ANNEX III

SUMMARY OF PRODUCT CHARACTERISTICS, LABELLING AND PACKAGE LEAFLET

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Zinnat and associated names 125 mg film-coated tablets
Zinnat and associated names 250 mg film-coated tablets
Zinnat and associated names 500 mg film-coated tablets
Zinnat and associated names 125 mg/5 ml granules for oral suspension
Zinnat and associated names 250 mg/5 ml granules for oral suspension
Zinnat and associated names 125 mg granules for oral suspension
Zinnat and associated names 250 mg granules for oral suspension
Zinnat and associated names 500 mg granules for oral suspension

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Zinnat 125 mg film-coated tablets
Each tablet contains 125 mg cefuroxime (as cefuroxime axetil).

Zinnat 250 mg film-coated tablets
Each tablet contains 250 mg cefuroxime (as cefuroxime axetil).

Zinnat 500 mg film-coated tablets
Each tablet contains 500 mg cefuroxime (as cefuroxime axetil).

Zinnat 125 mg/5 ml granules for oral suspension
125 mg cefuroxime per 5 ml (as 150 mg cefuroxime axetil).

Zinnat 250 mg/5 ml granules for oral suspension
250 mg cefuroxime per 5 ml (as 300 mg cefuroxime axetil).

Zinnat 125 mg granules for oral suspension
Cefuroxime 125 mg (as 150 mg cefuroxime axetil).

Zinnat 250 mg granules for oral suspension
Cefuroxime 250 mg (as 300 mg cefuroxime axetil).

Zinnat 500 mg granules for oral suspension
Cefuroxime 500 mg (as 600 mg cefuroxime axetil).

Excipient(s) with known effect:

Zinnat 125 mg film-coated tablets
Each tablet contains 0.00152 mg sodium benzoate (E211)

Zinnat 250 mg film-coated tablets
Each tablet contains 0.00203 mg sodium benzoate (E211)

Zinnat 500 mg film-coated tablets
Each tablet contains 0.00506 mg sodium benzoate (E211)

Zinnat 125 mg granules for oral suspension
Contains 0.021 g aspartame (E951) per sachet

Contains 3.1 g of sucrose per sachet
Contains 6 mg of propylene glycol (E1520) per sachet
Contains 4.5 mg benzyl alcohol (E1519) per sachet

Zinnat 250 mg granules for oral suspension
Contains 0.042 g aspartame (E951) per sachet
Contains 6.1 g of sucrose per sachet
Contains 12 mg of propylene glycol (E1520) per sachet
Contains 9 mg benzyl alcohol (E1519) per sachet

Zinnat 500 mg granules for oral suspension
Contains 0.084 g aspartame (E951) per sachet
Contains 12.2 g of sucrose per sachet
Contains 24 mg of propylene glycol (E1520) per sachet
Contains 18 mg benzyl alcohol (E1519) per sachet

Zinnat 125 mg/5 ml granules for oral suspension
Contains 0.021 g aspartame (E951) per 5 ml dose
Contains 3.1 g of sucrose per 5 ml dose
Contains 6 mg of propylene glycol (E1520) per 5 ml dose
Contains 4.5 mg benzyl alcohol (E1519) per 5 ml dose

Zinnat 250 mg/5 ml granules for oral suspension
Contains 0.045 g aspartame (E951) per 5 ml dose
Contains 2.3 g of sucrose per 5 ml dose
Contains 4.6 mg benzyl alcohol (E1519) per 5 ml dose

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

125 mg, 250 mg, 500 mg film-coated tablets
Film-coated tablet (tablet)

125 mg/5 ml, 250 mg/5 ml granules for oral suspension
Granules for oral suspension

125 mg, 250 mg, 500 mg granules for oral suspension
Granules for oral suspension
White to off white free flowing granules

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Zinnat is indicated for the treatment of the infections listed below in adults and children from the age of 3 months (see sections 4.4 and 5.1).

- Acute streptococcal tonsillitis and pharyngitis.

- Acute bacterial sinusitis.
- Acute otitis media.
- Acute exacerbations of chronic obstructive pulmonary disease.
- Cystitis.
- Pyelonephritis.
- Uncomplicated skin and soft tissue infections.
- Treatment of early Lyme disease.

Consideration should be given to official guidance on the appropriate use of antibacterial agents.

4.2 Posology and method of administration

Posology

The usual course of therapy is seven days (may range from five to ten days). The dose of cefuroxime that is selected to treat an individual infection should take into account:

- The expected pathogens and their likely susceptibility to cefuroxime axetil
- The severity and the site of the infection
- The age, weight and renal function of the patient; as shown below.

The duration of therapy should be determined by the type of infection and the response of the patient and should generally not be longer than recommended.

Table 1. Adults and children (≥ 40 kg)

Indication	Dosage
Acute tonsillitis and pharyngitis, acute bacterial sinusitis	250 mg twice daily
Acute otitis media	500 mg twice daily
Acute exacerbations of chronic obstructive pulmonary disease	500 mg twice daily
Cystitis	250 mg twice daily
Pyelonephritis	250 mg twice daily
Uncomplicated skin and soft tissue infections	250 mg twice daily
Lyme disease	500 mg twice daily for 14 days (range of 10 to 21 days)

Table 2. Children (< 40 kg) (also see Table 3 and 4)

Indication	Dosage
Acute tonsillitis and pharyngitis	10 mg/kg twice daily to a maximum of 250 mg twice daily
Acute otitis media	15 mg/kg twice daily to a maximum of 250 mg twice daily

Acute bacterial sinusitis	10 mg/kg twice daily to a maximum of 250 mg twice daily
Cystitis	15 mg/kg twice daily to a maximum of 250 mg twice daily
Pyelonephritis	15 mg/kg twice daily to a maximum of 250 mg twice daily for 10 to14 days
Uncomplicated skin and soft tissue infections	15 mg/kg twice daily to a maximum of 250 mg twice daily
Lyme disease	15 mg/kg twice daily to a maximum of 250 mg twice daily for 14 days (range of 10 to 21 days)

There is no experience of using Zinnat in children under the age of 3 months.

In infants (from the age of 3 months) and children with a body mass of less than 40 kg, it may be preferable to adjust dosage according to weight.

Cefuroxime axetil tablets and cefuroxime axetil granules for oral suspension are not bioequivalent and are not substitutable on a milligram-per-milligram basis (see section 5.2).

The following two tables, divided by body weight, serve as a guideline for simplified administration, e.g. measuring spoon (5 ml), for the 125 mg/5 ml or the 250 mg/5 ml multi-dose suspension if provided, and 125 mg or 250 mg single dose sachets.

Table 3. 10 mg/kg dosage for children aged 3 months and older, and weight < 40 kg

Weight range (kg)	**Dose (mg) twice daily**	**Volume of reconstituted suspension per dose (ml)**		**No. of sachets per dose**	
		125 mg /5ml	250 mg/ 5ml	125 mg	250 mg
4 to 6	40 to 60	2.5	-	-	-
6 to 12.5	60 to 125	2.5 to 5	-	-	-
12.5 to 25	125 to 250	5 to 10	2.5 to 5	1 to 2	-
Greater than 25	250	10	5	2	1

Table 4. 15 mg/kg dosage for children aged 3 months and older, and weight < 40 kg

Weight range (kg)	**Dose (mg) twice daily**	**Volume of reconstituted suspension per dose (ml)**		**No. of sachets per dose**	
		125 mg /5ml	250 mg/ 5ml	125 mg	250 mg
4 to 6	60 to 90	2.5 to 5	-	-	-
6 to 12	90 to 180	5 to 7.5	2.5 to 5	1	-
12 to 16	180 to 240	7.5 to 10	5	2	1
Greater than 16	250	10	5	2	1

To enhance compliance and improve the dosing accuracy in very young children, a dosing syringe can be supplied with a multidose bottle.

If required, the dosing syringe may also be used in older children (please refer to the dosing tables below).

For dosing 10 mg/kg using 125 mg/5 ml suspension in child weighing "W" kg; the ml of suspension required would be: (10 x W x 5)/125

For dosing 10 mg/kg using 250 mg/5 ml suspension in child weighing "W" kg; the ml of suspension required would be: (10 x W x 5)/250

Some examples of doses calculated for the paediatric dosing syringe expressed in ml or mg based on child's body weight in kg are provided in table below

Table 5. 10 mg/kg/dose (Paediatric dosing syringe)

		Volume of reconstituted suspension per dose (ml)	
Child's weight (kg)	**Dose twice daily (mg)**	**125 mg/5 ml dose twice daily**	**250 mg/5 ml dose twice daily**
4	40	1.6	0.8
6	60	2.4	1.2
8	80	3.2	1.6
10	100	4.0	2.0
12	120	4.8	2.4
14	140	5.6	2.8

For dosing 15 mg/kg using 125 mg/5 ml suspension in child weighing "W" kg; the ml of suspension required would be: (15 x W x 5)/125

For dosing 15 mg/kg using 250 mg/5 ml suspension in child weighing "W" kg; the ml of suspension required would be: (15 x W x 5)/250

Some examples of doses calculated for the paediatric dosing syringe expressed in ml or mg based on child's body weight in kg are provided in table below

Table 6. 15 mg/kg/dose (Paediatric dosing syringe)

		Volume of reconstituted suspension per dose (ml)	
Child's weight (kg)	**Dose twice daily (mg)**	**125 mg/5 ml dose twice daily**	**250 mg/5 ml dose twice daily**
4	60	2.4	1.2
6	90	3.6	1.8
8	120	4.8	2.4
10	150	6.0	3.0
12	180	7.2	3.6
14	210	8.4	4.2

Renal impairment
The safety and efficacy of cefuroxime axetil in patients with renal failure have not been established.

Cefuroxime is primarily excreted by the kidneys. In patients with markedly impaired renal function it is recommended that the dosage of cefuroxime should be reduced to compensate for its slower excretion. Cefuroxime is effectively removed by dialysis.

Table 7. Recommended doses for Zinnat in renal impairment

Creatinine clearance	$T_{1/2}$ (hrs)	Recommended dosage
≥30 ml/min/1.73 m^2	1.4–2.4	no dose adjustment necessary standard dose of 125 mg to 500 mg given twice daily
10-29 ml/min/1.73 m^2	4.6	standard individual dose given every 24 hours
<10 ml/min/1.73 m^2	16.8	standard individual dose given every 48 hours
During haemodialysis	2–4	A single additional standard individual dose should be given at the end of each dialysis

Hepatic impairment
There are no data available for patients with hepatic impairment. Since cefuroxime is primarily eliminated by the kidney, the presence of hepatic dysfunction is expected to have no effect on the pharmacokinetics of cefuroxime.

Method of administration

125 mg, 250 mg, 500 mg film-coated tablets

Oral use
Zinnat tablets should be taken after food for optimum absorption.

Zinnat tablets should not be crushed and are therefore unsuitable for treatment of patients who cannot swallow tablets. In children, Zinnat oral suspension may be used.

125 mg/5 ml, 250 mg/5 ml granules for oral suspension and 125 mg, 250 mg, 500 mg granules for oral suspension

Oral use
For optimal absorption, cefuroxime axetil suspension should be taken with food.

For instructions on reconstitution of the medicinal product before administration, see section 6.6.

Depending on the dosage, there are other presentations available.

4.3 Contraindications

Hypersensitivity to cefuroxime or to any of the excipients listed in section 6.1.

Patients with known hypersensitivity to cephalosporin antibiotics.

History of severe hypersensitivity (e.g. anaphylactic reaction) to any other type of beta-lactam antibacterial agent (penicillins, monobactams and carbapenems).

4.4 Special warnings and precautions for use

Hypersensitivity reactions

Special care is indicated in patients who have experienced an allergic reaction to penicillins or other beta-lactam antibiotics because there is a risk of cross-sensitivity. As with all beta-lactam antibacterial agents, serious and occasionally fatal hypersensitivity reactions have been reported. There have been reports of hypersensitivity reactions which progressed to Kounis syndrome (acute allergic coronary arteriospasm that can result in myocardial infarction, see section 4.8). In case of severe hypersensitivity reactions, treatment with cefuroxime must be discontinued immediately and adequate emergency measures must be initiated.

Before beginning treatment, it should be established whether the patient has a history of severe hypersensitivity reactions to cefuroxime, to other cephalosporins or to any other type of beta-lactam agent. Caution should be used if cefuroxime is given to patients with a history of non-severe hypersensitivity to other beta-lactam agents.

Severe cutaneous adverse reactions (SCARS)
Severe cutaneous adverse reactions including: Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN) and drug reaction with eosinophilia and systemic symptoms (DRESS), which can be life-threatening or fatal, have been reported in association with cefuroxime treatment (see section 4.8). At the time of prescription patients should be advised of the signs and symptoms and monitored closely for skin reactions. If signs and symptoms suggestive of these reactions appear, cefuroxime should be withdrawn immediately and an alternative treatment considered. If the patient has developed a serious reaction such as SJS, TEN or DRESS with the use of cefuroxime, treatment with cefuroxime must not be restarted in this patient at any time.

Jarisch-Herxheimer reaction

The Jarisch-Herxheimer reaction has been seen following cefuroxime axetil treatment of Lyme disease. It results directly from the bactericidal activity of cefuroxime axetil on the causative bacteria of Lyme disease, the spirochaete *Borrelia burgdorferi.* Patients should be reassured that this is a common and usually self-limiting consequence of antibiotic treatment of Lyme disease (see section 4.8).

Overgrowth of non-susceptible microorganisms

As with other antibiotics, use of cefuroxime axetil may result in the overgrowth of Candida. Prolonged use may also result in the overgrowth of other non-susceptible microorganisms (e.g. enterococci and *Clostridioides difficile*), which may require interruption of treatment (see section 4.8).

Antibacterial agent–associated pseudomembranous colitis have been reported with nearly all antibacterial agents, including cefuroxime and may range in severity from mild to life threatening. This diagnosis should be considered in patients with diarrhoea during or subsequent to the administration of cefuroxime (see section 4.8). Discontinuation of therapy with cefuroxime and the administration of specific treatment for *Clostridioides difficile* should be considered. Medicinal products that inhibit peristalsis should not be given (see section 4.8).

Interference with diagnostic tests

The development of a positive Coomb's Test associated with the use of cefuroxime may interfere with cross matching of blood (see section 4.8).

As a false negative result may occur in the ferricyanide test, it is recommended that either the glucose oxidase or hexokinase methods are used to determine blood/plasma glucose levels in patients receiving cefuroxime axetil.

Important information about excipients

125 mg, 250 mg, 500 mg film-coated tablets

This medicine contains 0.00152 mg sodium benzoate in each 125 mg tablet.
This medicine contains 0.00203 mg sodium benzoate in each 250 mg tablet.
This medicine contains 0.00506 mg sodium benzoate in each 500 mg tablet.
This medicine contains less than 1 mmol (23 mg) of sodium, that is to say essentially 'sodium free'.

125 mg/5 ml, 250 mg/5 ml granules for oral suspension and 125 mg, 250 mg, 500 mg granules for oral suspension

The sucrose content of cefuroxime axetil suspension and granules should be taken into account when treating diabetic patients and appropriate advice provided.

125 mg/5 ml granules for oral suspension

Contains 0.021 g aspartame (E951) per 5 ml dose. Aspartame is a source of phenylalanine and so should be used with caution in patients with phenylketonuria.
Contains 3.1 g of sucrose per 5 ml dose. Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.
Contains 6 mg of propylene glycol (E1520) per 5 ml dose.
Contains 4.5 mg benzyl alcohol (E1519) per 5 ml dose. Benzyl alcohol may cause allergic reactions. Benzyl alcohol must be used with caution in patients with renal or hepatic impairment, or in patients who are pregnant or breast-feeding, because of the risk of accumulation and toxicity (metabolic acidosis). High volumes of benzyl alcohol should be used with caution and only if necessary, especially in subjects with liver or kidney impairment because of the risk of accumulation. In addition, use of cefuroxime axetil suspension for more than a week in young children (less than 3 years old) should be avoided unless clinically needed due to the risk of accumulation.

250 mg/5 ml granules for oral suspension

Contains 0.045 g aspartame (E951) per 5 ml dose. Aspartame is a source of phenylalanine and so should be used with caution in patients with phenylketonuria.
Contains 2.3 g of sucrose per 5 ml dose. Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.
Contains 4.6 mg benzyl alcohol (E1519) per 5 ml dose. Benzyl alcohol may cause allergic reactions. Benzyl alcohol must be used with caution in patients with renal or hepatic impairment, or in patients who are pregnant or breast-feeding, because of the risk of accumulation and toxicity (metabolic acidosis). High volumes of benzyl alcohol should be used with caution and only if necessary, especially in subjects with liver or kidney impairment because of the risk of accumulation. In addition, use of cefuroxime axetil suspension for more than a week in young children (less than 3 years old) should be avoided unless clinically needed due to the risk of accumulation.

125 mg granules for oral suspension

Contains 0.021 g aspartame (E951) per sachet. Aspartame is a source of phenylalanine and so should be used with caution in patients with phenylketonuria.
Contains 3.1 g of sucrose per sachet. Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.

Contains 6 mg of propylene glycol (E1520) per sachet.
Contains 4.5 mg benzyl alcohol (E1519) per sachet. Benzyl alcohol may cause allergic reactions. Benzyl alcohol must be used with caution in patients with renal or hepatic impairment, or in patients who are pregnant or breast-feeding, because of the risk of accumulation and toxicity (metabolic acidosis). High volumes of benzyl alcohol should be used with caution and only if necessary, especially in subjects with liver or kidney impairment because of the risk of accumulation. In addition, use of cefuroxime axetil suspension for more than a week in young children (less than 3 years old) should be avoided unless clinically needed due to the risk of accumulation.

250 mg granules for oral suspension

Contains 0.042 g aspartame (E951) per sachet. Aspartame is a source of phenylalanine and so should be used with caution in patients with phenylketonuria.
Contains 6.1 g of sucrose per sachet. This should be taken into account in patients with diabetes mellitus. Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.
Contains 12 mg of propylene glycol (E1520) per sachet.
Contains 9 mg benzyl alcohol (E1519) per sachet. Benzyl alcohol may cause allergic reactions. Benzyl alcohol must be used with caution in patients with renal or hepatic impairment, or in patients who are pregnant or breast-feeding, because of the risk of accumulation and toxicity (metabolic acidosis). High volumes of benzyl alcohol should be used with caution and only if necessary, especially in subjects with liver or kidney impairment because of the risk of accumulation. In addition, use of cefuroxime axetil suspension for more than a week in young children (less than 3 years old) should be avoided unless clinically needed due to the risk of accumulation.

