

COMPONENTS: (1) Benzenesulfonamide, 4-amino-N-(aminocarbonyl)- (sulfaurea); $C_7H_9N_3O_3S$; [547-44-4] (2) Mannitol; $C_6H_{14}O_6$; [87-78-5] (3) Methane, trichloro- (chloroform); $CHCl_3$; [67-66-3] (4) Phosphoric acid, disodium salt; Na_2HPO_4 ; [7558-94-4] (5) Phosphoric acid, monopotassium salt; KH_2PO_4 ; [7778-77-0] (6) Sodium chloride; $NaCl$; [7647-14-5] (7) Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Sonnenberg, H.; Oelert, H.; Baumann, K. <i>Pflügers Arch. Ges. Physiol.</i> <u>1965</u> , 286, 171-80.				
VARIABLES: pH	PREPARED BY: R. Piekos				
EXPERIMENTAL VALUES: Relative lipid solubility determined on the basis of concentration measurements of sulfaurea in perfusates ^{a,b} before (c_i) and after (c_e) equilibration with chloroform $\left(100 - \frac{100 c_e}{c_i} \right)$ <table> <tr> <td>5^a</td> <td>0</td> </tr> <tr> <td>8^b</td> <td>0</td> </tr> </table> <p>^a Composition of perfusate: 110 mmol/l NaCl, 35 mmol/l mannitol in a phosphate buffer consisting of 98.8 ml of 0.022M KH_2PO_4 and 1.2 ml of 0.022M Na_2HPO_4.</p> <p>^b Composition of perfusate: 68 mmol/l NaCl, 100 mmol/l mannitol in a phosphate buffer consisting of 5.5 ml of 0.022M KH_2PO_4 and 94.5 ml of 0.022M Na_2HPO_4.</p>		5 ^a	0	8 ^b	0
5 ^a	0				
8 ^b	0				
AUXILIARY INFORMATION					
METHOD/APPARATUS/PROCEDURE: Lipoid solubilities were detd by shaking equal volumes of the perfusate and chloroform for 20 min and measuring the concn of sulfaurea by the spectrophotometric method of Bratton and Marshall (1) in an aq phase before and after this procedure.	SOURCE AND PURITY OF MATERIALS: None given. ESTIMATED ERROR: None given. REFERENCES: 1. Bratton, A. C.; Marshall, E. K., Jr. <i>J. Biol. Chem.</i> <u>1939</u> , 128, 537.				

COMPONENTS: (1) Benzenesulfonamide, 4-amino-N-(aminocarboxyl)- (sulfaurea); $C_7H_9N_3O_3S$; [547-44-4] (2) Benzene, methyl- (toluene); C_7H_8 ; [108-88-3] (3) Mannitol; $C_6H_{14}O_6$; [87-78-5] (4) Phosphoric acid, disodium salt; Na_2HPO_4 ; [7558-94-4] (5) Phosphoric acid, monopotassium salt; KH_2PO_4 ; [7778-77-0] (6) Sodium chloride; $NaCl$; [7647-14-5] (7) Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Sonnenberg, H.; Oelert, H.; Baumann, K. <i>Pflügers Arch. Ges. Physiol.</i> <u>1965</u> , <i>286</i> , 171-80.				
VARIABLES: pH	PREPARED BY: R. Piekos				
EXPERIMENTAL VALUES: <p style="text-align: center;">Relative lipid solubility determined on the basis of concentration measurements of sulfaurea in perfusates^{a,b} before (c_1) and after (c_e) equilibration with toluene</p> $\left(100 - \frac{100 c_e}{c_1}\right)$ <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding-right: 20px;">5^a</td> <td>2</td> </tr> <tr> <td>8^b</td> <td>2</td> </tr> </table> <p>^a Composition of perfusate: 110 mmol/l NaCl, 35 mmol/l mannitol in a phosphate buffer consisting of 98.8 ml of 0.022 M KH_2PO_4 and 1.2 ml of 0.022 M Na_2HPO_4.</p> <p>^b Composition of perfusate: 68 mmol/l NaCl, 100 mmol/l mannitol in a phosphate buffer consisting of 5.5 ml of 0.022 M KH_2PO_4 and 94.5 ml of 0.022 M Na_2HPO_4.</p>		5^a	2	8^b	2
5^a	2				
8^b	2				
AUXILIARY INFORMATION					
METHOD/APPARATUS/PROCEDURE: Lipoid solubilities were detd by shaking equal volumes of the perfusate and toluene with sulfaurea for 20 min and measuring the concn of sulfaurea by the spectrophotometric method of Bratton and Marshall (1) in an aq phase before and after this procedure.	SOURCE AND PURITY OF MATERIALS: None given.				
	ESTIMATED ERROR: None given.				
	REFERENCES: 1. Bratton, A. C.; Marshall, E. K., Jr. <i>J. Biol. Chem.</i> <u>1939</u> , <i>128</i> , 537.				

<p>COMPONENTS:</p> <p>(1) Benzenesulfonamide, 4-amino-N-[(butyl-amino)carbonyl]- (carbutamide); $C_{11}H_{17}N_3O_3S$; [339-43-5]</p> <p>(2) Aqueous phosphate buffers</p>	<p>EVALUATOR:</p> <p>Anthony N. Paruta Department of Pharmaceutics University of Rhode Island Kingston, Rhode Island, USA and Ryszard Piekos Faculty of Pharmacy, University of Gdansk Gdansk, Poland 1986</p>
<p>CRITICAL EVALUATION:</p> <p>The solubility of this compound was studied by two workers (1,2) at a temperature of 310K and a pH value of 4. Alric and Puech (1) determined the solubility in a McIlvaine type buffer and recorded a value of $1.95 \times 10^{-3} \text{ mol dm}^{-3}$ as an average of eight determinations. Saffar, Ogata and Ejima (2) used a McIlvaine buffer at a pH value of 4 and also illustrated the equilibrium time for saturation to occur. The value given by these workers (2) coincides very well with the other study and can be given as $1.92 \times 10^{-3} \text{ mol dm}^{-3}$. Both workers used at least 48 hours of equilibration and Saffar et al.(2) used an average value at 24, 48 and 72 hours. The recommended value for solubility of carbutamide at pH 4 in McIlvaine's buffer is $1.93 \times 10^{-3} \text{ mol dm}^{-3}$.</p> <p>REFERENCES:</p> <p>(1) Alric, R.; Puech, R. <i>J. Pharmacol. (Paris)</i> <u>1971</u>, <i>2(2)</i>, 141-54. (2) Saffar, F.; Ogata, H.; Ejima, A. <i>Chem. Pharm. Bull.</i> <u>1982</u>, <i>30(2)</i>, 679-83.</p>	

COMPONENTS: (1) Benzenesulfonamide, 4-amino-N-[(butylamino)carbonyl]- (carbutamide); $C_{11}H_{17}N_3O_3S$; [359-43-5] (2) Hydrochloric acid; HCl; [7647-01-0] (3) Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Saffar, F.; Ogata, H.; Ejima, A. <i>Chem. Pharm. Bull.</i> <u>1982</u> , <i>30</i> (2), 679-83.
VARIABLES: One temperature: 37°C	PREPARED BY: R. Piekos
EXPERIMENTAL VALUES: Solubility of carbutamide in dilute hydrochloric acid of pH 1.2 at 37°C is 1.80 mg/ml (6.63×10^{-3} mol dm ⁻³ , compiler).	
AUXILIARY INFORMATION	
METHOD/APPARATUS/PROCEDURE: A satd soln of carbutamide in dilute HCl of pH 1.2 was shaken at 30 strokes per min at 37°C, and samples were withdrawn for analysis after 48 and 72 h. The samples were taken with a syringe equipped with a membrane filter (1.0 μm), and the absorbances were read after dilution with 0.1 M phosphate buffer (pH 9.2) at 254 nm.	SOURCE AND PURITY OF MATERIALS: Carbutamide powder was a commercial product from Ono Pharmaceutical Co., Ltd., Osaka, Japan. Hydrochloric acid was of reagent grade. ESTIMATED ERROR: Soly: an average of the detns after 24 h (1.77 mg/ml) and 48 h (1.83 mg/ml) is given (authors). Temp and pH: not specified.
	REFERENCES: