

## ABSTRACT

This substrate processing device includes: a first nozzle disposed corresponding to a first region in which a plurality of product substrates are arranged in a substrate arrangement region in which a plurality of substrates are arranged in a reaction tube, the first nozzle supplying a hydrogen-containing gas into the reaction tube; a second nozzle disposed corresponding to the first region to supply an oxygen-containing gas into the reaction tube; a third nozzle disposed corresponding to a second region on a bottom opening side relative to the first region in which dummy substrates or heat insulators are arranged, the third nozzle supplying a dilution gas into the reaction tube; and a controller configured to be capable of controlling the hydrogen-containing gas supplied from the first nozzle and the dilution gas supplied from the third nozzle such that a concentration of the hydrogen-containing gas in the second region is lower than a concentration of the hydrogen-containing gas in the first region. The first nozzle includes a plurality of multi-hole nozzles including injection holes corresponding to a divided region obtained by dividing a region including the first region and not including the second region in a substrate arrangement direction.

Fig. 3