patients with severe renal impairment and unknown non-renal clearance.

1. Patel IH, *et al.* Ceftriaxone pharmacokinetics in patients with various degrees of renal impairment. *Antimicrob Agents Chemother* 1984; **25:** 438–42.
2. Stoeckel K, *et al.* Single-dose ceftriaxone kinetics in functionally anephric patients. *Clin Pharmacol Ther* 1983; **33:** 633–41.
3. Cohen D, *et al.* Pharmacokinetics of ceftriaxone in patients with renal failure and in those undergoing hemodialysis. *Antimicrob Agents Chemother* 1983; **24:** 529–32.
4. Ti T-Y, *et al.* Kinetic disposition of intravenous ceftriaxone in normal subjects and patients with renal failure on hemodialysis or peritoneal dialysis. *Antimicrob Agents Chemother* 1984; **25:** 83–7.
5. Garcia RL, *et al.* Single-dose pharmacokinetics of ceftriaxone in patients with end-stage renal disease and hemodialysis. *Chemotherapy* 1988; **34:** 261–6.

Uses and Administration

Ceftriaxone is a third-generation cephalosporin antibacterial used similarly to cefotaxime for the treatment of susceptible infections. They include chancroid, endocarditis, gastro-enteritis (invasive salmonellosis; shigellosis), gonorrhoea, Lyme disease, meningitis (including meningococcal meningitis prophylaxis), pneumonia, septicaemia, syphilis, typhoid fever, and Whipple's disease. It is also used for surgical infection prophylaxis. For details of these infections and their treatment, see under Choice of Antibacterial, p.162.

Administration and dosage. Ceftriaxone is given as the sodium salt by slow intravenous injection over at least 2 to 4 minutes, by intermittent intravenous infusion over at least 30 minutes, or by deep intramuscular injection. If more than 1 g is to be injected intramuscularly then the dose should be divided between more than one site. Doses are expressed in terms of the equivalent amount of ceftriaxone; 1.19 g of ceftriaxone sodium is equivalent to about 1 g of ceftriaxone. The usual adult dose is 1 to 2 g daily as a single dose or in two divided doses; in severe infections up to 4 g daily may be given. Doses for infants and children (under 50 kg) are 20 to 50 mg/kg once daily; for severe infections up to 80 mg/kg daily may be given. In neonates, the maximum dose should not exceed 50 mg/kg daily; intravenous doses in neonates should be given over 60 minutes. Doses above 50 mg/kg should be given by intravenous infusion only.

A single intramuscular dose of 250 mg is recommended for the treatment of uncomplicated gonorrhoea.

For surgical infection prophylaxis, a single dose of 1 g may be given 0.5 to 2 hours before surgery; a 2-g dose is suggested before colorectal surgery.

For the prevention of secondary cases of meningococcal meningitis, a single intramuscular dose of 250 mg may be used for adults and 125 mg for children.

◊ References.

1. Brogden RN, Ward A. Ceftriaxone: a reappraisal of its antibacterial activity and pharmacokinetic properties, and an update on its therapeutic use with particular reference to once-daily administration. *Drugs* 1988; **35:** 604–45.
2. Lamb HM, *et al.* Ceftriaxone: an update of its use in the management of community-acquired and nosocomial infections. *Drugs* 2002; **62:** 1041–89.
3. Bijie H, *et al.* In vitro activity, pharmacokinetics, clinical efficacy, safety and pharmacoeconomics of ceftriaxone compared with third and fourth generation cephalosporins: review. *J Chemother* 2005; **17:** 3–24.

Administration in hepatic and renal impairment. A reduction in dosage of ceftriaxone may be necessary in patients with severe renal impairment (creatinine clearance below 10 mL/minute), in whom the daily dose should not exceed 2 g. In patients undergoing dialysis, and in those with both renal and hepatic impairment, plasma concentrations of ceftriaxone should be monitored to determine whether dose adjustment is needed.

Preparations

BP 2008: Ceftriaxone Injection;
USP 31: Ceftriaxone for Injection; Ceftriaxone Injection.

Proprietary Preparations (details are given in Part 3)
Arg.: Acantex; Bioteral; Cefomax; Ceftriaz†; Exempla; Rivacefin; Soltrimox; ***Austral.:*** Rocephin; ***Austria:*** Exogran; Rocephin; ***Belg.:*** Rocephine; ***Braz.:*** Amplospec†; Bioteral†; Ceft†; Ceftriax; Glicocef; Mesporan; Neoceftriona; Prodoxin; Rocefin; Rofoxin†; Triaxon; Triaxton; Trioxina; ***Canad.:*** Rocephin; ***Chile:*** Acantex; Grifotriaxona; ***Cz.:*** Cefaxone†; Lendacin; Longaceph†; Megion; Novosef†; Oframax†; Rocephin†; Samixon; ***Denm.:*** Cefotrix; Rocephalin; ***Fin.:*** Rocephalin; ***Fr.:*** Rocephine; ***Ger.:*** Cefotrix; Rocephin; ***Gr.:*** Antibacin; Azatyl; Bresec; Ceftrixon; Farcef; Gladius; Glorixone; Labilex; Medaxone; Rocephin; Rolisporin; Travilan; Ugotrex; Veracol; ***Hong Kong:*** Medaxonum; Mesporin; Rocephin; ***Hung.:*** Cefotrix; Lendacin; Megion; Rocephin; ***India:*** Cefocef; Ciplacef; Lyceft; Monocef; Monotax; Oframax; Powercef; Stericef†; ***Indon.:*** Biotriax; Bioxon; Broadced; Brospec; Cefaxon; Cefriex; Ceftrox; Cefxon; Cephaflox; Criax; Ecotrixon; Elpicef; Erocef; Foricef; Intrix; Rocephin; Socef; Starxon; Terfacef; Termicef; Tricefin; Trijec; Tyason; Zeftrix; ***Irl.:*** Rocephin; ***Israel:*** Keftriaxon; Rocephin; Triax; ***Ital.:*** Axobat; Bixon; Davixon; Daytrix; Deixim; Eftry; Fidato; Frineg; Iliaxone; Kappacef; Kocefan; Monoxar; Nilson; Panatrix; Pantoxon; Ragex; Rocefin; Setriox; Sirtap; Valexime; ***Jpn:*** Rocephin; ***Malaysia:*** Cefaxone; Ceftrex; Eftriax; Mesporin; Rocephin; Trixone; ***Mex.:*** Amcef; Aurofox; Axtar; Benaxona; Cefaxona; Cefraden; Ceftrex; Ceftrilem; Centrifal; Limiprol; Megion; Primotox; Rocephin; Tacex; Terbac; Triaken; Triox; Xonatil; ***Neth.:*** Elfaxone; Exogran; Lopratin; Rocephin; ***Norw.:*** Rocephalin; ***NZ:*** Rocephin; ***Philipp.:*** Acrexon; CEF-3; Cikedrix; Cryaxon; Eurosef; Fenadef; Forgram; Keptrix; Megion; Monocrin; Noxoram; Pantrixon; Retrokor; Rocephin; Roxon; Samjizon; Sergimax; Trixophin; Xtenda; ***Pol.:*** Biotrakson; Lendacin; Rocephin; Tartriakson; ***Port.:*** Betasporina; Ceriax; Kemudin; Mesporin; Rocephin; ***Rus.:*** Azaran (Азаран); Ceftrifin (Цефтрифин); Ificef (Ифицеф); Lendacin (Лендацин); Loraxone (Лораксон); Medaxone (Медаксон); Novosef (Новосеф); Oframax (Офрамакс); Stericef (Стерицеф); Tercef (Терцеф); Torocef (Торацеф); ***S.Afr.:*** Fraxone†; Oframax; Rocephin; Rociject; ***Singapore:*** Antibacin; Cefaxone; Cefin†; Oframax; Rocephin; Trexofin; Tricefin; ***Spain:*** Rocefalin; ***Swed.:*** Rocephalin; ***Switz.:*** Rocephine; ***Thai.:*** CEF-3; Cef-Zone; Cefine†; Ceftrex; Ceftriphin; Lephin†; Oframax; Rinxofay; Rocephin; Sedalin†; Triacef; Tricephin; Trixone; Zefaxone; ***Turk.:*** Baktisef; Cefaday; Cephaxon; Desefin; Equiceft; Forsef; Iesef; Nevakson; Novosef; Rocephin; Unacefin; ***UAE:*** Triaxone; ***UK:*** Rocephin; ***USA:*** Rocephin; ***Venez.:*** Bioceftrax; Cefin; Cefix; Ceftrialin; Ciplacef; Eftrival; Felident†; Megion; Rocephin; Strixone; Tricefi.

