

Supporting Information

Speed of Sound and Excess Properties of (Ethanol + Isooctane) Binary System

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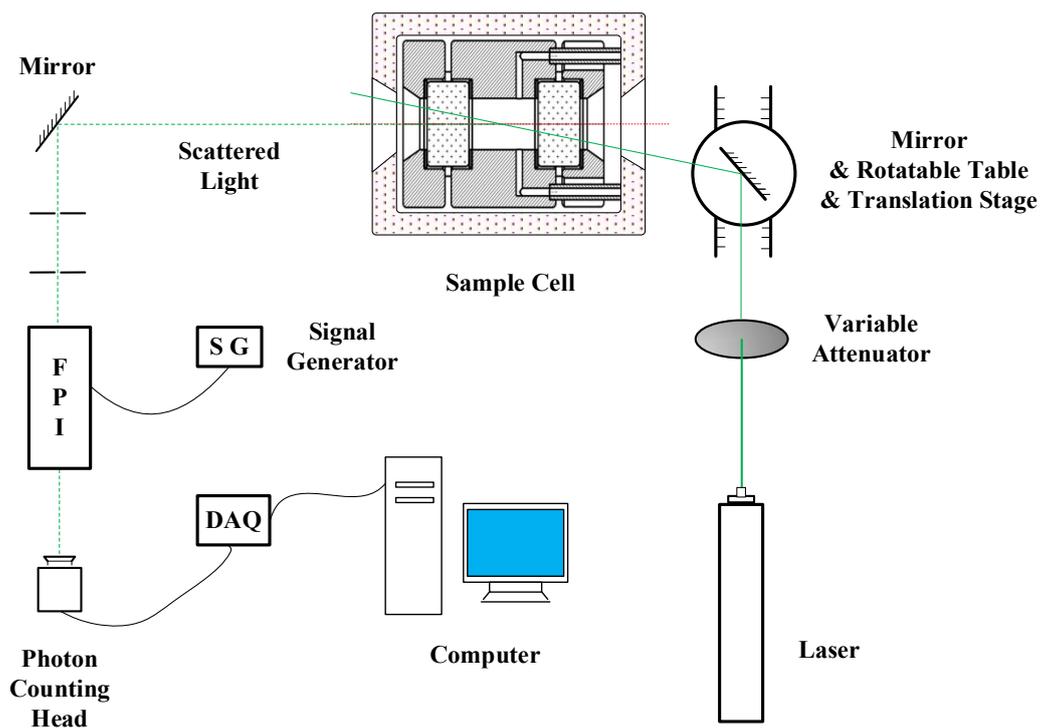


Figure S1. Schematic of the Experimental Optical Setup for the Speed of Sound.

