



<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-(2,6-dimethoxy-4-pyrimidinyl)- (sulfadimethoxine); $C_{12}H_{14}N_4O_4S$ ; [122-11-2] (2) Methane, trichloro- (chloroform); $CHCl_3$ ; [67-66-3]	<b>ORIGINAL MEASUREMENTS:</b> Yamazaki, M.; Aoki, M; Kamada, A.; Yata, N. <i>Yakuzaiigaku</i> <u>1967</u> , <i>27</i> (1), 37-40.
<b>VARIABLES:</b> One temperature: 30°C	<b>PREPARED BY:</b> R. Piekos
<b>EXPERIMENTAL VALUES:</b>  <p>Solubility of sulfadimethoxine in chloroform at 30°C is 7.30 mmol/L ( 2.26 g dm<sup>-3</sup>, compiler ).</p>	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> Sulfadimethoxine (0.5 g) was placed in an L-shaped tube together with 20 ml of chloroform. The mixt was shaken in a thermostat until equilibrium was attained. The sulfadimethoxine was assayed in the supernatant spectrophotometrically at 545 nm on a Beckmann DU spectrophotometer. The results were taken from a calibration graph.	<b>SOURCE AND PURITY OF MATERIALS:</b> Nothing specified  <b>ESTIMATED ERROR:</b> Soly: not specified. Temp: ±1°C (authors).  <b>REFERENCES:</b>

<b>COMPONENTS:</b> (1) Copper, bis[4-amino-N-(2,6-dimethoxy-4-pyrimidinyl)benzenesulfonamidato]-, hydrate; $C_{24}H_{26}CuN_8O_8S_2 \cdot nH_2O$ ; [86729-19-3] (2) Hydrochloric acid; HCl; [7647-01-0] (3) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Tskitishvili, M. G.; Mikadze, I. I. <i>Soobshch. Akad. Nauk Gruz. SSR</i> 1978, 89(3), 589-92.
<b>VARIABLES:</b> <p style="text-align: center;">pH</p>	<b>PREPARED BY:</b> <p style="text-align: center;">R. Piekos</p>
<b>EXPERIMENTAL VALUES:</b> <p style="text-align: center;"><math>K_{so}</math> over the HCl concentration range <math>2.5 \times 10^{-2} - 2.5 \times 10^{-5} \text{ mol dm}^{-3}</math>, at <math>25^\circ\text{C}</math>, is <math>1.63 \times 10^{-14}</math>.</p>	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> In a glass vessel, a mixt of 100 ml of HCl of appropriate concn and the solute was placed and shaken for 6 h in a water thermostat at $25^\circ\text{C}$ . After attaining equilibrium, the pH of the soln was measured and the $Cu^{2+}$ and S content was detd to calculate $K_{so}$ .	<b>SOURCE AND PURITY OF MATERIALS:</b> Nothing specified. <hr/> <b>ESTIMATED ERROR:</b> Nothing specified. <hr/> <b>REFERENCES:</b>







<b>COMPONENTS:</b> (1) Manganese, bis[4-amino-N-(2,6-dimethoxy-4-pyrimidinyl)benzenesulfonamidato]-hydrate; $C_{24}H_{26}MnN_8O_8S_2 \cdot nH_2O$ ; [84812-80-6] (2) Hydrochloric acid; HCl; [7647-01-0] (3) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Tskitishvili, M. G.; Shvelashvili, A. E.; Mikadze, I. I.; Zhorzholiani, N. B.; Chrelashvili, M. V. <i>Izv. Akad. Nauk Gruz. SSR, Ser. Khim.</i> 1981 7(4), 300-4.																														
<b>VARIABLES:</b>  <p style="text-align: center;">pH</p>	<b>PREPARED BY:</b>  <p style="text-align: center;">R. Piekos</p>																														
<b>EXPERIMENTAL VALUES:</b> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="text-align: left;">Concentration of HCl (mol/l)</th> <th style="text-align: left;">pH</th> <th style="text-align: left;"><math>10^9 K_{SO}</math> at 25°C</th> </tr> </thead> <tbody> <tr><td><math>5.0 \times 10^{-3}</math></td><td>6.54</td><td>7.45</td></tr> <tr><td><math>2.5 \times 10^{-3}</math></td><td>7.02</td><td>7.40</td></tr> <tr><td><math>1.0 \times 10^{-3}</math></td><td>7.09</td><td>7.41</td></tr> <tr><td><math>5.0 \times 10^{-4}</math></td><td>7.16</td><td>7.39</td></tr> <tr><td><math>2.5 \times 10^{-4}</math></td><td>7.21</td><td>7.43</td></tr> <tr><td><math>1.0 \times 10^{-4}</math></td><td>7.26</td><td>7.39</td></tr> <tr><td><math>5.0 \times 10^{-5}</math></td><td>7.27</td><td>7.43</td></tr> <tr><td><math>1.5 \times 10^{-5}</math></td><td>7.30</td><td><u>7.38</u></td></tr> <tr><td></td><td>Mean</td><td>7.41</td></tr> </tbody> </table>		Concentration of HCl (mol/l)	pH	$10^9 K_{SO}$ at 25°C	$5.0 \times 10^{-3}$	6.54	7.45	$2.5 \times 10^{-3}$	7.02	7.40	$1.0 \times 10^{-3}$	7.09	7.41	$5.0 \times 10^{-4}$	7.16	7.39	$2.5 \times 10^{-4}$	7.21	7.43	$1.0 \times 10^{-4}$	7.26	7.39	$5.0 \times 10^{-5}$	7.27	7.43	$1.5 \times 10^{-5}$	7.30	<u>7.38</u>		Mean	7.41
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<b>METHOD/APPARATUS/PROCEDURE:</b> <p>The earlier described apparatus and method was used (1): in a glass vessel, a mixt of 100 ml of HCl of appropriate concn and the solute were placed and shaken for 6 h in a water thermostat at 25°C. After attaining equilibrium, the pH of the soln was measured and the <math>Mn^{2+}</math> and S content was determined to calculate <math>K_{SO}</math>. The pH was measured on a pH-673 pH meter.</p>	<b>SOURCE AND PURITY OF MATERIALS:</b> <p>0.1M solns of chem. pure <math>Mn(OAc)_2</math>, monosodium salt of sulfadimethoxine, and HCl as well as doubly distd water were used. The source of the materials was not specified.</p> <b>ESTIMATED ERROR:</b> $K_{SO}$ : std deviation $2 \times 10^{-11}$ (compiler). Temp and pH: not specified.																														
<b>REFERENCES:</b> 1. Tskitishvili, M. G.; Mikadze, I. I. <i>Soobshch. Akad. Nauk Gruz. SSR</i> 1978, 89(3), 589.																															

COMPONENTS:		ORIGINAL MEASUREMENTS:	
(1) Nickel, bis[4-amino-N-(2,6,-dimethoxy-4-pyrimidinyl)benzenesulfonamidato]-hydrate; $C_{24}H_{26}N_8NiO_8S_2 \cdot nH_2O$ ; [84812-79-3] (2) Hydrochloric acid; HCl; [7647-01-0] (3) Water; $H_2O$ ; [7732-18-5]		Tskitishvili, M. G.; Shvelashvili, A. E.; Mikadze, I. I.; Zhorzholiani, N. B.; Chrelashvili, M. V. <i>Izv. Akad. Nauk Gruz. SSR. Ser. Khim.</i> <u>1981</u> , 7(4), 300-4.	
VARIABLES:		PREPARED BY:	
pH		R. Piekos	
EXPERIMENTAL VALUES:			
	Concentration of HCl (mol/l)	pH	$10^9 K_{SO}$ at 25°C
	$2.5 \times 10^{-2}$	6.37	3.17
	$1.0 \times 10^{-2}$	6.66	3.20
	$5.0 \times 10^{-3}$	6.85	3.16
	$2.5 \times 10^{-3}$	6.96	3.17
	$1.0 \times 10^{-3}$	7.05	3.13
	$5.0 \times 10^{-4}$	7.10	3.18
	$2.5 \times 10^{-4}$	7.16	3.16
	$1.0 \times 10^{-4}$	7.63	3.16
	$5.0 \times 10^{-5}$	7.80	3.11
	$2.5 \times 10^{-5}$	7.82	<u>3.15</u>
		Mean	3.16
AUXILIARY INFORMATION			
METHOD/APPARATUS/PROCEDURE:		SOURCE AND PURITY OF MATERIALS:	
The earlier described apparatus and method was used (1): in a glass vessel, a mixt of 100 ml of HCl of appropriate concn and the solute were placed and shaken for 6 h in a water thermostat at 25°C. After attaining equilibrium, the pH of the soln was measured and the $Ni^{2+}$ and S content was determined to calculate $K_{SO}$ . The pH was measured on a pH-673 pH meter.		0.1M solns of chem pure $Ni(OAc)_2$ , monosodium salt of sulfadimethoxine, HCl as well as doubly distd water were used. The source of the materials was not specified.	
		ESTIMATED ERROR:	
		$K_{SO}$ : std deviation $2.5 \times 10^{-11}$ (compiler). Temp and pH: not specified.	
		REFERENCES:	
		1. Tskitishvili, M. G.; Mikadze, I. I. <i>Soobshch. Akad. Nauk Gruz. SSR</i> <u>1978</u> , 89(3), 589.	

<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-(5,6-dimethoxy-4-pyrimidinyl)- (sulfadoxine); $C_{12}H_{14}N_4O_4S$ ; [2447-57-6] (2) Phosphoric acid, disodium salt; $Na_2HPO_4$ ; [7558-94-4] (3) Phosphoric acid, monopotassium salt; $KH_2PO_4$ ; [7778-77-0] (4) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Hekster, Ch. A.; Vree, T. B. <i>Antibiotics Chemother.</i> <u>1982</u> , <i>31</i> , 22-118.											
<b>VARIABLES:</b> PH	<b>PREPARED BY:</b> R. Piekos											
<b>EXPERIMENTAL VALUES:</b>  <table border="1" data-bbox="445 694 926 950"> <thead> <tr> <th rowspan="2">pH</th> <th colspan="2">Solubility at 25°C</th> </tr> <tr> <th>mg/l</th> <th><math>10^4 \text{ mol dm}^{-3} \text{ a}</math></th> </tr> </thead> <tbody> <tr> <td>5.5</td> <td>186</td> <td>5.99</td> </tr> <tr> <td>7.5<sup>b</sup></td> <td>2,387</td> <td>76.92</td> </tr> </tbody> </table> <p data-bbox="459 970 775 1011"><sup>a</sup> Calculated by compiler.</p>		pH	Solubility at 25°C		mg/l	$10^4 \text{ mol dm}^{-3} \text{ a}$	5.5	186	5.99	7.5 <sup>b</sup>	2,387	76.92
pH	Solubility at 25°C											
	mg/l	$10^4 \text{ mol dm}^{-3} \text{ a}$										
5.5	186	5.99										
7.5 <sup>b</sup>	2,387	76.92										
<b>AUXILIARY INFORMATION</b>												
<b>METHOD/APPARATUS/PROCEDURE:</b> The earlier developed method (1) was used (personal communication). Satd solns of sulfadoxine were prepd in phosphate buffers of pH 5.5 and 7.5 at 25°C. The concn of the solute was measured by means of a Spectra Physics 3500B high-performance liquid chromatograph equipped with a Model 748 column oven and a Pye-Unicam LC-UV spectrophotometric detector.	<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor the purity of the materials was specified.  <b>ESTIMATED ERROR:</b> Soly: the detection limit of the solute by HPLC was 0.5 mg/l (authors). The errors in temp and pH were not specified.  <b>REFERENCES:</b> 1. Hekster, Y. A.; Vree, T. B.; Damsma, J. E.; Friesen, W. T. <i>J. Antimicrob. Chemother.</i> <u>1981</u> , <i>8</i> , 133.											

<b>COMPONENTS:</b> (1) Acetamide, N-[4-[[[5,6-dimethoxy-4-pyrimidinyl]amino]sulfonyl]phenyl]-(N <sup>4</sup> -acetylsulfadoxine); C <sub>14</sub> H <sub>16</sub> N <sub>4</sub> O <sub>5</sub> S; [5018-54-2] (2) Phosphoric acid, disodium salt; Na <sub>2</sub> HPO <sub>4</sub> ; [7558-94-4] (3) Phosphoric acid, monopotassium salt; KH <sub>2</sub> PO <sub>4</sub> ; [7778-77-0] (4) Water; H <sub>2</sub> O; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Hekster, Ch. A.; Vree, T. B. <i>Antibiotics Chemother.</i> <u>1982</u> , 31, 22-118.											
<b>VARIABLES:</b> pH	<b>PREPARED BY:</b> R. Piekos											
<b>EXPERIMENTAL VALUES:</b> <table border="1" data-bbox="439 683 864 953" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">pH</th> <th colspan="2">Solubility at 25°C</th> </tr> <tr> <th>mg/l</th> <th>10<sup>4</sup> mol dm<sup>-3</sup> a</th> </tr> </thead> <tbody> <tr> <td>5.5</td> <td>221</td> <td>6.27</td> </tr> <tr> <td>7.5<sup>b</sup></td> <td>3,420</td> <td>97.06</td> </tr> </tbody> </table> <p data-bbox="452 984 754 1025">a Calculated by compiler</p> <p data-bbox="452 1046 891 1129">b Erroneous pH value of 7.0 is given in the article.</p>		pH	Solubility at 25°C		mg/l	10 <sup>4</sup> mol dm <sup>-3</sup> a	5.5	221	6.27	7.5 <sup>b</sup>	3,420	97.06
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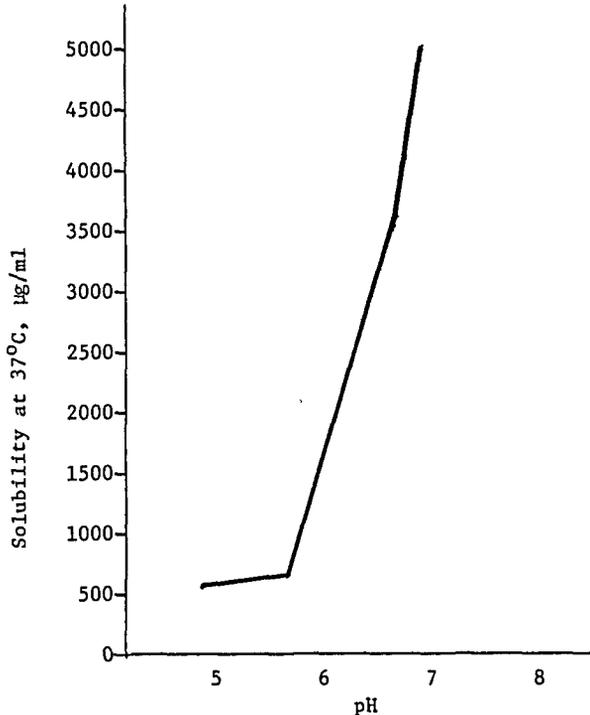
<b>COMPONENTS:</b> (1) Benzoic acid, 5-[[4-[[[(2,4-dimethoxy-6-pyrimidinyl)amino]sulfonyl] phenyl]azo]-2-hydroxy- (salazodimethoxine); $C_{19}H_{17}N_5O_7S$ ; [40016-88-4] (2) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Ezerskii, M. L; Per'kova, N. N. <i>Khim.-Farm. Zh.</i> 1979, 13(11), 87-91.														
<b>VARIABLES:</b> Grinding regime	<b>PREPARED BY:</b> R. Piekos														
<b>EXPERIMENTAL VALUES:</b> <table border="1" data-bbox="285 656 1144 936" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Specimen of salazodimethoxine</th> <th colspan="2">Solubility at room temperature</th> </tr> <tr> <th><math>g/cm^3</math></th> <th><math>10^4 \text{ mol dm}^{-3} \text{ a}</math></th> </tr> </thead> <tbody> <tr> <td>Commercial</td> <td>0.000075</td> <td>1.6</td> </tr> <tr> <td>Commercial, ground in a ball mill</td> <td>0.000080</td> <td>1.7</td> </tr> <tr> <td>Commercial, ground in a jet mill</td> <td>0.000100</td> <td>2.2</td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 20px;"><sup>a</sup> Calculated by compiler</p>		Specimen of salazodimethoxine	Solubility at room temperature		$g/cm^3$	$10^4 \text{ mol dm}^{-3} \text{ a}$	Commercial	0.000075	1.6	Commercial, ground in a ball mill	0.000080	1.7	Commercial, ground in a jet mill	0.000100	2.2
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Commercial, ground in a jet mill	0.000100	2.2													
<b>AUXILIARY INFORMATION</b>															
<b>METHOD/APPARATUS/PROCEDURE:</b> Satd solns were prepd by prolonged agitation of an excess of salazodimethoxine in water at room temp. The solns were then allowed to stand for 12 and h and filtered. The concn of the solute in the filtrate was detd spectrophotometrically at 462 nm in a 1-cm cuvet.	<b>SOURCE AND PURITY OF MATERIALS:</b> Comm, pharmacopeial salazodimethoxine was used (source not specified). It was ground in a Pulverisette-5 lab mill or in a C-1266-00 jet mill. Purity of the water was not specified.														
<b>ESTIMATED ERROR:</b> Nothing specified.															
<b>REFERENCES:</b>															

<b>COMPONENTS:</b> (1) Pyrimidine, 2,5-bis[[4-aminophenyl)sulfonyl]amino]-; $C_{16}H_{16}N_6O_4S_2$ ; [71119-39-6] (2) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Roblin, R. O., Jr.; Winnek, P. S.; English, J. P. <i>J. Am. Chem. Soc.</i> <u>1942</u> , <i>64</i> , 567-70.
<b>VARIABLES:</b> One temperature: 37°C	<b>PREPARED BY:</b> R. Piekos
<b>EXPERIMENTAL VALUES:</b>  <p>Solubility of 2,5-bis[[4-aminophenyl)sulfonyl]amino]pyrimidine in water at 37°C is 2.2 mg/100 cm<sup>3</sup> solution ( 5.2 x 10<sup>-5</sup> mol dm<sup>-3</sup>, compiler ).</p>	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> Excess sulfonamide in water was heated and stirred on a steam bath for 30 min. The suspension was then agitated for 24 h in a thermostat at 37°C. A sample of the satd soln was withdrawn through a glass filter, dild, and analyzed by the Marshall method (1) using a General Electric recording spectrophotometer for comparing the colors developed with those of the standards.	<b>SOURCE AND PURITY OF MATERIALS:</b> The sulfonamide, mp 231-2°C (cor), was prepd by the authors. Anal: %C 45.4 (calcd 45.6); %H 4.0 (3.8); %N 20.1 (20.1) Purity of the water was not specified.
<b>ESTIMATED ERROR:</b> Nothing specified.	
<b>REFERENCES:</b> 1. Bratton, A. C.; Marshall, E. K., Jr. <i>J. Pharmacol.</i> <u>1939</u> , <i>66</i> , 4.	



<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-pyrazinyl- (sulfapyrazine); $C_{10}H_{10}N_4O_2S$ ; [116-44-9] (2) 2-Propanol; $C_3H_8O$ ; [67-63-0]	<b>ORIGINAL MEASUREMENTS:</b> Burlage, H. M. <i>J. Am. Pharm. Assoc., Sci. Ed.</i> <u>1948</u> , 37, 345.
<b>VARIABLES:</b> One temperature: 25°C	<b>PREPARED BY:</b> R. Piekos
<b>EXPERIMENTAL VALUES:</b>  <p style="text-align: center;">Solubility of sulfapyrazine in 2-propanol at 25°C is 0.0290 g/100 cm<sup>3</sup>          solution (<math>1.16 \times 10^{-3}</math> mol dm<sup>-3</sup>, compiler).</p>	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> Satd solns of sulfapyrazine in 2-propanol were prepd at 25°C and definite vols of the solns were measured into tared dishes by means of standard pipets. The alcohol was allowed to evap at room temp and the residue was dried at 105°C. In the case of losses due to apparent decompn, the residue was dried in a dessicator (1).	<b>SOURCE AND PURITY OF MATERIALS:</b> The sulfapyrazine N.N.R. was manufd by Mead Johnson. The source and purity of 2-propanol were not reported.  <b>ESTIMATED ERROR:</b> Nothing specified.  <b>REFERENCES:</b> 1. Burlage, H. M. <i>J. Am. Pharm. Assoc., Sci. Ed.</i> <u>1947</u> , 36(1), 16.



<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-(3-methoxy-pyrazinyl)- (sulfamethoxypyrazine); $C_{11}H_{12}N_4O_3S$ ; [152-47-6] (2) Phosphoric acid, disodium salt; $Na_2HPO_4$ ; [7558-94-4] (3) 1,2,3-Propanetricarboxylic acid, 2-hydroxy- (citric acid); $C_6H_8O_7$ ; [77-92-9] (4) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Bertazzoli, C.; Buogo, A.; Ciceri, C.; Ghione, M.; Turolla, E.; Zavaglio, V. <i>Minerva Med.</i> <u>1961</u> , <i>52(40)</i> , 1789-96.												
<b>VARIABLES:</b> pH	<b>PREPARED BY:</b> R. Piekos												
<b>EXPERIMENTAL VALUES:</b>  <table border="1" data-bbox="356 507 946 1222"> <caption>Estimated data points from the solubility graph</caption> <thead> <tr> <th>pH</th> <th>Solubility at 37°C (µg/ml)</th> </tr> </thead> <tbody> <tr> <td>5.0</td> <td>~550</td> </tr> <tr> <td>5.5</td> <td>~650</td> </tr> <tr> <td>6.0</td> <td>~1800</td> </tr> <tr> <td>6.5</td> <td>~3600</td> </tr> <tr> <td>7.0</td> <td>~5000</td> </tr> </tbody> </table>		pH	Solubility at 37°C (µg/ml)	5.0	~550	5.5	~650	6.0	~1800	6.5	~3600	7.0	~5000
pH	Solubility at 37°C (µg/ml)												
5.0	~550												
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6.0	~1800												
6.5	~3600												
7.0	~5000												
<b>AUXILIARY INFORMATION</b>													
<b>METHOD/APPARATUS/PROCEDURE:</b> The soly of sulfamethoxypyrazine in McIlvaine's $Na_2HPO_4$ - citric acid buffer solns was detd under agitation at 37°C. No details were given.	<b>SOURCE AND PURITY OF MATERIALS:</b> Nothing specified.  <b>ESTIMATED ERROR:</b> Nothing specified.  <b>REFERENCES:</b>												

<b>COMPONENTS:</b> (1) Acetamide, N-[4-[[3-methoxypraziny]-amino]sulfonyl]phenyl]- (acetyl sulfamethoxyprazine); $C_{13}H_{14}N_4O_4S$ ; [655-78-7] (2) Phosphoric acid, disodium salt; $Na_2HPO_4$ ; [7558-94-4] (3) 1,2,3-Propanetricarboxylic acid, 2-hydroxy- (citric acid); $C_6H_8O_7$ ; [77-92-9] (4) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Bertazzoli, C.; Buogo, A.; Ciceri, C.; Ghione, M.; Turolla, E.; Zavaglio, V. <i>Minerva Med.</i> <u>1961</u> , <i>52(40)</i> , 1789-96.										
<b>VARIABLES:</b> pH	<b>PREPARED BY:</b> R. Piekos										
<b>EXPERIMENTAL VALUES:</b> <table border="1"> <caption>Experimental Solubility Data</caption> <thead> <tr> <th>pH</th> <th>Solubility at 37°C, µg/ml</th> </tr> </thead> <tbody> <tr> <td>5.0</td> <td>~200</td> </tr> <tr> <td>6.0</td> <td>~500</td> </tr> <tr> <td>7.0</td> <td>~4000</td> </tr> <tr> <td>7.1</td> <td>~5000</td> </tr> </tbody> </table>		pH	Solubility at 37°C, µg/ml	5.0	~200	6.0	~500	7.0	~4000	7.1	~5000
pH	Solubility at 37°C, µg/ml										
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6.0	~500										
7.0	~4000										
7.1	~5000										
<b>AUXILIARY INFORMATION</b>											
<b>METHOD/APPARATUS/PROCEDURE:</b> The solubility of acetyl sulfamethoxyprazine in McIlvaine's $Na_2HPO_4$ - citric acid buffer solutions was determined under agitation at 37°C. No details were given.	<b>SOURCE AND PURITY OF MATERIALS:</b> Nothing specified.										
	<b>ESTIMATED ERROR:</b> Nothing specified.										
	<b>REFERENCES:</b>										



<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-quin-oxaliny- (sulfaquinoxaline); $C_{14}H_{12}N_3O_2S$ ; [59-40-5] (2) Hydrochloric acid; HCl; [7647-01-0] (3) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Paál, T.; Regösz, P. <i>Gyógyszerészet</i> <u>1973</u> , 17, 59-63.								
<b>VARIABLES:</b> Concentration of HCl	<b>PREPARED BY:</b> R. Piekos								
<b>EXPERIMENTAL VALUES:</b> <table border="1" data-bbox="302 629 1068 909" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Concentration of HCl N</th> <th style="text-align: center;">Concentration of the most concentrated real solution of sulfaquinoxaline at 26°C mol dm<sup>-3</sup> solvent</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;"><math>3 \times 10^{-3}</math> (<math>9 \times 10^{-2}</math>)<sup>a</sup></td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;"><math>&lt; 2 \times 10^{-3}</math></td> </tr> <tr> <td style="text-align: center;">0.1</td> <td style="text-align: center;"><math>&lt; 2 \times 10^{-3}</math></td> </tr> </tbody> </table> <p data-bbox="288 950 1001 1032" style="margin-left: 20px;"><sup>a</sup>Concentration of the most concentrated metastable solution that could be prepared without precipitation of the solute</p>		Concentration of HCl N	Concentration of the most concentrated real solution of sulfaquinoxaline at 26°C mol dm <sup>-3</sup> solvent	5	$3 \times 10^{-3}$ ( $9 \times 10^{-2}$ ) <sup>a</sup>	1	$< 2 \times 10^{-3}$	0.1	$< 2 \times 10^{-3}$
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<b>AUXILIARY INFORMATION</b>									
<b>METHOD/APPARATUS/PROCEDURE:</b> Satd solns were prepd by addn of increasing quantities of aq HCl to weighed quantities of sulfaquinoxaline. After the dissoln had been completed, the soln was stirred with a magnetic stirrer and allowed to stand for 24 h. The soln was considered stable, if it remained clear during a 24-h period. If the solute pptd out from the clear soln, the soln was considered metastable.	<b>SOURCE AND PURITY OF MATERIALS:</b> Sulfaquinoxaline was a product of Chinoin Pharm and Chem Works. Its purity was 99.6% as detd by diazotization. The source and purity of the remaining materials were not specified.  <b>ESTIMATED ERROR:</b> Soly: accuracy ±10% (authors). Temp: ±3°C (authors).  <b>REFERENCES:</b>								

