

COMPONENTS: (1) 1,2,4,5-Tetramethylbenzene; $C_{10}H_{14}$; [95-93-2] (2) Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Price, L.C. <i>Am. Assoc. Petrol. Geol. Bull.</i> <u>1976</u> , 60, 213-244.
VARIABLES: One temperature: 25°C	PREPARED BY: M.C. Haulait-Pirson
EXPERIMENTAL VALUES: The solubility of 1,2,4,5-tetramethylbenzene in water at 25°C and at system pressure was reported to be 3.48 mg(1)/kg(2). The corresponding mass per cent and mole fraction, x_1 , calculated by the compiler are 3.48×10^{-4} g(1)/100 g sln and 4.67×10^{-7} .	
AUXILIARY INFORMATION	
METHOD/APPARATUS/PROCEDURE: The solubility was determined at laboratory temperatures by use of screw-cap test tubes. The (1) phase floated on top of the water and insured saturation of the (2) phase in 2 to 4 days. Analyses were carried out using a Hewlett-Packard Model 5751 gas chromatograph with dual-flame ionization detectors. Many details are given in the paper.	SOURCE AND PURITY OF MATERIALS: (1) Phillips Petroleum Company; Chemical Samples Company or Aldrich Chemical Company; 99+%. (2) Distilled. ESTIMATED ERROR: Temperature: $\pm 1^\circ C$ Solubility: ± 0.28 mg(1)/kg(2) REFERENCES:

COMPONENTS: (1) 1,2,4,5-Tetramethylbenzene; $C_{10}H_{14}$; [95-93-2] (2) Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Krzyzanowska, T.; Szeliga, J. <i>Nafta (Katowice)</i> , <u>1978</u> , <i>12</i> , 413-7.
VARIABLES: One temperature: 25°C	PREPARED BY: M.C. Haulait-Pirson
EXPERIMENTAL VALUES: The solubility of 1,2,4,5-tetramethylbenzene in water at 25°C was reported to be 3.48 mg(1)/kg(2). The corresponding mass percent and mole fraction, x_1 , calculated by compiler are 3.48×10^{-4} g(1)/100 g sln and 4.67×10^{-7} . Editor's Note: Based on the results for this and other hydrocarbon-water systems, uncertainty exists about whether the datum compiled here is independent of that of Price for the same system (see previous page). Consequently, this system has not been evaluated.	
AUXILIARY INFORMATION	
METHOD/APPARATUS/PROCEDURE: The saturated solutions of (1) in (2) were prepared in two ways. First, 200 μ L of (1) was injected into 20 mL of (2) and thermostatted at 25°C. Second, the mixture of (1) and (2) as above was thermostatted at 70°C and then cooled to 25°C. The time required to obtain equilibrium was three weeks. The solubility of (1) in (2) was measured by glc. A Perkin-Elmer model F-11 gas chromatograph equipped with a 100-150 mesh Porasil column (70°C) and a flame ionization detector was used. Saturated solutions of heptane in (2) were used as standard solutions.	SOURCE AND PURITY OF MATERIALS: (1) not specified. (2) not specified. ESTIMATED ERROR: soly. 0.1 mg(1)/kg(2) (standard deviation from 7-9 determinations). REFERENCES: