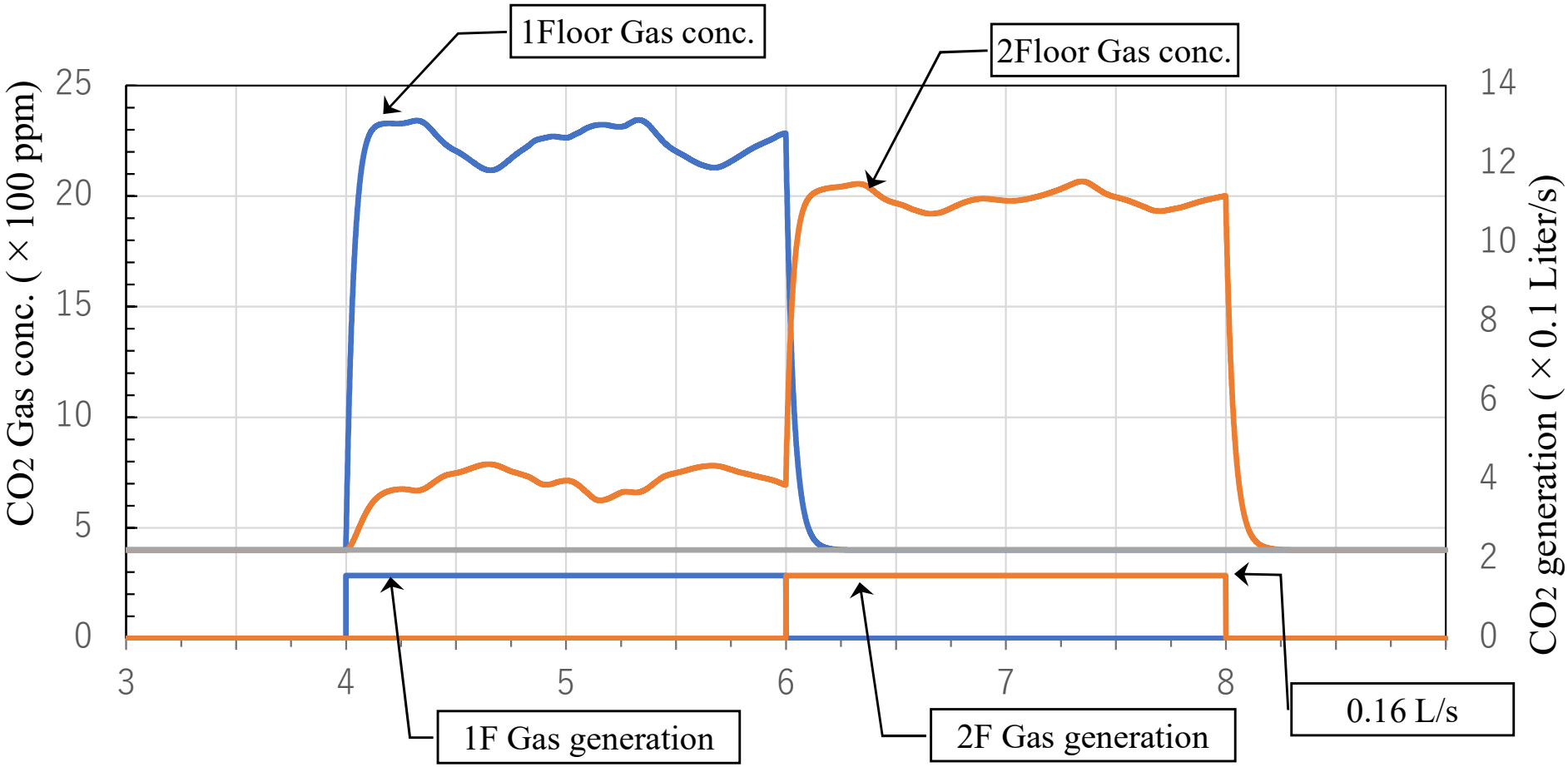
Generated measurement data by computer simulation for six days on carbon dioxide gas movement system of two chamber model



These simulated measurements were fed into SPIDS-G (a system identification calculation program for gas transfer systems). The low pass filter of 5-minute moving average was used. The batch system identification was applied for the entire six days and a set of air flow rates and effective mixing volumes were estimated.

CO_2 generation: Corresponding to the former research[99], firstly we assume the heat generation as 4 kW in each room and then the generation of carbon dioxide can be calculated. According to a heater maker material we found CO_2 generation rate is 9.58 (L/min). In this case kerosene consumption rate is 5.53 (g/min) which will be measured by electric scale in real and actual situation.