<pre>COMPONENTS: (1) Benzenesulfonamide, 4-amino-N-(5-methyl- 1,3,4-thiadiazol-2-yl)-, monosilver salt (Ag sulfamethizole); CgHgAgN402S2; [24342-31-2] (2) 4-Morpholinepropanesulfonic acid; C7H15N04S; [1132-61-2] (3) 4-Morpholinepropanesulfonic acid, sodium salt: C-H.(NNA0.S: [71119-22-7]</pre>	ORIGINAL MEASUREMENTS: Nesbitt, R. U., Jr.; Sandmann, B. J. J. Pharm. Sci. <u>1978,</u> 67(7), 1012-17.			
(4) Potassium pitrate: $KNO_{2}$ : [7757-79-1]	PDFDADED BY.			
(5) Water: $H_0(1)$ : [7732-18-5]	R. Piekos			
() water, wyo, (//52 10 5)				
VARIABLES:				
hydronium-ion concentration				
Equilibrium values of $S^2$ (S = total mola for Ag sulfamethizole in 0.05M 4-morphol at 0.1M ionic strength (KNO <sub>3</sub> ) and 25±0.1 30- 20- 0 20- 0 10- 20- 0 10- 20- 10- 20- 10- 20- 10- 20- 10- 20- 1	r solubility) versus $[H_30^+]$ for inepropanesulfonic acid buffer °C. $\frac{1}{6}$ $\frac{1}{8}$ $\frac{1}{10}$ $\frac{1}{12}$ $0^+] \times 10^8$			
AUXILIARY	INFORMATION			
METHOD/APPARATUS/PROCEDURE: Mixt of 100 mg Ag sulfamethizole and 25 or 27	All reagents used were anal or HSP grade			
m1 of the 4-morpholinepropanesulfonic acid buf	As sulfamethized was arend by the method			
for were placed in paraffin-costed visio ad-	Ag suitamethizore was prepa by the method			
ter were praced in paralitin-coaced vials, ad-	OI KOSENZWEIG AND FUCHS (1) AND RECRYSTD			
justed to an ionic strength 0.1M with KNO <sub>3</sub> ,	from ammonia (2). Water had a sp cond of			
and rotated end over end in a thermostated	$(1-10) \times 10^{-7} \text{ ohm}^{-1} \text{ cm}^{-1}$ .			
bath until equilibrium soly was obtained (3-	The buffer soln was from US Biochem. Corp.			
7 days). After filtration through 20M glass	Cleveland, Obio (nurity not specified)			
filtering crucibles, the solns were analyzed	oreverandy onto (party not specified).			
at $25\pm0$ 1°C in paraffin-partial backers for $A^+$				
at 2520.1 C In parallin-coated beakers for Ag	ESTIMATED ERROR:			
ions with a silver-ion selective electrode No.	Soly: not specified.			
94-16,Orion Res.,Cambridge,Mass) standardized	Temp: ±0.1 <sup>0</sup> C (authors).			
at the temp indicated and 0.1M ionic strength.	$pH$ : accuracy $\pm 0.001$ pH unit (authors)			
The pH was measured with a triple-purpose pH	REFERENCES:			
electrode (Corning Sci. Instruments,Medfield,	1. Rosenzweig, S.; Fuchs, W. U.S. pat.			
Mass) standardized using buffers meeting NBS	2,536,095 (1951).			
requirements ' The huffers were prend with a	2. Sandmann, B.J.; Nesbitt, R. U., Jr.; Sandmann, R. A. J. Dharmer Cont			
requirements. The burrers were prepa with a	1974, 63, 948.			
total molar concn of 0.05M and adjusted to an				
ionic strength of 0.1M with KNO3.				

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78							
COMPONENTS	5:		ORIGINAL MEA	SUREMENTS:			
(1) Benz 1,3, (Ag	enesulfonam 4-thiadiazo sulfamethiz	ide, 4-amino-N-(5-me 1-2-yl)-, monosilver ole); C <sub>9</sub> H <sub>9</sub> AgN <sub>4</sub> O <sub>2</sub> S <sub>2</sub> ;	thy1- salt Nesbitt, R. J. Pharm.	Nesbitt, R. U., Jr.; Sandman, B. J. J. Pharm. Sci. 1978. 67(7). 1012-17			
(2) Nirr	42-31-2] ic acid: HN	0.: [53081-02-0]					
(2) Nici	ssium nitra	te: KNO <sub>0</sub> : [7757-79	-11				
(4) Wate	r; H <sub>2</sub> O; [	7732-18-5]	-1				
VARIABLE	S:		PREPARED BY:	:			
	p	Н		R. Piekos			
XPERIMEN	TAL VALUES:						
Com	parison of	Total Silver Sulfame	thizole Molar Solu	ubility, S, Determined by			
the	Method of	Known Subtraction wit	th the Molar Conce	entration of the Silver Ion			
Det	ermined by	Direct Potentiometry	of Identical Sam	ples at 25±0.1°C, 0.1M Ionic			
Str	ength, in N	itric Acid Buffer					
	p	Н 1.931		pH 2.565			
	$S \times 10^4$	$[Ag^{+}] \times 10^{9}$	$S \times 10^4$	$[Ag^{+}] \times 10^{4}$			
	4.073	4.052	1.477	1.486			
	4.077	4.068	1.491	1.486			
	4.088	4.068	1.477	1.492			
	4.062	4.036	1.459	1.475			
	4.120	4.099	1,482	1.486			
	4.080	4.021	1.476	1.475			
Mean	4.084	4.057	1.477	1.483			
		AUXII	LIARY INFORMATION				
METHOD/AP	PARATUS/PRO	CEDURE:	SOURCE AND I	PURITY OF MATERIALS:			
Mixts of	100 mg of .	Ag sulfamethizole and	d 25 All reagent	ts were anal or USP grade. Ag			
or 27 ml	of the nit	ric acid buffer were	pla- sulfamethiz	zole was prepd by the method of			
ced in pa	araffin-coa	ted vials, adjusted (	to an Rosenzweig	and Fuchs (1) and recrytd from			
ionic st	rength 0.1M	with KNO3, and rotat	ted ammonia (2)	). Water had a sp cond of			
end over	end in a t	hermostated bath unt:	$(1 - 10) \times (1 - 10) $	10 <sup>-</sup> ' ohm <sup>-1</sup> cm <sup>-1</sup> .			
quilibri	um soly was	obtained (3-7 days).	Af- The source	of the reagents was not specifi			
ter filt:	ration thro	ugh 20M glass filter:	ing				
crucibles	s, the soln	s were analyzed at 25	5±0.1				
C in para with a si 16, Orion	affin-coate ilver-ion s n Res., Cam	d beakers for Ag <sup>+</sup> ion elective electrode (1 pridge, Mass) standar	ns ESTIMATED E analysis of the Table v rdiz- different a (authors).	RROR:Soly: when tested by one wa f variance, the means displayed were found not to be statistical at the 1% confidence level			
ed at the strength purpose p	e temp indio . The pH was pH electrodo	cated and U.IM ionic s measured with a tri e (Corning Sci. Inst:	Lple- REFERENCES: 1. Rosenzy 2,536,0	weig, S.; Fuchs, W. U. S. pat.			

 2,536,095 (1951).
 Sandmann,R.A.; Nesbitt, R.U., Jr.; Sandmann,R. A. J. Pharm. Sci.

