WHAT IS CLAIMED IS:

1. An ophthalmological composition for the treatment of presbyopia comprising:

aceclidine at a concentration from about 0.25% to about 2.0% w/v;

a cycloplegic agent at a concentration from about 0.025% to about 0.1% w/v;

a surfactant;

a tonicity adjustor; and

optionally a viscosity enhancer,

wherein the pH of the composition is from about 4.75 to about 5.0 and wherein the viscosity of the composition is from about 1 to about 5,000 centipoise (cps) at from about 2 to about 8 °C and wherein w/v denotes weight by volume.

2. The composition of claim 1 wherein:

the cycloplegic agent is selected from pirenzepine, tropicamide, cyclopentolate hydrochloride, 4-diphenylacetoxy-N-methylpiperidine methiodide (4-DAMP), AF-DX 384, methoctramine, tripitramine, darifenacin, solifenacin, tolterodine, oxybutynin, ipratropium, oxitropium, tiotropium, otenzepad and a combination thereof;

the surfactant is selected from polyoxyl 40 stearate, a gamma cyclodextrin, sulfobutylether β-cyclodextrin, 2-hydroxypropyl cyclodextrin, sodium lauryl sulfate, sodium ester lauryl sulfate, a poloxamer, a polysorbate, sorbitan monolaurate, sorbitan monopalmitate, sorbitan monostearate, sorbitan monooleate, a polyoxyl alkyl, a cyclodextrin and combinations thereof;

the tonicity adjustor is selected from mannitol, sodium chloride, potassium chloride, glycerin and combinations thereof; and

the optional viscosity enhancer is not a polysaccharide.

3. The composition of claim 2 wherein:

the cycloplegic agent is tropicamide;

the surfactant is polyoxyl 40 stearate; and

the tonicity adjustor is mannitol.

4. The composition of claim 1 further comprising one or more excipients selected from a viscosity enhancer selected from the group consisting of guar gum, hydroxypropyl-guar, xanthan gum, alginate, chitosan, gelrite, hyauluronic acid, dextran, and a carbomer, wherein the viscosity is from about 1 to about 5,000 centipoise (cps) prior to topical installation and

from about 1 to about 50 cps upon topical installation and an antioxidant selected from citrate, citric acid monohydrate, ethylenediaminetetraacetic acid, disodium ethylenediaminetetraacetic acid, dicalcium diethylenetriamine pentaacetic acid and combinations thereof.

5. The composition of claim 4 wherein the one or more excipients is a viscosity enhancer selected from carbomer 934 and carbomer 940 and the viscosity is from about 1 to about 5,000 (cps) at from about 2 to about 8 °C.

6. The composition of claim 4 wherein the one or more excipients is an antioxidant, wherein the antioxidant is citric acid monohydrate.

7. An ophthalmological composition for the treatment of presbyopia comprising:

aceclidine at a concentration from about 0.25% to about 2.0% w/v;

tropicamide at a concentration from about 0.025% to about 0.1% w/v;;

polyoxyl 40 stearate at a concentration from about 2.0% to about 10.0% w/v;

mannitol at a concentration from about 0.5% to about 6.0% w/v;

a buffer selected from acetate buffer, citrate buffer, phosphate buffer and citrophosphate buffer at a concentration of about 3 millimolar;

optionally citric acid monohydrate at a concentration from about 0.1% to about 0.2% w/v;

optionally a viscosity enhancer selected from carbomer 934 and carbomer 940 at a concentration from about 0.01% to about 1.0% w/v; and

optionally benzalkonium chloride (BAK) at a concentration of about 0.02% w/v,

wherein the pH of the composition is from about 4.75 to about 5.0 and wherein the viscosity of the composition is from about 1 to about 5,000 centipoise (cps) at from about 2 to about 8 °C and wherein w/v denotes weight by volume.

8. The composition of claim 7 wherein the concentration of aceclidine is from about 1.45% to about 1.75% w/v, the concentration of tropicamide is about 0.042% w/v, the concentration of polyoxyl 40 stearate is from about 4.5% to about 5.5% w/v, the concentration of mannitol is from about 2.5% to about 4.0% w/v, optionally the concentration of citric acid monohydrate is about 0.1% w/v, optionally the viscosity enhancer is carbomer 940 at a concentration from about 0.09% to about 1.0% w/v and the pH is about 4.75.