500 mg granules for oral suspension

Contains 0.084 g aspartame (E951) per sachet. Aspartame is a source of phenylalanine and so should be used with caution in patients with phenylketonuria.
Contains 12.2 g of sucrose per sachet. This should be taken into account in patients with diabetes mellitus. Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.
Contains 24 mg of propylene glycol (E1520) per sachet.
Contains 18 mg benzyl alcohol (E1519) per sachet. Benzyl alcohol may cause allergic reactions. Benzyl alcohol must be used with caution in patients with renal or hepatic impairment, or in patients who are pregnant or breast-feeding, because of the risk of accumulation and toxicity (metabolic acidosis). High volumes of benzyl alcohol should be used with caution and only if necessary, especially in subjects with liver or kidney impairment because of the risk of accumulation. In addition, use of cefuroxime axetil suspension for more than a week in young children (less than 3 years old) should be avoided unless clinically needed due to the risk of accumulation.

4.5 Interaction with other medicinal products and other forms of interaction

Drugs which reduce gastric acidity may result in a lower bioavailability of cefuroxime axetil compared with that of the fasting state and tend to cancel the effect of enhanced absorption after food.

Cefuroxime is excreted by glomerular filtration and tubular secretion. Concomitant use of probenicid is not recommended. Concurrent administration of probenecid significantly increases the peak concentration, area under the serum concentration time curve and elimination half-life of cefuroxime.

Concomitant use with oral anticoagulants may give rise to increased INR.

4.6 Fertility, pregnancy and lactation

Pregnancy

There are limited data from the use of cefuroxime in pregnant women. Studies in animals have shown no harmful effects on pregnancy, embryonal or foetal development, parturition or postnatal development. Zinnat should be prescribed to pregnant women only if the benefit outweighs the risk.

Breastfeeding

Cefuroxime is excreted in human milk in small quantities. Adverse effects at therapeutic doses are not expected, although a risk of diarrhoea and fungus infection of the mucous membranes cannot be excluded. Breastfeeding might have to be discontinued due to these effects. The possibility of sensitisation should be taken into account. Cefuroxime should only be used during breastfeeding after benefit/risk assessment by the physician in charge.

Fertility

There are no data on the effects of cefuroxime axetil on fertility in humans. Reproductive studies in animals have shown no effects on fertility.

4.7 Effects on ability to drive and use machines

No studies on the effects on the ability to drive and use machines have been performed. However, as this medicine may cause dizziness, patients should be warned to be cautious when driving or operating machinery.

4.8 Undesirable effects

The most common adverse reactions are *Candida* overgrowth, eosinophilia, headache, dizziness, gastrointestinal disturbances and transient rise in liver enzymes.

The frequency categories assigned to the adverse reactions below are estimates, as for most reactions suitable data (for example from placebo-controlled studies) for calculating incidence were not available. In addition the incidence of adverse reactions associated with cefuroxime axetil may vary according to the indication.

Data from large clinical studies were used to determine the frequency of very common to rare undesirable effects. The frequencies assigned to all other undesirable effects (i.e. those occurring at <1/10,000) were mainly determined using post-marketing data and refer to a reporting rate rather than true frequency. Placebo-controlled trial data were not available. Where incidences have been calculated from clinical trial data, these were based on drug-related (investigator assessed) data. Within each frequency grouping, undesirable effects are presented in order of decreasing seriousness.

Treatment related adverse reactions, all grades, are listed below by MedDRA body system organ class, frequency and grade of severity. The following convention has been utilised for the classification of frequency: very common ≥ 1/10; common ≥ 1/100 to < 1/10, uncommon ≥ 1/1,000 to < 1/100; rare ≥ 1/10,000 to < 1/1,000; very rare < 1/10,000 and not known (cannot be estimated from the available data).

System organ class	Common	Uncommon	Not known
Infections and infestations	*Candida* overgrowth		*Clostridioides difficile* overgrowth
Blood and lymphatic system disorders	eosinophilia	positive Coomb's test, thrombocytopenia, leukopenia (sometimes profound)	haemolytic anaemia
Cardiac disorders			Kounis syndrome
Immune system disorders			drug fever, serum sickness, anaphylaxis, Jarisch-Herxheimer reaction
Nervous system disorders	headache, dizziness		
Gastrointestinal disorders	diarrhoea, nausea, abdominal pain	vomiting	pseudomembranous colitis (see section 4.4)
Hepatobiliary disorders	transient increases of hepatic enzyme levels		jaundice (predominantly cholestatic), hepatitis
Skin and subcutaneous tissue disorders		skin rashes	urticaria, pruritus, erythema multiforme, Stevens-Johnson syndrome, toxic epidermal necrolysis (exanthematic necrolysis) (*see Immune system disorders*), angioneurotic oedema, Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)
Description of selected adverse reactions Cephalosporins as a class tend to be absorbed onto the surface of red cells membranes and react with antibodies directed against the drug to produce a positive Coombs' test (which can interfere with cross-matching of blood) and very rarely haemolytic anaemia. Transient rises in serum liver enzymes have been observed which are usually reversible.			

Paediatric population
The safety profile for cefuroxime axetil in children is consistent with the profile in adults.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system listed in Appendix V.

4.9 Overdose

Overdose can lead to neurological sequelae including encephalopathy, convulsions and coma. Symptoms of overdose can occur if the dose is not reduced appropriately in patients with renal impairment (see sections 4.2 and 4.4).

Serum levels of cefuroxime can be reduced by haemodialysis and peritoneal dialysis.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: antibacterials for systemic use, second-generation cephalosporins, ATC code: J01DC02

Mechanism of action

Cefuroxime axetil undergoes hydrolysis by esterase enzymes to the active antibiotic, cefuroxime. Cefuroxime inhibits bacterial cell wall synthesis following attachment to penicillin binding proteins (PBPs). This results in the interruption of cell wall (peptidoglycan) biosynthesis, which leads to bacterial cell lysis and death.

Mechanism of resistance
Bacterial resistance to cefuroxime may be due to one or more of the following mechanisms:

- hydrolysis by beta-lactamases; including (but not limited to) by extended-spectrum beta-lactamases (ESBLs), and AmpC enzymes that may be induced or stably derepressed in certain aerobic Gram-negative bacteria species;
- reduced affinity of penicillin-binding proteins for cefuroxime;
- outer membrane impermeability, which restricts access of cefuroxime to penicillin binding proteins in Gram-negative bacteria;
- bacterial efflux pumps.

Organisms that have acquired resistance to other injectable cephalosporins are expected to be resistant to cefuroxime.

Depending on the mechanism of resistance, organisms with acquired resistance to penicillins may demonstrate reduced susceptibility or resistance to cefuroxime.

Cefuroxime axetil breakpoints

Minimum inhibitory concentration (MIC) breakpoints established by the European Committee on Antimicrobial Susceptibility Testing (EUCAST) version 13, valid from 01 January 2023, are as follows:

Microorganism	Breakpoints (mg/L)	
	S≤	R>
Enterobacterales[1,2]	8	8
Staphylococcus spp.	Note[3]	Note[3]
Streptococcus groups A, B, C and G	Note[4]	Note[4]
Streptococcus pneumoniae	0.25	0.25

Haemophilus influenzae	0.001	1
Moraxella catarrhalis	0.001	4

[1] The cephalosporin breakpoints for *Enterobacterales* will detect all clinically important resistance mechanisms (including ESBL and plasmid mediated AmpC). Some isolates that produce beta-lactamases are susceptible to 3rd or 4th generation cephalosporins with these breakpoints and should be reported as tested, i.e. the presence or absence of an ESBL does not in itself influence the categorization of susceptibility. ESBL detection and characterization arerecommended for public health and infection control purposes.
[2] Uncomplicated urinary tract infection (UTI) only, *E. coli*, *Klebsiella* spp. (except *K. aerogenes*), *Raoultella* spp. and *P. mirabilis*.
[3] Susceptibility of staphylococci to cephalosporins is inferred from the cefoxitin susceptibility except for cefixime, ceftazidime, ceftazidime-avibactam, ceftibuten, and ceftolozane-tazobactam, which do not have breakpoints and should not be used for staphylococcal infections. For agents given orally, care to achieve sufficient exposure at the site of the infection should be exercised. If cefotaxime and ceftriaxone are reported for methicillin-susceptible staphylococci, these should be reported “Susceptible, increased exposure” (I). Some methicillin-resistant S. aureus are susceptible to ceftaroline and ceftobiprole.
[4] The susceptibility of streptococcus groups A, B, C and G to cephalosporins is inferred from the benzylpenicillin susceptibility.

S=susceptible, standard dosing regimen; I=susceptible, increased exposure; R=resistant

Microbiological susceptibility

The prevalence of acquired resistance may vary geographically and with time for selected species and local information on resistance is desirable, particularly when treating severe infections. As necessary, expert advice should be sought when the local prevalence of resistance is such that the utility of cefuroxime axetil in at least some types of infections is questionable.

Cefuroxime is usually active against the following microorganisms *in vitro*.

Commonly susceptible species
Gram-positive aerobes: *Staphylococcus aureus* (methicillin susceptible)* *Coagulase negative staphylococcus (methicillin susceptible)* *Streptococcus pyogenes* *Streptococcus agalactiae*
Gram-negative aerobes: *Haemophilus influenzae* *Haemophilus parainfluenzae* *Moraxella catarrhalis*
Spirochaetes: *Borrelia burgdorferi*
Microorganisms for which acquired resistance may be a problem
Gram-positive aerobes: *Streptococcus pneumoniae*

Gram-negative aerobes: *Citrobacter freundii* *Klebsiella aerogenes* *Enterobacter cloacae* *Escherichia coli* *Klebsiella pneumoniae* *Proteus mirabilis* *Proteus* spp.(other than *P. vulgaris*) *Providencia* spp.
Gram-positive anaerobes: *Peptostreptococcus* spp. *Propionibacterium* spp.
Gram-negative anaerobes: *Fusobacterium* spp. *Bacteroides* spp.
Inherently resistant microorganisms
Gram-positive aerobes: *Enterococcus faecalis* *Enterococcus faecium*
Gram-negative aerobes: *Acinetobacter* spp. *Campylobacter* spp. *Morganella morganii* *Proteus vulgaris* *Pseudomonas aeruginosa* *Serratia marcescens*
Gram-negative anaerobes: *Bacteroides fragilis*
Others: *Chlamydia* spp. *Mycoplasma* spp. *Legionella* spp.

*All methicillin-resistant *S. aureus* are resistant to cefuroxime.

5.2 Pharmacokinetic properties

Absorption

After oral administration cefuroxime axetil is absorbed from the gastrointestinal tract and rapidly hydrolysed in the intestinal mucosa and blood to release cefuroxime into the circulation. Optimum absorption occurs when it is administered shortly after a meal.

Following administration of cefuroxime axetil tablets peak serum levels (2.1 mcg/ml for a 125 mg dose, 4.1 mcg/ml for a 250 mg dose, 7.0 mcg/ml for a 500 mg dose and 13.6 mcg/ml for a 1000 mg dose) occur approximately 2 to 3 hours after dosing when taken with food. The rate of absorption of cefuroxime from the suspension is reduced compared with the tablets, leading to later, lower peak serum levels and reduced systemic bioavailability (4 to 17% less). Cefuroxime axetil oral suspension was not bioequivalent to cefuroxime axetil tablets when tested in healthy adults and therefore is not substitutable on a milligram-per-milligram basis (see section 4.2). The pharmacokinetics of cefuroxime is linear over the oral dosage range of 125 to 1000 mg. No accumulation of cefuroxime occurred following repeat oral doses of 250 to 500 mg.

Distribution

Protein binding has been stated as 33 to 50% depending on the methodology used. Following a single dose of cefuroxime axetil 500 mg tablet to 12 healthy volunteers, the apparent volume of distribution was 50 L (CV%=28%). Concentrations of cefuroxime in excess of the minimum inhibitory levels for common pathogens can be achieved in the tonsilla, sinus tissues, bronchial mucosa, bone, pleural fluid, joint fluid, synovial fluid, interstitial fluid, bile, sputum and aqueous humor. Cefuroxime passes the blood-brain barrier when the meninges are inflamed.

Biotransformation

Cefuroxime is not metabolised.

Elimination

The serum half-life is between 1 and 1.5 hours. Cefuroxime is excreted by glomerular filtration and tubular secretion. The renal clearance is in the region of 125 to 148 ml/min/1.73 m^2.

Special patient populations

Gender

No differences in the pharmacokinetics of cefuroxime were observed between males and females.

Elderly

No special precaution is necessary in the elderly patients with normal renal function at dosages up to the normal maximum of 1 g per day. Elderly patients are more likely to have decreased renal function; therefore, the dose should be adjusted in accordance with the renal function in the elderly (see section 4.2).

Paediatrics

In older infants (aged >3 months) and in children, the pharmacokinetics of cefuroxime are similar to that observed in adults.

There is no clinical trial data available on the use of cefuroxime axetil in children under the age of 3 months.

Renal impairment

The safety and efficacy of cefuroxime axetil in patients with renal failure have not been established. Cefuroxime is primarily excreted by the kidneys. Therefore, as with all such antibiotics, in patients with markedly impaired renal function (i.e. C1cr <30 ml/minute) it is recommended that the dosage of cefuroxime should be reduced to compensate for its slower excretion (see section 4.2). Cefuroxime is effectively removed by dialysis.

Hepatic impairment

There are no data available for patients with hepatic impairment. Since cefuroxime is primarily eliminated by the kidney, the presence of hepatic dysfunction is expected to have no effect on the pharmacokinetics of cefuroxime.

Pharmacokinetic/pharmacodynamic relationship

For cephalosporins, the most important pharmacokinetic-pharmacodynamic index correlating with *in vivo* efficacy has been shown to be the percentage of the dosing interval (%T) that the unbound concentration remains above the minimum inhibitory concentration (MIC) of cefuroxime for individual target species (i.e. %T>MIC).

5.3 Preclinical safety data

Non-clinical data reveal no special hazard for humans based on studies of safety pharmacology, repeated dose toxicity, genotoxicity and toxicity to reproduction and development. No carcinogenicity studies have been performed; however, there is no evidence to suggest carcinogenic potential.

Gamma glutamyl transpeptidase activity in rat urine is inhibited by various cephalosporins, however the level of inhibition is less with cefuroxime. This may have significance in the interference in clinical laboratory tests in humans.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Zinnat Tablets:
Microcrystalline cellulose
Sodium Laurilsulfate
Croscarmellose Sodium
Hydrogenated vegetable oil
Silica Colloidal Anhydrous
Hypromellose
Propylene glycol

Opaspray white M-1-7120J [containing titanium dioxide (E171) and sodium benzoate (E211)]

Zinnat Granules for Oral Suspension 250 mg/5 ml:
Aspartame (E951)
Xanthan gum
Acesulfame potassium (E950)
Povidone K30
Stearic Acid
Sucrose
Tutti Frutti Flavour (contains benzyl alcohol (E1519)
Purified Water

Zinnat Granules for Oral Suspension 125 mg/5 ml, 125 mg sachet, 250 mg sachet, 500 mg sachet:
Aspartame (E951)
Xanthan gum
Acesulfame potassium (E950)
Povidone K30
Stearic Acid
Sucrose
Tutti Frutti Flavour (contains propylene glycol (E1520) and benzyl alcohol (E1519))
Purified Water

6.2 Incompatibilities

A positive Coombs' test has been reported during treatment with cephalosporins – this phenomenon can interfere with cross-matching of blood.

6.3 Shelf life

Zinnat Tablet
36 months

Zinnat Granules for Oral Suspension 125 mg/5 ml, 250 mg/5 ml

The shelf life of unconstituted Zinnat Suspension from date of manufacture is 24 months.
The reconstituted suspension when refrigerated between 2 and 8°C can be kept for up to 10 days.

Zinnat Granules for Oral Suspension 125 mg, 250 mg, 500 mg sachet
The shelf life of unconstituted Zinnat Suspension from date of manufacture 24 months
Reconstituted suspension should be taken immediately.

6.4 Special precautions for storage

Cefuroxime axetil tablets in foil blisters
Do not store above 30°C

Zinnat Granules for Oral Suspension
Do not store above 30°C
For Storage conditions after reconstitution of the Zinnat oral suspension, see section 6.3

6.5 Nature and contents of container

Tablets

Aluminium foil blister pack with an aluminium lid.
Pack size: 6, 10, 12, 14, 16, 20, 24 and 50

Zinnat Granules for Oral Suspension

Multidose bottles:
Zinnat Suspension is provided as a dry, white to off-white, tutti-frutti flavoured granule. When reconstituted as directed, it provides the equivalent of 125 mg or 250 mg of cefuroxime (as cefuroxime axetil) per 5 ml of suspension.

It is supplied in Ph. Eur. Type III amber glass bottles with an induction heat seal membrane containing 40 ml, 50 ml, 60 ml, 70 ml, 80 ml or 100 ml of the 125 mg/5 ml suspension, and 50 ml, 60 ml, 70 ml or 100 ml of the 250 mg/5 ml suspension.

Sachets:
Zinnat Suspension in sachets for oral use is provided as dry, white to off-white, tutti-frutti flavoured granule. When reconstituted as directed, it provides the equivalent of 125 mg, 250 mg or 500 mg of cefuroxime (as cefuroxime axetil) per sachet.

It is supplied in paper/polyethylene/foil/ethylenemethacrylic acid ionomer laminated sachet.

Pack size:
8, 10, 12, 14, 20 and 100 sachets (either as single or duplex sachets) in a carton.
Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

125 mg/5 ml, 250 mg/5 ml Granules for Oral Suspension

Reconstitution /Administration instructions
The bottle should be shaken vigorously before the medication is taken.

The reconstituted suspension when refrigerated between 2 and 8°C can be kept for up to 10 days.

If desired, Zinnat suspension from multidose bottles can be further diluted in cold fruit juices, or milk drinks and should be taken immediately.

Please note that the time taken to prepare Zinnat suspension before administration of the first dose will take more than one hour. This includes time for the suspension to "settle" in the refrigerator

1. Shake the bottle to loosen the content. All the granules should be free-flowing in the bottle. Remove the bottle cap and the heat-seal membrane. If the latter is damaged or not present, the product should be returned to the pharmacist.

2. Add the total amount of cold water as stated on the label or up to the volume line on the measuring cup provided (if supplied). If the water was previously boiled it must be allowed to cool to room temperature before adding. Do not mix Zinnat granules for oral suspension with hot or warm liquids. Cold water must be used to prevent the suspension becoming too thick.
3. Pour the total amount of cold water into the bottle. Replace the bottle cap. Allow the bottle to stand to allow the water to fully soak through the granules; this should take about one-minute.
4. Invert the bottle and shake well (for at least 15 seconds) until all the granules have mixed with the water
5. Turn the bottle into an upright position and shake well for at least one-minute until all the granules have blended with the water.

Store the Zinnat suspension in the refrigerator immediately at between 2 and 8°C (do not freeze) and let it rest for at least one hour before taking the first dose. The reconstituted suspension should be refrigerated at all times; when refrigerated between 2 and 8°C the reconstituted suspension can be kept for up to 10 days.

Always shake the bottle well before taking the medication. A dosing syringe or spoon is provided for the administration of each dose.

Directions for using the dosing syringe (if supplied)

1. Remove the bottle cap and insert the syringe-collar assembly into the neck of the bottle. Press it down completely until the collar fits in the neck firmly. Invert the bottle and syringe.
2. Pull the plunger up the barrel until the barrels rim is aligned with the mark on the plunger corresponding to the required dose.
3. Turn the bottle and syringe into an upright position. While holding onto the syringe and the plunger to ensure that the plunger does not move, remove the syringe from the bottle, leaving the plastic collar in the bottle neck.
4. With the patient seated in an upright position, place the tip of the syringe just inside the patient's mouth, pointing towards the inside of the cheek.
5. Press the plunger of the syringe in slowly to expel the medicine without causing choking. Do NOT squirt the medicine out in a jet.
6. After giving the dose replace the bottle cap without removing the plastic collar. Dismantle the syringe and wash it thoroughly in clean water. Allow the plunger and the barrel to dry naturally.

125 mg, 250 mg, 500 mg granules for oral suspension
Directions for reconstituting suspension from sachets

1. Empty granules from sachet into a glass.
2. Add a small volume of cold water.
3. Stir well and drink immediately.

The reconstituted suspension or granules should not be mixed with hot liquids.

7. MARKETING AUTHORISATION HOLDER

[To be completed nationally]

{Name and address}
<{tel}>

<{fax}>
<{e-mail}>

8. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: {DD month YYYY}
Date of latest renewal: {DD month YYYY}

[To be completed nationally]

10. DATE OF REVISION OF THE TEXT

{MM/YYYY}

[To be completed nationally]

LABELLING

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

CARTON

1. NAME OF THE MEDICINAL PRODUCT

Zinnat and associated names 125 mg film-coated tablets
Zinnat and associated names 250 mg film-coated tablets
Zinnat and associated names 500 mg film-coated tablets
Zinnat and associated names 125 mg granules for oral suspension
Zinnat and associated names 250 mg granules for oral suspension
Zinnat and associated names 500 mg granules for oral suspension

cefuroxime

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each film-coated tablet contains 125 mg cefuroxime as cefuroxime axetil
Each film-coated tablet contains 250 mg cefuroxime as cefuroxime axetil
Each film-coated tablet contains 500 mg cefuroxime as cefuroxime axetil

Each sachet contains 125 mg cefuroxime as cefuroxime axetil
Each sachet contains 250 mg cefuroxime as cefuroxime axetil
Each sachet contains 500 mg cefuroxime as cefuroxime axetil

3. LIST OF EXCIPIENTS

Also contains sodium and sodium benzoate (E211)
Also contains sodium and sodium benzoate (E211)
Also contains sodium and sodium benzoate (E211)

Also contains sucrose, aspartame (E951), propylene glycol (E1520) and benzyl alcohol (E1519)
Also contains sucrose, aspartame (E951), propylene glycol (E1520) and benzyl alcohol (E1519)
Also contains sucrose, aspartame (E951), propylene glycol (E1520) and benzyl alcohol (E1519)

See package leaflet for further information

4. PHARMACEUTICAL FORM AND CONTENTS

Tablets: 6, 10, 12, 14, 16, 20, 24 or 50 tablets

Sachets: 8, 10, 12, 14, 20 or 100 sachets

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Oral use
Read the package leaflet before use.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP {MM YYYY}
Zinnat Granules for Oral Suspension 125 mg, 250 mg, 500 mg sachet
Reconstituted suspension should be taken immediately

9. SPECIAL STORAGE CONDITIONS

Do not store above 30°C

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

[See Annex I - To be completed nationally]

{Name and Address}
<{tel}>
<{fax}>
<{e-mail}>

12. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

[To be completed nationally]

15. INSTRUCTIONS ON USE

[To be completed nationally]

16. INFORMATION IN BRAILLE

zinnat 125 mg tablets
zinnat 250 mg tablets
zinnat 500 mg tablets

zinnat 125 mg sachets
zinnat 250 mg sachets
zinnat 500 mg sachets

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC
SN
NN

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

CARTON

1. NAME OF THE MEDICINAL PRODUCT

Zinnat and associated names 125 mg/5 ml granules for oral suspension
Zinnat and associated names 250 mg/5 ml granules for oral suspension

cefuroxime

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each 5 ml contains 125 mg cefuroxime (as cefuroxime axetil).
Each 5 ml contains 250 mg cefuroxime (as cefuroxime axetil).

3. LIST OF EXCIPIENTS

Also contains sucrose, aspartame (E951), benzyl alcohol (E1519) and propylene glycol (E1520)
Also contains sucrose, aspartame (E951) and benzyl alcohol (E1519)

See package leaflet for further information

4. PHARMACEUTICAL FORM AND CONTENTS

Granules for Oral Suspension
125 mg per 5 ml
250 mg per 5 ml

40 ml, 50 ml, 60 ml, 70 ml, 80 ml or 100 ml
50 ml, 60 ml, 70 ml or 100 ml

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Oral use
Read the package leaflet before use.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP {MM YYYY}

The reconstituted suspension when refrigerated between 2 and 8°C can be kept for up to 10 days.

9. SPECIAL STORAGE CONDITIONS

Store granules below 30°C

Reconstituted Suspension
Store in a fridge at all times when not taking the medicine. Do not freeze.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

[See Annex I - To be completed nationally]

{Name and Address}
<{tel}>
<{fax}>
<{e-mail}>

12. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

[To be completed nationally]

15. INSTRUCTIONS ON USE

[To be completed nationally]

16. INFORMATION IN BRAILLE

zinnat 125 mg/5 ml
zinnat 250 mg/5 ml

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC
SN
NN

MINIMUM PARTICULARS TO APPEAR ON BLISTERS

BLISTERS

1. NAME OF THE MEDICINAL PRODUCT

Zinnat and associated names 125 mg film-coated tablets
Zinnat and associated names 250 mg film-coated tablets
Zinnat and associated names 500 mg film-coated tablets

cefuroxime

2. NAME OF THE MARKETING AUTHORISATION HOLDER

[See Annex I - To be completed nationally]

3. EXPIRY DATE

EXP {MM YYYY}

4. BATCH NUMBER

Lot

5. OTHER

PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGING

BOTTLE

1. NAME OF THE MEDICINAL PRODUCT

Zinnat and associated names 125 mg/5 ml granules for oral suspension
Zinnat and associated names 250 mg/5 ml granules for oral suspension

cefuroxime

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each 5 ml contains 125 mg cefuroxime as cefuroxime axetil
Each 5 ml contains 250 mg cefuroxime as cefuroxime axetil

3. LIST OF EXCIPIENTS

Also contains sucrose, aspartame (E951), benzyl alcohol (E1519) and propylene glycol (E1520)
Also contains sucrose, benzyl alcohol (E1519) and aspartame (E951)
See package leaflet for further information

4. PHARMACEUTICAL FORM AND CONTENTS

Granules for Oral Suspension

125 mg per 5 ml
250 mg per 5 ml

40 ml, 50 ml, 60 ml, 70 ml, 80 ml or 100 ml
50 ml, 60 ml, 70 ml or 100 ml

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Oral use
Read the package leaflet before use.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP {MM YYYY}

Zinnat Granules for Oral Suspension 125 mg/5 ml, 250 mg/5 ml

The reconstituted suspension when refrigerated between 2 and 8°C can be kept for up to 10 days.

9. SPECIAL STORAGE CONDITIONS

Store granules below 30°C

Reconstituted Suspension
Store in a fridge at all times when not taking the medicine. Do not freeze.

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

[See Annex I - To be completed nationally]

{Name and Address}
<{tel}>
<{fax}>
<{e-mail}>

12. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

[To be completed nationally]

15. INSTRUCTIONS ON USE

[To be completed nationally]

16. INFORMATION IN BRAILLE

zinnat 125 mg/5 ml
zinnat 250 mg/5 ml

17. UNIQUE IDENTIFIER – 2D BARCODE

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS

SACHETS

1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION

Zinnat and associated names 125 mg granules for oral suspension
Zinnat and associated names 250 mg granules for oral suspension
Zinnat and associated names 500 mg granules for oral suspension

cefuroxime
Oral use

2. METHOD OF ADMINISTRATION

Oral use
Read the package leaflet before use.
Reconstituted suspension should be taken immediately

3. EXPIRY DATE

EXP {MM YYYY}

4. BATCH NUMBER

Lot

5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT

[To be completed nationally]

5. OTHER

PACKAGE LEAFLET

Package leaflet: Information for the user

Zinnat and associated names 125 mg film-coated tablets
Zinnat and associated names 250 mg film-coated tablets
Zinnat and associated names 500 mg film-coated tablets

cefuroxime

Read all of this leaflet carefully before you start taking this medicine because it contains important information for you.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist or nurse.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor or pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet:

1. What Zinnat is and what it is used for

Zinnat is an antibiotic used in adults and children. It works by killing bacteria that cause infections. It belongs to a group of medicines called *cephalosporins*.

Zinnat is used to treat infections of:
- the throat
- sinus
- middle ear
- the lungs or chest
- the urinary tract
- the skin and soft tissues.

Zinnat can also be used:
- to treat Lyme disease (an infection spread by parasites called ticks).

Your doctor may test the type of bacteria causing your infection and monitor whether the bacteria are sensitive to Zinnat during your treatment.

2. What you need to know before you take Zinnat

Do not take Zinnat:

- **if you are allergic** to cefuroxime axetil or **any cephalosporin antibiotics** or any of the other ingredients of Zinnat (listed in section 6).
- if you have ever had a severe allergic (hypersensitive) reaction to any other type of beta-lactam antibiotic (penicillins, monobactams and carbapenems).
- if you have ever developed a severe skin rash or skin peeling, blistering and/or mouth sores after treatment with cefuroxime or any other cephalosporin antibiotics.

➔ If you think this applies to you, **don't take Zinnat** until you have checked with your doctor.

Take special care with [Nationally completed name]:

Serious skin reactions including Stevens-Johnson syndrome, toxic epidermal necrolysis, drug reaction with eosinophilia and systemic symptoms (DRESS) have been reported in association with cefuroxime treatment. Seek medical attention immediately if you notice any of the symptoms related to these serious skin reactions described in section 4.

Warnings and precautions

Talk to your doctor or pharmacist before taking Zinnat.

Children

Zinnat is not recommended for children aged under 3 months, as the safety and effectiveness are not known in this age group.

You must look out for certain symptoms, such as allergic reactions, fungal infections (such as *candida*) and severe diarrhoea (*pseudomembranous colitis*) while you are taking Zinnat. This will reduce the risk of any problems. See 'Conditions you need to look out for' in Section 4.

If you need a blood test

Zinnat can affect the results of a test for blood sugar levels, or a blood screen called the *Coombs test*. If you need a blood test:

➔ **Tell the person taking the sample** that you are taking Zinnat.

Other medicines and Zinnat

Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines.

Medicines used to **reduce the amount of acid in your stomach** (e.g. *antacids* used to treat **heartburn**) can affect how Zinnat works.
Probenecid
Oral anticoagulants

➔ **Tell your doctor or pharmacist** if you are taking any medicine like this.

Pregnancy and breast-feeding and fertility

If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking this medicine.

Driving and using machines

Zinnat **can make you dizzy** and have other side effects that make you less alert.
➔ **Don't drive or use machines** if you do not feel well.

Important information about some of the ingredients of Zinnat

- This medicine contains 0.00152 mg sodium benzoate in each 125 mg tablet
- This medicine contains 0.00203 mg sodium benzoate in each 250 mg tablet
- This medicine contains 0.00506 mg sodium benzoate in each 500 mg tablet
- This medicine contains less than 1 mmol (23 mg) sodium per tablet, that is to say essentially 'sodium free'.

➔ **Check with your doctor** that Zinnat is suitable for you.

3. How to take Zinnat

Always take this medicine exactly as your doctor or pharmacist has told you to. Check with your doctor or pharmacist if you are not sure.

Take Zinnat after food. This will help to make the treatment more effective.

Swallow Zinnat tablets whole with some water.

Don't chew, crush or split the tablets — this may make the treatment less effective.

The recommended dose

Adults and children weighing 40 kg and over
The recommended dose of Zinnat is 250 mg to 500 mg twice daily depending on the severity and type of infection.

Children weighing less than 40 kg
Children weighing less than 40 kg should preferably be treated with Zinnat oral suspension or sachets. The recommended dose of Zinnat is 10 mg/kg (to a maximum of 250 mg) to 15 mg/kg (to a maximum of 250 mg) twice daily depending on:
- the severity and type of infection

Zinnat is not recommended for children aged under 3 months, as the safety and effectiveness are not known in this age group.

Depending on the illness or how you or your child responds to treatment, the initial dose may be changed or more than one course of treatment may be needed.

Patients with kidney problems

If you have a kidney problem, your doctor may change your dose.
➔ **Talk to your doctor** if this applies to you.

If you take more Zinnat than you should

If you take too much Zinnat you may have neurological disorders, in particular you may be **more likely to have fits** *(seizures)***.**

➔ **Don't delay. Contact your doctor or your nearest hospital emergency department immediately**. If possible, show them the Zinnat pack.

If you forget to take Zinnat

Do not take a double dose to make up for a forgotten dose. Just take your next dose at the usual time.

If you stop taking Zinnat

Don’t stop Zinnat without advice

It is important that you take the full course of Zinnat. Don’t stop unless your doctor advises you to – even if you are feeling better. If you don't complete the full course of treatment, the infection may come back.

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Conditions you need to look out for
A small number of people taking Zinnat get an allergic reaction or potentially serious skin reaction. Symptoms of these reactions include:

- **severe allergic reaction**. Signs include **raised and itchy rash**, **swelling**, sometimes of the face or mouth causing **difficulty in breathing**.
- **widespread rash**, **high body temperature** and **enlarged lymph nodes** (DRESS syndrome or drug hypersensitivity syndrome).
- **chest pain in the context of allergic reactions**, which may be a symptom of **allergy triggered cardiac infarction** (Kounis syndrome)
- **skin rash,** which may **blister**, and looks like **small targets** (central dark spot surrounded by a paler area, with a dark ring around the edge).
- **a widespread rash** with **blisters** and **peeling skin.** (These may be signs of *Stevens-Johnson syndrome* or *toxic epidermal necrolysis*).

Other conditions you need to look out for while taking Zinnat include:

- **fungal infections.** Medicines like Zinnat can cause an overgrowth of yeast (*Candida*) in the body which can lead to fungal infections (such as thrush). This side effect is more likely if you take Zinnat for a long time.

- **severe diarrhoea (*Pseudomembranous colitis*).** Medicines like Zinnat can cause inflammation of the colon (large intestine), causing severe diarrhoea, usually with blood and mucus, stomach pain, fever

- **Jarisch-Herxheimer reaction.** Some patients may get a high temperature (fever), chills, headache, muscle pain and skin rash while being treated with Zinnat for Lyme disease. This is known as the *Jarisch-Herxheimer reaction.* Symptoms usually last a few hours or up to one day.

➔ **Contact a doctor or nurse immediately if you get any of these symptoms.**

Common side effects

These may affect **up to 1 in 10** people:

- fungal infections (such as *Candida*)
- headache
- dizziness
- diarrhoea
- feeling sick
- stomach pain.

Common side effects that may show up in blood tests:

- an increase in a type of white blood cell (*eosinophilia*)
- an increase in liver enzymes.

Uncommon side effects

These may affect **up to 1 in 100** people:

- being sick
- skin rashes.

Uncommon side effects that may show up in blood tests:

- a decrease in the number of blood platelets (cells that help blood to clot)
- a decrease in the number of white blood cells
- positive Coomb's test.

Other side effects
Other side effects have occurred in a very small number of people, but their exact frequency is unknown:

- severe diarrhoea (*pseudomembranous colitis*)
- allergic reactions
- skin reactions (including severe)
- high temperature (*fever*)
- yellowing of the whites of the eyes or skin
- inflammation of the liver (*hepatitis*).

Side effects that may show up in blood tests:

- red blood cells destroyed too quickly (*haemolytic anaemia*).

Reporting of side effects
If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the national reporting system listed in Appendix V. By reporting side effects, you can help provide more information on the safety of this medicine.

5 How to store Zinnat

Keep this medicine out of the sight and reach of children.

Store in the original pack at or below 30°C.

Do not use Zinnat if the tablets are chipped or there are other visible signs of deterioration.
Do not use this medicine after the expiry date which is stated on the pack after EXP. The expiry date refers to the last day of that month.

Don't throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help to protect the environment.

6. Contents of the pack and other information

What Zinnat contains

The active substance in each tablet is 125 mg, 250 mg or 500 mg cefuroxime (present as cefuroxime axetil).

The other ingredients are microcrystalline cellulose, croscarmellose sodium type A, sodium lauryl sulphate, hydrogenated vegetable oil, silica colloidal anhydrous, hypromellose, propylene glycol and Opaspray white M-1-7120J [containing titanium dioxide (E171) and sodium benzoate (E211)].

What Zinnat looks like and contents of the pack

Zinnat Tablets 125 mg are white, film-coated, capsule-shaped tablets plain on one side and engraved with 'GX ES5' on the other. They are packaged in aluminium foil blister packs, enclosed in a carton. Each pack contains 6, 10, 12, 14, 16, 20, 24 and 50 tablets.

Zinnat Tablets 250 mg are white, film-coated, capsule-shaped tablets plain on one side and engraved with 'GX ES7' on the other. They are packaged in aluminium foil blister packs, enclosed in a carton. Each pack contains 6, 10, 12, 14, 16, 20, 24 and 50 tablets.

Zinnat Tablets 500 mg are white, film-coated, capsule-shaped tablets plain on one side and engraved with 'GX EG2' on the other. They are packaged in aluminium foil blister packs, enclosed in a carton. Each pack contains 6, 10, 12, 14, 16, 20, 24 and 50 tablets.

