

CLAIMS

1. Method of cleaning deposited material from a molding surface (10) of a mold (1) for forming ophthalmic lenses, in particular contact lenses, the method comprising the steps of:
 - bringing a cleaning head (20) having a rotational axis (22) into contact with the molding surface (10), ~~the rotational axis (22) of the cleaning head (20) being arranged normal to~~ having a concave or convex shape matching the concave or convex shape of the molding surface (10),
 - rotating (220) the cleaning head (20) around the rotational axis (22) while maintaining the contact between the cleaning head (20) and the molding surface (10),
characterized by the rotational axis (22) of the cleaning head (20) being arranged normal to the molding surface (10), and by the further steps:
 - moving the cleaning head (20) to perform a precession motion (110) around a central normal (11) on the molding surface (10) running through the apex thereof, while rotating (220) the cleaning head (20) around the rotational axis (22) and while maintaining the contact between the cleaning head (20) and the molding surface (10),
wherein during the precession motion (110) the rotational axis (22) of the cleaning head (20) includes an inclination angle (α_1, α_2) with the central normal (11) on the molding surface (10).
2. Method according to claim 1, wherein the inclination angle (α_1, α_2) is in the range of up to 40°, preferably in the range of up to 35° for a male mold and up to 25° for a female mold.
3. Method according to any_one of claims 1 or 2, wherein while being in contact with the molding surface (10) the cleaning head (20) is pressed against the molding surface (10) using a force (F) in the range of 10 N - 20 N, preferably a force of about 16N.

4. Method according to any_one of claims 1 to 3, wherein the cleaning head (20) is made of silicone.
5. Method according to any_one of the claims 1 to 3, wherein the cleaning head (20) is made of a foamed material.
6. Method according to any_one of the claims 1 to 5, wherein the cleaning head (20) is covered with a cloth (23).
- ~~7. Method according to anyone of the claims 1 to 6, wherein the cleaning head (20) has a concave or convex shape matching the concave or convex shape of the molding surface (10).~~
- ~~8.7.~~ Method according to any_one of the claims 1 to ~~76~~, further comprising the step of dispensing a cleaning liquid onto the molding surface (10).
- ~~9.8.~~ Method according to claim ~~87~~, wherein an amount of up to 300 µl of the cleaning liquid (40), preferably an amount of 50µl to 200 µl for a female mold and an amount of 150 µl to 300 µl for a male mold, is dispensed onto the molding surface (10).
- ~~10.9.~~ Method according to any_one of the claims 1 to ~~98~~, wherein the cleaning head (20) is moved to perform the precession motion (110) with a rotational speed of 10 revolutions per minute to 300 revolutions per minute around the central normal (11) on the molding surface (10), preferably with a rotational speed of 10 revolutions per minute to 100 revolutions per minute, most preferably with a rotational speed of about 100 revolutions per minute, and wherein the cleaning head (20) is rotated around its rotational axis (22) with a rotational speed of 10 revolutions per minute to 300 revolutions per minute, preferably with a rotational speed of 50 revolutions per minute to 300 revolutions per minute, most preferably with a rotational speed of about 110 revolutions per minute.

~~11-10.~~ Method according to any one of the claims 1 to ~~109~~, wherein the molding surface (10) is a convex molding surface, and wherein cleaning of the convex molding surface is started at an inclination angle (α_1, α_2), preferably at an inclination angle of 25° , and wherein the inclination angle (α_1, α_2) is then decreased stepwise until the rotational axis (22) of the cleaning head and the central normal (11) on the molding surface (10) coincide.

~~12-11.~~ Method according to any one of the claims 1 to ~~109~~, wherein the molding surface (10) is a concave molding surface, and wherein cleaning of the concave molding surface is started with the rotational axis (22) of the cleaning head (20) and the central normal (11) on the molding surface (10) coinciding, and wherein the inclination angle (α_1, α_2) is then increased stepwise, preferably up to an inclination angle (α_1, α_2) of 35° .

~~13-12.~~ Device for cleaning deposited material from a molding surface (10) of a mold (1) for forming ophthalmic lenses, in particular contact lenses, the device comprising:

- at least one cleaning head (20) for cleaning deposited lens forming material from the molding surface (10), the cleaning head (20) having a rotational axis (22), and having a concave or convex shape matching the concave or convex shape of the molding surface (10).
- a first drive for rotating (220) the cleaning head (20) around the rotational axis (22), characterised by
- a positioning device for bringing the molding surface (10) and the cleaning head (20) in a predefined position relative to one another, in which a central normal (11) on the molding surface (10) running through the apex thereof and the rotational axis (22) of the cleaning head (20) coincide,
- a tilting device for tilting the cleaning head (20) such that the rotational axis (22) of the cleaning head (20) and the central normal (11) on the molding surface (10) include an inclination angle (α_1, α_2),

~~— a first drive for rotating (220) the cleaning head (20) around the rotational axis (22),~~

- a second drive for moving the cleaning head (20) to perform a precession motion (110) around the central normal (11) on the molding surface (10),
- a controller for controlling the position of the molding surface (10) and of the cleaning head (20) relative to one another, for controlling the rotational speed of the cleaning head (20) around the rotational axis, for controlling the rotational speed of the precession motion of the cleaning head (20) around the central normal (11) on the molding surface (10), and for controlling the inclination angle (α_1, α_2) between the rotational axis (22) and the central normal (11) on the molding surface (10).

~~14.13.~~ 13.12. Device according to claim ~~13~~12, wherein the device further comprises a dispensing needle (4) for dispensing a cleaning liquid (40) onto the molding surface (10).

~~15.14.~~ 14.14. Device according to claim 12 or 13, wherein the cleaning head (20) is mounted to a rotational support (21), and wherein a cloth (23) is attached to the rotational support (21) so as to cover the cleaning head (20).