

COMPONENTS: (1) 1-Pentyne; C ₅ H ₈ ; [627-19-0] (2) Water; H ₂ O; [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: <p>The solubility of 1-pentyne in water at 25°C was reported to be 1570 g(1)/10⁶ g(2).</p> <p>The corresponding mass percent and mole fraction, x_1, calculated by the compilers are 0.1570 g(1)/100 g sln and 4.15×10^{-4}.</p>	
AUXILIARY INFORMATION	
METHOD/APPARATUS/PROCEDURE: <p>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 A sample of the hydrocarbon-saturated water was withdrawn with a Hamilton syringe and gas liquid chromatographed in conjunction with a flame-ionization detector.</p>	SOURCE AND PURITY OF MATERIALS: (1) Phillips Petroleum or Columbia Chemical; used as received. (2) distilled. ESTIMATED ERROR: temp. $\pm 1.5K$ soly. 33 g(1)/10 ⁶ g(2) (standard deviation of mean) REFERENCES: