

An aerosol-generating device is disclosed. The aerosol-generating device of the disclosure includes a cartridge having therein a chamber storing liquid, a first heater for heating the liquid, a housing having an insertion space defined therein, a second heater for heating a stick inserted into the insertion space, a memory for storing a plurality of liquid temperature profiles corresponding to the first heater and a plurality of stick temperature profiles corresponding to the second heater, and a controller for setting one of a plurality of modes to an operation mode of the aerosol-generating device. The controller determines a target temperature for the first heater based on a liquid temperature profile corresponding to the operation mode among the plurality of liquid temperature profiles, and determines a target temperature for the second heater based on a stick temperature profile corresponding to the operation mode among the plurality of stick temperature profiles.