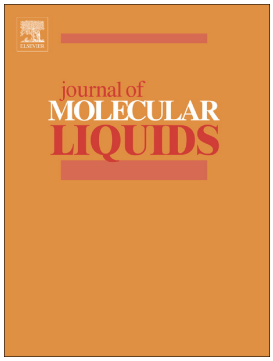

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Viscosity measurement of unloaded and CO_2-loaded aqueous monoethanolamine at higher concentrations

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ABSTRACT

This work contributes new experimental viscosity data of both unloaded and CO_2-loaded aqueous monoethanolamine (MEA) solutions. In the first part of this paper, viscosity of unloaded MEA solutions at MEA mass fractions between (0.5 and 1) is presented. Four different techniques for representing the viscosity of unloaded MEA solution are discussed and compared. The second part of this work reports viscosities of CO_2-loaded MEA solutions at five different CO_2 concentrations for MEA mass fractions of 0.50, 0.60, 0.70 and 0.80. These data were correlated using an established method from the literature. In both cases, the dependence of viscosity on temperature is also discussed.

KEYWORDS: Monoethanolamine; viscosity; CO_2 loading, alkanolamine, modeling

1. Introduction