<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-quin-oxalinyll- (sulfaquinoxaline); $C_{14}H_{12}N_3O_2S$ ; [59-40-5] (2) Perchloric acid; $HClO_4$ ; [7601-90-3] (4) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Paál, T.; Regösz, P. <i>Gyógyszerészet</i> <u>1973</u> , 17, 59-63.								
<b>VARIABLES:</b> Concentration of $HClO_4$	<b>PREPARED BY:</b> R. Piekos								
<b>EXPERIMENTAL VALUES:</b> <table border="1" data-bbox="266 537 1016 842" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Concentration of <math>HClO_4</math> N</th> <th style="text-align: center;">Concentration of the most concentrated real solution of sulfaquinoxaline at 26°C <math>mol\ dm^{-3}</math> solvent</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;"><math>2 \times 10^{-2}</math> ( 0.67 )<sup>a</sup></td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;"><math>&lt; 2 \times 10^{-3}</math></td> </tr> <tr> <td style="text-align: center;">0.1</td> <td style="text-align: center;"><math>&lt; 2 \times 10^{-3}</math></td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 20px;"><sup>a</sup>Concentration of the most concentrated metastable solution that could be prepared without precipitation of the solute</p>		Concentration of $HClO_4$ N	Concentration of the most concentrated real solution of sulfaquinoxaline at 26°C $mol\ dm^{-3}$ solvent	5	$2 \times 10^{-2}$ ( 0.67 ) <sup>a</sup>	1	$< 2 \times 10^{-3}$	0.1	$< 2 \times 10^{-3}$
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<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-quin-oxaliny1- (sulfaquinoxaline); $C_{14}H_{12}N_3O_2S$ ; [59-40-5] (2) Nitric acid; $HNO_3$ ; [7697-37-2] (3) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Paál, T.; Regösz, P. <i>Gyógyszerészet</i> <u>1973</u> , 17, 59-63.								
<b>VARIABLES:</b> Concentration of $HNO_3$	<b>PREPARED BY:</b> R. Piekos								
<b>EXPERIMENTAL VALUES:</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 20px;"> <thead> <tr> <th style="text-align: center;">Concentration of <math>HNO_3</math> N</th> <th style="text-align: center;">Concentration of the most concentrated real solution of sulfaquinoxaline at 26°C mol dm<sup>-3</sup> solvent</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;"><math>2 \times 10^{-2}</math> ( 0.2 )<sup>a</sup></td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;"><math>&lt; 2 \times 10^{-3}</math></td> </tr> <tr> <td style="text-align: center;">0.1</td> <td style="text-align: center;"><math>&lt; 2 \times 10^{-3}</math></td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 20px;"><sup>a</sup>Concentration of the most concentrated metastable solution that could be prepared without precipitation of the solute</p>		Concentration of $HNO_3$ N	Concentration of the most concentrated real solution of sulfaquinoxaline at 26°C mol dm <sup>-3</sup> solvent	5	$2 \times 10^{-2}$ ( 0.2 ) <sup>a</sup>	1	$< 2 \times 10^{-3}$	0.1	$< 2 \times 10^{-3}$
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<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-thiazolyl- (sulfathiazole); $C_9H_9N_3O_2S_2$ ; [72-14-0] (2) Acetamide, N-[4-[(2-thiazolylamino)sulfonyl]phenyl]- (acetyl sulfathiazole); $C_{11}H_{11}N_3O_3S_2$ ; [127-76-4] (3) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Langecker, H. <i>Arch. Exptl. Path. Pharmacol.</i> <u>1948</u> , 205, 291-301.
<b>VARIABLES:</b> One temperature: 37°C	<b>PREPARED BY:</b> R. Piekos
<b>EXPERIMENTAL VALUES:</b>  <p style="text-align: center;">Solubility of sulfathiazole and acetyl sulfathiazole in a saturated solution of both compounds in water at 37°C is 110 mg% ( <math>4.3 \times 10^{-3}</math> mol dm<sup>-3</sup>, compiler ) and 14 mg% ( <math>5.5 \times 10^{-4}</math> mol dm<sup>-3</sup>, compiler ), respectively.</p>	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> A mixt of sulfathiazole and acetyl sulfathiazole was boiled with water and the components were detd colorimetrically by the method of Bratton and Marshall (1) using a Havemann colorimeter (2).	<b>SOURCE AND PURITY OF MATERIALS:</b> Nothing specified.  <b>ESTIMATED ERROR:</b> Nothing specified.  <b>REFERENCES:</b> 1. Bratton, A. C.; Marshall, E. K., Jr. <i>J. Biol. Chem.</i> <u>1939</u> , <i>128</i> , 537. 2. Havemann, R. <i>Klin. Wochenschr.</i> <u>1940</u> , p. 503.



<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine, SD); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (2) Benzenesulfonamide, 4-amino-N-2-thiazolyl- (sulfathiazole, ST); $C_9H_9N_3O_2S_2$ ; [72-14-0] (3) Sodium hydroxide; NaOH; [1310-73-2] (4) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Garcia Onandia, A.; Holz, E.; Holz, S. <i>Acta Cient. Venezolana</i> <u>1955</u> , 8(4), 157-63.																						
<b>VARIABLES:</b> SD/ST ratio	<b>PREPARED BY:</b> R. Piekos																						
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<b>VARIABLES:</b> SM/ST ratio	<b>PREPARED BY:</b> R. Piekos
<b>EXPERIMENTAL VALUES:</b>	
Composition of sulfonamide mixture SM/ST	Volume of 1N NaOH soln required to dissolve the mixture at 26°C
g/g	$cm^3$
0.1/0.1	0.8
0.1/0.2	1.2
0.1/0.3	1.6
0.1/0.4	2.0
0.1/0.5	2.5
0.2/0.1	1.2
0.3/0.1	1.6
0.4/0.1	2.0
0.5/0.1	2.4
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> Nothing specified.	<b>SOURCE AND PURITY OF MATERIALS:</b> Nothing specified. Distd water was used.
	<b>ESTIMATED ERROR:</b> Nothing specified.
	<b>REFERENCES:</b>



<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine, SD); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (2) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamerazine, SM); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (3) Sodium hydroxide; NaOH; [1310-73-2] (4) Water; $H_2O$ ; [7732-18-5]		<b>ORIGINAL MEASUREMENTS:</b> Garcia Onandia, A.; Holz, E.; Holz, S. <i>Acta Cient. Venezolana</i> <u>1955</u> , 6(4), 157-63.																						
<b>VARIABLES:</b> SD/SM ratio		<b>PREPARED BY:</b> R. Piekos																						
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<b>AUXILIARY INFORMATION</b>																								
<b>METHOD/APPARATUS/PROCEDURE:</b> Nothing specified.		<b>SOURCE AND PURITY OF MATERIALS:</b> Nothing specified.																						
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<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine, SD); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (2) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamerazine, SM); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (3) Sodium hydroxide; NaOH; [1310-73-2] (4) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b>  Holz, E.; Garcia Onandia, A.; Holz, S. <i>Acta Cient. Venezolana</i> <u>1955</u> , 6(2), 68-73.																				
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<b>AUXILIARY INFORMATION</b>																					
<b>METHOD/APPARATUS/PROCEDURE:</b> Nothing specified.	<b>SOURCE AND PURITY OF MATERIALS:</b> Nothing specified. Distd water was used.  <b>ESTIMATED ERROR:</b> Nothing specified.  <b>REFERENCES:</b>																				

<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (2) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamethylpyrimidine); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (3) Phosphoric acid, disodium salt; $Na_2HPO_4$ ; [7558-94-4] (4) Phosphoric acid, monopotassium salt; $KH_2PO_4$ ; [7778-77-0] (5) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Frisk, A. R.; Hagerman, G.; Helander, S.; Sjögren, B. <i>Hygiea</i> <u>1946</u> , <i>108(12)</i> , 639-51
<b>VARIABLES:</b> One temperature: 37°C; one pH: 6.1	<b>PREPARED BY:</b> R. Piekos
<b>EXPERIMENTAL VALUES:</b>  <p style="text-align: center;">Solubility of a mixture of sulfadiazine in sulfamethylpyrimidine in M/30 phosphate buffer of pH 6.1 at 37°C is 56 mg/100 ml solvent.</p>	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> An excess of sulfadiazine and sulfamethylpyrimidine in the phosphate buffer was shaken at 37°C for 24 h. The concn of the sulfonamides was detd by the Bratton and Marshall method (1) using a photoelec colorimeter.	<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor purity of the materials was specified.
	<b>ESTIMATED ERROR:</b> Soly: precision $\pm 6$ mg/100 ml (authors). Temp and pH: not specified.
	<b>REFERENCES:</b> 1. Bratton, A. C.; Marshall, E. K., Jr. <i>J. Biol. Chem.</i> <u>1939</u> , <i>128</i> , 537.



<b>COMPONENTS:</b> (1) Acetamide, N-[4-[(2-thiazolylamino)-sulfonyl]phenyl]- (acetyl sulfathiazole); $C_{11}H_{11}N_3O_3S_2$ ; [127-76-4] (2) Acetamide, N-[4-[(2-pyrimidinylamino)-sulfonyl]phenyl]- (acetyl sulfapyrimidine); $C_{12}H_{12}N_4O_3S$ ; [127-74-2] (3) Phosphoric acid, disodium salt; $Na_2HPO_4$ ; [7558-94-4] (4) Phosphoric acid, monopotassium salt; $KH_2PO_4$ ; [7778-77-0] (5) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Frisk, A. R.; Hagerman, G.; Helander, S.; Sjögren, B. <i>Hygiea</i> , 1946, 108(12), 639-51.
<b>VARIABLES:</b> One temperature: 37°C; one pH: 6.1	<b>PREPARED BY:</b> R. Piekos
<b>EXPERIMENTAL VALUES:</b>  <p style="text-align: center;">Solubility of a mixture of acetyl sulfathiazole and acetyl sulfapyrimidine in M/30 phosphate buffer of pH 6.1 at 37°C is 44 mg/100 ml solvent.</p>	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> An excess of acetyl sulfathiazole and acetyl sulfapyrimidine in the phosphate buffer was shaken at 37°C for 24 h. The concn of the acetyl sulfonamides was detd by the Bratton and Marshall method (1) using a photoelec colorimeter.	<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor purity of the materials was specified.  <b>ESTIMATED ERROR:</b> Soly: precision $\pm 4$ mg/100 ml (authors). Temp and pH: not specified.  <b>REFERENCES:</b> 1. Bratton, A. C.; Marshall, E. K., Jr. <i>J. Biol. Chem.</i> 1939, 128, 537.





