What is Claimed is:

1. A packaging shell for a contact lens, comprising:

a cavity for receiving the contact lens, the cavity having an interior surface, at least a portion of the interior surface of the cavity having a micro-textured pattern thereon;

wherein the micro-textured pattern comprises a plurality of microstructures, the microstructures having a substantially rounded dome-like configuration.

2. The packaging shell of Claim 1, wherein the microstructures have a substantially uniform configuration across the portion of the interior surface of the cavity having the micro-textured pattern applied thereon.

3. The packaging shell of Claim 1, wherein the microstructures are repeated in a generally regular pattern along the portion of the interior surface of the cavity having the micro-textured pattern applied thereon.

4. The packaging shell of Claim 1, wherein the microstructures have a cross-wise dimension of between about 18-24 μm.

5. The packaging shell of Claim 1, wherein the microstructures are spaced about 18-24 μm from one another, center to center.

6. The packaging shell of Claim 1, wherein the microstructures partially overlap one another.

7. The packaging shell of Claim 1, wherein the portion of the interior surface of the cavity having the micro-textured pattern thereon has an overall root mean square surface roughness of between 1-11 μm.

8. The packaging shell of Claim 1, wherein the interior surface of the cavity comprises a plurality of zones, each zone having microstructures of different dimensions thereon.

9. The packaging shell of Claim 8, wherein a first zone of the plurality of zones is located near a central portion of the cavity and a second zone of the plurality of zones is located away from the central portion of the cavity, and wherein the microstructures of the first zone have a greater dimension and the microstructures of the second zone have a lesser dimension.

10. The packaging shell of Claim 9, wherein the greater dimension is about 24 μm and the lesser dimension is about 18 μm.

11. The packaging shell of Claim 8, wherein a gradual microstructure transition is defined between the zones.

12. The packaging shell of Claim 8, wherein a sharp microstructure transition is defined between the zones.

13. The packaging shell of Claim 8, wherein the plurality of zones comprise a center zone and at least one annular zone surrounding the center zone.

14. The packaging shell of Claim 13, wherein the center zone has a diameter of about 10 mm.

15. The packaging shell of Claim 13, wherein the annular zone has an outer diameter of about 14 mm.

16. The packaging shell of Claim 13, wherein the center zone has an overall root mean square surface roughness of about 1.5 μm.

17. The packaging shell of Claim 13, wherein the annular zone has an overall root mean square surface roughness of about 2 - 11 μm.

18. The packaging shell of Claim 13, wherein the annular zone has an overall root mean square surface roughness of about 2 - 4 μm.

19. The packaging shell of Claim 8, wherein the plurality of zones comprise a center zone, a first annular zone surrounding the center zone, and a second annular zone surrounding the first annular zone.

20. The packaging shell of Claim 19, wherein the first annular zone has an inner diameter of at least 10 mm and an outer diameter of about 14 mm.

21. The packaging shell of Claim 19, wherein the second annular zone has an outer diameter of about 20 mm.

22. The packaging shell of Claim 19, wherein the center zone has an overall root mean square surface roughness of about 1.5 μm, the first annular zone has an overall root mean square surface roughness of about 2 - 4 μm, and the second annular zone has an overall root mean square surface roughness of about 3 – 11 μm.

23. The packaging shell of Claim 8, wherein the plurality of zones comprise a first elliptical zone and a second elliptical zone, the first and second elliptical zones each defining a generally elliptical outer periphery, major axes of the generally elliptical outer peripheries of the first and second elliptical zones being aligned generally parallel to one another.

24. The packaging shell of Claim 23, further comprising a third elliptical zone, the second and third elliptical zones being arranged on opposite sides of and being smaller than the first elliptical zone.

25. The packaging shell of Claim 23, wherein the first elliptical zone has an overall root mean square surface roughness of about 1 – 1.9 μm, and the second elliptical zone has an overall root mean square surface roughness of about 3 – 11 μm.

26. The packaging shell of Claim 23, wherein the second elliptical zone has an overall root mean square surface roughness of about 4 – 8 μm.

27. The packaging shell of Claim 1, wherein the microstructures are transferred from a mold used to form the packaging shell, the mold comprising a mold surface having an inverse microstructure pattern thereon that corresponds inversely to the cavity of the packaging shell.

28. The packaging shell of Claim 27, wherein the inverse microstructure pattern is formed by electrical discharge machining of the mold surface.

29. The packaging shell of Claim 27, wherein the inverse microstructure pattern is formed shot-peening the mold surface.

30. The packaging shell of Claim 1, wherein the microstructures comprise a configuration that is not recognized as a lens defect during in-package inspection of a contact lens within the packaging shell.

31. A container for a contact lens, the container comprising a cavity having an interior surface defining first and second zones of microstructure patterns, wherein the first zone comprises microstructures having a first configuration and wherein the second zone comprises microstructures having a second configuration, the first configuration being different from the second configuration.

32. The container of Claim 31, wherein the first microstructure configuration has a greater crosswise dimension than the second microstructure configuration.

33. The container of Claim 32, wherein the crosswise dimension of the first microstructure configuration is about 24 μm and the crosswise dimension of the second microstructure configuration is about 18 μm.

34. The container of Claim 31, wherein the first zone has a greater surface roughness than the second zone.

35. The container of Claim 33, wherein the RMS surface roughness of the first zone is less than 4 μm, and the RMS surface roughness of the second zone is at least 2 μm.

