1. NAME OF THE MEDICINAL PRODUCT

CYCLOGYL 0.5% eye drops, solution
CYCLOGYL 1% eye drops, solution

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

CYLOGYL 0.5%: 1 ml solution contains 5 mg cyclopentolate hydrochloride.
CYCLOGYL 1%: 1 ml solution contains 10 mg cyclopentolate hydrochloride.
Excipient with known effect: this medicine contains 0,1 mg benzalkonium chloride and 12 mg boric acid (2,1 mg boron) in each ml.
For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Eye drops, solution
A clear, colourless to pale yellow solution

4. CLINICAL PARTICULARS

4.1. Therapeutic indications

CYCLOGYL is indicated in adults for treatment for:

- Cycloplegia and mydriasis for refractometry, eye fundus-examinations.
- Synechiae prophylaxis in case of iritis, irido-cyclitis, keratitis, choroiditis.
- Irido-crystalline lens adhesions prophylaxis in case of inflammations of the anterior segment of the globe, in combination with topical miotics (alternate treatment).

CYCLOGYL 0,5% is indicated in children from the age of 0 months for refractometry and eye fundus-examination.
CYCLOGYL 1% is indicated in children from the age of 1 year for refractometry and eye fundus- examination.

4.2. Posology and method of administration

Posology

Refraction and eye fundus-examination

Instil 1 drop, to be repeated after 10 minutes. Maximal cycloplegia is obtained 45 minutes after the first instillation, and continues for 30 minutes: the examination should preferably take place between 45 and 75 minutes.

Paediatric population

Children

Instil 1 or 2 drops of 0,5% or 1% solution in the eye which may be repeated 5 to 10 minutes later by a second application of 0,5% or 1% solution, if necessary.

Infants

A single instillation of 1 drop of 0.5% in the eye. To minimize absorption, apply pressure over the nasolacrimal sac for 2 to 3 minutes. Observe infant closely for at least 30 minutes following instillation. Individuals with heavily pigmented irises may require higher strengths.

Cyclopentolate 1% should not be used in infants less than 1 year old as concentrations greater than 0,5% are not recommended due to the risk of serious systemic side effects (See section 4.4, section 4.8 and section 4.9).

The lowest concentration and number of drops necessary to produce the desired effect should always be used. If any medicine misses the eye, wash away immediately.

Synechiae prophylaxis by relaxation of the irido-ciliary muscles
Instil 1 drop 3 to 4 times a day during the whole inflammation process.

Irido-crystalline lens adhesions prophylaxis
Instil 1 drop, followed 6 hours later by 1 drop pilocarpine 2%; this treatment is repeated every 24 hours.

Cycloplegia resistance may occur in individuals with heavily pigmented irises and persons of pigmented race; the dosage will be adapted accordingly.

There is no data to support paediatric dosing other than the indication of refraction and eye fundus examination.

Method of administration For ocular use only.

To prevent contamination of the dropper tip and solution, care must be taken not to touch the eyelids, surrounding areas or other surfaces with the dropper tip. Keep the bottle tightly closed when not in use.

Nasolacrimal occlusion or gently closing the eyelid after administration is recommended. This may reduce the systemic absorption of medicinal products administered via the ocular route and result in a decrease in systemic adverse reactions.

If more than one eye preparation is being used, the products must be administered at least 5 minutes apart. Eye ointments should be administered last (see section 4.5).

4.3. Contraindications

- Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.
- Patients with known or suspected angle-closure glaucoma or anatomical narrow angle.

4.4. Special warnings and precautions for use

- For ocular use only. Not for injection or ingestion.

- In the elderly and others where increased intraocular pressure may be encountered, mydriatics and cycloplegics should be used cautiously.

Due to the risk of precipitating angle-closure glaucoma, an estimation of the angle of the anterior chamber should be made prior to use.

CYCLOGYL may cause increased intraocular pressure. The possibility of undiagnosed glaucoma should be considered in some patients, such as elderly patients. Determine the intraocular pressure and an estimation of the depth of the angle of the anterior chamber prior to initiation of therapy to avoid glaucoma attacks (See section 4.8).

- Use with caution in patients, especially children, who have previously had a severe systemic reaction to atropine.

- Cyclopentolate-induced psychotic reactions and behavioural disturbances and other CNS disturbances may occur in patients with increased

susceptibility to anticholinergic drugs (See section 4.8). Use with caution in children and elderly patients, but reactions may occur at any age.

• Because of the risk of provoking hyperthermia, use with caution in patients, especially children, who may be exposed to elevated environmental temperatures or who are febrile.

• Patients may experience sensitivity to light and should protect eyes in bright illumination. (See section 4.8)

• Caution should also be observed in case of prostatic hypertrophy and senile dementia (mainly in prolonged use).

• Newborns and infants (especially premature and low weight infants) are especially prone to CNS and cardiopulmonary side effects from systemic absorption.

• Patients should be advised not to drive or use hazardous machinery while their pupils remain dilated. Patients may experience sensitivity to light and should protect eyes in bright illumination. (See Section 4.8).

• This medicine contains 0,1 mg benzalkonium chloride in each ml. Benzalkonium chloride may be absorbed by soft contact lenses and may change the colour of the contact lenses. Patients should be instructed to remove contact lenses before using this medicine and put them back 15 minutes afterwards. Benzalkonium chloride may cause eye irritation, symptoms of dry eyes and may affect the tear film and corneal surface. Should be used with caution in dry eye patients and in patients where the cornea may be compromised. Patients should be monitored in case of prolonged use.

Paediatric population

• Newborn and infants (especially premature and low weight infants), young children, or children with Down syndrome, spastic paralysis or brain damage are particularly susceptible to central nervous system disturbances, cardiopulmonary and gastrointestinal toxicity from systemic absorption of cyclopentolate (See Section 4.8). Use with extreme caution, if at all, in these groups. The lowest dose to produce the desire effects should always be used.

• Seizures and acute psychosis induced by cyclopentolate are especially prominent in children (See Section 4.8). Cyclopentolate should be used with caution in children with known epilepsy.

- Fair-skinned children with blue eyes may exhibit an increased response and/or increased susceptibility to adverse reactions.
- Prolonged administration of cyclopentolate eye drops during the first 3 months of life without appropriate medical supervision may increase the risk of developing amblyopia.
- Observe infants closely for at least 30 minutes following instillation.
- Feeding intolerance (see Section 4.8) and necrotizing enterocolitis (NEC) in preterm infants may follow ophthalmic use of this product in infants. Cases of NEC have been reported in preterm infants following administration; however, causality has not been established. It is recommended that feeding be withheld for 4 hours after examination in infants.
- Parents should be warned not to get this preparation in their children's mouth or on their cheeks and to wash their hands and the child's hands or cheeks following administration.
- This medicine should not be given to a child younger than 2 years without medical advice, as it contains boron and may impair fertility in the future.

4.5. Interaction with other medicinal products and other forms of interaction

The mydriatic effect (pupillary dilation) of CYCLOGYL is hampered by the local administration of eye drops of the same group as pilocarpine.
Cyclopentolate can antagonise or reverse the anti-glaucoma action of miotics with a direct or indirect cholinergic effect, such as carbachol or pilocarpine.

The effects of CYCLOGYL may be enhanced by concomitant use of other drugs having antimuscarinic properties, such as amantadine, some antihistamines, phenothiazine antipsychotics, and tricyclic antidepressants.

No interaction studies have been performed.

If more than one eye preparation is being used, the products must be administered at least 5 minutes apart. Eye ointments should be administered last (see section 4.2).

4.6. Fertility, pregnancy and lactation

Pregnancy

There are no or limited amount of data from the use of CYCLOGYL in pregnant women. CYCLOGYL is not recommended during pregnancy.

Breastfeeding

It is not known whether cyclopentolate/metabolites are excreted into human milk. A risk to the suckling child cannot be excluded. A decision must be made whether to discontinue breast-feeding or to discontinue/abstain from CYCLOGYL therapy taking into account the benefit of breastfeeding for the child and the benefit of therapy for the woman.

Fertility

No animal or clinical studies have been performed to evaluate the effect of topical ocular administration of CYCLOGYL on fertility.

4.7. Effects on ability to drive and use machines

Cyclopentolate may cause drowsiness, blurred vision and sensitivity to light. Patients receiving CYCLOGYL should be advised not to drive or engage in other hazardous activities unless vision is clear.

CYCLOGYL has a major influence on the ability to drive and use machines.

4.8. Undesirable effects

The following adverse reactions have been reported following administration of CYCLOGYL. Frequency cannot be estimated from the available data ("not known").

System Organ Class	**MedDRA Preferred Term**
Immune system disorders	Hypersensitivity
Psychiatric disorders	Hallucination, confusional state, disorientation, agitation, restlessness, acute psychosis*
Nervous system disorders	Incoherent, retrograde amnesia, dizziness, headache, somnolence, ataxia, seizure*
Eye disorders	Photophobia, drug effect prolonged (mydriasis), eye irritation, vision blurred, eye pain, hyperemia, conjunctivitis, blepharoconjunctivitis, intraocular pressure increased*
Cardiac disorders	Bradycardia, tachycardia, vasodilatation

Gastrointestinal disorders	Vomiting, nausea, dry mouth
Renal and urinary disorders	Urinary retention
Skin and subcutaneous tissue disorders	Erythema, rash
General disorders and administration site conditions	Gait disturbance, pyrexia, Fatigue

* See section “Description of selected adverse reactions"

Description of selected adverse reactions

This drug produces reactions similar to those of other anticholinergic drugs. The central nervous system manifestations such as ataxia, incoherent speech, restlessness, hallucinations, hyperactivity, seizures, disorientation as to time and place, and failure to recognize people are possible. Other toxic manifestations of anticholinergic drugs are skin rash, abdominal distension in infants, unusual drowsiness, tachycardia, hyperpyrexia, vasodilation, urinary retention, diminished gastrointestinal motility, and decreased secretion in salivary and sweat glands, pharynx, bronchi and nasal passages. Severe reactions are manifested by hypotension with rapid progressive respiratory depression.

CYCLOGYL may increase intraocular pressure and provoke glaucoma attacks in patients predisposed to acute angle closure, in particular geriatric patients. (See Section 4.4).

The onset of cyclopentolate toxicity occurs within 20 to 30 minutes of drug instillation, and although usually transient (subsiding in 4 to 6 hours), the symptoms can last 12 to 24 hours.

Paediatric population

Increased risk for systemic toxicity has been observed in newborn and infants (especially premature and low weight infants), young children, or children with Down syndrome, spastic paralysis or brain damage with this class of drug (See Section 4.4).

Use of CYCLOGYL has been associated with psychotic reactions and behaviour changes in paediatric and geriatric patients. Central nervous system reactions manifest similar to those listed above. Seizures and acute psychosis induced by cyclopentolate are especially prominent in children.

Epileptic attacks in children have been reported after administration of 1% and 2% cyclopentolate.

Feeding intolerance may follow ophthalmic use of the product in infants. (See Section 4.4)

A local or generalized allergic-type response to cyclopentolate consisting of an urticarial rash has been described in children.

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

Symptoms

Systemic toxicity may occur following topical use, particularly in children. It is manifested by vasodilatation, dry mouth, flushing and dryness of the skin (a rash may be present in children), blurred vision, a rapid and irregular pulse, fever, abdominal distension in infants, constipation, urinary retention, sometimes irritability and confusion, convulsions and hallucinations and the loss of neuromuscular coordination. Severe intoxication is characterized by central nervous system depression, coma, circulatory and respiratory failure, and death.

Management

An ocular overdose of CYCLOGYL can be flushed from the eye(s) with lukewarm water.

When administration of the drug product is discontinued, the patient usually recovers spontaneously. In case of severe manifestations of toxicity the antidote of choice is physostigmine salicylate. Treatment is symptomatic and supportive.

Paediatric population

As an antidote, slowly inject 0.5 mg physostigmine salicylate intravenously. If toxic symptoms persist and no cholinergic symptoms are produced, repeat

at 5 minute intervals to a maximum dose of 2.0 mg. In infants and small children, the body surface must be kept moist.

Adolescents and adults

As an antidote, slowly inject 2.0 mg physostigmine salicylate intravenously. If toxic symptoms persist, a second dose of 1 to 2 mg may be administered after 20 minutes.

5. PHARMACOLOGICAL PROPERTIES

5.1. Pharmacodynamic properties

Pharmacotherapeutic group: mydriatics and cycloplegics; anticholinergics, ATC code: S01FA04

This anticholinergic preparation blocks the response of the sphincter muscle of the iris and the accommodative muscle of the ciliary body to cholinergic stimulation, producing pupillary dilation (mydriasis) and paralysis of accommodation (cycloplegia). It acts rapidly but has a shorter duration than atropine.

5.2. Pharmacokinetic properties

Maximal cycloplegia and mydriasis are obtained after 15 to 60 minutes; the eye recovers within 24 hours.

Systemic resorption may take place after topical administration to the eye. This resorption primarily occurs in the lacrimal ducts. In humans, cyclopentolate is rapidly absorbed systemically and peak plasma concentrations of 8.3 ± 4.1 ng/ml were reached in 10 ± 5 minutes after a single topical ocular administration of 2 drops of a 10 mg/ml cyclopentolate ophthalmic solution. Systemic concentrations of cyclopentolate decreased to 3.3 ± 1.1 ng/ml at 30 minutes after dosing. Mean elimination half-life of cyclopentolate was 111 minutes. No additional information regarding the metabolic fate of cyclopentolate or its route and extent of elimination following systemic absorption is available.

5.3. Preclinical safety data

There are no non-clinical data of relevance to the prescriber which are additional to those already included elsewhere in the SmPC.

6. PHARMACEUTICAL PARTICULARS

6.1. List of excipients

Benzalkonium chloride
Boric acid
Potassium chloride
Disodium edetate
Hydrochloric acid and/or sodium carbonate monohydrate (to adjust pH) Purified water

6.2. Incompatibilities

None are known.

6.3. Shelf life

3 years
Discard 4 weeks after first opening.

6.4. Special precautions for storage

Store at room temperature (15-25°C).

6.5. Nature and contents of container

CYCLOGYL eye drops, solution is supplied in a 5 or 10 ml plastic dropper container (DROPTAINER®) with a screw cap.
Not all pack sizes may be marketed.

6.6. Special precautions for disposal and other handling

No special requirements for disposal.

7. MARKETING AUTHORISATION HOLDER

Alcon NV
Stationsstraat 55
B-2800 Mechelen

8. MARKETING AUTHORISATION NUMBERS

CYCLOGYL 0.5%: BE166424
CYCLOGYL 1%: BE166433

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: August 22, 1994.
Date of latest renewal: May 23, 2006.

10. DATE OF REVISION OF THE TEXT

13/06/2026