Abstract

Provided are a substrate processing system and a substrate processing method that can obtain expected etching rate and selection ratio, and perform stable processing. A substrate (11) is soaked in processing liquid (12) stored in a processing bath (14). The processing bath (14) is sealed by cover members (21a and 21b), and the inside is pressurized by water vapor from the heated processing liquid (12). Pure water is consecutively added to the processing liquid (12). Internal pressure of the processing bath (14) is measured, a degree of opening of an exhaust valve (41) is increased or decreased based on the internal pressure (Pa), the internal pressure is kept at constant, a water addition amount of the pure water is increased or decreased based on the internal pressure (Pa), and the substrate (11) is processed using the processing liquid (12) at constant concentration and constant temperature.