Claims

1. A method of removing excess lens forming material from a molded ophthalmic lens, in particular from a peripheral region of a contact lens, wherein a lens forming material is polymerized and/or cross-linked within a mold cavity of a mold comprising female and male mold halves to form an ophthalmic lens (1), wherein said mold is opened by moving said female and male mold halves apart from each other, wherein the formed lens (1) is supported on a carrier (3) such, that a front surface (2) of said lens (1) is exposed, and wherein excess lens forming material consisting essentially of residues of non-polymerized and/or non-cross-linked lens forming material is removed mechanically by contacting said exposed surface (2) of said formed lens (1) for a period of time of about 0.5 seconds to about 4 seconds, preferably about 0.8 seconds to about 2 seconds, with a cleaning means (7) having a hardness which is smaller than that of the polymerized and/or cross-linked lens forming material.

2. The method of claim 1, wherein said excess lens forming material is removed by contacting said exposed lens surface (2) with a cleaning means (7) which is at least partly capable of absorbing said non-polymerized and/or non-cross-linked lens forming material.

3. The method of claim 1, wherein said cleaning means (7) and said exposed lens surface (2) are brought into contact with each other and while in contact with each other are moved relative to one another.

4. The method of claim 3, wherein said cleaning means (7) is rotated relative to said exposed surface (2) of the lens (1).

5. The method of claim 4, wherein said cleaning means (7) is rotated with a rotation speed of about 5 - 250 revolutions per minute, preferably 10 - 100 revolutions per minute, most preferred 25 revolutions per minute.

6. The method of claim 5, wherein said cleaning means (7) is pressed against said exposed surface (7) of said formed lens (1) with a force which amounts to about 0.1 N to about 20 N, preferably about 0.2 N to about 5 N.

7. The method of claim 1, wherein an annular peripheral portion which extends from an edge to about one half to two thirds of a radius of said formed lens (1) is contacted with said cleaning means (7).

8. The method of claim 1, wherein a porous material is used as said cleaning means (7).

9. The method of claim 8, wherein said porous material is selected to be a foamed material, such as, e.g., foamed polyether, having a geometric bulk density of less than 150 kg/m3, preferably about 50 kg/m3.

10. The method of claim 8, wherein said porous material is selected to be a sponge rubber having a geometric bulk density of less than 350 kg/m3, preferably 160 kg/m3.

11. The method of claim 1, wherein said cleaning means (7) may be removed for a periodical cleaning thereof or for replacement.

12. The method of claim 1, wherein said formed lens (1) is mechanically cleaned immediately after said mold has been opened, with said formed lens being supported on said male mold half.

13. The method of claim 1, wherein said formed lens (1) is mechanically cleaned immediately prior to an optical inspection of said lens in an inspection station with said lens being supported on a carrier.

14. A device for carrying out the method of any one of claims 1 - 13, comprising a cleaning means (7) having a hardness which is smaller than that of a polymerized and/or cross-linked lens forming material, said cleaning means (7) being mounted to a stationary support (6), which is arranged in a production line for ophthalmic lenses, in particular contact lenses, and said cleaning means being capable of being moved in contact with an exposed front surface (2) of a formed lens (1) which is supported on a carrier (3).

15. The device of claim 14, wherein said cleaning means (7) is a porous material, selected from the group consisting of foamed materials having a geometric bulk density of less than 150 kg/m3, preferably about 50 kg/m3 and a sponge rubber having a geometric bulk density of less than 350 kg/m3, preferably about 160 kg/m3.

The invention claimed is:

1. A method of removing excess lens forming material from a molded ophthalmic lens, comprising the steps of dosing a lens forming material into a mold cavity of a mold comprising female and male mold halves, applying energy to polymerize and/or crosslink the lens forming material and form the lens, opening the mold by moving said female and male mold halves apart from each other, supporting the formed lens on a carrier such, that a front surface of said lens is exposed, and then mechanically removing excess lens forming material consisting essentially of residues of non-polymerized and/or non-cross-linked lens forming material by contacting said exposed front surface of said formed lens for about 0.5 seconds to about 4 seconds with a cleaner having a hardness which is smaller than that of the polymerized and/or cross-linked lens forming material, and wherein said cleaner is rotated relative to said exposed front surface of the lens, and wherein said formed lens is mechanically cleaned with said formed lens being supported on said male mold half.

2. The method of claim 1, wherein said excess lens forming material is removed by contacting said exposed lens surface with a cleaner which is at least partly capable of absorbing said non-polymerized and/or non-cross-linked lens forming material.

3. The method of claim 1, wherein said excess lens forming material is removed by contacting said exposed lens surface with the cleaner for about 0.8 seconds to about 2 seconds.

4. The method of claim 1, wherein said cleaner and said exposed lens surface are brought into contact with each other and while in contact with each other are moved relative to one another.

5. The method of claim 1, wherein said cleaner is rotated with a rotation speed of about 5 to about 250 revolutions per minute.

6. The method of claim 5, wherein said cleaner is rotated with a rotation speed of about 10 to about 100 revolutions per minute.

7. The method of claim 5, wherein said cleaner is pressed against said exposed surface of said formed lens with a force of about 0.1 N to about 20 N.

8. The method of claim 7, wherein said cleaner is pressed against said exposed surface of said formed lens with a force of about 0.2 N to about 5 N.

9. The method of claim 1, wherein an annular peripheral portion which extends from an edge to about one half to two thirds of a radius of said formed lens is contacted with said cleaner.

10. The method of claim 1, wherein a porous material is used as said cleaner.

11. The method of claim 10, wherein said porous material is a foamed material having a geometric bulk density of less than 150 kg/m3.

12. The method of claim 11, wherein said porous material is a foamed polyether.

13. The method of claim 10, wherein said porous material is a sponge rubber having a geometric bulk density of less than 350 kg/m3.

14. The method of claim 1, wherein said cleaner may be removed for a periodical cleaning thereof or for replacement.

15. The method of claim 1, wherein said formed lens is mechanically cleaned immediately prior to an optical inspection of said lens in an inspection station with said lens being supported on a carrier.