Phase Equilibria of Three Binary Mixtures: Methanethiol + Methane, Methanethiol + Nitrogen, and Methanethiol + Carbon Dioxide

New vapor–liquid equilibrium (VLE) data for methanethiol (MM) + methane (CH₄), methanethiol (MM) + nitrogen (N₂), and methanethiol (MM) + carbon dioxide (CO₂) is reported for temperatures of (304, 334, and 364) K in the pressure range (1 to 8) MPa. A “static–analytic” method was used for performing the measurements. The objective is to provide experimental VLE data for methanethiol with other natural gas contents at its crude form, for which no data are available in the open literature. The new VLE data for the aforementioned systems have been modeled successfully with the cubic-plus-association equation of state (CPA EoS).

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