

Diffusion coefficient of dideuterium oxide into dimethyl-sulfoxide and cesium iodide

3 Diffusion in Liquid Mixtures

3.1. Data

3.1.3. Diffusion in Ternary Mixtures

D ₂ O	(1)	dideuterium oxide	7789-20-0		
C ₂ H ₆ O S	(2)	dimethyl-sulfoxide	67-68-5		
Cs I	(3)	cesium iodide	7789-17-5		
Intradiffusion Coefficient: $D_{iT}(x_i)$; $T = 298.15$ K; Method: NMR FG					Ref.: [1993H8]
x_2	x_3^*	p [kPa]	$D_{1T} \cdot 10^9$ [m ² /s]	$D_{2T} \cdot 10^9$ [m ² /s]	$D_{3T} \cdot 10^9$ [m ² /s]
0.1	2.0	101.325		0.68	
0.2	2.0	101.325		0.47	
0.4	2.0	101.325		0.35	
0.6	2.0	101.325		0.37	
0.8	2.0	101.325		0.51	
1.0	2.0	101.325		0.59	
Comment: x_3^* : concentration of component (3): 2.0 mol (3) per 55.5 mol of solvent (1)					

Symbols and Abbreviations

Short Form	Full Form
D	diffusion coefficient
p	pressure
T	temperature
x_i	mole fraction
NMR FG	NMR spin echo field gradient

References

[1993H8] Holz, M., Grunder, R., Sacco, A., Meleleo, A.: J. Chem. Soc., Faraday Trans. **89** (1993) 1215–1222.