

COMPONENTS: (1) 10-Ethylbenz[a]anthracene; $C_{20}H_{16}$; [14854-08-1] (2) Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Davis, W.W.; Krahl, M.E.; Cloves, G.H.A. <i>J. Am. Chem. Soc.</i> <u>1942</u> , <i>64</i> , 108-10.																
VARIABLES: One temperature: 27°C	PREPARED BY: M.C. Haulait-Pirson																
EXPERIMENTAL VALUES: <p style="text-align: center;">Solubility of 10-ethylbenz[a]anthracene in water</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">$t/^\circ C$</th> <th style="text-align: center;">$10^5 \text{ g(1) L}^{-1} \text{ (2)}$</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">27</td><td style="text-align: center;">4.5 ± 0.5</td></tr> <tr><td></td><td style="text-align: center;">4.5 ± 0.5</td></tr> <tr><td></td><td style="text-align: center;">3.5 ± 0.5</td></tr> <tr><td></td><td style="text-align: center;">4.5 ± 0.3</td></tr> <tr><td></td><td style="text-align: center;">4.5 ± 0.5</td></tr> <tr><td></td><td style="text-align: center;">4.0 ± 0.5</td></tr> <tr><td></td><td style="text-align: center;">4.0 ± 0.8</td></tr> </tbody> </table> <hr style="width: 20%; margin: 10px auto;"/> <p>The best value recommended by the authors is $4.5 \times 10^{-5} \text{ g(1) L}^{-1} \text{ (2)}$. With the assumption that 1.00 L sln = 1.00 kg sln, the corresponding mass percent and mole fraction, x_1, calculated by the compiler are $4.5 \times 10^{-6} \text{ g(1)/100 g sln}$ and 3.2×10^{-9}.</p>		$t/^\circ C$	$10^5 \text{ g(1) L}^{-1} \text{ (2)}$	27	4.5 ± 0.5		4.5 ± 0.5		3.5 ± 0.5		4.5 ± 0.3		4.5 ± 0.5		4.0 ± 0.5		4.0 ± 0.8
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AUXILIARY INFORMATION																	
METHOD/APPARATUS/PROCEDURE: The method consisted of preparing serial dilutions of a suspension of (1) in (2) and determining nephelo- metrically the amount of (1) per unit volume beyond which further dilution caused no reduction in light scattering, which remained equal to that of pure (2). A Bausch and Lomb Dubosque colori- meter model 100-mm was employed. Many details are reported in ref 1.	SOURCE AND PURITY OF MATERIALS: (1) prepared at Harvard University; m.p. range 112.4-112.8°C (cf. ref 2). (2) dust-free. ESTIMATED ERROR: temp. ± 3°C soly. see above REFERENCES: 1. Davis, W.W.; Parker, Jr., T.V. <i>J. Am. Chem. Soc.</i> <u>1942</u> , <i>64</i> , 101. 2. Davis, W.W.; Krahl, M.E.; Cloves, G.H.A. <i>J. Am. Chem. Soc.</i> <u>1940</u> , <i>62</i> , 3086.																