CLAIMS

1. A cleaning liquid composition for cleaning a substrate having a Co contact plug and/or Co wiring, containing one or more reducing agents, water and a surfactant, wherein the surfactant is one or more polysulfonic acid compounds.

2. A cleaning liquid composition for cleaning a substrate having Co and not having Cu, which contains one or more reducing agents, water and a surfactant, wherein the surfactant is one or more polysulfonic acid compounds, wherein the liquid composition has a pH of 3 or more and less than 12.

3. The cleaning liquid composition according to claim 2, wherein the substrate having Co is the substrate having a Co contact plug and/or Co wiring.

4. The cleaning liquid composition according to any one of claims 1 to 3, wherein the reducing agent contains one or more selected from the group consisting of five-membered ring or six-membered ring compounds in which two or more hydroxyl groups are directly bonded to the ring.

5. The cleaning liquid composition according to claim 4, wherein the reducing agent is one or more selected from the group consisting of ascorbic acid, pyrogallol and methyl gallate.

6. The cleaning liquid composition according to any one of claims 1 to 5 wherein the liquid composition has a pH of 3 to 9.

7. A stock solution composition for the cleaning liquid composition according to any one of claims 1 to 6, which is used to obtain the cleaning liquid composition by 10 times to 1000 times dilution.

8. A method for manufacturing a semiconductor substrate, comprising a step of bringing the cleaning liquid composition according to any one of claims 1 to 6 into contact with the substrate having a Co contact plug and/or Co wiring or the substrate having Co.

9. The method for manufacturing a semiconductor substrate according to claim 8, comprising a step of chemical mechanical polishing (CMP) of the substrate having a Co contact plug and/or Co wiring or the substrate having Co, before the step of bringing the cleaning liquid composition into contact with the substrate having a Co contact plug and/or Co wiring or the substrate having Co.

10. The method for manufacturing a semiconductor substrate according to claim 8 or 9, wherein the step of bringing the cleaning liquid composition into contact with the substrate having a Co contact plug and/or Co wiring or the substrate having Co is a step of cleaning the substrate having a Co contact plug and/or Co wiring or the substrate having Co.