

COMPONENTS: (1) cis-1,2-Dimethylcyclohexane; C_8H_{16} ; [2207-01-4] (2) Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: McAuliffe, C. <i>J. Phys. Chem.</i> <u>1966</u> , 70, 1267-75.
VARIABLES: One temperature: 25°C	PREPARED BY: A. Maczynski, Z. Maczynska, and A. Szafranski
EXPERIMENTAL VALUES: The solubility of cis-1,2-dimethylcyclohexane in water at 25°C was reported to be 6.0 g(1)/10 ⁶ g(2). The corresponding mass percent and mole fraction, x_1 , calculated by the compilers are 0.00060 g(1)/100 g sln and 9.6×10^{-7} .	
AUXILIARY INFORMATION	
METHOD/APPARATUS/PROCEDURE: In a 250-mL bottle, 10-20 mL of (1) was vigorously shaken for 1 hr, or magnetically stirred for 1 day, with 200 mL of (2) at 25°C. The bottle was set aside for 2 days to allow droplets of undissolved (1) to separate. Absence of emulsion was checked microscopically. A sample of the hydrocarbon-saturated water was withdrawn with a Hamilton syringe and gas liquid chromatographed in conjunction with a flame-ionization detector.	SOURCE AND PURITY OF MATERIALS: (1) Phillips Petroleum or Columbia Chemical; used as received. (2) distilled. ESTIMATED ERROR: temp. $\pm 1.5^\circ C$ soly. 0.8 g(1)/10 ⁶ g(2) (standard deviation of mean) REFERENCES: