

Phase diagrams and interfacial properties of water-hexylamine, water-heptylamine, and water-octylamine systems.

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Streszczenie

Phase diagrams of three systems of water with normal hexylamine, heptylamine, and octylamine are determined, showing in all cases lower consolute points and gel formation at low temperatures. The interfacial tensions are measured, in function of temperature, using the Wilhelmy (plate), Du Noüy (ring), and capillary rise methods. In all cases the interfacial tension increases with temperature, starting close to the critical point. In the operating temperature range (room-80°C), the ring method gives monotonously increasing tensions. Due to temperature-dependent wetting, the plate method, together with the capillary rise method, fails to give meaningful results at high temperature ($T \geq 60^\circ\text{C}$).

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