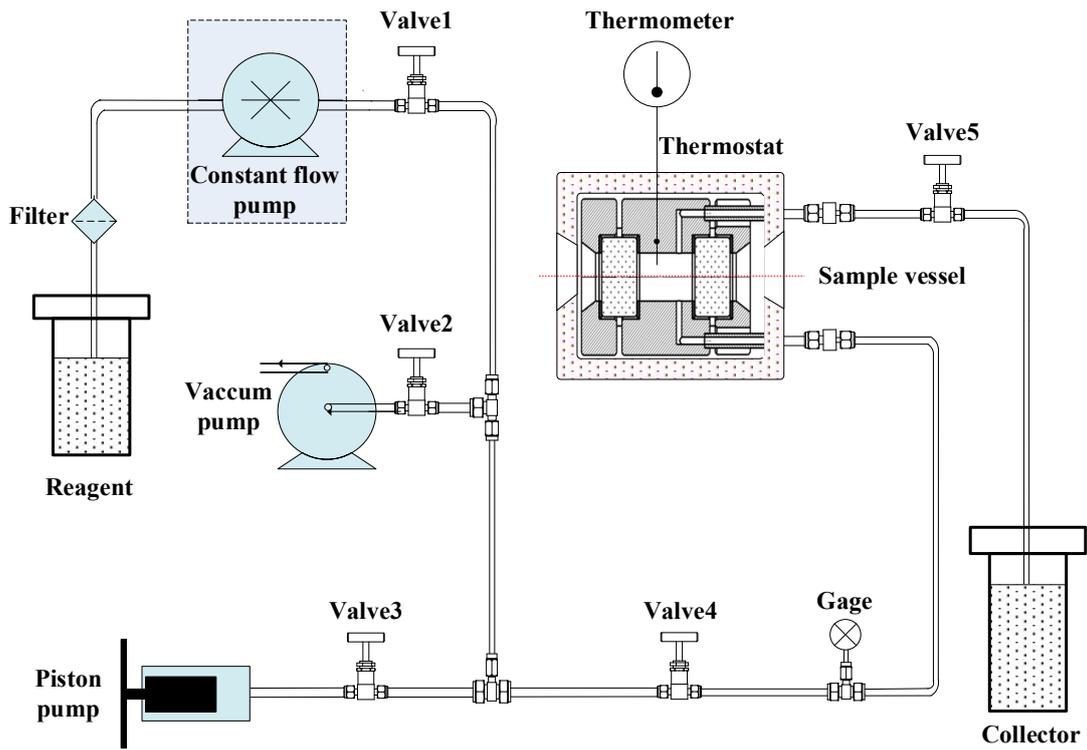


Figure S2. The control and measurement systems of temperature and pressure.

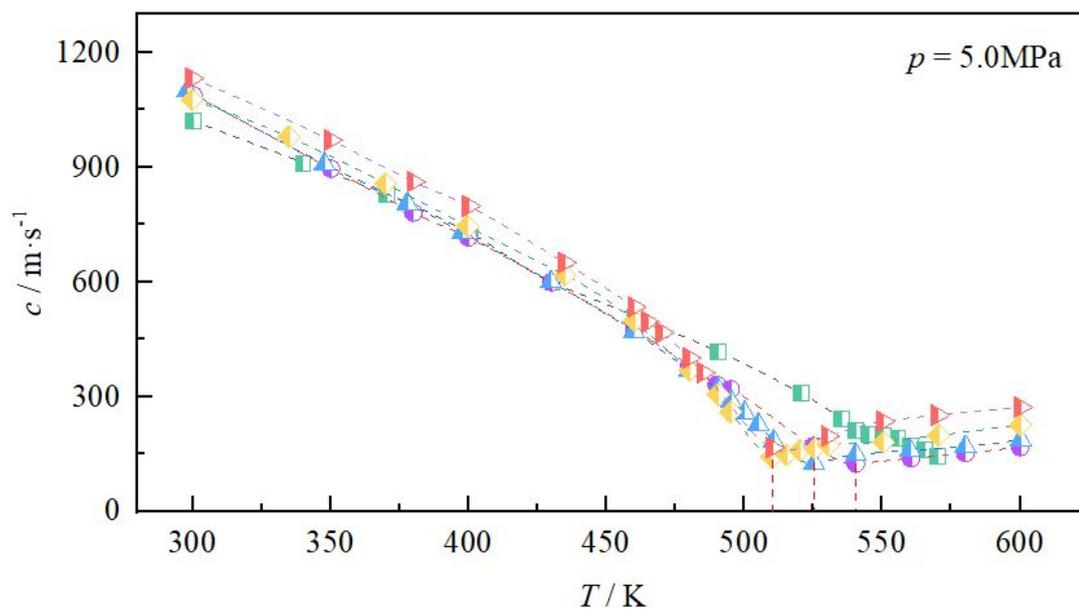


Figure S3. Experimental speeds of sound for the binary system of ethanol (1) + isooctane (2) at different mole fractions as a function of temperature at $p = 5.0 \text{ MPa}$: \square , $x_1 = 0.100$; \circ , $x_1 = 0.300$, \triangle , $x_1 = 0.500$; \diamond , $x_1 = 0.700$; \blacktriangleright , $x_1 = 0.900$.

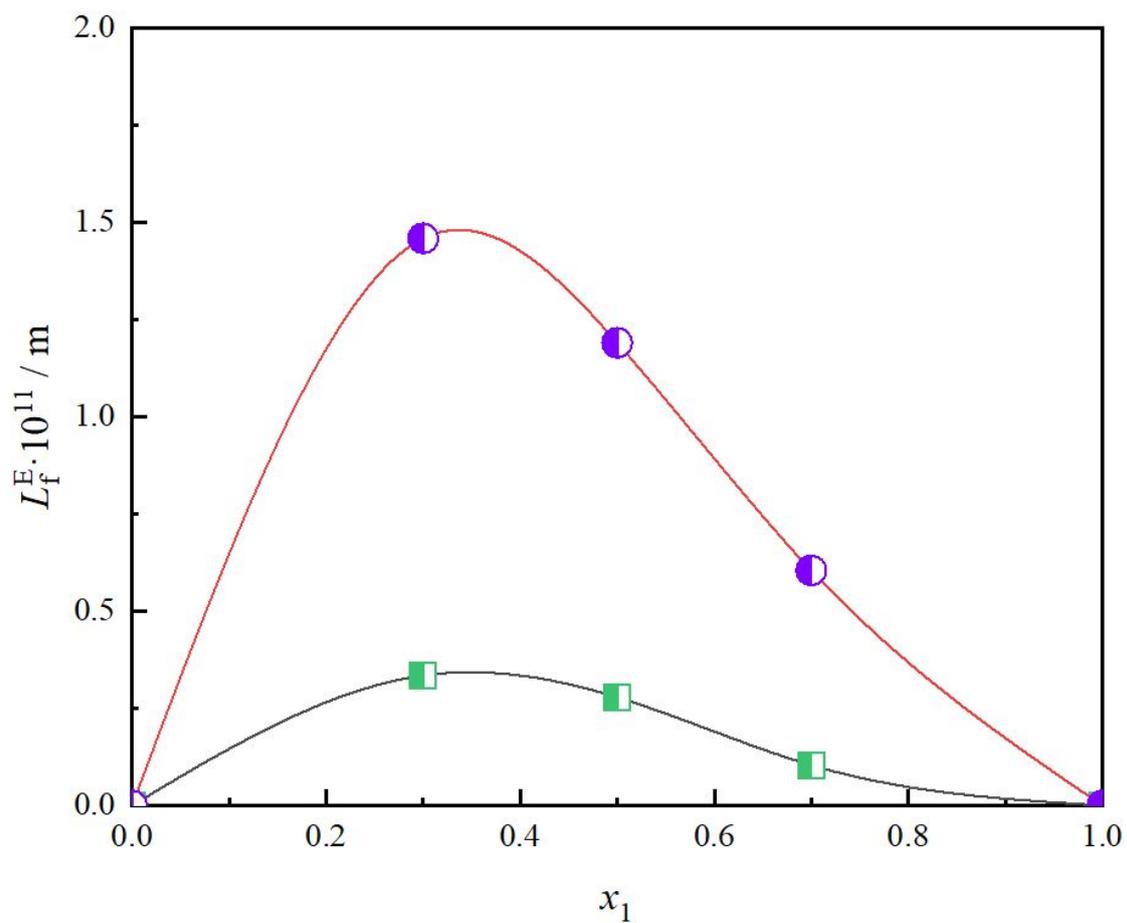


Figure S4. Plots of excess acoustic impedance against mole fraction at 3.0 MPa: \blacksquare , $T = 298.15 \text{ K}$; \bullet , $T = 400.15 \text{ K}$.

