CLAIMS

[Claim 1]

A semiconductor cleaning liquid comprising isopropyl alcohol,

a mass ratio of t-butyl alcohol with respect to isopropyl alcohol being 1 ppm or less,

a mass ratio of 2-pentanone with respect to isopropyl alcohol being 1 ppb or more and 50 ppb or less, and

a mass ratio of croton aldehyde with respect to isopropyl alcohol being 0.5 ppb or more and 10 ppb or less.

[Claim 2]

A method for producing a semiconductor cleaning liquid,

the method comprising a first distillation step of supplying a crude isopropyl alcohol aqueous solution comprising t-butyl alcohol as an impurity to a feedstock supply plate of a first distillation column, withdrawing a first distillate comprising a low-boiling point impurity having a lower boiling point than isopropyl alcohol from a column top of the first distillation column, and withdrawing a first bottom liquid from a column bottom of the first distillation column,

wherein a fluid comprising water is supplied from outside the first distillation column to a predetermined plate which is two or more theoretical plates above the feedstock supply plate of the first distillation column so that a water content in a liquid phase is 15 mass% or more in three or more, as a theoretical plate number, plates among plates of the first distillation column from the feedstock supply plate to the column top.

[Claim 3]

The method for producing a semiconductor cleaning liquid according to claim 2,

wherein the method further comprises a second distillation step of supplying the first distillate to a feedstock supply plate of a second distillation column, withdrawing a second distillate comprising the low-boiling point impurity from the column top of the second distillation column, and withdrawing a second bottom liquid from the column bottom of the second distillation column, and

in the second distillation step, water is supplied to a predetermined plate of the second distillation column from outside the second distillation column, and

in the first distillation step, the second bottom liquid is supplied as the liquid comprising water.

[Claim 4]

The method for producing a semiconductor cleaning liquid according to claim 3, wherein the predetermined plate of the second distillation column is a plate between the feedstock supply plate of the second distillation column and the column top thereof.

[Claim 5]

The method for producing a semiconductor cleaning liquid according to any one of claims 2 to 4, further comprising a reaction step of obtaining the crude isopropyl alcohol aqueous solution by direct hydration of propylene.