Claims

[Claim 0001]1. A Method method for drying a plate-like article;, the method comprising the steps of:

rinsing the plate-like article by dispensingwith an aqueous rinsing liquid with to the plate-like article; and

subsequently rinsing with an by dispensing a liquid organic solvent;

wherein to the plate-like article, the organic solvent has having a water content of below 20 mass-% %;

measuring a relative humidity of ambient air;

calculating a dew point from the relative humidity; and

selecting a solvent temperature at which the liquid organic solvent is supplied to the plate-like article as a function of the calculated dew point,

wherein the organic solvent is supplied at a solvent temperature is in a range between 20K and 35K above the calculated dew point, and the solvent temperature, which is at least 30°C and not higher than 60°C.

[Claim 0002] Method according to claim 1 wherein the relative humidity is measured and the dew point is calculated from the relative humidity and the temperature, at which the organic solvent shall be supplied to the plate-like article, is selected in a range between 20K and 35K above the calculated dew point.

[Claim 0003]2. The Method method according to claim 1, wherein the organic solvent is miscible with water.

[Claim 0004] Method according to claim 3 wherein the organic solvent is selected from the group of alcohol (e.g. methanol, ethanol, 2-propanol), ketones (e.g. acetone), ester, ether.

[Claim 0005]3. The Method method according to claim 1, wherein the solvent temperature is at least 35°C.

[Claim 0006]4. The Method method according to claim 1, wherein the solvent temperature is not more than 55°C.

[Claim 0007] Method according to claim 3 wherein the organic solvent has a water content of below 10 mass-%.

[Claim 0008]5. The Method method according to claim 1,

wherein the plate-like article is rotated during rinsing with the organic solvent, and

wherein a dispenser scans and dispenses the liquid organic solvent from a center of the plate-like article to an edge of the plate-like article.

~~[Claim 0009]~~6. The ~~Method~~ method according to claim 1, wherein the organic solvent is supplied at a volume flow in a range of 20 ml/min to 400 ml/min

~~[Claim 0010]~~7. The ~~Method~~ method according to claim ~~10~~ 1, wherein the solvent temperature of the ~~dispensed~~ organic solvent dispensed in the subsequent rinsing step is kept at least 25K above the calculated dew point, and ~~the~~ wherein a flow of the liquid organic solvent is ~~selected~~ maintained below 100 ml/min without generating watermarks.

~~[Claim 0011]~~8. The ~~Method~~ method according to claim 1, wherein a fluorine containing solution is dispensed onto the ~~dis~~plate-like article before the ~~drying is~~ rinsing and subsequent rinsing steps are conducted.

9. The method according to claim 2, wherein the organic solvent is selected from the group consisting of alcohols, ketones, esters, and ethers.

10. The method according to claim 2, wherein the organic solvent has a water content of below 10 mass %.

~~[Claim 0012]~~11. The ~~Method~~ method according to claim ~~11~~ 8, wherein the fluorine containing solution is an aqueous solution that contains hydrogen fluoride at a concentration of below 1 g/1.

12. A method for drying a disc-shaped article, the method comprising:

a first dispensing step of dispensing an aqueous rinsing liquid to the disc-shaped article to rinse the disc-shaped article;

following said first dispensing step, a second dispensing step of dispensing a liquid organic solvent to the disc-shaped article to further rinse the disc-shaped article, the organic solvent having a water content of below 20 mass %; and

at least prior to the second dispensing step, performing the steps of:

measuring a relative humidity of ambient air;

calculating a dew point from the relative humidity; and

selecting a solvent temperature at which the liquid organic solvent is supplied to the disc-shaped article as a function of the calculated dew point.

wherein the solvent temperature is in a range between 20K and 35K above the calculated dew point, and

wherein the solvent temperature is at least 30°C and not higher than 60°C.

13. The method according to claim 12,

wherein the disc-shaped article is rotated during at least said second dispensing step, and

wherein in said second dispensing step, a dispenser scans and dispenses the liquid organic solvent from a center of the disc-shaped article to an edge of the disc-shaped article.

14. The method according to claim 12,

wherein the organic solvent is supplied at a volume flow in a range of 20 ml/min to 400 ml/min, and

wherein the solvent temperature is not more than 55°C.

15. The method according to claim 12, further comprising:

prior to said first dispensing step, a step of dispensing a fluorine containing solution onto the disc-shaped article.

16. The method according to claim 12, wherein said second dispensing step further comprises dispensing a flow of nitrogen in gaseous form to the disc-shaped article, the flow of nitrogen to the disc-shaped article being dispensed from a source separate from that of the organic solvent.

17. The method according to claim 15, wherein the fluorine containing solution is an aqueous solution that contains hydrogen fluoride at a concentration of below 1 g/l.

18. The method according to claim 15, wherein said second dispensing step further comprises dispensing a flow of nitrogen in gaseous form to the disc-shaped article, the flow of nitrogen to the disc-shaped article being dispensed from a source separate from that of the organic solvent.