WHAT IS CLAIMED IS:

1. A cleaning chemical supplying device for supplying a cleaning chemical to a substrate cleaning device, comprising:

a first mixing portion for supplying a first cleaning chemical obtained by mixing a first chemical and dilution water to the substrate cleaning device through a first pipeline;

a second mixing portion for supplying a second cleaning chemical obtained by mixing a second chemical and dilution water to the substrate cleaning device through a second pipeline;

a first chemical control portion for executing feedback control of a flow rate of the first chemical to be supplied to the first mixing portion based on a flow rate of the first chemical in the first pipeline;

a second chemical control portion for executing feedback control of a flow rate of the second chemical to be supplied to the second mixing portion based on a flow rate of the second chemical in the second pipeline;

a dilution water control portion for controlling a flow rate of the dilution water to be supplied to the first mixing portion or the second mixing portion; and

a dilution water supply switching portion for switching a supply destination of the dilution water from the first mixing portion to the second mixing portion or from the second mixing portion to the first mixing portion.

2. The cleaning chemical supplying device according to claim 1, wherein

the first chemical control portion is configured to stop supply of the first chemical while the second cleaning chemical is supplied to the substrate cleaning device; and

the second chemical control portion is configured to

stop supply of the second chemical while the first cleaning chemical is supplied to the substrate cleaning device.

3. The cleaning chemical supplying device according to claim 1 or 2, wherein

the dilution water supply switching portion is configured to supply the dilution water to the first mixing portion while the first chemical control portion supplies the first chemical to the first mixing portion and to supply the dilution water to the second mixing portion while the second chemical control portion supplies the second chemical to the second mixing portion.

4. The cleaning chemical supplying device according to any one of claims 1 to 3, further comprising:

a first chemical supply source for supplying the first chemical to the first chemical control portion;

a second chemical supply source for supplying the second chemical to the second chemical control portion:

a first chemical inlet valve provided on a pipeline connecting the first chemical supply source and the first chemical control portion; and

a second chemical inlet valve provided on a pipeline connecting the second chemical supply source and the second chemical control portion.

5. The cleaning chemical supplying device according to any one of claims 1 to 4, wherein

one of the first chemical and the second chemical is an alkaline chemical while the other is an acid chemical.

6. A cleaning chemical supplying method for supplying a

cleaning chemical to a substrate cleaning device, comprising:

a step of controlling a flow rate of a first chemical;

a step of controlling a flow rate of dilution water;

a step of supplying the first chemical and the dilution water to a first mixing portion and mixing the first chemical and the dilution water;

a first supply step of supplying a first cleaning chemical obtained by mixing the dilution water and the first chemical to the substrate cleaning device;

a step of executing feedback control of a flow rate of the first chemical to be supplied to the first mixing portion based on the flow rate of the first chemical to be supplied to the first mixing portion;

a step of controlling a flow rate of a second chemical;

a step of switching a supply destination of the dilution water from the first mixing portion to the second mixing portion;

a step of supplying the second chemical and the dilution water to the second mixing portion and of mixing the second chemical and the dilution water;

a second supply step of supplying a second cleaning chemical obtained by mixing the second cleaning chemical with the dilution water to the substrate cleaning device; and

a step of executing feedback control of a flow rate of the second chemical to be supplied to the second mixing portion based on the flow rate of the second chemical to be supplied to the second mixing portion.

7. The cleaning chemical supplying method according to claim 6, wherein

the first supply step has a step of stopping supply of the first cleaning chemical while the second cleaning chemical is supplied to the substrate cleaning device in the second supply step; and

the second supply step has a step of stopping supply

of the second cleaning chemical while the first cleaning chemical is supplied to the substrate cleaning device in the first supply step.

8. The cleaning chemical supplying method according to claim 6 or 7, wherein

one of the first chemical and the second chemical is an alkaline chemical, and the other is an acid chemical.

9. A cleaning unit having a substrate cleaning device for cleaning a substrate and a cleaning chemical supplying device according to claim 1 for supplying a cleaning chemical to the substrate cleaning device, wherein

the substrate cleaning device has:

a nozzle for supplying a cleaning chemical to the substrate; and

a first ultrasonic flow meter for measuring a flow rate of the cleaning chemical supplied to the substrate; and

the first ultrasonic flow meter is arranged at a position lower than a position of the nozzle.

10. The cleaning unit according to claim 9, wherein

the first ultrasonic flow meter is configured such that a flow direction of the cleaning chemical passing through the first ultrasonic flow meter is directed to a vertical direction.

11. The cleaning unit according to claim 9 or 10, wherein

the cleaning chemical supplying device has:

a mixing portion for supplying a cleaning chemical obtained by mixing a chemical and dilution water to

the substrate cleaning device;

a chemical flow rate control portion for controlling a flow rate of the chemical and for supplying the chemical to the mixing portion; and

a dilution water flow rate control portion for controlling a flow rate of the dilution water and for supplying the dilution water to the mixing portion, wherein

the chemical flow rate control portion and the dilution water flow rate control portion have a second ultrasonic flow meter and a third ultrasonic flow meter, respectively; and

the second ultrasonic flow meter and the third ultrasonic flow meter are arranged at positions lower than a position of the nozzle.

12. The cleaning unit according to claim 11, wherein

the second ultrasonic flow meter and the third ultrasonic flow meter are arranged such that a flow direction of the dilution water flowing through the second ultrasonic flow meter and a flow direction of the chemical passing through the third ultrasonic flow meter are directed to the vertical directions.