

COMPONENTS: (1) (+)-(R)-P-Mentha-1,8-diene (d-Limonene); C ₁₀ H ₁₆ ; [5989-27-5] (2) Water; H ₂ O; [7732-18-5]	ORIGINAL MEASUREMENTS: Massaldi, H.A.; King, C.J. <i>J. Chem. Eng. Data</i> <u>1973</u> , <i>18</i> , 393-7.																				
VARIABLES: Temperature: 0-25°C	PREPARED BY: A. Maczynski and Z. Maczynska																				
EXPERIMENTAL VALUES: <p style="text-align: center;">Solubility of d-limonene in water</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">t/°C</th> <th style="text-align: center;">mg(1) L sln</th> <th style="text-align: center;">10⁴ mol(1) L sln</th> <th style="text-align: center;">10³g(1)/100g sln (compiler)</th> <th style="text-align: right;">10⁶x₁</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0</td> <td style="text-align: center;">9.7</td> <td style="text-align: center;">0.708</td> <td style="text-align: center;">0.97</td> <td style="text-align: right;">1.3</td> </tr> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">10.4</td> <td style="text-align: center;">0.767</td> <td style="text-align: center;">1.04</td> <td style="text-align: right;">1.4</td> </tr> <tr> <td style="text-align: center;">25</td> <td style="text-align: center;">13.8</td> <td style="text-align: center;">1.013</td> <td style="text-align: center;">1.38</td> <td style="text-align: right;">1.8</td> </tr> </tbody> </table>		t/°C	mg(1) L sln	10 ⁴ mol(1) L sln	10 ³ g(1)/100g sln (compiler)	10 ⁶ x ₁	0	9.7	0.708	0.97	1.3	5	10.4	0.767	1.04	1.4	25	13.8	1.013	1.38	1.8
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AUXILIARY INFORMATION																					
METHOD/APPARATUS/PROCEDURE: A technique based on head-space analysis by gas-liquid chromatography was developed to determine solubilities of sparingly soluble organics. Saturated solutions need not be prepared in advance whereby phase separation problems are avoided, nor have liquid samples to be analyzed. This method is versatile enough to allow determinations provided that the pure vapor pressure of the substances is known. The gas chromatograph was a Varian Aerograph Model 1740 with a flame ionization detector.	SOURCE AND PURITY OF MATERIALS: (1) Matheson Coleman and Bell Co., highest purity; kept under N ₂ atmosphere at -2°C in a dark container; used as received. (2) not specified. ESTIMATED ERROR: temp. ± 0.05°C REFERENCES:																				