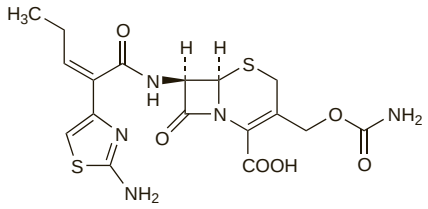
Cefcapene Pivoxil Hydrochloride *(rINNM)*

Cefcapène Pivoxil, Chlorhydrate de; Cefcapeni Pivoxili Hydrochloridum; Hidrocloruro de cefcapeno pivoxilo. Pivaloyloxymethyl (+)-(6*R*,7*R*)-7-[(*Z*)-2-(2-amino-4-thiazolyl)-2-pentenamido]-3-(hydroxymethyl)-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid carbamate monohydrochloride monohydrate.

Цефкапена Пивоксила Гидрохлорид

$C_{23}H_{29}N_5O_8S_2,HCl,H_2O$ = 622.1.

CAS — 135889-00-8 (cefcapene); 105889-45-0 (cefcapene pivoxil); 147816-23-7 (anhydrous cefcapene pivoxil hydrochloride); 147816-24-8 (cefcapene pivoxil hydrochloride);.



(cefcapene)

Pharmacopoeias. In *Jpn.*

Profile

Cefcapene is an oral cephalosporin antibacterial given orally as the pivaloyloxymethyl ester, cefcapene pivoxil hydrochloride.

For reference to carnitine deficiency occurring with some pivaloyloxymethyl esters, see Pivampicillin, p.317.

Preparations

Proprietary Preparations (details are given in Part 3)
Jpn: Flomox.

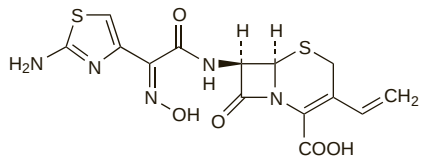
Cefdinir *(BAN, USAN, rINN)*

Cefdinirum; CI-983; FK-482; Kefdiniiri. (–)-(6*R*,7*R*)-7-[2-(2-Amino-4-thiazolyl)glyoxylamido]-8-oxo-3-vinyl-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7^2-(*Z*)-oxime; 7-{(2-Amino-1,3-thiazol-4-yl)-2-[(*Z*)-hydroxyimino]acetamido}-3-vinylcephem-4-carboxylic acid.

Цефдинир

$C_{14}H_{13}N_5O_5S_2$ = 395.4.

CAS — 91832-40-5.
ATC — J01DD15.
ATC Vet — QJ01DD15.



Pharmacopoeias. In *Chin.* and *Jpn*.

Adverse Effects and Precautions

As for Cefalotin Sodium, p.219. There have been reports of reddish stools in patients given cefdinir with iron supplements (see also Interactions, below).

Interactions

Absorption of cefdinir is decreased by antacids or iron supplements and doses should be separated by an interval of at least 2 hours. Probenecid reduces the renal excretion of cefdinir.

Iron. A report[1] of red stools in an infant given cefdinir whilst being fed with an infant formula containing supplemental iron. It was considered important to be aware of the interaction because of the risk that it might be mistaken for a sign of gastrointestinal bleeding.

1. Lancaster J, *et al.* Nonbloody, red stools from coadministration of cefdinir and iron-supplemented infant formulas. *Pharmacotherapy* 2008; **28:** 678–81.

Antimicrobial Action

As for Cefixime, p.224. However, cefdinir is reported to be much more active *in vitro* than cefixime against *Staphylococcus aureus*, but not meticillin-resistant strains, and it is less active against some Enterobacteriaceae.

Pharmacokinetics

Cefdinir is absorbed from the gastrointestinal tract after oral doses, peak plasma concentrations occurring 2 to 4 hours after a dose. Oral bioavailability has been estimated to range from 16 to 25%. It is widely distributed into tissues and is 60 to 70% bound to plasma proteins. Cefdinir is not appreciably metabolised and is excreted in the urine with an elimination half-life of 1.7 hours.

Cefdinir is removed by dialysis.

Uses and Administration

Cefdinir is a third-generation oral cephalosporin antibacterial with actions and uses similar to those of cefixime (p.224). It is given orally in a usual adult dose of 600 mg daily as a single dose or in two divided doses. Children may be given 14 mg/kg daily up to a maximum of 600 mg daily. Doses may need to be reduced in patients with renal impairment (see below).

◊ Reviews.

1. Guay DRP. Cefdinir: an expanded-spectrum oral cephalosporin. *Ann Pharmacother* 2000; **34:** 1469–77.
2. Guay DR, *et al.* Cefdinir: an advanced-generation, broad-spectrum oral cephalosporin. *Clin Ther* 2002; **24:** 473–89.
3. Perry CM, Scott LJ. Cefdinir: a review of its use in the management of mild-to-moderate bacterial infections. *Drugs* 2004; **64:** 1433–64.
4. Sader HS, Jones RN. Cefdinir: an oral cephalosporin for the treatment of respiratory tract infections and skin and skin structure infections. *Expert Rev Anti Infect Ther* 2007; **5:** 29–43. Correction. *ibid.*; 754. [dose error]

Administration in renal impairment. Doses of cefdinir should be reduced to 300 mg once daily in patients with renal impairment whose creatinine clearance is less than 30 mL/minute.

Preparations

Proprietary Preparations (details are given in Part 3)
India: Kefnir†; Sefdin; ***Jpn:*** Cefzon; ***Mex.:*** Omnicef; ***Thai.:*** Omnicef; ***USA:*** Omnicef.

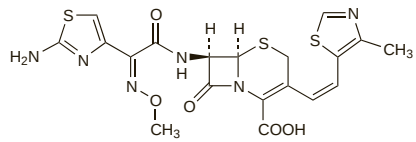
Cefditoren Pivoxil *(rINNM)*

Cefditorène, Pivoxil de; Cefditoreni Pivoxil; Cefditoreno pivoxilo; ME-1207; ME-1206 (cefditoren). Pivaloyloxymethyl (+)-(6*R*,7*R*)-7-[2-(2-Amino-4-thiazolyl)glyoxylamido]-3-[(*Z*)-2-(4-methyl-5-thiazolyl)vinyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid 7^2-(*Z*)-(*O*-methyloxime).

Цефдиторена Пивоксил

$C_{25}H_{28}N_6O_7S_3$ = 620.7.

CAS — 104145-95-1 (cefditoren); 117467-28-4 (cefditoren pivoxil).
ATC — J01DD16.
ATC Vet — QJ01DD16.



(cefditoren)

Pharmacopoeias. In *Jpn.*

Adverse Effects and Precautions

As for Cefalotin, p.219.

The most frequently reported adverse effects of cefditoren are gastrointestinal disturbances, especially diarrhoea.

For reference to carnitine deficiency with some pivaloyloxymethyl esters, see Pivampicillin, p.317.

Interactions

Absorption of cefditoren after oral doses is decreased by antacids or histamine H_2-receptor antagonists. Probenecid reduces the renal excretion of cefditoren.

Antimicrobial Action

As for Cefixime, p.224. Cefditoren also has activity against *Staphylococcus aureus.*

Pharmacokinetics

Cefditoren pivoxil is absorbed from the gastrointestinal tract and is hydrolysed to cefditoren by esterases to release active cefditoren in the bloodstream. Peak plasma concentrations average 1.8 micrograms/mL in fasting subjects 1.5 to 3 hours after a 200-mg dose. Bioavailability is about 14% in fasting subjects and is increased when cefditoren pivoxil is given with a high-fat meal. Plasma protein binding is reported to be 88%. The plasma half-life is about 1.6 hours and is prolonged in patients with renal impairment.

Cefditoren is not appreciably metabolised and is excreted mainly in the urine by glomerular filtration and tubular secretion. It is removed by haemodialysis.

Uses and Administration

Cefditoren is a cephalosporin antibacterial with a broad spectrum of activity used in the treatment of susceptible infections, particularly of the respiratory tract and skin. It is given orally as the pivaloyloxymethyl ester, cefditoren pivoxil, but doses are expressed in terms of cefditoren; 245 mg of cefditoren pivoxil is equivalent to about 200 mg of cefditoren. A usual dose is 200 to 400 mg given twice daily.

For details of reduced doses to be used in patients with moderate to severe renal impairment, see below.

◊ Reviews.

1. Wellington K, Curran MP. Cefditoren pivoxil: a review of its use in the treatment of bacterial infections. *Drugs* 2004; **64:** 2597–2618.

Administration in renal impairment. Doses of cefditoren pivoxil should be reduced in patients with moderate to severe renal impairment according to creatinine clearance (CC):

- CC 30 to 49 mL/minute: the dose should not exceed 200 mg twice daily
- CC less than 30 mL/minute: the dose should be 200 mg once daily.

Preparations

Proprietary Preparations (details are given in Part 3)
Gr.: Spectracef; ***India:*** Cefditran; ***Indon.:*** Meiact; ***Jpn:*** Meiact; ***Mex.:*** Spectracef; ***Port.:*** Meiact; Spectracef; ***Spain:*** Meiact; Spectracef; Telo; ***Thai.:*** Meiact; ***Turk.:*** Spektracef; ***USA:*** Spectracef.

Cefepime Hydrochloride

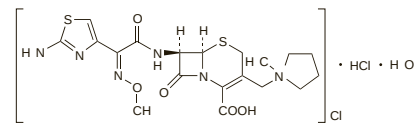
(BANM, USAN, rINNM)

BMY-28142 (cefepime); Céfépime, Chlorhydrate de; Céfépime, dichlorhydrate de; Cefepimi dihydrochloridum; Cefepimi Hydrochloridum; Hidrocloruro de cefepima; Sefepim Hidroklorür. {6*R*-[6α,7β(*Z*)]}-1-[(7-{[(2-Amino-4-thiazolyl)-(methoxyimino)acetyl]amino}-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl)methyl]-1-methylpyrrolidinium chloride monohydrochloride monohydrate; 7-{(2-Amino-1,3-thiazol-4-yl)-2-[(*Z*)-methoxyimino]acetamido}-3-(1-methylpyrrolidiniomethyl)-3-cephem-4-carboxylate hydrochloride.

Цефепима Гидрохлорид

$C_{19}H_{25}ClN_6O_5S_2,HCl,H_2O$ = 571.5.

CAS — 88040-23-7 (cefepime); 123171-59-5 (cefepime hydrochloride monohydrate).
ATC — J01DE01.
ATC Vet — QJ01DE01.



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

Ph. Eur. 6.2 (Cefepime Dihydrochloride Monohydrate). A white or almost white, crystalline powder. Freely soluble in water and in methyl alcohol; practically insoluble in dichloromethane. Protect from light.

USP 31 (Cefepime Hydrochloride). A white to off-white, non-hygroscopic, crystalline powder. Freely soluble in water. Store in airtight containers. Protect from light.

Incompatibility and stability. References.

1. Stewart JT, *et al.* Stability of cefepime hydrochloride injection in polypropylene syringes at –20°C, 4°C, and 22-24°C. *Am J Health-Syst Pharm* 1999; **56:** 457–9.
2. Stewart JT, *et al.* Stability of cefepime hydrochloride in polypropylene syringes. *Am J Health-Syst Pharm* 1999; **56:** 1134.
3. Williamson JC, *et al.* Stability of cefepime in peritoneal dialysis solution. *Ann Pharmacother* 1999; **33:** 906–9.
4. Baririan N, *et al.* Stability and compatibility study of cefepime in comparison with ceftazidime for potential administration by continuous infusion under conditions pertinent to ambulatory treatment of cystic fibrosis patients and to administration in intensive care units. *J Antimicrob Chemother* 2003; **51:** 651–8.
5. Trissel LA, Xu QA. Stability of cefepime hydrochloride in AutoDose infusion system bags. *Ann Pharmacother* 2003; **37:** 804–7.

Adverse Effects and Precautions

As for Cefalotin Sodium, p.219.

◊ The safety of cefepime has been reviewed.[1-3] A meta-analysis[2] of studies involving cefepime suggested that there might be an increased risk of all-cause mortality compared with other beta-lactams. The FDA subsequently announced that it would review safety data to further evaluate the risk of death associated with cefepime use.[4]

1. Neu HC. Safety of cefepime: a new extended-spectrum parenteral cephalosporin. *Am J Med* 1996; **100** (suppl 6A): 68S–75S.
2. Yahav D, *et al.* Efficacy and safety of cefepime: a systematic review and meta-analysis. *Lancet Infect Dis* 2007; **7:** 338–48.
3. Drago L, De Vecchi E. The safety of cefepime in the treatment of infection. *Expert Opin Drug Saf* 2008; **7:** 377–87.
4. FDA. Early communication about an ongoing safety review: cefepime (marketed as Maxipime) (issued 14th November 2007). Available at: http://www.fda.gov/cder/drug/early_comm/cefepime.htm (accessed 04/08/08)

Effects on the nervous system. References to neurotoxicity, sometimes manifesting as nonconvulsive status epilepticus, associated with use of cefepime (particularly but not exclusively in patients with impaired renal function).

1. Chow KM, *et al.* Retrospective review of neurotoxicity induced by cefepime and ceftazidime. *Pharmacotherapy* 2003; **23:** 369–73.

2. Ferrara N, *et al.* Neurotoxicity induced by cefepime in a very old hemodialysis patient. *Clin Nephrol* 2003; **59:** 388–90.
3. Dakdouki GK, Al-Awar GN. Cefepime-induced encephalopathy. *Int J Infect Dis* 2004; **8:** 59–61.
4. Alpay H, *et al.* Cefepime-induced non-convulsive status epilepticus in a peritoneal dialysis patient. *Pediatr Nephrol* 2004; **19:** 445–7.
5. Abanades S, *et al.* Reversible coma secondary to cefepime neurotoxicity. *Ann Pharmacother* 2004; **38:** 606–8.
6. Capparelli FJ, *et al.* Cefepime- and cefixime-induced encephalopathy in a patient with normal renal function. *Neurology* 2005; **65:** 1840.
7. Maganti R, *et al.* Nonconvulsive status epilepticus due to cefepime in a patient with normal renal function. *Epilepsy Behav* 2006; **8:** 312–4.
8. Lam S, Gomolin IH. Cefepime neurotoxicity: case report, pharmacokinetic considerations, and literature review. *Pharmacotherapy* 2006; **26:** 1169–74.
9. Sonck J, *et al.* The neurotoxicity and safety of treatment with cefepime in patients with renal failure. *Nephrol Dial Transplant* 2008; **23:** 966–70.
10. Garces EO, *et al.* Renal failure is a risk factor for cefepime-induced encephalopathy. *J Nephrol* 2008; **21:** 526–34.

Antimicrobial Action

Cefepime is a fourth-generation cephalosporin and is active against a wide range of Gram-positive and Gram-negative aerobic organisms. Against Gram-positive cocci, its activity is similar to that of cefotaxime (p.228) and includes staphylococci (but not meticillin-resistant *Staphylococcus aureus*) and streptococci. Against Enterobacteriaceae, it has a broader spectrum of activity than other cephalosporins, including activity against organisms producing chromosomally mediated beta-lactamases such as *Enterobacter* spp. and *Proteus vulgaris*. Against *Pseudomonas aeruginosa*, it has similar or slightly less activity than ceftazidime (p.234), although it may be active against some strains resistant to ceftazidime.

Pharmacokinetics

Cefepime is given by injection as the hydrochloride. It is rapidly and almost completely absorbed on intramuscular injection and mean peak plasma concentrations of about 14 and 30 micrograms/mL have been reported about 1.5 hours after doses of 500 mg and 1 g respectively. Within 30 minutes of similar intravenous doses, peak plasma concentrations of about 40 and 80 micrograms/mL are achieved. The plasma half-life of cefepime is about 2 hours and is prolonged in patients with renal impairment. About 20% of cefepime is bound to plasma proteins.

Cefepime is widely distributed in body tissues and fluids. High concentrations are achieved in bile. Low concentrations have been detected in breast milk.

Cefepime is eliminated principally by the kidneys and about 85% of a dose is recovered unchanged in the urine. Cefepime is substantially removed by haemodialysis.

◊ References.

1. Okamoto MP, *et al.* Cefepime clinical pharmacokinetics. *Clin Pharmacokinet* 1993; **25:** 88–102.
2. Rybak M. The pharmacokinetic profile of a new generation of parenteral cephalosporin. *Am J Med* 1996; **100** (suppl 6A): 39S–44S.
3. Reed MD, *et al.* Pharmacokinetics of intravenously and intramuscularly administered cefepime in infants and children. *Antimicrob Agents Chemother* 1997; **41:** 1783–7.
4. Allaouchiche B, *et al.* Pharmacokinetics of cefepime during continuous venovenous hemodiafiltration. *Antimicrob Agents Chemother* 1997; **41:** 2424–7.
5. Blumer JL, *et al.* Review of the pharmacokinetics of cefepime in children. *Pediatr Infect Dis J* 2001; **20:** 337–42.
6. Capparelli E, *et al.* Population pharmacokinetics of cefepime in the neonate. *Antimicrob Agents Chemother* 2005; **49:** 2760–6.

Uses and Administration

Cefepime is a fourth-generation cephalosporin antibacterial used in the treatment of infections due to susceptible organisms. They include infections of the urinary tract, respiratory tract, and skin. For details of these infections and their treatment, see under Choice of Antibacterial, p.162.

Cefepime is given as the hydrochloride by deep intramuscular injection, or intravenously by infusion over at least 30 minutes. Doses are expressed in terms of the equivalent amount of cefepime; 1.19 g of cefepime hydrochloride is equivalent to about 1 g of cefepime. The usual adult dose is 1 to 2 g daily in 2 divided doses for mild to moderate infections, increased to 4 g daily in 2 divided doses in severe infections, although up to 6 g daily in 3 divided doses has been given for febrile neutropenia. Children aged over 2 months and weighing up to 40 kg may be given 50 mg/kg twice daily; this dose may be given 3 times daily for febrile neutropenia.

For details of reduced doses to be used in renal impairment, see below.

◊ Reviews.

1. Various. Cefepime: a β-lactamase-stable extended-spectrum cephalosporin. *J Antimicrob Chemother* 1993; **32** (suppl B): 1–214.
2. Barradell LB, Bryson HM. Cefepime: a review of its antibacterial activity, pharmacokinetic properties and therapeutic use. *Drugs* 1994; **47:** 471–505.
3. Okamoto MP, *et al.* Cefepime: a new fourth-generation cephalosporin. *Am J Hosp Pharm* 1994; **51:** 463–77.
4. Wynd MA, Paladino JA. Cefepime: a fourth-generation parenteral cephalosporin. *Ann Pharmacother* 1996; **30:** 1414–24.
5. Wong-Beringer A. Treating serious infections: focus on cefepime. *Pharmacotherapy* 2004; **24:** 216S–23S.
6. Roberts JA, *et al.* Cefepime versus ceftazidime: considerations for empirical use in critically ill patients. *Int J Antimicrob Agents* 2007; **29:** 117–28.

Administration in renal impairment. Dosage of cefepime should be modified in renal impairment. After a normal first dose the maintenance dosage should be adjusted according to the patient's creatinine clearance (CC) and the severity of the infection:

- CC 30 to 60 mL/minute: 0.5 to 2 g every 24 hours (2 g every 12 hours for febrile neutropenia)
- CC 11 to 29 mL/minute: 0.5 to 1 g every 24 hours (2 g every 24 hours for febrile neutropenia)
- CC 10 mL/minute or less: 250 to 500 mg every 24 hours (1 g every 24 hours for febrile neutropenia)

Patients undergoing haemodialysis should be given a dose of 1 g on the first day of treatment, followed by 500 mg daily; the dose should be given after haemodialysis on those days. A dose of 1 g daily should be used for febrile neutropenia. Patients undergoing continuous ambulatory peritoneal dialysis should receive normal recommended doses at intervals of 48 hours. A dose of 2 g every 48 hours is used for febrile neutropenia.

Preparations

USP 31: Cefepime for Injection.

Proprietary Preparations (details are given in Part 3)
Arg.: Cefimen-K; Maxcef; Rivepime; ***Austral.:*** Maxipime; ***Austria:*** Maxipime; ***Belg.:*** Maxipime; ***Braz.:*** Cefepen†; Cemax†; Clocef; Maxcef; Maxil†; ***Canad.:*** Maxipime; ***Chile:*** Maxipime; ***Cz.:*** Maxipime; ***Denm.:*** Maxipime†; ***Fin.:*** Maxipime; ***Fr.:*** Axepim; ***Ger.:*** Maxipime; ***Gr.:*** Anticepim; Gencef; Maxinject; Maxipime; Verapime; Zefipime; ***Hong Kong:*** Maxipime; ***Hung.:*** Maxipime; ***India:*** Biopime; Cefica; Forpar; ***Indon.:*** Exepime; Maxicef; Maxipime; Procepim; Sandocef; ***Irl.:*** Maxipime†; ***Israel:*** Maxcef†; ***Ital.:*** Cepim; Cepimex; Maxipime; ***Malaysia:*** Maxipime; ***Mex.:*** Maxipime; ***NZ:*** Maxipime; ***Philipp.:*** Cepimax; ***Pol.:*** Maxipime; ***Port.:*** Maxipime; ***Rus.:*** Maxipime (Максипим); ***S.Afr.:*** Maxipime; ***Singapore:*** Maxipime; ***Spain:*** Maxipime; ***Swed.:*** Maxipime; ***Switz.:*** Maxipime; ***Thai.:*** Maxipime; ***Turk.:*** Maxipime; ***USA:*** Maxipime; ***Venez.:*** Maxipime.

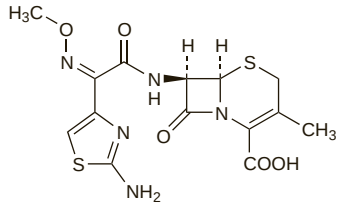
Cefetamet *(USAN, rINN)*

Céfétamet; Cefetametum; LY-097964; Ro-15-8074. (*Z*)-7-[2-(2-Aminothiazol-4-yl)-2-methoxyiminoacetamido]-3-methyl-3-cephem-4-carboxylic acid.

Цефетамет

$C_{14}H_{15}N_5O_5S_2$ = 397.4.

CAS — 65052-63-3 (cefetamet).
ATC — J01DD10.
ATC Vet — QJ01DD10.



Cefetamet Pivoxil Hydrochloride *(rINNM)*

Céfétamet Pivoxil, Chlorhydrate de; Cefetameti Pivoxili Hydrochloridum; Cefetametpivoxilhydroklorid; Cefetametum Pivoxili Hydrochloridum; Hidrocloruro de cefetamet pivoxilo; Kefetameettipivoksiilihydrokloridi; Ro-15-8075 (cefetamet pivoxil). Cefetamet pivaloyloxymethyl hydrochloride.

Цефетамета Пивоксила Гидрохлорид

$C_{20}H_{25}N_5O_7S_2$,HCl = 548.0.

CAS — 65243-33-6 (cefetamet pivoxil); 111696-23-2 (cefetamet pivoxil hydrochloride).
ATC — J01DD10.
ATC Vet — QJ01DD10.

Profile

Cefetamet is a third-generation cephalosporin antibacterial similar to cefixime (below). It has been given orally as the hydrochloride of the pivaloyloxymethyl ester, cefetamet pivoxil hydrochloride, which is hydrolysed to cefetamet *in vivo*. The usual dose is 500 mg twice daily.

For reference to carnitine deficiency occurring with some pivaloyloxymethyl esters, see Pivampicillin, p.317.

◊ Reviews.

1. Bryson HM, Brogden RN. Cefetamet pivoxil: a review of its antibacterial activity, pharmacokinetic properties and therapeutic use. *Drugs* 1993; **45:** 589–621.
2. Blouin RA, Stoeckel K. Cefetamet pivoxil clinical pharmacokinetics. *Clin Pharmacokinet* 1993; **25:** 172–88.

Preparations

Proprietary Preparations (details are given in Part 3)
Braz.: Globocef†; ***Ger.:*** Globocef†; ***Hong Kong:*** Globocef†; ***Ital.:*** Globocef†; ***Pol.:*** Tarcevis†; ***Port.:*** Cefec†; Globocef†; ***Switz.:*** Globocef†.

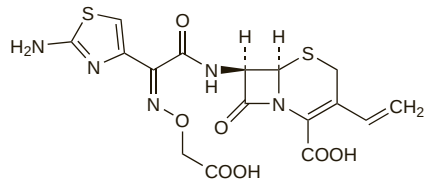
Cefixime *(BAN, USAN, rINN)*

Cefiksimas; Cefixim; Cefixim trihydrát; Cefixima; Céfixime; Cefiximum; Cefiximum Trihydricum; CL-284635; FK-027; FR-17027; Kefiksiimi; Sefiksim. (*Z*)-7-[2-(2-Aminothiazol-4-yl)-2-(carboxymethoxyimino)acetamido]-3-vinyl-3-cephem-4-carboxylic acid trihydrate.

Цефиксим

$C_{16}H_{15}N_5O_7S_2$,3H_2O = 507.5.

CAS — 79350-37-1.
ATC — J01DD08.
ATC Vet — QJ01DD08.



Pharmacopoeias. In *Eur.* (see p.vii) and *US. Jpn* includes the anhydrous substance.

Ph. Eur. 6.2 (Cefixime). A white or almost white, slightly hygroscopic, powder. Slightly soluble in water; sparingly soluble in dehydrated alcohol; practically insoluble in ethyl acetate; freely soluble in methyl alcohol. A 5% suspension in water has a pH of 2.6 to 4.1. Store in airtight containers. Protect from light.

USP 31 (Cefixime). A white to light yellow crystalline powder. Practically insoluble in water, in ether, in ethyl acetate, and in hexane; slightly soluble in alcohol, in acetone, and in glycerol; soluble in methyl alcohol and in propylene glycol; very slightly soluble in 70% sorbitol and in octanol. pH of a solution in water containing the equivalent of cefixime 0.07% is between 2.6 and 4.1. Store in airtight containers.

Adverse Effects and Precautions

As for Cefalotin Sodium, p.219.

The most frequently reported adverse effects of cefixime are gastrointestinal disturbances, especially diarrhoea. Cefixime should be stopped if diarrhoea is severe.

Although cefixime does not have the *N*-methylthiotetrazole side-chain usually associated with hypoprothrombinaemia increases in prothrombin times have occurred in a few patients.

Antibiotic-associated colitis. For reports of diarrhoea and pseudomembranous colitis associated with cefixime, see Cefalotin, p.219.

Interactions

Care should be exercised in patients receiving anticoagulants and cefixime due to the possibility that cefixime may increase prothrombin times (see above).

Antimicrobial Action

Cefixime is bactericidal and is stable to hydrolysis by many beta-lactamases. It has a mode of action and spectrum of activity similar to those of the third-generation cephalosporin cefotaxime (p.228), but some Enterobacteriaceae are less susceptible to cefixime. *Haemophilus influenzae*, *Moraxella catarrhalis* (*Branhamella catarrhalis*), and *Neisseria gonorrhoeae* are sensitive, including penicillinase-producing strains. Of the Gram-positive bacteria, streptococci are