

10. The lens as recited in claim 4 wherein said fluid is nonreactive with the eye.

11. The lens as recited in claim 1 wherein said fluid-expandable sac can be transported through a needle when collapsed.

12. The lens as recited in claim 1 further comprising means for maintaining said sac in a fixed position in the posterior chamber of the eye.

13. The lens as recited in claim 12 wherein said means for maintaining said sac in a fixed position includes projections on the exterior of said sac.

14. The lens as recited in claim 13 wherein said projections are pin-like.

15. The lens as recited in claim 13 wherein said projections are rib-like.

16. The lens as recited in claim 1 wherein said sac is constructed of materials selected from the group consisting of polypropylene, polyethylene and silicone.

17. The lens as recited in claim 1 wherein said sac is dimensioned when expanded to occupy the interior portion of the natural lens sac.

18. A posterior chamber intraocular lens for an eye comprising:

(a) a fluid-expandable sac constructed of a transparent flexible material for containing fluid and dimensioned for occupying the posterior chamber of an eye;

(b) liquid crystal material contained within said sac having an index of refraction that is variable by an applied voltage;

(c) means for producing an input signal proportional to the accommodation of the eye; and

(d) microprocessor means electrically coupled to said liquid crystal material and responsive to an input signal for producing an output signal for controlling the index of refraction of said liquid crystal material for achieving the desired accommodation.

19. The lens as recited in claim 18 wherein said means for producing an input signal includes a sensor for monitoring the position of the eyes.

20. The lens as recited in claim 18 wherein said sensor monitors the position of the eyes by measuring the electric potential generated by the rectus medialis.

21. The lens as recited in claim 18 wherein said means for producing an input signal includes an electrode for monitoring the electrical potential generated by contractions and relaxations of the ciliary body of the eye.

22. The lens as recited in claim 21 wherein the optical density of said liquid crystal is variable by an applied voltage potential.

23. A method for removing a natural lens from an eye and for implanting into the eye a posterior chamber intraocular lens comprising:

(a) inserting an insertion member through the sclera of the eye and into the posterior chamber;

(b) inserting a collapsible, fluid-expandable sac constructed of flexible transparent material through said member and into the posterior chamber; and

(c) instilling a fluid into said sac for filling said sac in order to provide an artificial lens.

24. The method of claim 23 and further comprising forming an aperture in the cornea of the eye for relieving pressure produced on the interior portion of the eye as fluid is instilled into the sac.

25. The method as recited in claim 23 wherein at least a portion of the natural lens is removed after said fluid-expandable sac is inserted into the posterior chamber.

26. The method as recited in claim 25 wherein the lens is removed by phacoemulsification.

27. The method as recited in claim 25 wherein the lens is removed by cryoextraction.

28. The method as recited in claim 25 wherein the lens is removed by an extracapsular procedure.

29. The method as recited in claim 23 further comprising sealing said sac having fluid contained therein, said sac functioning as a posterior intraocular lens.

30. The method as recited in claim 23 wherein said fluid-expandable sac is inserted into the natural lens sac.

31. The method as recited in claim 25 wherein the entire natural lens is removed.

32. The method as recited in claim 25 wherein only the crystalline material of the natural lens is removed.

33. The method as recited in claim 32 wherein the intraocular lens is posterior to the natural lens sac.

34. The method as recited in claim 23 wherein said fluid is a liquid crystal material.

35. The method as recited in claim 34 wherein said fluid-expandable sac has electrodes on interior portions thereof.

36. The method as recited in claim 35 further comprising:

(a) implanting an electrode in the ciliary muscle of the eye;

(b) connecting said electrode to the input of a microprocessor; and

(c) connecting the output of said microprocessor to the electrodes located on the interior of said fluid-expandable sac.

37. The method as recited in claim 23 wherein said insertion member is a hollow needle that is inserted about 2.5 millimeters posterior to the limbus of the eye.

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