9. The composition of claim 8 comprising citric acid monohydrate at a concentration of about 0.1% w/v and BAK at a concentration of about 0.02% w/v, wherein aceclidine is at a

concentration of about 1.75% w/v, poloxyl 40 stearate is at a concentration of about 4.5% w/v, mannitol is at a concentration of about 2.5% w/v and the buffer is acetate buffer.

10. The composition of claim 8 comprising citric acid monohydrate at a concentration of about 0.10% w/v and carbomer 940 at a concentration of 0.09% w/v, wherein aceclidine is at a concentration of about 1.55% w/v, polyoxyl 40 stearate is at a concentration of about 5.5% w/v, mannitol at a concentration of about 4.0% w/v and the buffer is acetate buffer.

11. The composition of claim 8 comprising carbomer 940 at a concentration of about 0.25% w/v and BAK at a concentration of about 0.02% w/v, wherein aceclidine is at a concentration of about 1.50% w/v, polyoxyl 40 stearate is at a concentration of about 5.5% w/v, mannitol is at a concentration of about 2.5% w/v, and the buffer is phosphate buffer.

12. The composition of claim 8 comprising citric acid monohydrate at a concentration of about 0.10% w/v and carbomer 940 at a concentration of about 0.75% w/v, wherein aceclidine is at a concentration of about 1.45% w/v, polyoxyl 40 stearate is at a concentration of about 5.5% w/v, mannitol is at a concentration of about 4.0% w/v, and the buffer is acetate buffer.

13. The composition of claim 8 comprising citric acid monohydrate at a concentration of about 0.10% w/v and carbomer 940 at a concentration of about 1.0% w/v, wherein aceclidine is at a concentration of about 1.45% w/v, polyoxyl 40 stearate is at a concentration of about 5.5% w/v, mannitol at a concentration of about 4.0% w/v and the buffer is phosphate buffer.

14. A method for stabilizing the composition of claim 1 comprising maintaining the composition at a temperature from about 2 to about 8 °C.

15. A method for stabilizing an aqueous aceclidine composition comprising the steps of:

a) adding a surfactant selected from polyoxyl 40 stearate, a gamma cyclodextrin, sulfobutylether β-cyclodextrin, 2-hydroxypropyl cyclodextrin, sodium lauryl sulfate, sodium ester lauryl sulfate, a poloxamer, a polysorbate, sorbitan monolaurate, sorbitan monopalmitate, sorbitan monostearate, sorbitan monooleate, a polyoxyl alkyl, a cyclodextrin and combinations thereof to the composition;

b) adding a tonicity adjustor selected from mannitol, sodium chloride, potassium chloride, glycerin and combinations thereof,

b) optionally adding a viscosity enhancer selected from the group consisting of guar gum, hydroxypropyl-guar, xanthan gum, alginate, chitosan, gelrite, hyauluronic acid, dextran, a carbomer and combinations thereof to the composition,

c) buffering the pH of the composition to from about 4.0 to about 6.0; and

d) maintaining the composition at a temperature from about 2 to about 8 °C.

16. The method of claim 15 comprising adding a viscosity enhancer, wherein:

the surfactant is polyoxyl 40 stearate;

the tonicity adjustor is mannitol;

the viscosity enhancer is carbomer 940; and

the pH of the composition is about 4.75.

17. A method of treating a refractive error of the eye comprising administering to a patient in need thereof a pharmaceutically acceptable amount of the composition of claim 1, wherein the refractive error is selected from presbyopia, myopia, hyperopia, astigmatism or a combination thereof.

18. The method of claim 17 wherein the refractive error is presbyopia.

19. A method for treating a refractive errors of the eye comprising administering to a patient in need thereof a pharmaceutically acceptable amount of the composition of claim 1, wherein the size of the pupil is reduced to from about 1.5 to about 2.5 millimeters and wherein the refractive error is selected from the group consisting of corneal irregular astigmatism, an ectasia induced corneal irregularity, a pellucid induced corneal irregularity, a higher order aberration and a refractive surgery induced higher order aberration.

20. The method of claim 19 wherein the size of the pupil is reduced to from about 1.7 to about 2.0 millimeters.