušky); Mother of Thyme; Paprastuju čiboreliu žolē; Quendel; Serpolet; Serpylli herba.

NOTE. Distinguish from Thyme, p.2401.

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

Ph. Eur. 6.2 (Wild Thyme; Serpylli Herba). The whole or cut, dried, flowering aerial parts of *Thymus serpyllum* containing a minimum of 0.3% v/w of essential oil, calculated with reference to the dried drug. Protect from light.

Profile

Wild thyme (*Thymus serpyllum*, Lamiaceae) is included in herbal medicines for disorders of the upper respiratory tract. Its actions are similar to, but weaker than, those of thyme (p.2401). Commercially, *T. pulegioides* and *T. praecox* subsp. *arcticus* are also offered as *T. serpyllum*.

Wild thyme oil is used similarly.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: Austral.: Gartech; **Austria:** Scottopect; **Belg.:** Colimax†; Thymoseptine; **Cz.:** Bronchialtee N†; Detsky Caj s Hermankem; Pruduškova; Thymome; **Fr.:** Aromasol; Bronchorectine au Citral; Dinacode avec codeine†; Dinacode†; Nazinette du Docteur Gilbert; **Indon.:** Silex; **Ital.:** Stenobronchial; Tussamag; Tussamag Complex; **Port.:** Pilka F†; **Rus.:** Stoptussin-Fito (Стрoптуссин-Фитo); **Spain:** Llantusil†; **Switz.:** Frixo-Drag-on Vert†; Nasobol†; Pectosan N†; Tisane contre les refroidissements.

Xanthine-containing Beverages

Xantina, bebidas con.

Adverse Effects

The adverse effects of xanthine-containing beverages are largely due to their caffeine (p.1116), theophylline (p.1140), and theobromine (p.1140) content. Common adverse effects are sleeplessness, anxiety, tremor, palpitations, and withdrawal headache.

Breast feeding. For references to the effects of caffeinated beverages in breast feeding, see under Caffeine, p.1117.

Effects on the heart. A meta-analysis of published studies found no evidence of an association between coffee consumption and the development of coronary heart disease,¹ and a large cohort study in men followed up for 14 years and women for up to 20 years also found no evidence of a link.² Expert opinion in the UK³ has been that the evidence that caffeine or coffee consumption contributes to coronary heart disease development is inconsistent. Coffee prepared by boiling, as is the practice in Scandinavia for example, does raise serum cholesterol concentrations due to the presence of the diterpenes cafestol and kahweol, and coffee made in a cafetière (French press) has a similar effect, but filtered coffee does not, as the hypercholesterolaemic fraction does not pass a paper filter.⁴ A case-control study has suggested a relationship between consumption of boiled, but not filtered, coffee and incidence of a first non-fatal myocardial infarction.⁵ Others have raised concern that the potential pressor effect of caffeine itself may be a cardiovascular risk factor,⁶ but as mentioned above there is little evidence for this. A large prospective cohort study⁷ found no association between dietary caffeine and risk of atrial fibrillation or flutter.

Tea drinking has not been associated with increased cardiovascular risk³—indeed, its polyphenol content has been suggested to have beneficial antioxidant effects.^{8,9}

1. Myers MG, Basinski A. Coffee and coronary heart disease. *Arch Intern Med* 1992; **152**: 1767–72.
2. Lopez-Garcia E, et al. Coffee consumption and coronary heart disease in men and women: a prospective cohort study. *Circulation* 2006; **113**: 2045–53.
3. Department of Health. Nutritional aspects of cardiovascular disease. Report of the cardiovascular review group committee on medical aspects of food policy. Report on health and social subjects no. 46. London: HMSO, 1994.
4. Urgert R, et al. Comparison of effect of cafetière and filtered coffee on serum concentrations of liver aminotransferases and lipids: six month randomised controlled trial. *BMJ* 1996; **313**: 1362–6.
5. Hammar N, et al. Association of boiled and filtered coffee with incidence of first nonfatal myocardial infarction: the SHEEP and the VHEEP study. *J Intern Med* 2003; **253**: 653–9.
6. James JE. Is habitual caffeine use a preventable cardiovascular risk factor? *Lancet* 1997; **349**: 279–81.

- Frost L, Vestergaard P. Caffeine and risk of atrial fibrillation or flutter: the Danish Diet, Cancer, and Health Study. *Am J Clin Nutr* 2005; **81**: 578–82.
- Luo M, et al. Inhibition of LDL oxidation by green tea extract. *Lancet* 1997; **349**: 360–1.
- Geleijnse JM, et al. Tea flavonoids may protect against atherosclerosis: the Rotterdam study. *Arch Intern Med* 1999; **159**: 2170–4.