<b>COMPONENTS:</b> (1) Benzamide, N-[(4-aminophenyl)sulfonyl]- (sulfabenzamide); $C_{13}H_{12}N_2O_3S$ ; [127-71-9] (2) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (3) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamerazine); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (4) Water; $H_2O$ ; [7732-18-5]		<b>ORIGINAL MEASUREMENTS:</b>  Bhattacharyya, R.; Basu, U. P. <i>Indian Pharmacist</i> <u>1950</u> , <i>6(3)</i> , 77-8, 86.																				
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Composition of the sulfonamide mixture			Solubility at 30°C	Final pH																		
(1)	(2)	(3)	mg/ml solution																			
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<b>AUXILIARY INFORMATION</b>																						
<b>METHOD/APPARATUS/PROCEDURE:</b> A weighed sample of the sulfonamides was placed in a clean reagent bottle and a known vol of water was added. The mixt was shaken in a mech shaker at 80-100 strokes/min. After at least 24 h the mixt was filtered through a clean, dried and weighed sintered-glass crucible. At the end of the filtration the crucible was washed with about 1 ml of water, dried at 105°C for 2-3 h, cooled, and weighed to const wt. The pH was detd with a Cambridge bench type pH meter using a glass electrode.		<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor purity of the sulfonamides was specified. Doubly distd water was used.																				
		<b>ESTIMATED ERROR:</b> Soly: not specified. Temp: $\pm 0.2^\circ C$ (authors). pH : $\pm 0.01$ unit (authors).																				
		<b>REFERENCES:</b>																				

COMPOSITION OF THE SULFONAMIDE MIXTURE (PARTS)		SOLUBILITY AT 30°C IN M/20 KH <sub>2</sub> PO <sub>4</sub> SOLUTION OF pH CORRECTED WITH M/20 NaOH SOLUTION (mg/ml SOLUTION)		FINAL pH
(1)	(2)	(3)		
7	8	5	134.5	5.50
7	8	5	482.8	6.45
7	8	5	486.6	6.7
5	8	7	111	5.75
5	8	7	353.6	6.71
5	8	7	382.8	6.9

**COMPONENTS:**  
 (1) Benzamide, N-[(4-aminophenyl)sulfonyl]- (sulfabenzamide); C<sub>13</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub>S; [127-71-9]  
 (2) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine); C<sub>10</sub>H<sub>10</sub>N<sub>4</sub>O<sub>2</sub>S; [68-35-9]  
 (3) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamerazine); C<sub>11</sub>H<sub>12</sub>N<sub>4</sub>O<sub>2</sub>S; [127-79-7]  
 (4) Phosphoric acid, monopotassium salt; KH<sub>2</sub>PO<sub>4</sub>; [7778-77-0]  
 (5) Sodium hydroxide; NaOH; [1310-73-2]  
 (6) Water; H<sub>2</sub>O; [7732-18-5]

**ORIGINAL MEASUREMENTS:**  
 Bhattacharyya, R.; Basu, U. P.  
*Indian Pharmacist* 1950, 6(3), 77-8, 86.

**PREPARED BY:**  
 R. Piekos

**VARIABLES:** pH

**EXPERIMENTAL VALUES:**

**AUXILIARY INFORMATION**

**METHOD/APPARATUS/PROCEDURE:**  
 A weighed sample of the mixture of sulfonamides was placed in a clean reagent bottle and a known vol of the buffer soln was added. The mixt was shaken in a mech shaker at 80-100 strokes/min. After at least 24 h the mixt was filtered through a clean, dried and weighed sintered-glass crucible. At the end of the filtration the crucible was washed with about 1 ml of water, dried at 105°C for 2-3 h, cooled, and weighed to const wt. The pH was detd with a Cambridge bench type pH meter using a glass electrode.

**SOURCE AND PURITY OF MATERIALS:**  
 Neither source nor purity of the materials, with the exception of water, was specified. The water was doubly distilled.

**ESTIMATED ERROR:**  
 Soly: not specified.  
 Temp: ±0.2°C (authors).  
 pH : ±0.01 unit (authors).

**REFERENCES:**

<b>COMPONENTS:</b> (1) Benzamide, N-[(4-aminophenyl)sulfonyl]- (sulfabenzamide); $C_{13}H_{12}N_2O_3S$ ; [127-71-9] (2) Benzenesulfonamide, 4-amino-N-2-thiazolyl- (sulfathiazole); $C_9H_9N_3O_2S_2$ ; [72-14-0] (3) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (4) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamerazine); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (5) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Bhattacharyya, R.; Basu, U. P. <i>Indian Pharmacist</i> <u>1950</u> , <i>6(3)</i> , 77-8, 86.
<b>VARIABLES:</b> One temperature: 30°C	<b>PREPARED BY:</b> R. Piekos
<b>EXPERIMENTAL VALUES:</b> <p>Solubility of a mixture containing 3 parts of sulfabenzamide, 4 parts of sulfathiazole, 8 parts of sulfadiazine, and 5 parts of sulfamerazine in water at 30°C is 93.4 mg per ml solution<sup>a</sup>.</p> <p><sup>a</sup>The final pH was 3.5</p>	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> A weighed sample of the sulfonamides was placed in a clean reagent bottle and a known vol of water was added. The mixt was shaken in a mech shaker at 80-100 strokes/min. After at least 24 h the mixt was filtered through a clean, dried and weighed sintered-glass crucible. At the end of the filtration the crucible was washed with about 1 ml of water, dried at 105°C for 2-3 h, cooled, and weighed to const wt. The pH was detd with a Cambridge bench-type pH meter using a glass electrode.	<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor purity of the sulfonamides was specified. Doubly distd water was used.
	<b>ESTIMATED ERROR:</b> Soly: not specified. Temp: $\pm 0.2^\circ C$ (authors). pH : $\pm 0.01$ unit (authors).
	<b>REFERENCES:</b>

COMPOSITIONS:		ORIGINAL MEASUREMENTS:	
(1) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine, SD); C <sub>10</sub> H <sub>10</sub> N <sub>4</sub> O <sub>2</sub> S; [68-35-9]		Garcia Onandia, A.; Holz, E.; Holz, S. <i>Acta Cient. Venezolana</i> <u>1955</u> , 6(4), 157-63.	
(2) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl- (sulfamerazine, SM); C <sub>11</sub> H <sub>12</sub> N <sub>4</sub> O <sub>2</sub> S; [127-79-7]		PREPARED BY:	
(3) Benzenesulfonamide, 4-amino-N-2-thiazolyl- (sulfathiazole, ST); C <sub>9</sub> H <sub>9</sub> N <sub>3</sub> O <sub>2</sub> S <sub>2</sub> ; [72-14-0]		R. Piekos	
(4) Sodium hydroxide; NaOH; [1310-73-2]			
(5) Water; H <sub>2</sub> O; [7732-18-5]			
VARIABLES: SD/SM/ST ratio			
EXPERIMENTAL VALUES:			
Composition of sulfonamide mixt SD/SM/ST	Volume of 1.5N NaOH soln required to dissolve the mixture at 26°C	Composition of sulfonamide mixt SD/SM/ST	Volume of 1.5N NaOH soln required to dissolve the mixt at 26°C
g/g/g	cm <sup>3</sup>	g/g/g	cm <sup>3</sup>
0.1/0.1/0.1	0.825	0.1/0.1/0.2	1.1
0.1/0.2/0.2	1.375	0.1/0.1/0.3	1.375
0.1/0.3/0.3	1.9	0.1/0.1/0.4	1.675
0.1/0.4/0.4	2.425	0.1/0.1/0.5	1.925
0.1/0.5/0.5	2.975	0.1/0.2/0.1	1.075
0.2/0.1/0.2	1.375	0.1/0.3/0.1	1.35
0.3/0.1/0.3	1.925	0.1/0.4/0.1	1.6
0.4/0.1/0.4	2.45	0.1/0.5/0.1	1.875
0.5/0.1/0.5	3.025	0.2/0.1/0.1	1.1
0.2/0.2/0.1	1.375	0.3/0.1/0.1	1.375
0.3/0.3/0.1	1.9	0.4/0.1/0.1	1.675
0.4/0.4/0.1	2.475	0.5/0.1/0.1	1.95
0.5/0.5/0.1	3.025		
AUXILIARY INFORMATION			
METHOD/APPARATUS/PROCEDURE: Nothing specified.		SOURCE AND PURITY OF MATERIALS: Nothing specified.	
		ESTIMATED ERROR: Nothing specified.	
		REFERENCES:	