<u>1974, 63,</u> 948.

acid buffers were prepd by diln to 0.1M HNO3

ments, Medfield, Mass) standardized using buffers meeting NBS requirements. The nitric

COMPONENTS :			ORIGINAL MEASUREM	ENTS:
			Nesbitt, R. U.,	Jr.: Sandman. B. J.
			J. Pharm. Sci.	1978, 67(7), 1012-17.
VARIABLES:			PREPARED BY:	
	pН			R. Piekos
EXPERIMENTAL VAL	LUES: C	ontinued from pr	evious page	
	<b>6</b> . <b>1</b> . <b>1</b> .		6	- <b>a</b> - v
$25+0.1^{\circ}C$	on of the solu	strength	r Ag sullamethizol	e, <sub>s</sub> , at
2520.1 0 8	and 0.1M 10mic	acrengen		
	pН	fo	s <sup>2</sup>	K <sub>s</sub> <sup>a</sup>
-				
	1.965	$1.583 \times 10^{-4}$	$1.733 \times 10^{-7}$ 2	$.74 \times 10^{-11}$
	2.102	$2.526 \times 10^{-4}$	$1.051 \times 10^{-7}$ 2	.65 x 10 <sup>-11</sup>
	2.345	5.448 x $10^{-4}$	4.693 x 10 <sup>-8</sup> 2	.56 x 10 <sup>-11</sup>
	2.598	$1.132 \times 10^{-3}$	$2.508 \times 10^{-8}$ 2	.85 x 10 <sup>-11</sup>
			Mean (2.	70±0.12)10 <sup>-11</sup>
-				
	<sup>a</sup> K <sub>s</sub> report	ted as mean ±SD		+. + <b>2</b>
	<sup>a</sup> from eq.	$K_s = f_0 S^2$ , where	$f_0 = (1 + \frac{[H_30]}{K_2})$	$\frac{(H_30^+)^2}{(K_1 K_2)^2} - 1$
	S is the t	total molar solu	oility, and $K_1$ and	K <sub>2</sub> are the
	apparent d	lissociation con	stants of the $N^4-$	(amino) and N <sup>1</sup> -
	(amido) hy	drogens of sulfa	methizole, respecti	ively
		AUXILIARY	INFORMATION	
METHOD/APPARATU	S/PROCEDURE:		SOURCE AND PURITY	OF MATERIALS:
			ESTIMATED ERROR:	
			REFERENCES :	<u></u>
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COMPONENTS:	ORIGINAL MEASUREMENTS:
	Nesbitt, R. U., Jr.; Sandmann, B. J.
	J. Pharm. Sci. 1978, 67(7), 1012-17.
VARIABLES:	PREPARED BY:
pH	R. Piekos
-	
EXPERIMENTAL VALUES: Continued from	previous page
2.0-	
105	
×	
f f	
2/	
+8	
1	
0,	
2.0	4.0 6.0 8.0 10.0
	$[H_30^+] \times 10^5$
Equilibrium values of [Ag	$[H_{3}0^{+}]$ versus $[H_{3}0^{+}]$ for
silver sulfamethizole in a	nitric acid buffer at 0.1M
ionic strength and 25±0.1	°c
AUXILIARY	INFORMATION
METHOD APPARATUS / PROCEDURE :	SOURCE AND PURITY OF MATERIALS:
	}
	ESTIMATED EDDOR
	ESTIMATED ERKOK:
	1
	REFERENCES :
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COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Acetamide, N-[4-[[(5-methyl -1,3,4-	Durel, M. P.; Allinne, M.
thiadiazo1-2-y1)amino]sulfony1]pheny1]-	Bull. Soc. Med. Hop. Paris III
(acetyl sulfamethythiadiazole):	1941, 251-9.
$C_{-1}H_{-1}N_{+}O_{-}S_{-} + [39719 - 87 - 4]$	,,
$(2)  u_{11} u_{12} u_{4} u_{3} u_{2},  (3772)  19  51$	
(2) water; n <sub>2</sub> 0; [//32-16-5]	
VARIABLES:	PREPARED BY:
One temperature: 37°C	R. Piekos
EXPERIMENTAL VALUES:	
Solubility of acetyl sulfamethythiad:	lazole in water at 37 <sup>0</sup> C is 0.10 g/liter
	÷.
( 3.2 x 10 mol dm -, compiler ).	
AUXILIARY	INFORMATION
	SOURCE AND PURITY OF MATERIALS.
The mixt of acetyl sulfamethylthiadiasole	Source and nurity of acetyl sulfamethyl-
The mine of accept suffamethylthiauta2018	source and purity of acetyf Sullamethyl-
and water was agitated for 24 hours at 37°C.	thiadiazole were not specified.
	Distilled water was used.
	]
	ESTIMATED ERROR:
	Nothing specified.
1	
	REFERENCES:
	Į į

COMF (1) (2)	PONENTS: Acetamide, N-[4-[[(5-methyl-1,3,4- thiadiazol-2-yl)amino]sulfonyl]phenyl]- (acetyl sulfamethylthiadiazole); $C_{11}H_{12}N_4O_3S_2$ ; [39719-87-4] Phosphoric acid, disodium salt; Na <sub>2</sub> HPO <sub>4</sub> ; [7558-94-4]	ORIGINAL MEASUREMENTS: Krüger-Thiemer, E. <i>Arch. Dermatol. Syphilis</i> <u>1942</u> , 183, 90-116.
(3) VAR On	Water; H <sub>2</sub> 0; [7732-18-5] MABLES: Ne temperature: ca 20 <sup>0</sup> C; one pH: 8.74	PREPARED BY: R. Piekos
EXP	ERIMENTAL VALUES:	<u> </u>

Solubility of acetyl sulfamethylthiadiazole in a 0.705M (10%)  $Na_2HPO_4$ solution of pH 8.74 at room temperature ( about  $20^{\circ}C$  ) is 1.250 g% (  $4.002 \times 10^{-2}$  mol dm<sup>-3</sup> solution, compiler ).

## METHOD/APPARATUS/PROCEDURE:

Acetyl sulfamethylthiadiazole (0.5 g) was dissolved in 10 cm<sup>3</sup> of the 0.705M (10%)  $Na_2HPO_4$  soln, shaken for 2 h at room temp (about 20°C), and filtered. The filtrate was treated with equal vol of 2N HC1 and refluxed for 15 min. After proper diln, a 1-cm<sup>3</sup> aliquot was withdrawn, acidified, cooled, and the sulfonamide content was detd colorimetrically (as sulfamethylthiadiazole) by the Marshall method modified by Kimmig (1) using an Authenrieth colorimeter. The pH was detd on an ultraionograph using a glass electrode. SOURCE AND PURITY OF MATERIALS: Acetyl sulfamethylthiadiazole (source not specified) gave no coloration upon diazotization of its satd soln, thus showing absence of sulfamethylthiadiazole. The source and purity of the remaining materials were not specified.

ESTI	MAT	ED	ERROR:						
Soly:		precision ±5%			(author)				
Temp: not specified.									
pН	:	±0	.05 pH	unit	(author)				
REFE	REN	CES	:						
1.	Ki	nm i	g, J.	Arch.	Derm	atol.	<u>1938</u> ,		
	17	6,	722;	Erg.	Hyg.	<u>1941</u> ,	24, 39	8.	

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COMPONENTS :	ORIGINAL MEASUREMENTS:
(1) Acetamide, N-[4-[[(5-methyl-1,3,4- thiadiazol=2-w1)aminolsulfonv1]phenv1]-	Krüger-Thiemer, E.
(acetyl sulfamethylthiadiazole);	Arch. Dermatol. Syphilis <u>1942</u> , 183,
$C_{11}H_{12}N_4O_3S_2;$ [39719-87-4]	90-116.
(2) Phosphoric acid, monopotassium salt; KH <sub>2</sub> PO <sub>4</sub> : [7778-77-0]	
(3) Water; $H_20$ ; [7732-18-5]	
VARIABLES:	PREPARED BY:
One temperature: ca 20 <sup>0</sup> C; one pH: 4.37	R. Piekos
EXPERIMENTAL VALUES:	
Solubility of acetyl sulfamethylthiad	diazole in a 0.735M (10%) KH <sub>2</sub> PO <sub>4</sub>
colution of $pH \neq 37$ at mean temperate	$\frac{1}{2}$ ( shout $20^{\circ}$ C ) is 0.0066 s <sup>7</sup>
	fre ( about 20 c ) is 0.0000 g
$(2.11 \times 10^{-4} \text{ mol dm}^{-3} \text{ solution, comp})$	piler ).
	INFORMATION
METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Acetyl sulfamethylthiadiazole (0.5 g) was	Acetyl sulfamethylthiadiazole (source not
dissolved in the 0.735M (10%) KH <sub>2</sub> PO <sub>4</sub> soln,	specified) gave no coloration upon diazo-
shaken for 2 h at room temp (about 20 <sup>o</sup> C),	tization of its satd soln, thus showing
and filtered. The filtrate was treated with	absence of sulfamethylthiadiazole. The
equal vol of 2N HCl, and refluxed for 15	source and purity of the remaining materi-
min. After proper diln, a 1-cm <sup>3</sup> aliquot was	als were not specified.
withdrawn, acidified, cooled. and the sul-	
fonamide content was detd colorimetrically	
by the Marshall method modified by Kimmig	ESTIMATED ERROR:
(1) using an Authenrighth colorimator The	Soly: precision ±5% (author)
pl was dotd on an ultraioneensh water -	Temp: not specified
pri was deta on an uttralonograph using a	pH : ±0.05 pH unit (author)
glass electrode.	REFERENCES :
	1. Kimmig, J. Arch. Dermatol. 1938,
	176, 722; Erg. Hyg. <u>1941</u> , 24, 398.

COMPONENT	TS:	ORIGINAL MEASUREMENTS:	
(1) Ace thi	tamide, N-[4-[[(5-methyl-1,3,4- adiazol-2-yl)amino]sulfonyl]phenyl]-	Krüger-Thiemer, E.	
(ac	etyl sulfamethylthiadiazole);	Arch. Dermatol. Syphilis <u>1942</u> , 183,	
C <sub>11</sub>	$^{H}12^{N}4^{0}3^{S}2;$ [39719-87-4]	90-116.	
(2) Pho	sphoric acid, disodium salt;		
Na <sub>2</sub>	HPO <sub>4</sub> ; [7558-94-4]		
(3) Pho	sphoric acid, monopotassium salt;		
KH2	PO <sub>4</sub> ; [7778-77-0]		_
(4) Wat	er; H <sub>2</sub> 0; [7732-18-5]	PREPARED BY:	
VARIABLE	 S:	R. Piekos	
	Temperature; pH	R. TIEROS	

## EXPERIMENTAL VALUES:

Compositi	on of 1/15M	phosphate		Solubility				
buffer solution			- рН	Room temp (ca 20 <sup>0</sup> C)			37 <sup>0</sup> C	
Na <sub>2</sub> HPO <sub>4</sub>	кн <sub>2</sub> ро <sub>4</sub>	%Content		g%	10 <sup>3</sup> mol dm <sup>-3</sup> solution	g%	10 <sup>3</sup> mol dm <sup>-3</sup> solution	
1.0	99.0	0.91	4.944	0.0073	0.23	-	-	
10.0	90.0	0.91	5.906	0.022	0.70	0.022	0.70	
61.1	38.9	0.93	7.005	0.197	6.31	0.274	8.77	
9.5	0.5	0.733 <sup>b</sup>	7.51	0.726	23.24	-	-	
94.7	5.3	0.95	8.018	0.455	14.57	-	-	

<sup>a</sup> Calculated by compiler

<sup>b</sup> Molar content; 10% buffer solution

## AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE: Acetyl sulfamethylthiadiazole (0.5 g) was dissolved in 10 cm<sup>3</sup> of a buffer soln, shaken for 2 h at  $20^{\circ}$ C (or left for 48 h at  $37^{\circ}$ C), and filtered at respective temp. The filtrate was treated with equal vol of 2N HCl and refluxed for 15 min. After proper diln, a 1-cm<sup>3</sup> aliquot was withdrawn, acidified, cooled, and the sulfonamide content was detd colorimetrically (as sulfamethylthiadiazole) by the Marshall method modified by Kimmig (1) using an Authenrieth colorimeter. The pH was detd on an ultraionograph using a glass electrode.

SOURCE AND PURITY OF MATERIALS: Acetyl sulfamethylthiadiazole (source not specified) gave no coloration upon diazotization of its satd soln, thus showing absence of sulfamethylthiadiazole. The source and purity of the remaining materials were not specified.

ESTIMATED ERROR:									
	Sol	y: pr	ecisio	(author).					
	Tem	p: no	t spec	ified.					
	pН	: ±0	.05 pH	unit	(author).				
	REFE	RENCES	:						
	1.	Kimmi	g, J.	Arch.	Derma	tol.	193	<u>8</u> ,	
1		176,	722;	Erg.	Hyg.	<u>1941</u> ,	24,	398.	

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4	o	υ

OMP	ONENTS :	ORIGINAL 1	TEASUREMENTS :
(1)	Acetamide, N-[4-[[(5-methyl-1,3,4- thiadiazo1-2-y1)amino]sulfony1]pheny1 (acety1 sulfamethylthiadiazole); C <sub>11</sub> H <sub>12</sub> N <sub>4</sub> 0 <sub>3</sub> S <sub>2</sub> ; [39719-87-4]	]- Bandelin J. Am. 48, 177	, F. J.; Malesh, W. Pharm. Assoc., Sci. Ed. <u>1959</u> -81.
(2)	Phosphoric acid, disodium salt; Na <sub>2</sub> HPO <sub>4</sub> ; [7558-94-4]		
(3)	Phosphoric acid, monopotassium salt;	ļ	
(4)	$\operatorname{KH}_2\operatorname{PO}_4$ ; [///8-//-0]	PREPARED	PREPARED BY: R. Piekos
ARI	ABLES:		
	рН		
	Solubility of acetyl sulfamethylthiad of $Na_2HPO_4 \cdot 7H_2O$ (71.6 g/l distilled w KH_PO_4 (36.3 g/l distilled water: 0.2	iazole in buf ater; $0.27 \text{ mo}$ 7 mol dm <sup>-3</sup>	fers of varying mixtures 1 dm <sup>-3</sup> , compiler) and compiler ) at 37°C.
	Solubility of acetyl sulfamethylthiad of Na <sub>2</sub> HPO <sub>4</sub> ·7H <sub>2</sub> O (71.6 g/l distilled w KH <sub>2</sub> PO <sub>4</sub> (36.3 g/l distilled water; 0.2 Equilibrium pH Sol	iazole in buf ater; 0.27 mo 7 mol dm <sup>-3</sup> , ubility (base	fers of varying mixtures 1 dm <sup>-3</sup> , compiler) and compiler ) at 37 <sup>0</sup> C. d on sulfamethylthiadiazole)
	Solubility of acetyl sulfamethylthiad of Na <sub>2</sub> HPO <sub>4</sub> .7H <sub>2</sub> O (71.6 g/l distilled w KH <sub>2</sub> PO <sub>4</sub> (36.3 g/l distilled water; 0.2 Equilibrium pH Sol	iazole in buf ater; 0.27 mo 7 mol dm <sup>-3</sup> , ubility (base mg/100 ml	fers of varying mixtures 1 dm <sup>-3</sup> , compiler) and compiler ) at 37°C. d on sulfamethylthiadiazole) 10 <sup>2</sup> mol dm <sup>-3</sup> a
	Solubility of acetyl sulfamethylthiad of Na <sub>2</sub> HPO <sub>4</sub> ·7H <sub>2</sub> O (71.6 g/l distilled w KH <sub>2</sub> PO <sub>4</sub> (36.3 g/l distilled water; 0.2 Equilibrium pH Sol	iazole in buf ater; 0.27 mo 7 mol dm <sup>-3</sup> , ubility (base mg/100 ml 41	fers of varying mixtures 1 dm <sup>-3</sup> , compiler) and compiler ) at 37°C. d on sulfamethylthiadiazole) 10 <sup>2</sup> mol dm <sup>-3</sup> a 0.151
	Solubility of acetyl sulfamethylthiad of Na <sub>2</sub> HPO <sub>4</sub> ·7H <sub>2</sub> O (71.6 g/l distilled w KH <sub>2</sub> PO <sub>4</sub> (36.3 g/l distilled water; 0.2 Equilibrium pH Sol	iazole in buf ater; 0.27 mo 7 mol dm <sup>-3</sup> , ubility (base mg/100 ml 41 50	fers of varying mixtures 1 dm <sup>-3</sup> , compiler) and compiler ) at 37°C. d on sulfamethylthiadiazole) 10 <sup>2</sup> mol dm <sup>-3</sup> a 0.151 0.185
	Solubility of acetyl sulfamethylthiad of Na <sub>2</sub> HPO <sub>4</sub> ·7H <sub>2</sub> O (71.6 g/l distilled w KH <sub>2</sub> PO <sub>4</sub> (36.3 g/l distilled water; 0.2 Equilibrium pH Sol 4.5 5.0 5.5	iazole in buf ater; 0.27 mo 7 mol dm <sup>-3</sup> , ubility (base mg/100 m1 41 50 71	fers of varying mixtures 1 dm <sup>-3</sup> , compiler) and compiler ) at 37°C. d on sulfamethylthiadiazole) 10 <sup>2</sup> mol dm <sup>-3</sup> a 0.151 0.185 0.262
	Solubility of acetyl sulfamethylthiad of Na <sub>2</sub> HPO <sub>4</sub> ·7H <sub>2</sub> O (71.6 g/l distilled w KH <sub>2</sub> PO <sub>4</sub> (36.3 g/l distilled water; 0.2 Equilibrium pH Sol 4.5 5.0 5.5 6.0	iazole in buf ater; 0.27 mo 7 mol dm <sup>-3</sup> , ubility (base mg/100 ml 41 50 71 102	fers of varying mixtures 1 dm <sup>-3</sup> , compiler) and compiler ) at 37°C. d on sulfamethylthiadiazole) 10 <sup>2</sup> mol dm <sup>-3</sup> a 0.151 0.185 0.262 0.377
	Solubility of acetyl sulfamethylthiad of Na <sub>2</sub> HPO <sub>4</sub> ·7H <sub>2</sub> O (71.6 g/l distilled w KH <sub>2</sub> PO <sub>4</sub> (36.3 g/l distilled water; 0.2 Equilibrium pH Sol 4.5 5.0 5.5 6.0 6.3	<pre>iazole in buf ater; 0.27 mo 7 mol dm<sup>-3</sup>, ubility (base mg/100 m1 41 50 71 102 260</pre>	fers of varying mixtures 1 dm <sup>-3</sup> , compiler) and compiler ) at 37°C. d on sulfamethylthiadiazole) 10 <sup>2</sup> mol dm <sup>-3</sup> a 0.151 0.185 0.262 0.377 0.962
	Solubility of acetyl sulfamethylthiad of Na <sub>2</sub> HPO <sub>4</sub> ·7H <sub>2</sub> O (71.6 g/l distilled w KH <sub>2</sub> PO <sub>4</sub> (36.3 g/l distilled water; 0.2 Equilibrium pH Sol 4.5 5.0 5.5 6.0 6.3 6.6	<pre>iazole in buf ater; 0.27 mo 7 mol dm<sup>-3</sup>, ubility (base mg/100 m1 41 50 71 102 260 630</pre>	fers of varying mixtures 1 dm <sup>-3</sup> , compiler) and compiler ) at 37°C. d on sulfamethylthiadiazole) 10 <sup>2</sup> mol dm <sup>-3</sup> a 0.151 0.155 0.262 0.377 0.962 2.33

<sup>a</sup> Calculated by compiler

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AUXILIARY INFORMATION			
METHOD/APPARATUS/PROCEDURE: Solns were prepd by adding an excess of ace- tyl sulfamethylthiadiazole to 10 ml of buffer soln at each pH level in 18 x 150-mm test tubes, stoppering the tubes, placing them in water bath at $37^{\circ}$ C with gentle agitation for 24 h. The solute was then hydrolyzed with 5% H <sub>2</sub> SO <sub>4</sub> for 1 h to liberate the free sulfon- amide. One-ml aliquot of the hydrolyzate was	SOURCE AND PURITY OF MATERIALS: Neither source nor purity of the reagents were specified. Distilled water was used.		
accurately pipetted into a volumetric flask for diln and analysis. The sulfonamide was assayed colorimetrically by the method of Bratton and Marshall as described in detail by Biamonte and Schneller (1). A standard curve was prepd using accurately prepd stan- dard solutions.	<pre>ESTIMATED ERROR: Soly: ave values of duplicate runs are reported (authors). Temp and pH: not specified. REFERENCES: 1. Biamonte, A. R.; Schneller, G. E. J. Am. Pharm. Assoc., Sci. Ed. <u>1952</u>, 41, 341.</pre>		

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COMPONENTS	OPICINAL MEASUPENENTS -
(1) Acetamide, N-[4-[[(5-methyl-1,3,4-	Unional MEASUREMENTS:
thiadiazole-2-y1)amino]sulfony1]pheny	1]- Rekster, Y.A.; Vree, T. B.; Damsma, J. E.
$(N^{+acetylsulfamethizole});$ $C_{1}H_{1}N(0_{2}S_{2}; [39719-87-4]$	Friesen, W. T. J. Antimicrob. Chemother.
(2) Phosphoric acid, disodium salt;	$\frac{1981}{9}, \theta, 133-44.$
Na <sub>2</sub> HPO <sub>4</sub> ; [7558-94-4]	
(3) Phosphoric acid, monopotassium salt; KH_PO(: [7778-77-0]	
(4) Water; $H_20$ ; [7732-18-5]	PREPARED BY:
VARIABLES:	R. Piekos
рн	
EXPERIMENTAL VALUES:	
	Solubility at 25 <sup>0</sup> C
рН	
	mg/1 10 <sup>3</sup> mol dm <sup>-3</sup> a
	200 0.640
5.5	200 0.840
7.5	3000 9.604
a Calculate	d by compiler
AUXILI	ARY INFORMATION
METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Satd solns of $\underline{N}^4$ -acetylsulfamethizole we	re The source and purity of the materials
prepd in phosphate buffers of pH 5.5 and	7.5 were not specified.
at room temp (25°C). The concn of the s	01-
ute was measured by means of a Spectra P	hy-
sics 3500B high-performance liquid chrom	a-
tograph equipped with a column oven (Mod	el
748) and a Pye-Unicam LC-UV spectrophoto	-
metric detector. The detector was conner	ct-
ed to a 1-mV recorder. A stainless stee	L ESTIMATED ERROR:
column (10 cm x 4.6 mm i.d.) was packed	The detection limit of the solute by HPLC
with Lichrosorb RPS, 5 µm, obtained from	was 0.5 mg/l (authors). The error in tem-
Chrompack. An injection loop of 100 µ1	was perature and pH were not specified.
used. The oven temp was 40°C. Detection	REFERENCES:
of the solute was performed at 260 nm.	