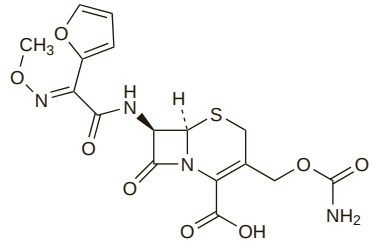
Multi-ingredient: ***India:*** Axone; Dibact†; Keftragard.

Cefuroxime *(BAN, USAN, rINN)*

640/359; Cefuroxim; Cefuroxima; Céfuroxime; Cefuroximum; Kefuroksiimi; Sefuroksim. (*Z*)-3-Carbamoyloxymethyl-7-[2-(2-furyl)-2-methoxyiminoacetamido]-3-cephem-4-carboxylic acid.

Цефуроксим

$C_{16}H_{16}N_4O_8S$ = 424.4.
CAS — 55268-75-2.
ATC — J01DC02.
ATC Vet — QJ01DC02; QJ51DA06.



Cefuroxime Axetil *(BANM, USAN, rINNM)*

CCI-15641; Cefuroksimas aksetilas; Cefuroksymu aksetyl; Cefuroxima axetilo; Cefuroximaxetil; Cefuroxim-axetil; Céfuroxime axétil; Céfuroxime, Axétil de; Cefuroximi Axetilum; Cefuroximum axetili; Cefuroximum Axetilum; Kefuroksiimiaksetiili; Sefuroksim Aksetil.

Цефуроксима Аксетил

$C_{20}H_{22}N_4O_{10}S$ = 510.5.
CAS — 64544-07-6.
ATC — J01DC02.
ATC Vet — QJ01DC02.

Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), *Jpn*, and *US*.
Ph. Eur. 6.2 (Cefuroxime Axetil). A white or almost white powder. Slightly soluble in water and in alcohol; soluble in acetone, in ethyl acetate, and in methyl alcohol. Store in airtight containers. Protect from light.
USP 31 (Cefuroxime Axetil). A mixture of the diastereoisomers of cefuroxime axetil. A white or almost white powder. The amorphous form is insoluble in water and in ether; slightly soluble in dehydrated alcohol; freely soluble in acetone; soluble in chloroform, in ethyl acetate, and in methyl alcohol. The crystalline form is insoluble in water and in ether; slightly soluble in dehydrated alcohol; freely soluble in acetone; sparingly soluble in chloroform, in ethyl acetate, and in methyl alcohol. Store in airtight containers.

Cefuroxime Sodium *(BANM, rINNM)*

Cefuroksimo natrio druska; Cefuroksym sodowy; Cefuroxim sodná sůl; Cefuroxima sódica; Céfuroxime sodique; Cefuroximnatrium; Cefuroxim-nátrium; Cefuroximum natricum; Kefuroksiiminatrium; Natrii Cefuroximum; Sefuroksim Sodyum.

Натрий Цефуроксим

$C_{16}H_{15}N_4NaO_8S$ = 446.4.
CAS — 56238-63-2.
ATC — J01DC02.
ATC Vet — QJ01DC02.

Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), *Jpn*, and *US*.
Ph. Eur. 6.2 (Cefuroxime Sodium). A white or almost white slightly hygroscopic powder. Freely soluble in water; very slightly soluble in alcohol. A 1% solution in water has a pH of 5.5 to 8.5. Store in airtight containers.
USP 31 (Cefuroxime Sodium). A white or faintly yellow powder. Freely soluble in water; very slightly soluble in alcohol, in chloroform, in ether, and in ethyl acetate; soluble in methyl alcohol. pH of a 10% solution in water is between 6.0 and 8.5. Store in airtight containers.

Incompatibility and stability. Cefuroxime sodium may be incompatible with aminoglycosides.

References.
1. Barnes AR. Chemical stabilities of cefuroxime sodium and metronidazole in an admixture for intravenous infusion. *J Clin Pharm Ther* 1990; **15:** 187–96.
2. Stiles ML, *et al.* Stability of ceftazidime (with arginine) and of cefuroxime sodium in infusion-pump reservoirs. *Am J Hosp Pharm* 1992; **49:** 2761–4.
3. Hebron B, Scott H. Shelf life of cefuroxime eye-drops when dispensed in artificial tear preparations. *Int J Pharm Pract* 1993; **2:** 163–7.

Adverse Effects and Precautions

As for Cefalotin Sodium, p.219.

Gastrointestinal disturbances, including diarrhoea, nausea, and vomiting, have occurred in some patients receiving cefuroxime axetil. There have been rare reports of erythema multiforme, Stevens-Johnson syndrome, and toxic epidermal necrolysis. Mild to moderate hearing loss has been reported in some children given cefuroxime for the treatment of meningitis.

Antibiotic-associated colitis. For reports of pseudomembranous colitis associated with cefuroxime axetil, see Cefalotin, p.219.

Hypersensitivity. A report[1] of a serum sickness-like reaction to cefuroxime. Similar reactions have occurred with cefaclor (p.217), although it is unclear whether they represent a class effect.

1. Katta R, Anusuri V. Serum sickness-like reaction to cefuroxime: a case report and review of the literature. *J Drugs Dermatol* 2007; **6:** 747–8.

Porphyria. Cefuroxime is considered to be unsafe in patients with porphyria although there is conflicting experimental evidence of porphyrinogenicity.

Sodium content. Each g of cefuroxime sodium contains about 2.2 mmol of sodium.

Interactions

Probenecid reduces the renal clearance of cefuroxime.

Antimicrobial Action

Cefuroxime is bactericidal and has a similar spectrum of antimicrobial action and pattern of resistance to those of cefamandole (p.221). It is more resistant to hydrolysis by beta-lactamases than cefamandole, and therefore may be more active against beta-lactamase-producing strains of, for example, *Haemophilus influenzae* and *Neisseria gonorrhoeae*. However, treatment failures have occurred in patients with *H. influenzae* meningitis given cefuroxime and might be associated with a relatively high minimum bactericidal concentration when compared with the minimum inhibitory concentration or with a significant inoculum effect. Reduced affinity of penicillin-binding proteins for cefuroxime has also been reported to be responsible for resistance in a beta-lactamase-negative strain of *H. influenzae*.

◊ References.

1. Arditi M, *et al.* Cefuroxime treatment failure and Haemophilus influenzae meningitis: case report and review of literature. *Pediatrics* 1989; **84:** 132–5.
2. Mendelman PM, *et al.* Cefuroxime treatment failure of nontypable Haemophilus influenzae meningitis associated with alteration of penicillin-binding proteins. *J Infect Dis* 1990; **162:** 1118–23.
3. Brown NM, *et al.* Cefuroxime resistance in Haemophilus influenzae. *Lancet* 1992; **340:** 552.

Pharmacokinetics

Cefuroxime axetil is absorbed from the gastrointestinal tract and is rapidly hydrolysed in the intestinal mucosa and blood to cefuroxime; absorption is enhanced in the presence of food. Peak plasma concentrations are reported about 2 to 3 hours after an oral dose. The sodium salt is given by intramuscular or intravenous injection. Peak plasma concentrations of about 27 micrograms/mL have been achieved 45 minutes after an intramuscular dose of 750 mg with measurable amounts present 8 hours after a dose. Up to 50% of cefuroxime in the circulation is bound to plasma proteins. The plasma half-life is about 70 minutes and is pro-

longed in patients with renal impairment and in neonates.

Cefuroxime is widely distributed in the body including pleural fluid, sputum, bone, synovial fluid, and aqueous humour, but only achieves therapeutic concentrations in the CSF when the meninges are inflamed. It crosses the placenta and has been detected in breast milk.

Cefuroxime is excreted unchanged, by glomerular filtration and renal tubular secretion, and high concentrations are achieved in the urine. On injection, most of a dose of cefuroxime is excreted within 24 hours, the majority within 6 hours. Probenecid competes for renal tubular secretion with cefuroxime resulting in higher and more prolonged plasma concentrations of cefuroxime. Small amounts of cefuroxime are excreted in bile.

Plasma concentrations are reduced by dialysis.

Uses and Administration

Cefuroxime is a second-generation cephalosporin antibacterial used in the treatment of susceptible infections. These have included bone and joint infections, bronchitis (and other lower respiratory-tract infections), gonorrhoea, meningitis (although treatment failures have been reported in *H. influenzae* meningitis), otitis media, peritonitis, pharyngitis, sinusitis, skin infections (including soft-tissue infections), and urinary-tract infections. It is also used for surgical infection prophylaxis. For details of these infections and their treatment, see under Choice of Antibacterial, p.162.

Administration and dosage. Cefuroxime is given orally as the acetoxyethyl ester, cefuroxime axetil, in the form of tablets or suspension with or after food, or by injection as the sodium salt. Cefuroxime sodium may be given by deep intramuscular injection, by slow intravenous injection over 3 to 5 minutes, or by intravenous infusion. Doses of cefuroxime axetil and cefuroxime sodium are expressed in terms of the equivalent amount of cefuroxime; 1.20 g of cefuroxime axetil and 1.05 g of cefuroxime sodium are each equivalent to about 1 g of cefuroxime.

Usual oral doses for adults are 125 mg twice daily for uncomplicated urinary-tract infections and 250 to 500 mg twice daily for respiratory-tract infections. A dose for children more than 3 months of age is 125 mg twice daily or 10 mg/kg twice daily to a maximum of 250 mg daily. Children over 2 years of age with otitis media may be given 250 mg twice daily or 15 mg/kg twice daily to a maximum of 500 mg daily.

By injection the usual adult dose is 750 mg of cefuroxime every 8 hours but in more severe infections 1.5 g may be given intravenously every 8, or in some cases every 6, hours. Infants and children can be given 30 to 60 mg/kg daily, increased to 100 mg/kg daily if necessary, given in 3 or 4 divided doses. Neonates may be given similar total daily doses but in 2 or 3 divided doses.

Adults with pneumonia or with acute exacerbations of chronic bronchitis may respond to sequential therapy with parenteral cefuroxime 1.5 g twice daily or 750 mg twice daily respectively, followed by oral cefuroxime 500 mg twice daily in each case.

For Lyme disease in adults, an oral dose of 500 mg is given twice daily for 20 days.

For details of reduced dosage of cefuroxime in patients with renal impairment, see below.

For the treatment of meningitis due to sensitive strains of bacteria, cefuroxime is given intravenously in adult doses of 3 g every 8 hours. Infants and children are given 200 to 240 mg/kg daily intravenously in 3 or 4 divided doses, which may be decreased to 100 mg/kg daily after 3 days or when there is clinical improvement. For neonates, a dose of 100 mg/kg daily, decreased to 50 mg/kg daily when indicated, may be used.

In the treatment of gonorrhoea, a single dose of 1.5 g by intramuscular injection, divided between 2 injection sites, has been used. A single 1-g oral dose of cefuroxime has been given for uncomplicated gonorrhoea. In each case an oral dose of probenecid 1 g may be given with cefuroxime.

For surgical infection prophylaxis, the usual dose is 1.5 g of cefuroxime intravenously before the procedure; this may be supplemented by 750 mg intramuscularly every 8 hours for up to 24 to 48 hours depending upon the procedure. For total joint replacement, 1.5 g of cefuroxime powder may be mixed with the methylmethacrylate cement.

◊ Reviews.
1. Perry CM, Brogden RN. Cefuroxime axetil: a review of its antibacterial activity, pharmacokinetic properties and therapeutic efficacy. *Drugs* 1996; **52:** 125–58.
2. Scott LJ, *et al.* Cefuroxime axetil: an updated review of its use in the management of bacterial infections. *Drugs* 2001; **61:** 1455–1500.

Administration in renal impairment. Parenteral doses of cefuroxime may need to be reduced in renal impairment. Licensed product information suggests the following doses based on creatinine clearance (CC):

- CC 10 to 20 mL/minute: 750 mg twice daily
- CC less than 10 mL/minute: 750 mg once daily

Patients undergoing haemodialysis should receive an additional 750-mg dose following each dialysis; those undergoing continuous peritoneal dialysis may be given 750 mg twice daily.

Preparations

BP 2008: Cefuroxime Axetil Tablets; Cefuroxime Injection;
USP 31: Cefuroxime Axetil for Oral Suspension; Cefuroxime Axetil Tablets; Cefuroxime for Injection; Cefuroxime Injection.

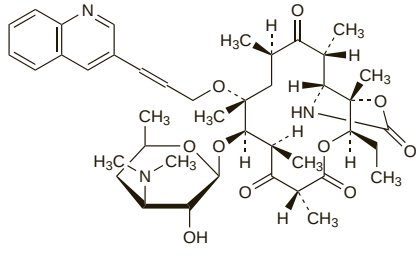
Proprietary Preparations (details are given in Part 3)
Arg.: Ceflux†; Cefogram†; Cefurox; Deltrox†; Ligramex†; ***Austral.:*** Zinnat; ***Austria:*** Curocef; Furoxim; Zinnat; ***Belg.:*** Axetine; Cefurim; Doccefuro; Kefurox†; Zinacef; Zinnat; ***Braz.:*** Cefunorth†; Cefuran†; Medcef; Zinacef; Zinnat; ***Canad.:*** Ceftin; Kefurox†; Zinacef; ***Chile:*** Curocef; Zinnat; ***Cz.:*** Axetine; Lifurox†; Xorimax; Zinacef; Zinnat; Zinoxime; ***Denm.:*** Zinacef; Zinnat; ***Fin.:*** Zinacef; Zinnat; ***Fr.:*** Cepazine; Zinnat; ***Ger.:*** Cefu; Cefudura; Cefuhexal; Cefurax; Cefuro-Puren; Cefurox-Wolff; Elobact; Zinacef†; Zinnat; ***Gr.:*** Anaptivan; Cefoprim†; Cefur; Cefuroprol; Cerofene; Ceruxim; Cupax; Ecoline†; Feacef; Foucacillin; Fredyr; Furaxil; Galemin; Genephoxal; Gonif; Interbion; Lyoprovir; Medoxem; Mevecan†; Mosalan; Nelabocin; Nipogalin; Normafenac; Receant; Saxetil; Sedopan; Vekfazolin; Yokel; Zagorine; Zetagal; Zilisten; Zinacef; Zinadol; ***Hong Kong:*** Anikef; Axetine†; Zinacef; Zinnat; ***Hung.:*** Cefurin; Ceroxim; Cexim†; Xorim; Xorimax; Zinacef; Zinnat; ***India:*** Altacef; Cefasyn; Cefogen; Cefoxim; Forcef; Supacef; ***Indon.:*** Anbacim; Cefurox; Celocid; Cethixim; Kalcef; Kenacef; Oxtercid; Roxbi; Sharox; Zinacef; Zinnat; ***Irl.:*** Ceftal; Zinacef; Zinnat; ***Israel:*** Cefurax; Kefurim; Zinacef; Zinnat; ***Ital.:*** Biociclin; Biofurex†; Cefoprim; Cefumax†; Cefur†; Cefurex†; Cefurin; Colifossim†; Curoxim; Deltacef†; Duxima; Ipacef†; Itorex; Kefox†; Kesint; Lafurex; Oraxim; Supero; Tilexim; Zinnat; Zinocep; Zoref; ***Malaysia:*** Ceflour; Efurox; Furoxime; Zinacef; Zinnat; Zocef; ***Mex.:*** Cefagen; Cefuracet; Cetoxil; Froxal; Fucerox; Lemoxin†; Magnaspor; Novador; Ximaken; Xorufec; Zinnat; ***Neth.:*** Cefofix; Zinacef; Zinnat; ***Norw.:*** Zinacef; ***NZ:*** Zinacef; Zinnat; ***Philipp.:*** Aeruginox; Cervin; Clovixime; Fubaxyn; Furocef; Furocem; Furoxy; Infekor; Kefox; Keunzef; Laxinat; Loxatrel; Panaxim; Profurex; Romicef; Ruxim; Sharox; Shincef; Unoximed; Xorimax; Zegen; Zinacef; Zinnat; ***Pol.:*** Biofuroksym; Bioracef; Ceroxim; Novocef; Oframax; Plixym; Tarsime; Xorim; Xorimax; Zamur; Zinacef; Zinnat; ***Port.:*** Antibioxime; Cefaricida†; Cefofix; Cefrix†; Curoxime; Furaxetil†; Lusocef; Pluscef; Zipos; Zoref; ***Rus.:*** Axetine (Аксетин); Kefstar (Кефстар); Ketocef (Кетоцеф); Zinacef (Зинацеф); Zinnat (Зиннат); ***S.Afr.:*** Cefasyn; Cefu-Hexal; Ceroxim; Cipofix†; Intracef; Lifurom†; Medaxime; Zefroxe; Zinacef; Zinnat; ***Singapore:*** Bearcef; Ceftil; Shincef; Zinacef; Zinnat; ***Spain:*** Curoxima; Lifurox†; Nivador; Selan; Zinnat; ***Swed.:*** Zinacef; Zinnat; ***Switz.:*** Cefurim; Zinacef; Zinat; ***Thai.:*** Axetine†; Axurocef; Cefamar; Cefogen†; Cefurim; Farmacef; Furoxime; Magnaspor; Zinacef; Zinnat; Zonef; ***Turk.:*** Aksef; Cefatin; Enfexia; Multisef; Oraceftin; Sefaktil; Sefuroks; Zinnat; ***UAE:*** Cefuzime; ***UK:*** Zinacef; Zinnat; ***USA:*** Ceftin; Zinacef; ***Venez.:*** Xorim; Zencef; Zinacef; Zinnat.

Cethromycin *(USAN, rINN)*

A-195773; Abbott-195773; ABT-773; Céthromycine; Cethromycinum; Cetromicina. (3a*S*,4*R*,7*R*,9*R*,10*R*,11*R*,13*R*,15*R*,15a*R*)-4-Ethyl-3a,7,9,11,13,15-hexamethyl-11-{[3-(quinolin-3-yl)prop-2-enyl]oxy}-10-{[3,4,6-trideoxy-3-(dimethylamino)-β-D-*xylo*-hexopyranosyl]oxy}octahydro-2*H*-oxacyclotetradecino[4,3-*d*]oxazole-2,6,8,14(1*H*,7*H*,9*H*)-tetrone.

Цетромицин

$C_{42}H_{59}N_3O_{10}$ = 765.9.
CAS — 205110-48-1.



Profile

Cethromycin is a ketolide antibacterial under investigation for the treatment of susceptible respiratory-tract infections.

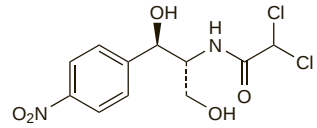
◊ References.
1. Dougherty TJ, Barrett JF. ABT-773: a new ketolide antibiotic. *Expert Opin Invest Drugs* 2001; **10:** 343–51.
2. Zhanel GG, *et al.* The ketolides: a critical review. *Drugs* 2002; **62:** 1771–1804.
3. Zhanel GG, *et al.* Ketolides: an emerging treatment for macrolide-resistant respiratory infections, focusing on S. pneumoniae. *Expert Opin Emerg Drugs* 2003; **8:** 297–321.
4. Reinert RR. Clinical efficacy of ketolides in the treatment of respiratory tract infections. *J Antimicrob Chemother* 2004; **53:** 918–27.
5. Anonymous. Cethromycin: A-195773, A-195773-0, A-1957730, Abbott-195773, ABT 773. *Drugs R D* 2007; **8:** 95–102.
6. Hammerschlag MR, Sharma R. Use of cethromycin, a new ketolide, for treatment of community-acquired respiratory infections. *Expert Opin Invest Drugs* 2008; **17:** 387–400.

Chloramphenicol *(BAN, rINN)*

Chloramfenikol; Chloramfenikolis; Chloramphénicol; Chloramphenicolum; Chloranfenicol; Cloranfenicol; Klóramfenikol; Kloramfenikol; Kloramfenikoli; Laevomycetinum. 2,2-Dichloro-*N*-[(α*R*,β*R*)-β-hydroxy-α-hydroxymethyl-4-nitrophenethyl]acetamide.

Хлорамфеникол

$C_{11}H_{12}Cl_2N_2O_5$ = 323.1.
CAS — 56-75-7.
ATC — D06AX02; D10AF03; G01AA05; J01BA01; S01AA01; S02AA01; S03AA08.
ATC Vet — QD06AX02; QD10AF03; QG01AA05; QJ01BA01; QJ51BA01; QS01AA01; QS02AA01; QS03AA08.



NOTE. CPL is a code approved by the BP 2008 for use on single unit doses of eye drops containing chloramphenicol where the individual container may be too small to bear all the appropriate labelling information.

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

Ph. Eur. 6.2 (Chloramphenicol). A substance produced by the growth of certain strains of *Streptomyces venezuelae*, but now mainly prepared synthetically. A white, greyish-white or yellowish-white, fine crystalline powder or fine crystals, needles, or elongated plates. Slightly soluble in water; freely soluble in alcohol and in propylene glycol. Protect from light.

USP 31 (Chloramphenicol). Fine, white to greyish-white or yellowish-white, needle-like crystals or elongated plates. Soluble 1 in 400 of water; freely soluble in alcohol, in acetone, in ethyl acetate, and in propylene glycol. pH of a 2.5% suspension in water is between 4.5 and 7.5. Its solutions are practically neutral to litmus. It is reasonably stable in neutral or moderately acid solutions. Store in airtight containers.

Chloramphenicol Palmitate *(BANM, rINNM)*

Chloramfenikolio palmitatas; Chloramfenikol-palmitát; Chloramfenikolu palmitynian; Chloramphenicol α-Palmitate; Chloramphénicol, palmitate de; Chloramphenicoli palmitas; Kloramfenikolipalmitaatti; Kloramfenikolpalmitat; Klóramfenikol-palmitát; Palmitato de cloranfenicol; Palmitylchloramphenicol.

Хлорамфеникола Пальмитат

$C_{27}H_{42}Cl_2N_2O_6$ = 561.5.
CAS — 530-43-8.
ATC — D06AX02; D10AF03; G01AA05; J01BA01; S01AA01; S02AA01; S03AA08.
ATC Vet — QD06AX02; QD10AF03; QG01AA05; QJ01BA01; QS01AA01; QS02AA01; QS03AA08.

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

Ph. Eur. 6.2 (Chloramphenicol Palmitate). A fine, white or almost white, unctuous, powder. M.p. 87° to 95°. Chloramphenicol palmitate shows polymorphism and the thermodynamically stable form has low bioavailability following oral administration. Practically insoluble in water; sparingly soluble in alcohol; freely soluble in acetone; very slightly soluble in hexane. Protect from light.

USP 31 (Chloramphenicol Palmitate). A fine, white, unctuous, crystalline powder, having a faint odour. M.p. 87° to 95°. Insoluble in water; sparingly soluble in alcohol; freely soluble in acetone and in chloroform; soluble in ether; very slightly soluble in hexane. Store in airtight containers.