

## Simultaneous absorption of CO<sub>2</sub> and NO<sub>2</sub> into aqueous AMP solution

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Carbon dioxide and nitrogen dioxide were simultaneously absorbed into aqueous 2-amino-2-methyl-1-propanol (AMP) in a stirred semi-batch tank with a planar gas-liquid interface within a range of 0 - 4.0 kmol/m<sup>3</sup> of AMP, 0.03 - 0.3 mole fraction of CO<sub>2</sub>, 0.005 - 0.2 mole fraction of NO<sub>2</sub>, and 298 - 318 K. Absorption data of each gas in the CO<sub>2</sub>-AMP and NO<sub>2</sub>-AMP systems are obtained to verify their reaction regimes, based on film theory, respectively, which are used to analyze the simultaneous absorption mechanisms of CO<sub>2</sub> and NO<sub>2</sub> in the CO<sub>2</sub>-NO<sub>2</sub>-AMP systems. The measured absorption rates of CO<sub>2</sub> and NO<sub>2</sub> are compared to those formulated by an approximate solution of the mass balances with simultaneous reactions.