COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) 1,5-Hexadiene; C_6H_{10}; [592-42-7] (2) Water; H_2O; [7732-18-5]	Black, C.; Joris, G.G.; Taylor, H.S. *J. Chem. Phys.* 1948, *16*, 537-43.
VARIABLES: Temperature: 13.5 and 20.2°C	**PREPARED BY:** A. Maczynski and Z. Maczynska

EXPERIMENTAL VALUES:

Solubility of water in 1,5-hexadiene

t/°C	g(2)/100 g(1)	g(2)/100 g sln (compiler)	$10^3 x_2$ (compiler)
13.5	0.0618	0.0618	2.81
20.2	0.0969	0.0962	4.37

(at total saturation pressure of 1 atm)

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Air saturated with radioactive water vapor was bubbled through (1) until saturation was attained. Dissolved water was separated from (1) by absorption on calcium oxide. The tritium was transferred into the counter by equilibration with ethanol vapor. The method is described in ref (1).

SOURCE AND PURITY OF MATERIALS:

(1) Harvard University; purity not specified; used as received.

(2) not specified.

ESTIMATED ERROR:

soly. ± 1% (type of error not specified)

REFERENCES:

1. Joris, G.G.; Taylor, H.S.
J. Chem. Phys. 1948, *16*, 45.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) 1,5-Hexadiene; C_6H_{10}; [592-42-7] (2) Water; H_2O; [7732-18-5]	McAuliffe, C. *J. Phys. Chem.* 1966, *70*, 1267-75.
VARIABLES:	**PREPARED BY:**
One temperature: 25°C	A. Maczynski, Z. Maczynska, and A. Szafranski

EXPERIMENTAL VALUES:

The solubility of 1,5-hexadiene in water at 25°C was reported to be 169 g(1)/10^6 g(2).

The corresponding mass percent and mole fraction, x_1, calculated by the compilers are 0.0169 g(1)/100 g sln and 3.70×10^{-5}.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
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 A sample of the hydrocarbon-saturated water was withdrawn with a Hamilton syringe and gas liquid chromatographed in conjunction with a flame-ionization detector.	(1) Phillips Petroleum or Columbia Chemical; used as received. (2) distilled.
	ESTIMATED ERROR: temp. ± 1.5 K soly. 6 g(1)/10^6 g(2) (standard deviation of mean)
	REFERENCES: