CLAIMS

1. An ophthalmic device comprising:

a contact lens having a central optic zone and a peripheral zone surrounding the central optic zone, the contact lens being formed from a first material having a first modulus of elasticity; and

a second material incorporated into the central optic zone of the contact lens, the second material changing the first modulus of elasticity in the central optic zone to a second modulus of elasticity, wherein the second modulus of elasticity is greater than the first modulus of elasticity and the first and second materials are substantially immiscible.

2. The ophthalmic device according to Claim 1, wherein the contact lens comprises a soft contact lens.

3. The ophthalmic device according to Claim 1, wherein the contact lens comprises a toric contact lens.

4. The ophthalmic device according to Claim 1, wherein the first material comprises a monomer having a low modulus of elasticity.

5. The ophthalmic device according to Claim 4, wherein the monomer comprises etafilcon.

6. The ophthalmic device according to Claim 4, wherein the monomer comprises galyfilcon.

7. The ophthalmic device according to Claim 4, wherein the monomer comprises senofilcon.

8. The ophthalmic device according to Claim 4, wherein the monomer comprises narafilcon.

9. The ophthalmic device according to Claim 4, wherein the second

material comprises a monomer having a high modulus of elasticity.

10. A method of making an ophthalmic device, the method comprising:

dosing a first material having a first modulus of elasticity into a center portion of a contact lens front curve mold;

dosing a second material having a second modulus of elasticity into the contact lens front curve mold on top of the first material, wherein the second modulus of elasticity is greater than the first modulus of elasticity, and wherein the first and second materials are substantially immiscible; and

positioning a contact lens back curve mold on the second material and curing the first and second materials thereby forming a contact lens having a central optic zone with a higher modulus of elasticity than a peripheral zone thereof.

11. The method of claim 10, whereby the curing of the first and second materials occurs by selectively curing the optical grade material in the contact lens mold by varying the intensity of the curing light across the contact lens mold such that a central portion of the contact lens is stiffer than a peripheral portion of the contact lens.

12. The method of claim 10 or claim 11, further comprising:

a) introducing a first reaction inhibitor into a surface of a contact lens front curve mold; and

b) introducing a second reaction inhibitor into a surface of a contact lens back curve mold;

wherein the first and second reaction inhibitors differ in at least one of composition and concentration.

13. The method of making an ophthalmic device according to Claim 12, wherein the first and second reaction inhibitor comprises a gas.

14. The method of making an ophthalmic device according to Claim 13, wherein the gas is oxygen.

15. The method of making an ophthalmic device according to Claim 12,

further comprising the step of controlling the concentration of the first and second reaction inhibitors by varying the materials forming the front and back curve molds by their propensity to absorb and release the first and second reaction inhibitors respectively.

16. The method of making an ophthalmic device according to Claim 12, further comprising the step of controlling the concentration of the first and second reaction inhibitors by varying the exposure to the first and second inhibitor by controlling the time, temperature, concentration and pressure of the medium surrounding the front and back curve molds.

17. A contact lens comprising:

an optic zone being formed from a material having a first modulus of elasticity; and

a peripheral zone being formed from a material having a second modulus of elasticity, wherein the first modulus of elasticity is greater than the second modulus of elasticity.

18. A contact lens comprising:

an optic zone having a first stiffness; and

a peripheral zone having a second stiffness, the first stiffness being greater than the second stiffness.

CLAIMS

1. A method of making a contact lens having a central optic zone with a higher modulus of elasticity than a peripheral zone, the method comprising:

a) introducing a first reaction inhibitor into a surface of a contact lens front curve mold;

b) dosing a first material having a first modulus of elasticity into a center portion of the contact lens front curve mold;

c) dosing a second material having a second modulus of elasticity into the contact lens front curve mold on top of the first material, wherein the second modulus of elasticity is greater than the first modulus of elasticity, and wherein the first and second materials are substantially immiscible;

d) introducing a second reaction inhibitor into a surface of a contact lens back curve mold, wherein the first and second reaction inhibitors differ in at least one of composition and concentration; and

e) positioning the contact lens back curve mold on the second material and curing the first and second materials.

2. The method of making a contact lens according to Claim 1, wherein the first and second reaction inhibitor comprises a gas.

3. The method of making a contact lens according to Claim 2, wherein the gas is oxygen.

4. The method of making a contact lens according to Claim 1, further comprising a step of controlling the concentration of the first and second reaction inhibitors by varying the materials forming the front and back curve molds by their propensity to absorb and release the first and second reaction inhibitors respectively.

5. The method of making a contact lens according to Claim 1, further comprising a step of controlling the concentration of the first and second reaction inhibitors by varying the exposure to the first and second inhibitor by controlling the time, temperature, concentration and pressure of the medium surrounding the front

and back curve molds.