# **1. NAME OF THE DRUG PRODUCT**

## CEFURAXE 500 (CEFUROXIME AXETIL TABLETS USP 500 MG)

Composition	
Each film coated tablet con	ntains
Cefuroxime Axetil	USP
eq. to Cefuroxime	500 mg
Excipients	q.s.
Colour: Titanium Dioxide	BP

# 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Sr. No.	Ingredients	Qty/ Tab (In mg)	Qty Per Batch (Kg)	Use/Function		
1	* Cefuroxime Axetil USP eq. to Cefuroxime	620 mg 500mg	62.00	Active material		
2	Croscarmellose sodium BP	56 mg	5.60	Disintegrant		
3	Microcrystalline Cellulose BP	158 mg	15.80	Diluent/ Disintegrant		
4	Sodium Benzoate BP	1 mg	0.10	Preservative		
5	Indion 234 IHS	50 mg	5.00	Disintegrant/taste masking agent		
6	Magnesium stearate BP	5 mg	0.50	Lubricant		
7	Talcum BP	10 mg	1.00	Glidant		
8	Aerosil (Colloidal Anhydrous Silica) BP	30 mg	3.00	Glidant / Lubricant		
9	Light liquid paraffin BP	0.9 mg	0.09	Lubricant		
Total Material Weight of Uncoated Tablet : 930.00 mg						
10	Isopropyl alcohol BP	0.189	18.90	Solvent		
11	Methylene Chloride BP	0.284	28.40	Solvent		
12	EL-MB-1004 (F/C MOISTURE PROTEIH)	27.90	2.790	Coating agent		
Total	Total Material Weight of film coated Tablets : 958.00 mg					

\* Quantity to be changed based on potency of API.

USP = United States Pharmacopeia

BP = British Pharmacopoeia

IHS= In-house Specification

## **3. PHARMACEUTICAL FORM**

Oral tablets

# 4. CLINICAL PARTICULARS

## 4.1 Therapeutic indications

CEFURAXE is indicated for the treatment of infections caused by susceptible strains of the following organisms in the following infections:

• Pharyngitis and tonsillitis caused by Streptococcus pyogenes.

• Otitis media caused by Streptococcus pneumoniae, Haemophilus influenzae (ampicillin- sensitive and resistant strains), Moraxella (Branhamella) catarrhalis and Streptococcus pyogenes.

• Sinusitis caused by Streptococcus pneumoniae and Haemophilus influenzae.

• Acute and chronic bronchitis caused by Streptococcus pneumoniae, Haemophilus influenzae(ampicillin-sensitive strains) and Haemophilus parainfluenzae (ampicillin-sensitive strains).

- Acute uncomplicated cystitis caused by Escherichia coli and Klebsiella pneumoniae.
- Lyme disease caused by Borrelia burgdorferi

## 4.2 Posology/Dosage and method of administration

CEFURAXE 500 should be taken half an hour after food for optimum absorption. **Dosage:** 

Infection	Dosage				
Adults and Adolescents (13 years and older)					
Acute tonsillitis and pharyngitis, acute	250 mg twice daily				
bacterial sinusitis					
Acute otitis media	500 mg twice daily				
Acute exacerbations of chronic bronchitis	500 mg twice daily				
Cystitis	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)				
Pediatric Patients younger than 13 years					
Acute bacterial otitis media	250 mg every 12 hours				
Acute bacterial maxillary sinusitis	250 mg every 12 hours				

As directed by physician.

## Method of Administration

For oral administration

## **4.3 Contraindications**

Hypersensitivity to cephalosporin antibiotics or to any components of the formulation. Hypersensitivity to penicillin and other beta-lactam antibiotics.

## 4.4 Special warnings and precautions for use

CEFURAXE 500 should be used with caution in patients with; History of gastrointestinal disease, especially ulcerative colitis, regional enteritis or pseudomembranous colitis.

Renal function impairment - A reduced dose may be required.

## 4.5 Interaction with other drug products and other forms of interaction

## **Oral Contraceptives**

Cefuroxime axetil may affect the gut flora, leading to lower estrogen reabsorption and reduced efficacy of combined oral estrogen/progesterone contraceptives. Counsel patients to consider alternate supplementary (non-hormonal) contraceptive measures during treatment.

## **Drugs That Reduce Gastric Acidity**

Drugs that reduce gastric acidity may result in a lower bioavailability of CEFTIN compared with administration in the fasting state. Administration of drugs that reduce gastric acidity may negate the food effect of increased absorption of CEFTIN when administered in the postprandial state. Administer CEFTIN at least 1 hour before or 2 hours after administration of short-acting antacids. Histamine-2 (H2) antagonists and proton pump inhibitors should be avoided.

## Probenecid

Concomitant administration of probenecid with cefuroxime axetil increases serum concentrations of cefuroxime

Coadministration of probenecid with cefuroxime axetil is not recommended.

## **Drug/Laboratory Test Interactions**

A false-positive reaction for glucose in the urine may occur with copper reduction tests (e.g., Benedict's or Fehling's solution), but not with enzyme-based tests for glycosuria. As a false-negative result may occur in the ferricyanide test, it is recommended that either the glucose oxidase or hexokinase method be used to determine blood/plasma glucose levels in patients receiving cefuroxime axetil. The presence of cefuroxime does not interfere with the assay of serum and urine creatinine by the alkaline picrate method.

## 4.6 Fertility, pregnancy and lactation

## **PREGNANCY:**

Pregnancy Category B. Reproduction studies have been performed in mice at doses up to 3,200 mg/kg/day (14 times the recommended maximum human dose based on mg/m2) and in rats at doses up to 1,000 mg/kg/day (9 times the recommended maximum human dose based on mg/m2) and have revealed no evidence of impaired fertility or harm to the fetus due to Cefuroxime Axetil.

There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

## LACTATION:

Because cefuroxime is excreted in human milk, consideration should be given to discontinuing nursing temporarily during treatment with Cefuroxime Axetil.

## 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

Diarrhoea, dizziness, headache, drowsiness, itching/swelling, rash, nausea, vomiting, abdominal pain, stomach upset, gas, headache, itching or rash.

## 4.9 Overdose

Seizures have been reported.

Treatment is symptomatic and supportive. Serum levels of CEFURAXE can be reduced by hemodialysis or peritoneal dialysis.

# 5. PHARMACOLOGICAL PROPERTIES

## **5.1 Pharmacodynamics properties**

# Pharmacotherapeutic group: Antimycotics for systemic use, triazole derivatives:. ATC code: J02AC01

Cefuroxime is a  $\beta$ -lactam type antibiotic. More specifically, it is a second-generation cephalosporin. Cephalosporins work the same way as penicillins: they interfere with the peptidoglycan synthesis of the bacterial wall by inhibiting the final transpeptidation needed for the cross-links. This effect is bactericidal. Cefuroxime is effective against the following organisms: Aerobic Gram-positive Microorganisms: Staphylococcus aureus, Streptococcus pneumoniae, Streptococcus pyogenes. Aerobic Gram-negative Microorganisms: Escherichia coli, Haemophilus influenzae (including beta-lactamase-producing strains), Haemophilus parainfluenzae, Klebsiella pneumoniae, Moraxella catarrhalis (including beta-lactamase-producing strains). Spirochetes: Borrelia burgdorferi. Cefuroxime axetil is the prodrug.

## **5.2 Pharmacokinetic properties**

## Absorption:

Cefuroxime axetil is an oral prodrug of cefuroxime. After oral absorption, cefuroxime axetil is hydrolysed in the intestinal mucosa and blood to release cefuroxime into the plasma. Oral absorption is optimal when administered with food. Peak serum levels of cefuroxime occur approximately 2 to 3 hours after oral dosing, when taken with food.

## **Distribution:**

Protein binding is approximately 33% to 50%.

## Metabolism & Excretion:

Cefuroxime is not metabolised and is excreted unchanged in the urine by glomerular filtration and tubular secretion. The elimination half-life is between 1 and 1,5 hours after oral dosing. The elimination half-life is prolonged with renal impairment. Serum levels of cefuroxime are reduced by dialysis.

## **5.3 Preclinical safety data**

Preclinical data from conventional studies on repeat-dose/general toxicity, genotoxicity or carcinogenicity indicate no special hazard for humans not already considered in other sections of the SPC.

In reproduction toxicity studies in rat an increased incidence of hydronephrosis and extension of renal pelvis was reported and embryonal lethality was increased. An increase in anatomical variations and delayed ossification was noted as well as prolonged delivery and dystocia. In reproduction toxicity studies in rabbits abortions were recorded.

# 6. PHARMACEUTICAL PARTICULARS

## 6.1 List of excipients

Cross camellose sodium BP	Disintegrant
MCCP (Microcrystalline Cellulose Powder)	Diluent/
Sodium Benzoate BP	Preservative
Indolin 234 IHS	Disintegrant/taste
Magnesium stearate BP	Lubricant
Talcum BP	Glidant
Aerosil( Colloidal Anhydrous Silica) BP	Glidant /
Light liquid paraffin BP	Lubricant
Isopropyl alcohol BP	Solvent
Methylene Chloride BP	Solvent

## **6.2 Incompatibilities**

None

## 6.3 Shelf life

36 months

## 6.4 Special precautions for storage

Keep in cool & Dry place, below 30°C. Protect from light. KEEP OUT OF REACH OF CHILDREN.

## 6.5 Nature and contents of container

1 x 10 Tablets in Alu-Alu pack, in a mono-carton.

#### **6.6 Special precautions for disposal and other handling** KEEP OUT OF THE REACH AND SIGHT OF CHILDREN.

## 7. APPLICANT/MANUFACTURER

Applicant:

# KINGZY PHARMACEUTICALS LTD.,

NO 100 EAST-WEST ROAD, RUMUODARA PHC, RIVERS STATE

Exported by: ROENTGEN IMPEX NO. 2063/A, RABARI VAS, KHORAJ VILLAGE, DIST. GANDHINAGAR-382735, GUJARAT, INDIA

#### Manufactured by: M/s. HEALTH CARE FORMULATIONS PVT. LTD, Survey No. C/8, SARDAR ESTATE, AJWA Road, CITY: VADODARA-390019, GUJARAT STATE, INDIA