36. The container of Claim 31, wherein the first zone is a central zone and the second zone is a peripheral zone.

37. The container of Claim 36, wherein the peripheral zone is annularly shaped and surrounds the central zone.

38. The container of Claim 36, further comprising a third peripheral zone, and wherein the second zone and the third zone are positioned on opposite sides of the central zone.

39. A method of preventing adherence of a contact lens to a contact lens package, said method comprising applying a micro-textured pattern to an interior surface of the contact lens package.

40. The method of Claim 39, wherein the micro-textured pattern comprises a plurality of microstructures, the microstructures having a substantially rounded dome-like configuration.

41. The method of Claim 39, wherein the micro-textured pattern comprises a first zone of microstructures having a first configuration and a second zone of microstructures having a second configuration, the first configuration being different from the second configuration.

42. A method of manufacturing a contact lens package comprising:

applying an inverse micro-textured pattern to a mold surface of a mold; and

forming the contact lens package in the mold and thereby transferring a mirror image of the inverse micro-textured pattern of the mold surface onto the formed contact lens package.

43. The method of Claim 42, wherein the micro-textured pattern comprises a plurality of microstructures, the microstructures having a substantially rounded dome-like configuration.

44. The method of Claim 42, wherein the micro-textured pattern comprises a first zone of microstructures having a first configuration and a second zone of microstructures having a second configuration, the first configuration being different from the second configuration.

45. A method of in-package inspection of a contact lens within a contact lens package, the method comprising:

capturing an image of the contact lens within the package; and

analyzing the image of the contact lens to determine whether it contains a lens defect;

wherein the contact lens package comprises an interior surface having a micro-textured pattern applied thereon, and wherein the micro-textured pattern is not indicated as the lens defect.

46. The method of Claim 45, wherein the micro-textured pattern comprises microstructures having a dimension too small to indicate the presence of the lens defect.

47. The method of Claim 45, wherein the micro-textured pattern is filtered out of the analyzing of the image of the contact lens.

Claims

1. A packaging shell (10; 210; 310) for a contact lens, comprising:

   a cavity (20; 220; 320) for receiving the contact lens, the cavity (20; 220; 320) having an interior surface (21; 221; 321), at least a portion of the interior surface of the cavity (20; 220; 320) having a micro-textured pattern (22) thereon;
   wherein the micro-textured pattern (22) comprises a plurality of microstructures (24), the microstructures (24) having a substantially rounded dome-like configuration.

2. The packaging shell (10; 210; 310) of claim 1, wherein the microstructures (24) have a substantially uniform configuration across the portion of the interior surface of the cavity (20; 220; 320) having the micro-textured pattern (22) applied thereon.

3. The packaging shell (10; 210; 310) of claim 1, wherein the microstructures (24) are repeated in a generally regular pattern along the portion of the interior surface/of the cavity (20; 220; 320) having the micro-textured pattern 22 applied thereon.

4. The packaging shell (10: 210; 310) of claim 1, wherein the portion of the interior surface (21; 221; 321) of the cavity (20; 220; 320) having the micro-textured pattern (22) thereon has an overall root mean square surface roughness of between 1-11 μm.

5. The packaging shell (10; 210; 310) of claim 1, where-

in the interior surface (21; 221; 321) of the cavity (20; 220; 320) comprises a plurality of zones, each zone having microstructures of different dimensions thereon.

6. The packaging shell (10; 210; 310) of claim 5, wherein a first zone of the plurality of zones is located near a central portion of the cavity (20; 220; 320) and a second zone of the plurality of zones is located away from the central portion of the cavity, and wherein the microstructures of the first zone have a greater dimension than the microstructures of the second zone.

7. The packaging shell (10; 210; 310) of claim 5, wherein the plurality of zones comprise a center zone (224) and at least one annular zone surrounding the center zone (224).

8. The packaging shell (10; 210; 310) of claim 7, wherein the center zone (224) has an overall root mean square surface roughness of about 1.5 μm.

9. The packaging shell (10; 210; 310) of claim 7, wherein the annular zone has an overall root mean square surface roughness of about 2 - 11 μm.

10. The packaging shell (10; 210; 310) of claim 5, wherein the plurality of zones comprise a center zone (224), a first annular zone (226) surrounding the center zone (224), and a second annular zone (228) surrounding the first annular zone (226)

11. The packaging shell (10; 210; 310) of claim 10, wherein the center zone (224) has an overall root mean square surface roughness of about 1.5 μm, the first annular zone (226) has an overall root mean square surface roughness of about 2 - 4 μm, and the second annular zone (228) has an overall root mean square surface roughness of about 3 - 11 μm.

12. The packaging shell (10; 210; 310) of claim 5, wherein the plurality of zones (334; 336; 338) comprise a first elliptical zone and a second elliptical zone, the first and second elliptical zones each defining a generally elliptical outer periphery, major axes of the generally elliptical outer peripheries of the first and second elliptical zones being aligned generally parallel to one another.

13. The packaging shell (10; 210; 310) of claim 12, further comprising a third elliptical zone, the second and third elliptical zones being arranged on opposite sides of and being smaller than the first elliptical zone.

14. The packaging Shell (10; 210; 310) of claim 12, wherein the first elliptical zone has an overall root mean square surface roughness of about 1 - 1.9 μm, and the second elliptical zone has an overall root mean square surface roughness of about 3 - 11 μm.

15. The packaging shell (10; 210; 310) of claim 1, wherein the microstructures (24) are transferred from a mold used to form the packaging shell (10; 210; 310), the mold comprising a mold surface having an inverse microstructure pattern thereon that corresponds inversely to the cavity (20; 220; 320) of the packaging shell (10; 210; 310)