<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine, DS); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (2) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamerazine, SM); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (3) Benzenesulfonamide, 4-amino-N-2-thiazolyl- (sulfathiazole, ST); $C_9H_9N_3O_2S_2$ ; [[72-14-0] (4) Sodium hydroxide; NaOH; [1310-73-2] (5) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Holz, E.; Garcia Onandia, A.; Holz, S. <i>Acta Cient. Venezolana</i> <u>1955</u> , 6(2), 68-73.																																																										
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<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-thiazolyl- (sulfathiazole); $C_9H_9N_3O_2S_2$ ; [72-14-0] (2) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (3) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamerazine); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (4) Phosphoric acid, monopotassium salt; $KH_2PO_4$ ; [7778-77-0] (5) Sodium hydroxide; NaOH; [1310-73-2] (6) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b>  Bhattacharyya, R.; Basu, U. P. <i>Indian Pharmacist</i> <u>1950</u> , <u>6(3)</u> , 77-8, 86.												
<b>VARIABLES:</b>  <p style="text-align: center;">pH</p>	<b>PREPARED BY:</b>  <p style="text-align: center;">R. Piekos</p>												
<b>EXPERIMENTAL VALUES:</b>  <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Initial pH</th> <th style="text-align: center;">Solubility at 30°C of a mixture of 1 part each of sulfathiazole, sulfadiazine, and sulfamerazine in M/20 <math>KH_2PO_4</math> solution of pH corrected with M/20 NaOH solution</th> <th style="text-align: right;">Final pH</th> </tr> <tr> <th colspan="3" style="text-align: center;">mg/ml solution</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">6.18</td> <td style="text-align: center;">114.8</td> <td style="text-align: right;">6.24</td> </tr> <tr> <td style="text-align: left;">7.05</td> <td style="text-align: center;">212</td> <td style="text-align: right;">7.49</td> </tr> </tbody> </table>		Initial pH	Solubility at 30°C of a mixture of 1 part each of sulfathiazole, sulfadiazine, and sulfamerazine in M/20 $KH_2PO_4$ solution of pH corrected with M/20 NaOH solution	Final pH	mg/ml solution			6.18	114.8	6.24	7.05	212	7.49
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<b>AUXILIARY INFORMATION</b>													
<b>METHOD/APPARATUS/PROCEDURE:</b> A weighed sample of the sulfonamides was placed in a clean reagent bottle and a known vol of the M/20 $KH_2PO_4$ soln was added, and the pH was adjusted to the desired value with M/20 NaOH soln. The mixt was shaken in a mech shaker at 80-100 strokes/min. After at least 24 h the mixt was filtered through a clean, dried and weighed sintered-glass crucible. At the end of the filtration the crucible was washed with about 1 ml of water, dried at 105°C for 2-3 h, cooled, and weighed to const wt. The pH was detd with a Cambridge bench type pH meter using a glass electrode.	<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor purity of the materials, with the exception of water, was specified. The water was doubly distilled.  <b>ESTIMATED ERROR:</b> Soly: not specified. Temp: $\pm 0.2^\circ C$ pH : $\pm 0.01$ unit (authors).												
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<b>COMPONENTS:</b> (1) Acetamide, N-[4-[(2-thiazolylamino)sulfonyl]phenyl]- (acetyl sulfathiazole); $C_{11}H_{11}N_3O_3S_2$ ; [127-76-4] (2) Acetamide, N-[4-[(2-pyrimidinylamino)sulfonyl]phenyl]- (acetyl sulfapyrimidine); $C_{12}H_{12}N_4O_3S$ ; [127-74-2] (3) Acetamide, N-[4-[(4-methyl(2-pyrimidinylamino)sulfonyl]phenyl]- (acetyl sulfamethylpyrimidine); $C_{13}H_{14}N_4O_3S$ ; [127-73-1] (4) Phosphoric acid, disodium salt; $Na_2HPO_4$ ; [7558-94-4] (5) Phosphoric acid, monopotassium salt; $KH_2PO_4$ ; [7778-77-0] (6) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Frisk, A. R.; Hagerman, G.; Helander, S.; Sjögren, B. <i>Hygiea</i> <u>1946</u> , 108(12), 639-51.
<b>VARIABLES:</b> One temperature: 37°C; one pH 6.1	<b>PREPARED BY:</b> R. Piekos
<b>EXPERIMENTAL VALUES:</b>  Solubility of a mixture of acetyl sulfathiazole, acetyl sulfapyrimidine, and acetyl sulfamethylpyrimidine in M/30 phosphate buffer of pH 6.1 at 37°C is 89 mg/100 ml solvent.	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> An excess of acetyl sulfathiazole, acetyl sulfapyrimidine and acetyl sulfamethylpyrimidine in the phosphate buffer was shaken at 37°C for 24 h. The concn of the acetylated sulfonamides was detd by the Bratton and Marshall method (1) using a photoelec colorimeter.	<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor purity of the materials was specified.
	<b>ESTIMATED ERROR:</b> Soly: precision $\pm 9$ mg/100 ml (authors). Temp and pH: not specified.
	<b>REFERENCES:</b> 1. Bratton, A. C.; Marshall, E. K., Jr. <i>J. Biol. Chem.</i> <u>1939</u> , 128, 537.

<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-(4,6-dimethyl-2-pyrimidinyl)- (sulfamethazine); $C_{12}H_{14}N_4O_2S$ ; [57-68-1] (2) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamerazine); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (3) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (4) Phosphoric acid, disodium salt; $Na_2HPO_4$ ; [7558-94-4] (5) Phosphoric acid, monopotassium salt; $KH_2PO_4$ ; [7778-77-0] (6) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Bandelin, F. J.; Malesh, W. <i>J. Am. Pharm. Assoc., Sci. Ed.</i> <u>1959</u> , 48, 177-81.																
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<b>EXPERIMENTAL VALUES:</b> <p>Solubility of a 1:1:1 (by wt.) mixture of the three sulfonamides (triple sulfonamide) in buffers of varying mixtures of the following solutions:</p> <p><math>Na_2HPO_4 \cdot 7H_2O</math> 71.6 g/l of distilled water (0.27 mol <math>dm^{-3}</math>, compiler);</p> <p><math>KH_2PO_4</math> 36.3 g/l of distilled water (0.27 mol <math>dm^{-3}</math>, compiler) at 37°C</p> <table border="1" data-bbox="466 868 1035 1144"> <thead> <tr> <th>Initial pH</th> <th>Solubility in mg/100 ml buffer</th> </tr> </thead> <tbody> <tr> <td>4.5</td> <td>96</td> </tr> <tr> <td>5.0</td> <td>98</td> </tr> <tr> <td>5.5</td> <td>102</td> </tr> <tr> <td>6.0</td> <td>109</td> </tr> <tr> <td>6.5</td> <td>130; 139<sup>a</sup></td> </tr> <tr> <td>7.0</td> <td>192</td> </tr> <tr> <td>7.5</td> <td>209</td> </tr> </tbody> </table> <p><sup>a</sup> obtained by extrapolation of the solubility curve.</p>		Initial pH	Solubility in mg/100 ml buffer	4.5	96	5.0	98	5.5	102	6.0	109	6.5	130; 139 <sup>a</sup>	7.0	192	7.5	209
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<b>METHOD/APPARATUS/PROCEDURE:</b> Solns were prepd by adding an excess of the sulfonamides to 10 ml of buffer soln at each pH level in 18 x 150-mm test tubes, stoppering the tubes, placing in a water bath at 37°C with gentle agitation for 24 h. The mixt was then filtered and a 1-ml aliquot was accurately pipetted into a volumetric flask for diln and analysis. The balance was retained for pH detn to ascertain any change in pH value. The sulfonamides were assayed colorimetrically at 545 nm by the method of Bratton and Marshall as described in detail by Biamonte and Schneller (1). Standard curves were prepd for individual sulfonamides using accurately prepd std solns.	<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor the purity of the reagents were specified. Distilled water was used. <b>ESTIMATED ERROR:</b> Soly: duplicate samples were used for analysis (authors). Temp: nothing specified. pH : nothing specified. <b>REFERENCES:</b> 1. Biamonte, A. R.; Schneller, G. E. <i>J. Am. Pharm. Assoc., Sci. Ed.</i> , <u>1952</u> , 41, 341.																