Effects on the muscles. Severe myositis in an elderly man who drank around 14 litres of tea daily was attributed to hypokalaemia produced by the xanthine content of the beverage.¹ The patient improved after intravenous potassium replacement and subsequently remained well with a reduction in tea intake.

- Trewby PN, et al. Teapot myositis. *Lancet* 1998; **351**: 1248.

Malignant neoplasms. A review of available data did not suggest a clinically significant association between the regular use of coffee and the development of cancer of the lower urinary tract in men or women.¹

- Viscoli CM, et al. Bladder cancer and coffee drinking: a summary of case-control research. *Lancet* 1993; **341**: 1432–7.

Interactions

The possibility of synergistic effects in patients receiving xanthines who consume large amounts of xanthine-containing beverages should be borne in mind.

Antipsychotics. Xanthine-containing beverages have been reported to precipitate some antipsychotic drugs from solution *in vitro*, but do not appear to alter antipsychotic concentrations *in vivo*. For references, see p.975.

Uses and Administration

Xanthine-containing beverages including chocolate, coffee, cocoa, cola, maté, and tea are widely consumed and have a mild stimulant effect on the CNS. The primary xanthine constituent is caffeine (p.1116) but other xanthine derivatives such as theobromine (p.1140) and theophylline (p.1140) may also be present; cocoa and chocolate contain significant amounts of theobromine.

Coffee is the kernel of the dried ripe seeds of *Coffea arabica*, *C. liberica*, *C. canephora* (robusta coffee), and other species of *Coffea* (Rubiaceae), roasted until it acquires a deep brown colour and a pleasant characteristic aroma. It contains about 1 to 2% of caffeine. Coffee has been used in the form of an infusion or decoction as a stimulant and as a flavour in some pharmaceutical preparations. A decoction is used as a beverage containing up to about 100 mg of caffeine per 100 mL. Preparations of instant coffee may contain up to 40% less caffeine while decaffeinated preparations may contain only up to about 3 mg per 100 mL.

Kola (cola, cola seeds, kola nuts) is the dried cotyledons of *Cola nitida* and *C. acuminata* (Sterculiaceae), containing up to about 2.5% of caffeine and traces of theobromine. Kola is used in the preparation of cola drinks which may contain up to 20 mg of caffeine per 100 mL.

Maté (Paraguay Tea) is the dried leaves of *Ilex paraguensis* (Aquifoliaceae), containing 0.2 to 2% of caffeine and traces of theobromine. Maté is less astringent than tea and is extensively used as a beverage in South America.

Tea (thea, chá, thé, tee) is the prepared young leaves and leaf-buds of *Camellia sinensis* (= *C. thea*) (Theaceae). It contains 1 to 5% of caffeine, up to 24% of tannin, and small amounts of theobromine and theophylline. Tea is used in an infusion as a beverage containing up to about 60 mg of caffeine per 100 mL.

Guarana consists of the crushed seeds of *Paullinia cupana* var *sorbilis* (Sapindaceae). Caffeine appears to be its major active ingredient which was once termed guaranine. Herbal preparations include a beverage or liquid extract and may contain 5% caffeine.

Homoeopathy. Coffee has been used in homoeopathic medicines under the following names: *Coffea arabica*; *Coffea*; *Coffea cruda*; *Coff.* cr.

Kola has been used in homoeopathic medicines under the following names: *Cola*.

Maté has been used in homoeopathic medicines under the following names: *Ilex paraguayensis*; *Ile. para*.

Guarana has been used in homoeopathic medicines.

Diabetes mellitus. Regular coffee consumption has been reported^{1–6} to reduce the risk of developing type 2 diabetes mellitus, although it is not clear whether this effect is due to caffeine or some other constituent in coffee.

- Salazar-Martinez E, et al. Coffee consumption and risk for type 2 diabetes mellitus. *Ann Intern Med* 2004; **140**: 1–8.
- van Dam RM, Hu FB. Coffee consumption and risk of type 2 diabetes: a systematic review. *JAMA* 2005; **294**: 97–104.
- van Dam RM, et al. Coffee, caffeine, and risk of type 2 diabetes: a prospective cohort study in younger and middle-aged U.S. women. *Diabetes Care* 2006; **29**: 398–403.
- Iso H, et al. The relationship between green tea and total caffeine intake and risk for self-reported type 2 diabetes among Japanese adults. *Ann Intern Med* 2006; **144**: 554–62.
- Pereira MA, et al. Coffee consumption and risk of type 2 diabetes mellitus: an 11-year prospective study of 28 812 postmenopausal women. *Arch Intern Med* 2006; **166**: 1311–16.
- Smith B, et al. Does coffee consumption reduce the risk of type 2 diabetes in individuals with impaired glucose? *Diabetes Care* 2006; **29**: 2385–90.

Preparations

Proprietary Preparations (details are given in Part 3)

Arg.: Radite; **Braz.:** Guarafort; **Fr.:** Camiline; **Ger.:** Carbo Konigsfeld; **Ital.:** Cateq; **UK:** Yanba; **USA:** Teegreen.

Multi-ingredient: **Arg.:** Centella Incaico; Energy Plus; Ginkgo Biloba Memo Diates; Guarana Diates; Ilox Gel Reductor; Yerba Diet; **Austral.:** Avena Complex; Bioglan 3B Beer Belly Buster; Infant Tonic; Irontona; Vig Vig Recovery; Vig; Vitanox; Vitatona; **Braz.:** Astenol; Dermattive 10; Gastrogenol; Kola Fosfatada Soel; **Canad.:** Biotrim; Energy Plus; **Cz.:** Abfuhr-Heilkräutertee; **Fr.:** Biotone; Drainuryl; Filgel; Maxidraïne; Min-clift; Promincil; Quinotone; Tealine; Tonactil; Uromil; YSE; **Ger.:** Cardibisanat; Myrrhinil-Intest; Nieroxin Nt; Ramend Krauter; **Hong Kong:** LEAN Formula w/ Advantra; Vvari-Procomil; **Indon.:** F-Slim; Lycog; **Ir.:** Biofreeze; **Ital.:** Altadrine; Biominal 5-Alfa Shampoo; Calmason; Chinoidina; Dam; Four-Ton; Ginkoba Active; Memorandum; Snell Cell; **Mex.:** Noxivid; **Philipp.:** Fitrum; Jamieson Total Energy; Memory DD; Nutrafit; **Pol.:** Cardiol C; Penigra; Tobacoff; **Port.:** Lipoforte; **Rus.:** Insti (Инсти); **Spain:** Exodren; Fitosvelt; Rmagrip; Vigortonic; **Thai.:** Vvari-Procomil; **UK:** Biofreeze; Chlorophyl; Cleansing Herbs; Daily Fatigue Relief; Damiana and Kola Tablets; Glykola; Labiton; Lion Cleansing Herbs; S.F.H.P.; Strength; Zotrim; **Venez.:** Demerung; Eufytosef.

Xanthopterin

2-Amino-4,6-dihydroxypteridine.

$C_6H_5N_5O_2 = 179.1$.

CAS — 119-44-8.

Profile

Xanthopterin is a natural pigment that has been used in the management of eye disorders.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: **Ital.:** Xantervit; Xantervit Antibiotico; Xantervit Eparina.

Xylazine (BAN, rINN)

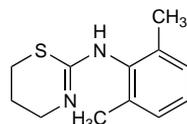
Ksylatsiini; Xilazina; Xylazin; Xylazinum. N-(5,6-Dihydro-4H-1,3-thiazin-2-yl)-2,6-xylidide.

КСИЛАЗИН

$C_{12}H_{16}N_2S = 220.3$.

CAS — 7361-61-7.

ATC Vet — QN05CM92.



Pharmacopoeias. In US.

USP 31 (Xylazine). Colourless to white crystals. Sparingly soluble in acetone, in chloroform, and in dilute acid; insoluble in dilute alkali. Store in airtight containers at a temperature of 25°, excursions permitted between 15° and 30°.

Xylazine Hydrochloride (BANM, USAN, rINN)

Bay-Va-1470; Hidrocloruro de xilazina; Ksylatsiinihidrokloridi; Xilazin-hidroklorid; Xylazine, chlorhydrate de; Xylazin-hydrochlorid; Xylazinhydroklorid; Xylazin hydrochloridum.

КСИЛАЗИНА ГИДРОХЛОРИД

$C_{12}H_{16}N_2S \cdot HCl = 256.8$.

CAS — 23076-35-9.

Pharmacopoeias. In US.

Eur. (see p.vii) includes for veterinary use only.

Ph. Eur. 6.2 (Xylazine Hydrochloride for Veterinary Use; Xylazine Hydrochloride BP(Vet) 2008). A white or almost white, crystalline, hygroscopic powder. Freely soluble in water and in dichloromethane; very soluble in methyl alcohol. A 10% solution in water has a pH of 4.0 to 5.5. Store in airtight containers. Protect from light.

USP 31 (Xylazine Hydrochloride). Colourless to white crystals. Sparingly soluble in acetone, in methyl alcohol, and in dilute acid; insoluble in dilute alkali. A 1% solution in water has a pH of 4.0 to 6.0. Store in airtight containers at a temperature of 25°, excursions permitted between 15° and 30°.

Profile

Xylazine is a sedative, analgesic, and muscle relaxant used in veterinary medicine. The hydrochloride is used similarly. Abuse has been reported.

Adverse effects. Reports^{1–5} of toxicity and abuse associated with xylazine. Bradycardia, hypotension, and coma were associated with the self-administration of 200 mg of xylazine. Treatment was supportive.¹

- Samanta A, et al. Accidental self administration of xylazine in a veterinary nurse. *Postgrad Med J* 1990; **66**: 244–5.
- Mittleman RE, et al. Xylazine toxicity—literature review and report of two cases. *J Forensic Sci* 1998; **43**: 400–2.

- Hoffmann U, et al. Severe intoxication with the veterinary tranquilizer xylazine in humans. *J Anal Toxicol* 2001; **25**: 245–9.
- Capraro AJ, et al. Severe intoxication from xylazine inhalation. *Pediatr Emerg Care* 2001; **17**: 447–8.
- Elejalde JI, et al. Drug abuse with inhaled xylazine. *Eur J Emerg Med* 2003; **10**: 252–3.

Xylose

Ksilozé; Ksyoosi; Ksyoza; Wood Sugar; Xilosa; Xilóz; Xylos; Xylosa; D-Xylose; Xylosum. α -D-Xylopyranose.

$C_5H_{10}O_5 = 150.1$.

CAS — 58-86-6; 6763-34-4.

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

Ph. Eur. 6.2 (Xylose). A white or almost white crystalline powder or colourless needles. Freely soluble in water; soluble in hot alcohol.

USP 31 (Xylose). Odourless, colourless needles or white crystalline powder. Very soluble in water; slightly soluble in alcohol. Store in airtight containers at a temperature of 15° to 30°.

Profile

Xylose has been used for the investigation of absorption from the gastrointestinal tract. In the absence of malabsorption, about 35% of a 5-g oral dose and about 25% of a 25-g oral dose are reported to be excreted in the urine within 5 hours. It has been given by mouth, usually in a dose of either 5 or 25 g, with up to 700 mL of water. The amount recovered in the urine is estimated and used to assess any malabsorption. Adjustment may have to be made for renal impairment. Xylose may cause some gastrointestinal discomfort with large doses. Other drugs may affect the absorption of xylose and interfere with the xylose test.

The test has been adapted to use blood-xylose concentrations.

References

- Craig RM, Ehrenpreis ED. D-xylose testing. *J Clin Gastroenterol* 1999; **29**: 143–50.

Precautions. Preparations that contain, or are metabolised to, xylose may interfere with the results from glucose tests (p.2314). Overestimation of glucose results may mask hypoglycaemia, resulting in the inappropriate use of insulin.^{1,2}

- Medicines and Healthcare products Regulatory Agency. Medical device alert: ref MDA/2007/058 issued 19 July 2007. Available at: <http://www.mhra.gov.uk/PrintPreview/PublicationSP/CON2031807> (accessed 01/07/08)
- FDA. Important safety information on interference with blood glucose measurement following use of parenteral maltose/parenteral galactose/oral xylose-containing products (issued November 2005). Available at: <http://www.fda.gov/cber/safety/maltose110405.htm> (accessed 01/07/08)

Yellow Dock

Curly Dock; Lengua de vaca; Sour Dock.

NOTE. The name sour dock has also been used for sorrel (p.2391).

Profile

Yellow dock, the root of *Rumex crispus* (Polygonaceae) has laxative and choleric properties. It is used for constipation, jaundice, and chronic skin disorders.

Homoeopathy. Yellow Dock has been used in homoeopathic medicines under the following names: *Rumex*; *Rumex crispus*; *Rumex c.*

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: **Austral.:** Colax; Dermaco; Haemo-Red Formula; Herbal Cleanse; Trifolium Complex; **Canad.:** Herborex; **UK:** Skin Eruptions Mixture.

Ylang Ylang

Cananga; Ylang-ylang.

Profile

The flowers of ylang ylang (*Cananga odorata*, Annonaceae) are the source of ylang ylang oil. Ylang ylang oil is used in perfumery, as a flavouring agent, and in aromatherapy.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: **UK:** Teenstick.

Yucca

Yuca.

Profile

Various species of *Yucca* (Liliaceae), including Mohave yucca (*Y. schidigera*); *Y. mohavensis*), the Joshua tree (*Y. brevifolia*); *Y. arborescens*), and bear grass (*Y. filamentosa*) have been used in herbal medicine and as foods.

Preparations

Proprietary Preparations (details are given in Part 3)

Multi-ingredient: **Austral.:** Prost-1; **Braz.:** Bronchiogem.