ABSTRACT

An object of the present invention to provide a method that eliminates a taper phenomenon in high-aspect-ratio vertical processing. A wafer processing method according to an embodiment of the present invention is a wafer processing method of processing a wafer placed in a process chamber and having a process target film provided on a surface thereof. The wafer processing method repeats a cycle including a plurality of steps a plurality of times, and the plurality of steps include the steps of: forming a protection film covering a recessed portion formed in advance in the process target film from an upper end of a sidewall of the recessed portion to a middle portion thereof between the upper end of the sidewall of the recessed portion and a bottom surface of the recessed portion; and etching a sidewall of the process target film of the recessed portion which is located under the protection film and uncovered with the protection film.