

# Nepasol

Sterile  
Ophthalmic  
Suspension  
(Nepafenac)

نیا سول  
(نیپافینیک)  
جراثیم سے پاک  
آنکھوں کے قطرے

## COMPOSITION:

Each ml contains:

Nepafenac .....1mg  
(Innovator's specifications)

## DESCRIPTION:

**NEPASOL** (nepafenac ophthalmic suspension) 0.1% is a sterile, topical, non steroidal anti-inflammatory (NSAID) pro drug for ophthalmic use.

## MECHANISM OF ACTION

**NEPASOL** suspension contains nepafenac (0.1%), a nonsteroidal anti-inflammatory and analgesic prodrug. After topical ocular dosing, nepafenac penetrates the cornea and is converted by ocular tissue hydrolases to amfenac, a nonsteroidal anti-inflammatory drug. Amfenac is thought to inhibit the action of prostaglandin H synthase (cyclooxygenase), an enzyme required for prostaglandin production.

## INDICATIONS AND USAGE:

**NEPASOL** ophthalmic suspension is indicated for the treatment of pain and inflammation associated with cataract surgery. Reduction in risk of macular edema (ME) associated with cataract surgery in diabetic patients.

## DOSAGE AND ADMINISTRATION:

Shake well before use. One drop of **NEPASOL** ophthalmic suspension should be applied to the affected eye(s) three-times-daily beginning 1 day prior to cataract surgery, continued on the day of surgery and through the first 2 weeks of the postoperative period. **NEPASOL** ophthalmic suspension may be administered in conjunction with other topical ophthalmic medications such as beta-blockers, carbonic anhydrase inhibitors, alpha-agonists, cycloplegics, and mydriatics.

## PHARMACOKINETICS:

Low but quantifiable plasma concentrations of nepafenac and amfenac were observed in the majority of subjects 2 and 3 hours postdose, respectively, following bilateral topical ocular three-times-daily dosing of nepafenac ophthalmic suspension, 0.1%. The mean steady-state C<sub>max</sub> for nepafenac and for amfenac were 0.310 ± 0.104 ng/ml and 0.422 ± 0.121 ng/ml, respectively, following ocular administration. Nepafenac at concentrations up to 300 ng/mL did not inhibit the in vitro metabolism of 6 specific marker substrates of cytochrome P450 (CYP) isozymes (CYP1A2, CYP2C9, CYP2C19, CYP2D6, CYP2E1, and CYP3A4). Therefore, drug-drug interactions involving CYP mediated metabolism of concomitantly administered drugs are unlikely. Drug-drug interactions mediated by protein binding are also unlikely.

## WARNINGS:

There is the potential for cross-sensitivity to acetylsalicylic acid, phenyl acetic acid derivatives, and other nonsteroidal anti-inflammatory agents. Therefore, caution should be used when treating individuals who have previously exhibited sensitivities to these drugs.

With some nonsteroidal anti-inflammatory drugs including **NEPASOL** suspension, there exists the potential for increased bleeding time due to interference with thrombocyte aggregation. There have been reports that ocularly applied nonsteroidal anti-inflammatory drugs may cause increased bleeding of ocular tissues (including hyphemas) in conjunction with ocular surgery.

## PRECAUTIONS:

• **General:** Topical nonsteroidal anti-inflammatory drugs (NSAIDs) including **NEPASOL** suspension, may slow or delay healing. Topical corticosteroids are also known to slow or delay healing. Concomitant use of topical NSAIDs and topical steroids may increase the potential for healing problems.

Use of topical NSAIDs may result in keratitis. In some susceptible patients, continued use of topical NSAIDs may result in epithelial breakdown, corneal thinning, corneal erosion, corneal ulceration or corneal perforation.

These events may be sight threatening.

Patients with evidence of corneal epithelial breakdown should immediately discontinue use of topical NSAIDs including **NEPASOL** suspension and should be closely monitored for corneal health.

Postmarketing experience with topical NSAIDs suggests that patients with complicated ocular surgeries, corneal denervation, corneal epithelial defects, diabetes mellitus, ocular surface diseases (e.g., dry eye syndrome), rheumatoid arthritis, or repeat ocular surgeries within a short period of time may be at increased risk for corneal adverse events which may become sight threatening. Topical NSAIDs should be used with caution in these patients.

It is recommended that **NEPASOL** ophthalmic suspension be used with caution in patients with known bleeding tendencies or who are receiving other medications which may prolong bleeding time.

## Information for Patients:

**NEPASOL** ophthalmic suspension should not be administered while wearing contact lenses.

## Carcinogenesis, Mutagenesis, Impairment of Fertility:

Nepafenac has not been evaluated in long-term carcinogenicity studies. Increased chromosomal aberrations were observed in Chinese hamster ovary cells exposed in vitro to nepafenac suspension. Nepafenac was not mutagenic in the Ames assay or in

result in an increase in the formation of micronucleated polychromatic erythrocytes in vivo in the mouse micronucleus assay in the bone marrow of mice.

Nepafenac did not impair fertility when administered orally to male and female rats at 3 mg/kg (approximately 90 and 380 times the plasma exposure to the parent drug, nepafenac, and the active metabolite, amfenac, respectively, at the recommended human topical ophthalmic dose).

## Pregnancy: Teratogenic Effects.

**Pregnancy Category C:** Reproduction studies performed with nepafenac in rabbits and rats at oral doses up to 10 mg/kg/day have revealed no evidence of teratogenicity due to nepafenac, despite the induction of maternal toxicity. At this dose, the animal plasma exposure to nepafenac and amfenac was approximately 260 and 2400 times human plasma exposure at the recommended human topical ophthalmic dose for rats and 80 and 680 times human plasma exposure for rabbits, respectively. In rats, maternally toxic doses >10 mg/kg were associated with dystocia, increased postimplantation loss, reduced fetal weights and growth, and reduced fetal survival. Nepafenac has been shown to cross the placental barrier in rats. There are no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, **NEPASOL** suspension should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

## Non-teratogenic Effects:

Because of the known effects of prostaglandin biosynthesis inhibiting drugs on the fetal cardiovascular system (closure of the ductus arteriosus), the use of **NEPASOL** ophthalmic suspension during late pregnancy should be avoided.

## Nursing Mothers:

**NEPASOL** ophthalmic suspension is excreted in the milk of pregnant rats. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when **NEPASOL** ophthalmic suspension is administered to a nursing woman.

## Pediatric Use:

The safety and effectiveness of **NEPASOL** suspension in pediatric patients below the age of 10 years have not been established.

## Geriatric Use:

No overall differences in safety and effectiveness have been observed between elderly and younger patients.

## ADVERSE REACTIONS:

In controlled clinical studies, the most frequently reported ocular adverse events following cataract surgery were capsular opacity, decreased visual acuity, foreign body sensation, increased intraocular pressure, and sticky sensation. These events occurred in approximately 5 to 10% of patients.

Other ocular adverse events occurring at an incidence of approximately 1 to 5% included conjunctival edema, corneal edema, dry eye, lid margin crusting, ocular discomfort, ocular hyperemia, ocular pain, ocular pruritus, photophobia, tearing and vitreous detachment. Some of these events may be the consequence of the cataract surgical procedure.

Nonocular adverse events reported at an incidence of 1 to 4% included headache, hypertension, nausea/vomiting, and sinusitis.

## CONTRAINDICATIONS:

**NEPASOL** ophthalmic suspension is contraindicated in patients with previously demonstrated hypersensitivity to any of the ingredients in the formulation or to other NSAIDs

## STORAGE & INSTRUCTIONS:

Store between 15-25°C. Protect from heat, sunlight, moisture and do not freeze. Keep away from the reach of children. Use within one month after first opening the bottle and discard the remaining portion.

Do not touch the dropper tip to any surface as this may contaminate the solution.

To be sold on the prescription of a registered medical practitioner only.

## SHAKE WELL BEFORE USE.

For ophthalmic use only.

## HOW SUPPLIED:

5ml sterile ophthalmic suspension in plastic dropper bottle.

Manufactured by:

**PHARMA SOL**

**PRIVATE LIMITED**

Plot # 549, Sundar Industrial Estate, Lahore, Pakistan.

خوراک و ہدایات: ڈاکٹر کی ہدایات کے مطابق استعمال کریں۔ دو کو ۱۵-۲۵ ڈگری سینٹی گریڈ درجہ حرارت کے درمیان رکھیں۔ دھوپ، گرمی، نمی، اور منجمد ہونے سے بچائیں۔ بچوں کی پہنچ سے دور رکھیں۔ پہلی دفعہ بوتل کھولنے کے بعد دو کو ایک ماہ تک استعمال کریں۔ استعمال سے پہلے بوتل اچھی طرح ہلا لیں۔ صرف مستند ڈاکٹر کے نسخے کے مطابق فروخت کریں۔