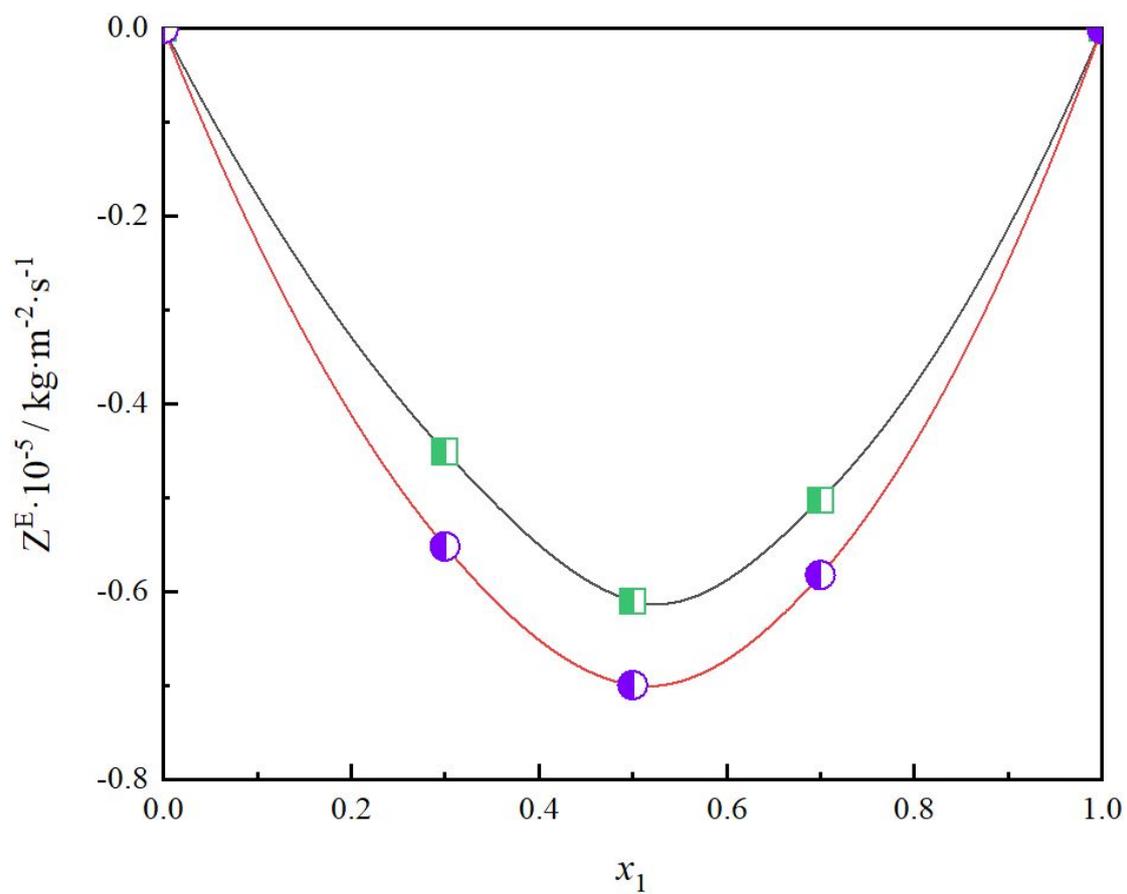


Figure S5. Plots of excess acoustic impedance against mole fraction at 3.0 MPa: \blacksquare , $T = 298.15 \text{ K}$; \blacksquare , $T = 400.15 \text{ K}$.

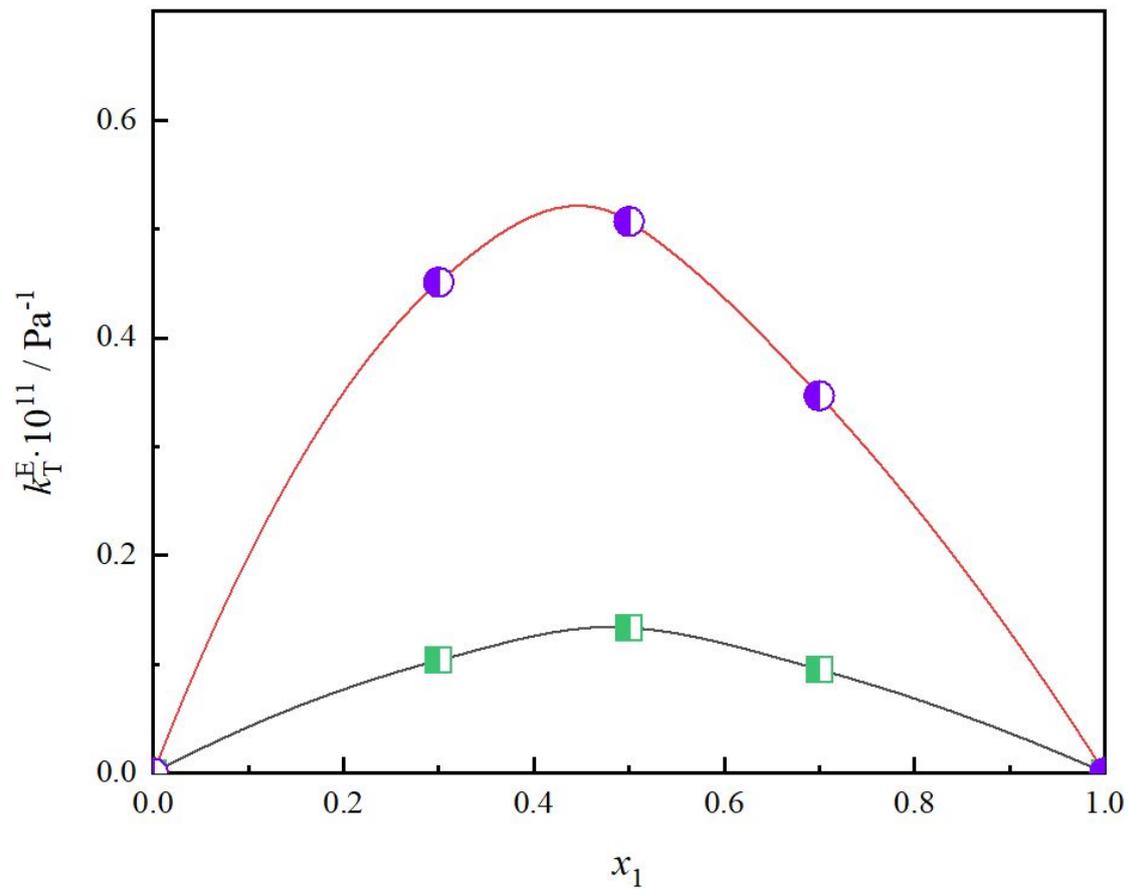


Figure S6. Plots of excess isothermal compressibility against mole fraction at 3.0 MPa: \blacksquare , $T = 298.15$ K; \blacksquare , $T = 400.15$ K.