

KETOROLAC TROMETHAMINE - ketorolac tromethamine solution

Micro Labs Limited

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use **KETOROLAC TROMETHAMINE OPHTHALMIC SOLUTION 0.5%** safely and effectively. See full prescribing information for **KETOROLAC TROMETHAMINE OPHTHALMIC SOLUTION 0.5%**.

KETOROLAC TROMETHAMINE ophthalmic solution 0.5%, for topical ophthalmic use
Initial U.S. Approval: 1991

RECENT MAJOR CHANGES

Warnings and Precautions (5.5)

9/2025

INDICATIONS AND USAGE

Ketorolac tromethamine ophthalmic solution 0.5% is a nonsteroidal anti-inflammatory drug (NSAID) indicated for:

- The temporary relief of ocular itching due to seasonal allergic conjunctivitis. (1)
- The treatment of inflammation following cataract surgery. (1)

DOSAGE AND ADMINISTRATION

- For temporary relief of ocular itching due to seasonal allergic conjunctivitis, apply one drop of ketorolac tromethamine ophthalmic solution 0.5% to the affected eye(s) four times a day.
- For the treatment of postoperative inflammation in patients who have undergone cataract extraction, apply one drop of ketorolac tromethamine ophthalmic solution 0.5% to the affected eye four times daily beginning 24 hours after cataract surgery and continuing through the first 2 weeks of the postoperative period. (2.1)

DOSAGE FORMS AND STRENGTHS

Ophthalmic solution containing 0.5% (5 mg/mL) ketorolac tromethamine. (3)

- 5 mL size bottle filled with 3 mL, 5 mL size bottle filled with 5 mL and 10 mL size bottle filled with 10 mL of ketorolac tromethamine ophthalmic solution, 0.5% (5 mg/mL)

CONTRAINDICATIONS

Hypersensitivity to any component of this product. (4)

WARNINGS AND PRECAUTIONS

- Delayed healing (5.1)
- Cross-sensitivity or hypersensitivity (5.2)
- Increased bleeding time due to interference with thrombocyte aggregation (5.3)
- Corneal effects including keratitis (5.4)

ADVERSE REACTIONS

The most frequent adverse reactions reported by up to 40% of patients participating in clinical trials have been transient stinging and burning on instillation. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Micro Labs Limited at 1-855-839-8195 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

See 17 for PATIENT COUNSELING INFORMATION.

FULL PRESCRIBING INFORMATION: CONTENTS*

1 INDICATIONS AND USAGE

2 DOSAGE AND ADMINISTRATION

- 2.1 Recommended Dosage
- 2.2 Use with Other Topical Ophthalmic Medications

3 DOSAGE FORMS AND STRENGTHS

4 CONTRAINDICATIONS

5 WARNINGS AND PRECAUTIONS

- 5.1 Delayed Healing
- 5.2 Cross-Sensitivity or Hypersensitivity
- 5.3 Increased Bleeding Time
- 5.4 Corneal Effects
- 5.5 Risk of Contamination
- 5.6 Contact Lens Wear

6 ADVERSE REACTIONS

- 6.1 Clinical Trials Experience
- 6.2 Postmarketing Experience

8 USE IN SPECIFIC POPULATIONS

- 8.1 Pregnancy
- 8.2 Lactation
- 8.4 Pediatric Use
- 8.5 Geriatric Use

11 DESCRIPTION

12 CLINICAL PHARMACOLOGY

- 12.1 Mechanism of Action
- 12.3 Pharmacokinetics

14 CLINICAL STUDIES

16 HOW SUPPLIED/STORAGE AND HANDLING

17 PATIENT COUNSELING INFORMATION

* Sections or subsections omitted from the full prescribing information are not listed.

FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

Ketorolac tromethamine ophthalmic solution 0.5% is indicated for the temporary relief of ocular itching due to seasonal allergic conjunctivitis. Ketorolac tromethamine ophthalmic solution 0.5% is also indicated for the treatment of postoperative inflammation in patients who have undergone cataract extraction.

2 DOSAGE AND ADMINISTRATION

2.1 Recommended Dosage

Temporary Relief of Ocular Itching Due to Seasonal Allergic Conjunctivitis

The recommended dosage of ketorolac tromethamine ophthalmic solution 0.5% is one drop four times a day to the affected eye(s) for the temporary relief of ocular itching due to seasonal allergic conjunctivitis.