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<b>EXPERIMENTAL VALUES:</b>  Solubility of a mixture of equal portions of sulfadiazine, sulfamerazine, and sulfamethazine in McIlvaine's disodium phosphate - citric acid buffer solutions at 37°C <table border="1" data-bbox="395 854 1053 1181"> <thead> <tr> <th>Initial pH of buffer</th> <th>Solubility (mg/100 ml solution)</th> <th>Final pH</th> </tr> </thead> <tbody> <tr> <td>4.5</td> <td>95.9</td> <td>4.5</td> </tr> <tr> <td>5.0</td> <td>98.4</td> <td>5.0</td> </tr> <tr> <td>6.0</td> <td>108.9</td> <td>5.8</td> </tr> <tr> <td>7.0</td> <td>186.0</td> <td>6.9</td> </tr> <tr> <td>8.0</td> <td>476.0</td> <td>7.5</td> </tr> </tbody> </table>		Initial pH of buffer	Solubility (mg/100 ml solution)	Final pH	4.5	95.9	4.5	5.0	98.4	5.0	6.0	108.9	5.8	7.0	186.0	6.9	8.0	476.0	7.5
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<b>METHOD/APPARATUS/PROCEDURE:</b>  A sample large enough to supply an excess of each constituent was equilibrated in buffer solns at 37°C for 18 h with agitation. The suspension was then immediately filtered through a Whatman No. 1 paper. The filtration time was approx 2 min. The sulfonamides in the filtrate were assayed spectrophotometrically by the method of Bratton and Marshall (1) using a Beckmann DU spectrophotometer.	<b>SOURCE AND PURITY OF MATERIALS:</b>  The source and purity of the materials was not specified. The mp of sulfadiazine, sulfamerazine and sulfamethazine was 253.5-4.5°C, 235.5-6.5°C, and 197.7-8.6°C, resp.																		
	<b>ESTIMATED ERROR:</b> pH and temp: not specified. Accuracy of the anal method was illustrated by the following values: expected 2.003, 3.004, 4.006, 5.007 mg/100 ml; found: 2.08, 3.06, 4.12, 5.10.																		
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<b>METHOD/APPARATUS/PROCEDURE:</b> Solns were prepd by adding an excess of the acetyl derivs to 10 ml of buffer soln at each pH level in 18 x 150-mm test tubes, stoppering the tubes, placing in a water bath at 37°C with gentle agitation for 24 h. The mixt was then hydrolyzed with 5% $H_2SO_4$ for 1 h to liberate the free sulfonamides. One-ml aliquot was accurately pipetted into a volumetric flask for diln and analysis. The sulfonamides were assayed colorimetrically at 545 nm by the method of Bratton and Marshall as described in detail by Biamonte and Schneller (1). Standard curves were prepd for individual sulfonamides using accurately prepd std solns.	<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor the purity of the reagents were specified. Distilled water was used.																		
	<b>ESTIMATED ERROR:</b> Soly: duplicate samples were used for analysis (authors). Temp: Nothing specified. pH : Nothing specified.																		
	<b>REFERENCES:</b> 1. Biamonte, A. R.; Schneller, G. E. <i>J. Am. Pharm. Assoc., Sci. Ed.</i> , <u>1952</u> , 41, 341.																		

<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-(4,6-dimethyl-2-pyrimidinyl)-, (sulfamethazine); $C_{12}H_{14}N_4O_2S$ ; [57-68-1] (2) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)-, (sulfamerazine); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (3) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl-, (sulfadiazine); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (4) Calcium chloride; $CaCl_2$ ; [10043-52-4] (5) Magnesium chloride; $MgCl_2$ ; [7786-30-3] (6) Phosphoric acid, monoammonium salt; $NH_4H_2PO_4$ ; [7722-76-1] (7) Potassium chloride; $KCl$ ; [7447-40-7] (8) Sodium chloride; $NaCl$ ; [7647-14-5] (9) Urea; $CH_4N_2O$ ; [57-13-6] (10) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b>  Bandelin, F. J.; Malesh, W.,  <i>J. Am. Pharm. Assoc., Sci. Ed.</i> <u>1959</u> , 48, 178-81.
<b>VARIABLES:</b>  pH at 37°C	<b>PREPARED BY:</b>  R. Piekos
<b>EXPERIMENTAL VALUES:</b>  Continued on the next page.	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> Excess sulfonamides was added to aliquots of synthetic urine solutions and 1% $H_3PO_4$ or 1% NaOH solns were used to adjust the pH to the required value. The solns were agitated for 24 h with addn of acid or base to keep them at the desired pH level until equilibrium in pH and concn was attained. The solns were filtered and in aliquots the sulfonamides were assayed spectrophotometrically by a method described by Biamonte and Schneller (1).	<b>SOURCE AND PURITY OF MATERIALS:</b> Nothing specified.
	<b>ESTIMATED ERROR:</b> Soly: average values of 2 detns are given. Temp: not specified. pH : not specified.
	<b>REFERENCES:</b>  1. Biamonte, A. R.; Schneller, G. E., <i>J. Am. Pharm. Assoc., Sci. Ed.</i> <u>1952</u> , 41, 341.

<b>COMPONENTS:</b> (1) Sulfamethazine; $C_{12}H_{14}N_4O_2S$ ; [57-68-1] (2) Sulfamerazine; $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (3) Sulfadiazine; $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (4) - (10) Synthetic urine see previous page for details	<b>ORIGINAL MEASUREMENTS: (CONTINUED)</b> Bandelin, F.; Malesh, W., <i>J. Am. Pharm. Assoc., Sci. Ed.</i> <u>1959</u> , 48, 177-81.  <b>PREPARED BY:</b> R. Piekos														
<b>EXPERIMENTAL VALUES:</b> Solubility of a 1:1:1 (by wt.) mixture of the three sulfonamides (triple sulfonamide) in a solution containing $CaCl_2$ 0.143, $MgCl_2$ 0.121, $NH_4H_2PO_4$ 0.300, KCl 1.660, NaCl 2.950 and urea 20 g/dm <sup>3</sup> (synthetic urine, Mosher Vehicle) at 37°C <table data-bbox="316 682 916 1024"> <thead> <tr> <th>Equilibrium pH</th> <th>Solubility (mg/100 ml synthetic urine)</th> </tr> </thead> <tbody> <tr> <td>4.5</td> <td>100</td> </tr> <tr> <td>5.0</td> <td>108</td> </tr> <tr> <td>5.5</td> <td>118</td> </tr> <tr> <td>6.0</td> <td>136</td> </tr> <tr> <td>6.4</td> <td>182</td> </tr> <tr> <td>7.1</td> <td>275</td> </tr> </tbody> </table>		Equilibrium pH	Solubility (mg/100 ml synthetic urine)	4.5	100	5.0	108	5.5	118	6.0	136	6.4	182	7.1	275
Equilibrium pH	Solubility (mg/100 ml synthetic urine)														
4.5	100														
5.0	108														
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7.1	275														
<b>AUXILIARY INFORMATION</b>															
<b>METHOD/APPARATUS/PROCEDURE:</b>	<b>SOURCE AND PURITY OF MATERIALS:</b>  <b>ESTIMATED ERROR:</b>  <b>REFERENCES:</b>														

COMPONENTS:	ORIGINAL MEASUREMENTS:															
(1) Acetamide, N-[4-[(2-pyrimidinylamino)-sulfonyl]phenyl]- (acetyl sulfadiazine); $C_{12}H_{12}N_4O_3S$ ; [127-74-2] (2) Acetamide, N-[4-[(4-methyl-2-pyrimidinylamino)sulfonyl]phenyl]- (acetyl sulfamerazine); $C_{13}H_{14}N_4O_3S$ ; [127-73-1] (3) Acetamide, N-[4-[[[(4,6-dimethyl-2-pyrimidinyl)amino]sulfonyl]phenyl]- (acetyl sulfamethazine); $C_{14}H_{16}N_4O_3S$ ; [100-90-3] (4) Phosphoric acid, disodium salt; $Na_2HPO_4$ ; [7558-94-4] (5) 1,2,3-Propanetricarboxylic acid, 2-hydroxy- (citric acid); $C_6H_8O_7$ ; [77-92-9] (6) Water; $H_2O$ ; [7732-18-5]	Biamonte, A. R.; Schneller, G. H. <i>J. Am. Pharm. Assoc., Sci. Ed.</i> <u>1952</u> , 41, 341-5.															
VARIABLES: <p style="text-align: center;">pH</p>	PREPARED BY: <p style="text-align: center;">R. Piekos</p>															
EXPERIMENTAL VALUES:																
<p style="text-align: center;">Solubility of a mixture of equal parts of acetyl sulfadiazine, acetyl sulfamerazine and acetyl sulfamethazine in McIlvaine's disodium phosphate - citric acid buffers at 37°C</p>																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Initial pH of buffer</th> <th style="text-align: center;">Solubility (mg/100 ml solution)</th> <th style="text-align: center;">Final pH</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">4.5</td> <td style="text-align: center;">119.0</td> <td style="text-align: center;">4.5</td> </tr> <tr> <td style="text-align: center;">5.0</td> <td style="text-align: center;">119.0</td> <td style="text-align: center;">5.0</td> </tr> <tr> <td style="text-align: center;">6.0</td> <td style="text-align: center;">152.7</td> <td style="text-align: center;">6.0</td> </tr> <tr> <td style="text-align: center;">7.0</td> <td style="text-align: center;">390.2</td> <td style="text-align: center;">6.8</td> </tr> </tbody> </table>		Initial pH of buffer	Solubility (mg/100 ml solution)	Final pH	4.5	119.0	4.5	5.0	119.0	5.0	6.0	152.7	6.0	7.0	390.2	6.8
Initial pH of buffer	Solubility (mg/100 ml solution)	Final pH														
4.5	119.0	4.5														
5.0	119.0	5.0														
6.0	152.7	6.0														
7.0	390.2	6.8														
AUXILIARY INFORMATION																
METHOD/APPARATUS/PROCEDURE: <p>A sample large enough to supply an excess of each constituent was equilibrated in buffer solns at 37°C for 18 h with agitation. The suspension was then immediately filtered through a Whatman No. 1 paper. The filtration time was approx. 2 min. The compds were assayed in the filtrate spectrophotometrically by the Bratton and Marshall method (1) after deacetylation with concd <math>HCl_{aq}</math>. The instrument used was a Beckmann DU spectrophotometer.</p>	SOURCE AND PURITY OF MATERIALS: <p>Acetyl sulfadiazine, acetyl sulfamerazine, and acetyl sulfamethazine had mp of 261.2-2.4°C, 248.2-9.4°C, and 249.5-50.6°C, resp, and were supplied by the American Cyanamid Co, Calco Chem. Div, Bound Brook, NJ. The source and purity of the remaining materials were not specified.</p>															
	ESTIMATED ERROR: pH and temp: not specified. Accuracy of the anal method was illustrated by the following values: expected 2.003, 3.004, 4.006, 5.007 mg/100 ml; found 2.08, 3.06, 4.12, 5.10, resp.															
	REFERENCES: <p>1. Bratton, A. C.; Marshall, E. K., Jr.  <i>J. Biol. Chem.</i> <u>1939</u>, 128, 537.</p>															



<b>COMPONENTS:</b> (1) Acetamide, N-[4-[[[(4,6-dimethyl-2-pyrimidinyl)amino]sulfonyl]phenyl]- (acetyl sulfamethazine); C <sub>14</sub> H <sub>16</sub> N <sub>4</sub> O <sub>3</sub> S; [100-90-3] (2) Acetamide, N-[[[(4-methyl-2-pyrimidinyl)-amino]sulfonyl]phenyl]- (acetyl sulfamerazine); C <sub>13</sub> H <sub>14</sub> N <sub>4</sub> O <sub>3</sub> S; [127-73-1] (3) Acetamide, N-[4-[(2-pyrimidinylamino)-sulfonyl]phenyl]- (acetyl sulfadiazine); C <sub>12</sub> H <sub>12</sub> N <sub>4</sub> O <sub>3</sub> S; [127-74-2] (4) - (10) Synthetic urine	<b>ORIGINAL MEASUREMENTS: (CONTINUED)</b> Bandelin, F. J.; Malesh, W., <i>J. Am. Pharm. Assoc., Sci. Ed.</i> <u>1959</u> , 48, 177-81. <b>PREPARED BY:</b> R. Piekos														
<b>EXPERIMENTAL VALUES:</b>  Solubility of a 1:1:1 (by wt.) mixture of the three acetyl sulfonamides (acetyl triple sulfonamide) in a solution containing CaCl <sub>2</sub> 0.143, MgCl <sub>2</sub> 0.121, NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> 0.300, KCl 1.660, NaCl 2.950 and urea 20 g/dm <sup>3</sup> (synthetic urine, Mosher Vehicle) at 37°C  <table border="1" data-bbox="466 705 1077 1113"> <thead> <tr> <th>Equilibrium pH</th> <th>Solubility (mg/100 ml synthetic urine)</th> </tr> </thead> <tbody> <tr> <td>4.5</td> <td>218</td> </tr> <tr> <td>5.0</td> <td>223</td> </tr> <tr> <td>5.5</td> <td>231</td> </tr> <tr> <td>6.0</td> <td>254</td> </tr> <tr> <td>6.5</td> <td>163</td> </tr> <tr> <td>7.0</td> <td>630</td> </tr> </tbody> </table>		Equilibrium pH	Solubility (mg/100 ml synthetic urine)	4.5	218	5.0	223	5.5	231	6.0	254	6.5	163	7.0	630
Equilibrium pH	Solubility (mg/100 ml synthetic urine)														
4.5	218														
5.0	223														
5.5	231														
6.0	254														
6.5	163														
7.0	630														
<b>AUXILIARY INFORMATION</b>															
<b>METHOD/APPARATUS/PROCEDURE:</b>	<b>SOURCE AND PURITY OF MATERIALS:</b>  <b>ESTIMATED ERROR:</b>  <b>REFERENCES:</b>														



<b>COMPONENTS:</b> (1) Benzamide, N-[(4-aminophenyl)sulfonyl]- (sulfabenzamide); $C_{13}H_{12}N_2O_3S$ ; [127-71-9] (2) Benzenesulfonamide, 4-amino-N-2-thiazolyl- (sulfathiazole); $C_9H_9N_3O_2S_2$ ; [72-14-0] (3) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfadiazine); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (4) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamerazine); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (5) Phosphoric acid, monopotassium salt; $KH_2PO_4$ ; [7778-77-0] (6) Sodium hydroxide; NaOH; [1310-73-2] (7) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b>  Bhattacharyya, R.; Basu, U. P. <i>Indian Pharmacist</i> <u>1950</u> , 6(3), 77-8, 86.									
<b>VARIABLES:</b>  pH	<b>PREPARED BY:</b>  R. Piekos									
<b>EXPERIMENTAL VALUES:</b>  Solubility at 30°C of a mixture of sulfabenzamide 3, sulfathiazole 4, sulfadiazine 8, and sulfamerazine 5 parts in M/20 $KH_2PO_4$ solution of pH corrected with M/20 NaOH solution (mg/ml solution) <table border="1" data-bbox="220 833 1181 1038"> <thead> <tr> <th>Initial pH</th> <th>M/20 NaOH solution (mg/ml solution)</th> <th>Final pH</th> </tr> </thead> <tbody> <tr> <td>6.18</td> <td>188</td> <td>6.23</td> </tr> <tr> <td>7.05</td> <td>469.4</td> <td>6.93</td> </tr> </tbody> </table>		Initial pH	M/20 NaOH solution (mg/ml solution)	Final pH	6.18	188	6.23	7.05	469.4	6.93
Initial pH	M/20 NaOH solution (mg/ml solution)	Final pH								
6.18	188	6.23								
7.05	469.4	6.93								
<b>AUXILIARY INFORMATION</b>										
<b>METHOD/APPARATUS/PROCEDURE:</b> A weighed sample of the mixture of sulfonamides was placed in a clean reagent bottle and a known vol of the buffer soln was added. The mixt was shaken in a mech shaker at 80-100 strokes/min. After at least 24 h the mixt was filtered through a clean, dried and weighed sintered-glass crucible. At the end of the filtration the crucible was washed with about 1 ml of water, dried at 105°C for 2-3 h, cooled, and weighed to const wt. The pH was detd with a Cambridge bench type pH meter using a glass electrode.	<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor purity of the materials, with the exception of water, was specified.  <b>ESTIMATED ERROR:</b> Soly: not specified. Temp: $\pm 0.2^\circ C$ (authors). pH : $\pm 0.01$ unit (authors).									
<b>REFERENCES:</b>										

<b>COMPONENTS:</b> (1) Benzenesulfonamide, 4-amino-N-2-thiazolyl- (sulfathiazole); $C_9H_9N_3O_2S$ ; [72-14-0] (2) Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (sulfapyrimidine); $C_{10}H_{10}N_4O_2S$ ; [68-35-9] (3) Benzenesulfonamide, 4-amino-N-(4-methyl-2-pyrimidinyl)- (sulfamethylpyrimidine); $C_{11}H_{12}N_4O_2S$ ; [127-79-7] (4) Acetamide, N-[4-[(2-thiazolylamino)sulfonyl]phenyl]- (acetyl sulfathiazole); $C_{11}H_{11}N_3O_3S_2$ ; [127-76-4] (5) Acetamide, N-[4-[(2-pyrimidinylamino)sulfonyl]phenyl]- (acetyl sulfapyrimidine); $C_{12}H_{12}N_4O_3S$ ; [127-74-2] (6) Acetamide, N-[4-[[4-methyl-2-pyrimidinyl)amino]sulfonyl]phenyl]- (acetyl sulfamethylpyrimidine); $C_{13}H_{14}N_4O_3S$ ; [127-73-1] (7) Phosphoric acid, disodium salt; $Na_2HPO_4$ ; [7558-94-4] (8) Phosphoric acid, monopotassium salt; $KH_2PO_4$ ; [7778-77-0] (9) Water; $H_2O$ ; [7732-18-5]	<b>ORIGINAL MEASUREMENTS:</b> Frisk, A. R.; Hagerman, G.; Helander, S.; Sjögren, B. <i>Hygiea</i> <u>1946</u> , <i>108(12)</i> , 639-51.
<b>VARIABLES:</b> One temperature: 37°C; one pH: 6.1	<b>PREPARED BY:</b> R. Piekos
<b>EXPERIMENTAL VALUES:</b> <p>Solubility of a mixture of sulfathiazole, sulfapyrimidine, sulfamethylpyrimidine, acetyl sulfathiazole, acetyl sulfapyrimidine and acetyl sulfamethylpyrimidine in M/30 phosphate buffer of pH 6.1 at 37°C is 283 mg/100 ml solvent.</p>	
<b>AUXILIARY INFORMATION</b>	
<b>METHOD/APPARATUS/PROCEDURE:</b> An excess of the three sulfonamides and their acetyl derivatives in the phosphate buffer was shaken at 37°C for 24 h. The concn of the dissolved compds was detd by the Bratton and Marshall method (1) using a photoelec colorimeter.	<b>SOURCE AND PURITY OF MATERIALS:</b> Neither source nor purity of the materials was specified.
	<b>ESTIMATED ERROR:</b> Soly: precision: ±28 mg/100 ml (authors). Temp and pH: not specified.
	<b>REFERENCES:</b> 1. Bratton, A. C.; Marshall, E. K., Jr. <i>J. Biol. Chem.</i> <u>1939</u> , <i>128</i> , 537.