Marketing Authorisation Holder and Manufacturer

[To be completed nationally]

This medicine is authorised in the Member States of the European Economic Area and in the United Kingdom (Northern Ireland) under the following names:

125 mg film-coated tablets
Czech Republic, Denmark, France, Hungary, Ireland, Lithuania, Netherlands, Poland, Romania, Slovakia, United Kingdom (Northern Ireland) – Zinnat
Germany – Elobact

250 mg film-coated tablets
Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom (Northern Ireland) – Zinnat
Germany – Elobact
Greece – Zinadol
Italy – Oraxim
Portugal - Zipos
Portugal – Zoref

500 mg film-coated tablets
Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, France, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Romania, Slovakia, Slovenia, Spain, United Kingdom (Northern Ireland) – Zinnat
Germany – Elobact
Greece – Zinadol
Italy – Oraxim
Portugal - Zipos
Portugal – Zoref

This leaflet was last revised in {**month/YYYY**}.

Package leaflet: Information for the user

Zinnat and associated names 125 mg/5 ml granules for oral suspension
Zinnat and associated names 250 mg/5 ml granules for oral suspension
Zinnat and associated names 125 mg granules for oral suspension
Zinnat and associated names 250 mg granules for oral suspension
Zinnat and associated names 500 mg granules for oral suspension

cefuroxime

Read all of this leaflet carefully before you start taking this medicine because it contains important information for you.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist or nurse.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor or pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet:

1. What Zinnat is and what it is used for

Zinnat is an antibiotic used in adults and children. It works by killing bacteria that cause infections. It belongs to a group of medicines called *cephalosporins*.

Zinnat is used to treat infections of:
- the throat
- sinus
- middle ear
- the lungs or chest
- the urinary tract
- the skin and soft tissues.

Zinnat can also be used:
- to treat Lyme disease (an infection spread by parasites called ticks).

Your doctor may test the type of bacteria causing your infection and monitor whether the bacteria are sensitive to Zinnat during your treatment.

2. What you need to know before you take Zinnat

Do not take Zinnat:

- **if you are allergic** to cefuroxime axetil or **any cephalosporin antibiotics** or any of the other ingredients of Zinnat (listed in section 6).
- if you have ever had a severe allergic (hypersensitive) reaction to any other type of betalactam antibiotic (penicillins, monobactams and carbapenems).
- if you have ever developed a severe skin rash or skin peeling, blistering and/or mouth sores after treatment with cefuroxime or any other cephalosporin antibiotics.

➔ If you think this applies to you, **don't take Zinnat** until you have checked with your doctor.

Take special care with [Nationally completed name]:

Serious skin reactions including Stevens-Johnson syndrome, toxic epidermal necrolysis, drug reaction with eosinophilia and systemic symptoms (DRESS) have been reported in association with cefuroxime treatment. Seek medical attention immediately if you notice any of the symptoms related to these serious skin reactions described in section 4.

Warnings and precautions

Talk to your doctor or pharmacist before taking Zinnat.

Children

Zinnat is not recommended for children aged under 3 months, as the safety and effectiveness are not known in this age group.

You must look out for certain symptoms, such as allergic reactions, fungal infections (such as *candida*) and severe diarrhoea (*pseudomembranous colitis*) while you are taking Zinnat. This will reduce the risk of any problems. See 'Conditions you need to look out for' in Section 4.

If you need a blood test

Zinnat can affect the results of a test for blood sugar levels, or a blood screen called the *Coombs test*. If you need a blood test:

➔ **Tell the person taking the sample** that you are taking Zinnat.

Other medicines and Zinnat

Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines.

Medicines used to **reduce the amount of acid in your stomach** (e.g. *antacids* used to treat **heartburn**) can affect how Zinnat works.
Probenecid
Oral anticoagulants

➔ **Tell your doctor or pharmacist** if you are taking any medicine like this.

Pregnancy and breast-feeding and fertility

If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking this medicine.

Driving and using machines

Zinnat **can make you dizzy** and have other side effects that make you less alert.
➔ **Don't drive or use machines** if you do not feel well.

Important information about some of the ingredients of Zinnat

Zinnat suspension contains sugar (sucrose). If you are diabetic you need to take this into account for your diet. If you have been told by your doctor that you have an intolerance to some sugars, contact your doctor before taking this medicinal product.

Zinnat suspension also contains **aspartame**, which is a source of phenylalanine. It may be harmful if you have phenylketonuria (PKU), a rare genetic disorder in which phenylalanine builds up because the body cannot remove it properly.

Zinnat suspension also contains benzyl alcohol (E1519) which may cause allergic reactions. Ask your doctor or pharmacist for advice if you have a liver or kidney disease, are pregnant or are breast-feeding (also see section above – Pregnancy and breast-feeding and fertility). This is because large amounts of benzyl alcohol can build-up in your body and may cause side-effects (called metabolic acidosis). Do not use for more than a week in young children (less than 3 years old), unless advised by your doctor or pharmacist.

Zinnat 125 mg/5 ml granules for oral suspension
This medicine contains 0.021 g aspartame in each 5 ml dose
This medicine contains 3.1 g of sucrose in each 5 ml dose
This medicine contains 6 mg of propylene glycol (E1520) in each 5 ml dose
This medicine contains 4.5 mg benzyl alcohol (E1519) in each 5 ml dose

Zinnat 250 mg/5 ml granules for oral suspension
This medicine contains 0.045 g aspartame in each 5 ml dose
This medicine contains 2.3 g of sucrose in each 5 ml dose
This medicine contains 4.6 mg benzyl alcohol (E1519) in each 5 ml dose

Zinnat 125 mg granules for oral suspension
This medicine contains 0.021 g aspartame in each sachet
This medicine contains 3.1 g of sucrose in each sachet
This medicine contains 6 mg of propylene glycol (E1520) in each sachet
This medicine contains 4.5 mg benzyl alcohol (E1519) in each sachet

Zinnat 250 mg granules for oral suspension
This medicine contains 0.042 g aspartame in each sachet
This medicine contains 6.1 g of sucrose in each sachet. This should be taken into account in patients with diabetes mellitus.
This medicine contains 12 mg of propylene glycol (E1520) in each sachet
This medicine contains 9 mg benzyl alcohol (E1519) in each sachet

Zinnat 500 mg granules for oral suspension
This medicine contains 0.084 g aspartame in each sachet

This medicine contains 12.2 g of sucrose in each sachet. This should be taken into account in patients with diabetes mellitus.
This medicine contains 24 mg of propylene glycol (E1520) in each sachet
This medicine contains 18 mg benzyl alcohol (E1519) in each sachet

➔ **Check with your doctor** that Zinnat is suitable for you.

3. How to take Zinnat

Always take this medicine exactly as your doctor or pharmacist has told you to. Check with your doctor or pharmacist if you are not sure.

Take Zinnat after food. This will help to make the treatment more effective.

125 mg/5 ml, 250 mg/5 ml granules for oral suspension
Shake the bottle before use.

Zinnat suspension can be diluted in cold fruit juices, or milk drinks but should be taken immediately.

Don't mix Zinnat with hot liquids.

For step-by-step instructions on how to make up Zinnat suspension see **Instructions for reconstitution** at the end of this leaflet.

125 mg, 250 mg, 500 mg granules for oral suspension
For step-by-step instructions on how to make up Zinnat sachets see **Instructions for reconstitution** at the end of this leaflet.

The recommended dose

Adults and children weighing 40 kg and over
The recommended dose of Zinnat is 250 mg to 500 mg twice daily depending on the severity and type of infection.

Children weighing less than 40 kg
Children weighing less than 40 kg should preferably be treated with Zinnat oral suspension or sachets. The recommended dose of Zinnat is 10 mg/kg (to a maximum of 250 mg) to 15 mg/kg (to a maximum of 250 mg) twice daily depending on:
- the severity and type of infection
- the weight and age of the child, up to a maximum of 500 mg per day.

Zinnat is not recommended for children aged under 3 months, as the safety and effectiveness are not known in this age group.

Depending on the illness or how you or your child responds to treatment, the initial dose may be changed or more than one course of treatment may be needed.

Patients with kidney problems

If you have a kidney problem, your doctor may change your dose.
➔ **Talk to your doctor** if this applies to you.

If you take more Zinnat than you should

If you take too much Zinnat you may have neurological disorders, in particular you may be **more likely to have fits** *(seizures)***.**
➔ **Don't delay. Contact your doctor or your nearest hospital emergency department immediately**. If possible, show them the Zinnat pack.

If you forget to take Zinnat

Do not take a double dose to make up for a forgotten dose. Just take your next dose at the usual time.

If you stop taking Zinnat

Don’t stop Zinnat without advice

It is important that you take the full course of Zinnat. Don’t stop unless your doctor advises you to – even if you are feeling better. If you don't complete the full course of treatment, the infection may come back.

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Conditions you need to look out for
A small number of people taking Zinnat get an allergic reaction or potentially serious skin reaction. Symptoms of these reactions include:

- **severe allergic reaction**. Signs include **raised and itchy rash**, **swelling**, sometimes of the face or mouth causing **difficulty in breathing**.
- **widespread rash**, **high body temperature** and **enlarged lymph nodes** (DRESS syndrome or drug hypersensitivity syndrome).
- **chest pain in the context of allergic reactions**, which may be a symptom of **allergy triggered cardiac infarction** (Kounis syndrome)
- **skin rash,** which may **blister**, and looks like **small targets** (central dark spot surrounded by a paler area, with a dark ring around the edge).
- **a widespread rash** with **blisters** and **peeling skin.** (These may be signs of *Stevens-Johnson syndrome* or *toxic epidermal necrolysis*).

Other conditions you need to look out for while taking Zinnat include:

- **fungal infections.** Medicines like Zinnat can cause an overgrowth of yeast (*Candida*) in the body which can lead to fungal infections (such as thrush). This side effect is more likely if you take Zinnat for a long time.

- **severe diarrhoea (*Pseudomembranous colitis*).** Medicines like Zinnat can cause inflammation of the colon (large intestine), causing severe diarrhoea, usually with blood and mucus, stomach pain, fever

- **Jarisch-Herxheimer reaction.** Some patients may get a high temperature (fever), chills, headache, muscle pain and skin rash while being treated with Zinnat for Lyme disease. This is known as the *Jarisch-Herxheimer reaction.* Symptoms usually last a few hours or up to one day.

➔ **Contact a doctor or nurse immediately if you get any of these symptoms.**

Common side effects

These may affect **up to 1 in 10** people:

- fungal infections (such as *Candida*)
- headache
- dizziness
- diarrhoea
- feeling sick
- stomach pain.

Common side effects that may show up in blood tests:

- an increase in a type of white blood cell (*eosinophilia*)
- an increase in liver enzymes.

Uncommon side effects

These may affect **up to 1 in 100** people:

- being sick
- skin rashes.

Uncommon side effects that may show up in blood tests:

- a decrease in the number of blood platelets (cells that help blood to clot)
- a decrease in the number of white blood cells
- positive Coomb's test.

Other side effects
Other side effects have occurred in a very small number of people, but their exact frequency is unknown:

- severe diarrhoea (*pseudomembranous colitis*)
- allergic reactions
- skin reactions (including severe)
- high temperature (*fever*)
- yellowing of the whites of the eyes or skin
- inflammation of the liver (*hepatitis*).

Side effects that may show up in blood tests:

- red blood cells destroyed too quickly (*haemolytic anaemia*).

Reporting of side effects
If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the national reporting system listed in Appendix V. By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Zinnat

Keep this medicine out of the sight and reach of children.

Store in the original pack at or below 30°C.

125 mg/ 5ml and 250 mg/ 5ml granules for oral suspension:
The suspension should be stored in a fridge at all times when not taking the medicine.
Do not allow it to freeze. It can be kept in the fridge for up to 10 days.

125 mg, 250 mg and 500 mg sachets:
Reconstituted suspension should be taken immediately

Do not use Zinnat if it shows any sign of deterioration.

Do not use this medicine after the expiry date which is stated on the pack after EXP. The expiry date refers to the last day of that month.

Don't throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help to protect the environment.

6. Contents of the pack and other information

What Zinnat contains

125 mg/5 ml granules for oral suspension
The active substance is 125 mg per 5 ml of cefuroxime (present as cefuroxime axetil).
The other ingredients are aspartame (E951), xanthan gum, acesulfame potassium (E950), povidone K30, stearic acid, sucrose, tutti frutti flavour (contains propylene glycol (E1520) and benzyl alcohol (E1519)) and purified water.

250 mg/5 ml granules for oral suspension
The active substance is 250 mg per 5 ml of cefuroxime (present as cefuroxime axetil).
The other ingredients are aspartame (E951), xanthan gum, acesulfame potassium (E950), povidone K30, stearic acid, sucrose, tutti frutti flavour (contains benzyl alcohol (E1519)) and purified water.

125 mg sachets
The active substance is 125 mg of cefuroxime (present as cefuroxime axetil) per sachet.
The other ingredients are aspartame (E951), xanthan gum, acesulfame potassium (E950), povidone K30, stearic acid, sucrose, tutti frutti flavour (contains propylene glycol (E1520) and benzyl alcohol (E1519)) and purified water.

250 mg sachets
The active substance is 250 mg of cefuroxime (present as cefuroxime axetil) per sachet.
The other ingredients are aspartame (E951), xanthan gum, acesulfame potassium (E950), povidone K30, stearic acid, sucrose, tutti frutti flavour (contains propylene glycol (E1520) and benzyl alcohol (E1519)) and purified water.

500 mg sachets
The active substance is 500 mg of cefuroxime (present as cefuroxime axetil) per sachet.
The other ingredients are aspartame (E951), xanthan gum, acesulfame potassium (E950), povidone K30, stearic acid, sucrose, tutti frutti flavour (contains propylene glycol (E1520) and benzyl alcohol (E1519)) and purified water.

See section 2 for further important information about some of the ingredients of Zinnat.

What Zinnat looks like and contents of the pack

Zinnat Suspension 125 mg/5 ml and 250 mg/5 ml is supplied in an amber, glass, multidose bottle. The bottle contains 40 ml, 50 ml, 60 ml, 70 ml, 80 ml or 100 ml of the 125 mg/5 ml suspension, or 50 ml, 60 ml, 70 ml or 100 ml of the 250 mg/5 ml suspension. This medicine must be made up with water using the original granules that were supplied in the bottle. The bottle is contained within a carton.

Zinnat Suspension 125 mg, 250 mg and 500 mg is supplied in sachets. Sachets are contained within a carton.

Not all pack sizes may be marketed

Marketing Authorisation Holder and Manufacturer

[To be completed nationally]

This medicine is authorised in the Member States of the European Economic Area and in the United Kingdom (Northern Ireland) under the following names:

125 mg/5 ml granules for oral suspension
Bulgaria, Czech Republic, Estonia, France, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Romania, Slovakia, Slovenia, , United Kingdom (Northern Ireland) – Zinnat
Germany – Cefuroxim - 1 A Pharma 125 mg/5 ml Granulat zur Herstellung einer Suspension zum Einnehmen
Italy – Oraxim
Portugal - Zipos
Portugal – Zoref

250 mg/5 ml granules for oral suspension
Belgium, Bulgaria, Cyprus, Ireland, Italy, Luxembourg, Malta, Poland, Slovakia, Slovenia, Spain, United Kingdom (Northern Ireland) – Zinnat
Greece – Zinadol
Italy – Oraxim
Portugal - Zipos
Portugal – Zoref

125 mg granules for oral suspension

France, Slovakia, Spain – Zinnat

250 mg granules for oral suspension
Italy, Spain, Slovakia – Zinnat
Italy – Oraxim

500 mg granules for oral suspension
Spain – Zinnat

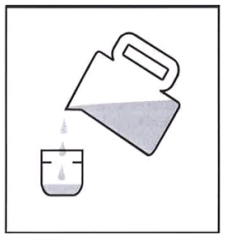
This leaflet was last revised in {**month/YYYY**}.

Instructions for reconstitution

125 mg/5 ml and 250 mg/5 ml granules for oral suspension
Directions for making up the suspension

Please note that the time taken to prepare Zinnat suspension before administration of the first dose will take more than one hour. This includes time for the suspension to settle in the refrigerator.
Please follow the instructions given below very carefully when preparing and storing Zinnat suspension for your child.

Shake the bottle to loosen the content. All the granules should be free-flowing in the bottle. Remove the bottle cap and the heat-seal membrane. If the latter is damaged or not present, the product should be returned to the pharmacist.



Add the total amount of cold water as stated on the label or up to the volume line on the measuring cup provided. If the water was previously boiled it must be allowed to cool to room temperature before adding. Do not mix Zinnat granules for oral suspension with hot or warm liquids. Cold water must be used to prevent the suspension becoming too thick.

Pour the total amount of cold water into the bottle. Replace the bottle cap. Allow the bottle to stand to allow the water to fully soak through the granules; this should take about 1-minute.

Invert the bottle and shake well (for at least 15 seconds) until all the granules have mixed with the water.

Turn the bottle into an upright position and shake well for at least 1-minute until all the granules have blended with the water. Store the Zinnat suspension in the refrigerator immediately at between 2 and 8°C (do not freeze) and let it rest for at least one hour before taking the first dose.

The reconstituted suspension should be refrigerated at all times; when refrigerated between 2 and 8°C, the reconstituted suspension can be kept for up to 10 days.

Always shake the bottle well before taking the medication.

For children who can't take Zinnat using a spoon, a dosing syringe with a 5 mL graduation may be supplied with the pack. If supplied, use the oral dosing syringe to measure your dose accurately:

1. **Remove the bottle cap**. Keep it safely.
2. Hold the bottle firmly. **Push the plastic adapter into the neck of the bottle**.
3. **Insert the syringe** firmly into the adapter.
4. Turn the bottle upside down.
5. **Pull out syringe plunger** until the syringe contains the first part of the child's full dose.

6. Turn the bottle the correct way up. **Remove the syringe** from the adapter.
7. **Put the syringe into the child's mouth,** placing the tip of the syringe against the inside of the child's cheek. **Slowly push the plunger in,** allowing time to swallow. **Don't** push too hard and squirt the liquid into the back of the child's throat or they may choke.
8. **Repeat steps 3 to 7** in the same way until the child has taken the whole dose.
9. **Take the syringe out of the bottle** and **wash** it thoroughly in clean water. Let it dry completely before you use it again.
10. **Close the bottle tightly** with the cap, leaving the adaptor in place.

125 mg, 250 mg, 500 mg granules for oral suspension

Directions for making up suspension from sachets

1. **Empty granules** from sachet into a **glass**.
2. Add a **small amount of cold water**.
3. **Stir well** and **drink straight away.**

➔ **Do not mix the suspension or granules with hot liquids.**