-

Treatment of Postoperative Inflammation in Patients Who Have Undergone Cataract Extraction

Apply one drop of ketorolac tromethamine ophthalmic solution 0.5% to the affected eye four times daily beginning 24 hours after cataract surgery and continuing through the first 2 weeks of the postoperative period for the treatment of postoperative inflammation in patients who have undergone cataract extraction.

2.2 Use with Other Topical Ophthalmic Medications

Ketorolac tromethamine ophthalmic solution 0.5% has been safely administered in conjunction with other ophthalmic medications such as antibiotics, alpha-agonists, beta blockers, carbonic anhydrase inhibitors, cycloplegics, and mydriatics. Drops should be administered at least 5 minutes apart.

3 DOSAGE FORMS AND STRENGTHS

5 mL size bottle filled with 3 mL, 5 mL size bottle filled with 5 mL and 10 mL size bottle filled with 10 mL of ketorolac tromethamine ophthalmic solution, 0.5% (5 mg/mL).

4 CONTRAINDICATIONS

Ketorolac tromethamine ophthalmic solution 0.5% is contraindicated in patients with previously demonstrated hypersensitivity to any of the ingredients in the formulation [*see Adverse Reactions (6.1)*].

5 WARNINGS AND PRECAUTIONS

5.1 Delayed Healing

Topical nonsteroidal anti-inflammatory drugs (NSAIDs) 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.

5.2 Cross-Sensitivity or Hypersensitivity

There is the potential for cross-sensitivity to acetylsalicylic acid, phenylacetic acid

derivatives, and other NSAIDs. There have been reports of bronchospasm or exacerbation of asthma associated with the use of ketorolac tromethamine ophthalmic solution in patients who have either a known hypersensitivity to aspirin/non-steroidal anti-inflammatory drugs or a past medical history of asthma. Therefore, caution should be used when treating individuals who have previously exhibited sensitivities to these drugs.

5.3 Increased Bleeding Time

With some NSAIDs, 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.

It is recommended that ketorolac tromethamine ophthalmic solution 0.5% be used with caution in patients with known bleeding tendencies or who are receiving other medications, which may prolong bleeding time.

5.4 Corneal Effects

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 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.

Postmarketing experience with topical NSAIDs also suggests that use more than 1 day prior to surgery or use beyond 14 days post-surgery may increase patient risk for the occurrence and severity of corneal adverse events.

5.5 Risk of Contamination

Avoid allowing the tip of the bottle to contact the eye or surrounding structures because this could cause the tip to become contaminated by common bacteria known to cause ocular infections. Serious damage to the eye and subsequent loss of vision may result from using contaminated solutions.

5.6 Contact Lens Wear

Ketorolac tromethamine ophthalmic solution 0.5% should not be administered while wearing contact lenses.

6 ADVERSE REACTIONS

The following serious adverse reactions are described elsewhere in the labeling:

- Delayed Healing [see *Warnings and Precautions (5.1)*]
- Cross-Sensitivity or Hypersensitivity [see *Warnings and Precautions (5.2)*]
- Increased Bleeding Time [see *Warnings and Precautions (5.3)*]
- Corneal Effects [see *Warnings and Precautions (5.4)*]

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to the rates in the clinical trials of another drug and may not reflect the rates observed in practice.

The most frequent adverse reactions reported with the use of ketorolac tromethamine ophthalmic solutions have been transient stinging and burning on instillation. These reactions were reported by up to 40% of patients participating in clinical trials.

Other adverse reactions occurring approximately 1% to 10% of the time during treatment with ketorolac tromethamine ophthalmic solutions included allergic reactions (including eye swelling, hyperemia, and pruritus), corneal edema, iritis, ocular inflammation, ocular irritation, ocular pain, superficial keratitis, and superficial ocular infections.

Other adverse reactions reported rarely with the use of ketorolac tromethamine ophthalmic solutions included: corneal infiltrates, corneal ulcer, eye dryness, headaches, and visual disturbance (blurry vision).

6.2 Postmarketing Experience

The following adverse reactions have been identified during postapproval use of ketorolac tromethamine ophthalmic solution 0.5% in clinical practice. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to the drug.

Eye Disorders: corneal erosion, corneal perforation, corneal thinning, and epithelial breakdown. *Respiratory, Thoracic and Mediastinal Disorders:* bronchospasm or exacerbation of asthma.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summary

There are no adequate and well-controlled studies with ketorolac tromethamine ophthalmic solution 0.5% in pregnant women. No evidence of teratogenicity has been

observed in rats or rabbits with ketorolac tromethamine ophthalmic solution 0.5% at clinically relevant doses.

In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

-

Clinical Considerations

Because of the known effects of prostaglandin-inhibiting drugs on the fetal cardiovascular system (closure of the ductus arteriosus), the use of ketorolac tromethamine ophthalmic solution 0.5% during late pregnancy should be avoided.

8.2 Lactation

Risk Summary

-

It is not known whether ketorolac when given topically is present in human milk. Because many drugs are excreted in human milk, caution should be exercised when ketorolac tromethamine ophthalmic solution 0.5% is administered to a nursing woman.

8.4 Pediatric Use

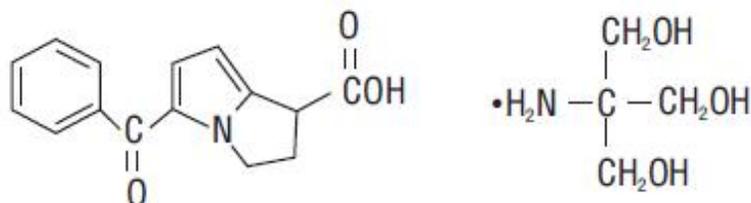
The safety and effectiveness of ketorolac tromethamine ophthalmic solution 0.5% have not been established in pediatric patients younger than 2 years old.

8.5 Geriatric Use

No overall differences in safety or effectiveness have been observed between elderly and other adult patients.

11 DESCRIPTION

Ketorolac tromethamine ophthalmic solution 0.5% is a member of the pyrrolo-pyrrole group of nonsteroidal anti-inflammatory drugs (NSAIDs) for topical ophthalmic use. Its chemical name is (±)-5-Benzoyl-2,3-dihydro-1Hpyrrolizine-1-carboxylic acid, compound with 2-amino-2-(hydroxy methyl)-1,3-propanediol (1:1) and it has the following structure:



Ketorolac tromethamine ophthalmic solution 0.5% is supplied as a sterile isotonic aqueous 0.5% solution, with a pH of 7.4. Ketorolac tromethamine ophthalmic solution 0.5% contains a racemic mixture of R-(+) and S-(-)- ketorolac tromethamine. Ketorolac tromethamine may exist in three crystal forms. All forms are equally soluble in water. The pKa of ketorolac is 3.5. This white to off-white crystalline substance discolors on prolonged exposure to light. The molecular weight of ketorolac tromethamine is 376.41. The osmolality of ketorolac tromethamine ophthalmic solution 0.5% is 290 mOsmol/kg.

Each mL of ketorolac tromethamine ophthalmic solution contains: **Active:**ketorolac tromethamine 0.5%. **Preservative:**benzalkonium chloride 0.01%. **Inactives:**edetate disodium 0.1%; octoxynol 40; water for injection; sodium chloride; hydrochloric acid and/or sodium hydroxide to adjust the pH.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Ketorolac tromethamine is a nonsteroidal anti-inflammatory drug which, when administered systemically, has demonstrated analgesic, anti-inflammatory, and anti-pyretic activity. The mechanism of its action is thought to be due to its ability to inhibit prostaglandin biosynthesis.

12.3 Pharmacokinetics

Two drops of 0.5% ketorolac tromethamine ophthalmic solution instilled into the eyes of patients 12 hours and 1 hour prior to cataract extraction achieved a mean ketorolac concentration of 95 ng/mL in the aqueous humor of 8 of 9 eyes tested (range 40 to 170 ng/mL).

One drop of 0.5% ketorolac tromethamine ophthalmic solution was instilled into 1 eye and 1 drop of vehicle into the other eye TID in 26 healthy subjects. Five (5) of 26 subjects had detectable concentrations of ketorolac in their plasma (range 11 to 23 ng/mL) at Day 10 during topical ocular treatment. The range of concentrations following TID dosing of 0.5% ketorolac tromethamine ophthalmic solution are approximately 4 to 8% of the steady state mean minimum plasma concentration observed following four times daily oral administration of 10 mg ketorolac in humans (290 ± 70 ng/mL).

14 CLINICAL STUDIES

Two controlled clinical studies showed that ketorolac tromethamine ophthalmic solution was significantly more effective than its vehicle in relieving ocular itching caused by seasonal allergic conjunctivitis.

Two controlled clinical studies showed that patients treated for two weeks with ketorolac tromethamine ophthalmic solution were less likely to have measurable signs of inflammation (cell and flare) than patients treated with its vehicle.

Results from clinical studies indicate that ketorolac tromethamine has no significant effect upon intraocular pressure; however, changes in intraocular pressure may occur following cataract surgery.

16 HOW SUPPLIED/STORAGE AND HANDLING

Ketorolac Tromethamine Ophthalmic solution 0.5% is supplied sterile, in white opaque LDPE bottles with white opaque LDPE Nozzles with HDPE grey caps as follows.

3 mL in 5 mL bottle	NDC42571-137-31
5 mL in 5 mL bottle	NDC42571-137-25
10 mL in 10 mL bottle	NDC42571-137-26

Storage: Store at 20° to 25°C (68° to 77°F) [see USP Controlled Room Temperature].

17 PATIENT COUNSELING INFORMATION

Slow or Delayed Healing

Advise patients of the possibility that slow or delayed healing may occur while using nonsteroidal anti-inflammatory drugs (NSAIDs).

Avoiding Contamination of the Product

Instruct patients to avoid allowing the tip of the bottle to contact the eye or surrounding structures because this could cause the tip to become contaminated by common bacteria known to cause ocular infections. Serious damage to the eye and subsequent loss of vision may result from using contaminated solutions.

Contact Lens Wear

Advise patients that ketorolac tromethamine ophthalmic solution 0.5% should not be administered while wearing contact lenses.

Intercurrent Ocular Conditions

Advise patients that if they develop an intercurrent ocular condition (e.g., trauma or infection) or have ocular surgery, they should immediately seek their physician's advice concerning the continued use of ketorolac tromethamine ophthalmic solution 0.5%.

Concomitant Topical Ocular Therapy

Advise patients that if more than one topical ophthalmic medication is being used, the medicines should be administered at least 5 minutes apart.

Manufactured by:

Micro Labs Limited

Bangalore-560099, INDIA.

Manufactured for:

Micro Labs USA Inc.

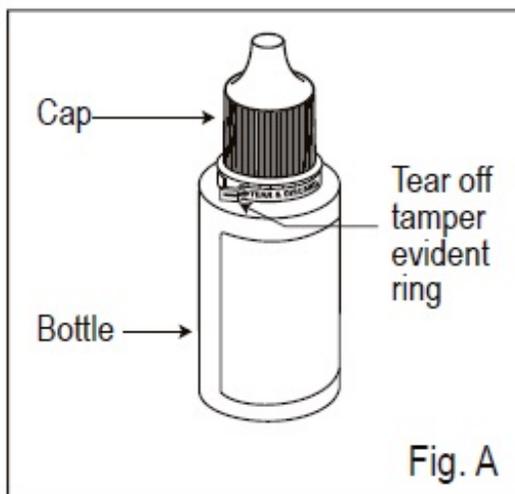
Somerset, NJ 08873

Rev. 09/2025

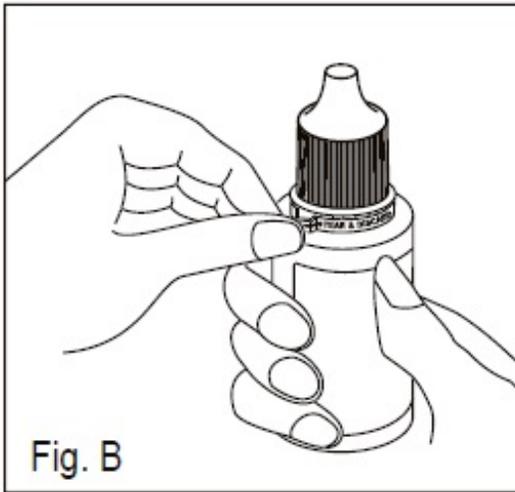
INSTRUCTIONS FOR USE:

Before you use Ketorolac Tromethamine Ophthalmic solution 0.5% for the first time:

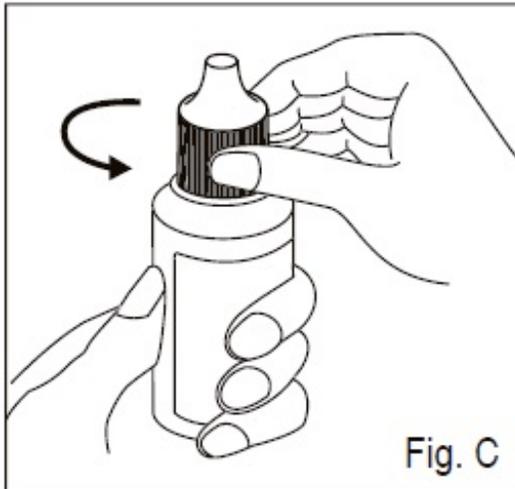
1. Check to make sure that the tamper evident ring between the bottle and the cap is not broken (**See Figure A**). If the tamper evident ring is broken or missing, contact your pharmacist.



2. Tear off the tamper evident ring (**See Figure B**).



3. To open the bottle, remove the cap by turning it in the counterclockwise direction (**See Figure C**).



This Instructions for Use has been approved by the U.S. Food and Drug Administration.

Rev. 09/2025

PACKAGE LABEL.PRINCIPAL DISPLAY PANEL

NDC 42571-137-31

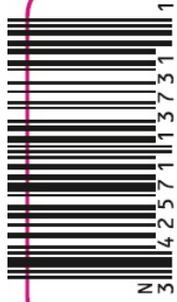
Rx Only

Ketorolac Tromethamine Ophthalmic Solution

0.5%

3 mL

FOR USE IN EYES ONLY



Rx Only

NDC 42571-137-31

Protect from light.

Code: KR/DRUGS/KTK/28/357/2006



**Ketorolac
Tromethamine
Ophthalmic
Solution**

Manufactured by:
Micro Labs Limited
INDIA.

Artwork Code



0.5%

3 mL

Manufactured for:
Micro Labs USA Inc.
Somerset, NJ 08873

Rev. 09/2024

**FOR USE IN THE
EYES ONLY**

NDC 42571-137-31

Rx Only

Ketorolac Tromethamine Ophthalmic Solution

0.5%

3 mL

FOR USE IN EYES ONLY



Pharma Code

Artwork code

NDC 42571-137-31 Rx Only

Ketorolac Tromethamine Ophthalmic Solution

0.5%

FOR USE IN THE EYES ONLY

3 mL



Each mL contains: Active:
Ketorolac tromethamine 0.5%.

Preservative:
Benzalkonium chloride 0.01%.

Inactives:
Edetate disodium 0.1%, octoxynol 40, water for injection, sodium chloride, and hydrochloric acid and/or sodium hydroxide to adjust pH to 7.4.

Usual Dosage:
One drop four times a day. Refer to package insert.

Note:
Store at 20° to 25°C (68° to 77°F) [see USP Controlled Room Temperature].

NDC 42571-137-31 Rx Only

Ketorolac Tromethamine Ophthalmic Solution

0.5%

FOR USE IN THE EYES ONLY

3 mL



Code: KR/DRUGS/KTK/28/357/2006

Manufactured by:
Micro Labs Limited
INDIA.

Manufactured for:
Micro Labs USA Inc.
Somerset, NJ 08873

Rev. 09/2024



N 3 4 2 5 7 1 1 1 3 7 3 1 1 1

Rx Only

Ketorolac Tromethamine Ophthalmic Solution

0.5%

FOR USE IN THE EYES ONLY

3 mL



Pharma Code

KETOROLAC TROMETHAMINE

ketorolac tromethamine solution

Product Information

Product Type	HUMAN PRESCRIPTION DRUG	Item Code (Source)	NDC:42571-137
Route of Administration	OPHTHALMIC		

Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
KETOROLAC TROMETHAMINE (UNII: 4EVE5946BQ) (KETOROLAC - UNII:YZI5105V0L)	KETOROLAC TROMETHAMINE	5 mg in 1 mL

Inactive Ingredients

Ingredient Name	Strength
SODIUM CHLORIDE (UNII: 451W47IQ8X)	
EDETATE DISODIUM (UNII: 7FLD91C86K)	
OCTOXYNOL-40 (UNII: 9T1C662FKS)	
HYDROCHLORIC ACID (UNII: QTT17582CB)	
WATER (UNII: 059QF0K00R)	
BENZALKONIUM CHLORIDE (UNII: F5UM2KM3W7)	
SODIUM HYDROXIDE (UNII: 55X04QC32I)	

Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:42571-137-31	3 mL in 1 BOTTLE; Type 0: Not a Combination Product	06/03/2019	
2	NDC:42571-137-25	5 mL in 1 BOTTLE; Type 0: Not a Combination Product	06/03/2019	
3	NDC:42571-137-26	10 mL in 1 BOTTLE; Type 0: Not a Combination Product	06/03/2019	

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA203410	06/03/2019	

Labeler - Micro Labs Limited (862174955)

Establishment

Name	Address	ID/FEI	Business Operations
Micro Labs Limited		677600482	analysis(42571-137) , label(42571-137) , manufacture(42571-137) , pack(42571-137)