COMPONENTS:		ORIGINAL MEASUREMENTS:
 (1) Benzenesulfonamide, 3-amino- (metanilamide); C₆H₈N₂O₂S; [98-18-0] (2) Water; H₂O [7732-18-5] 		Kienle, R. H.; Sayward, J. M.,
		J. Am. Chem. Soc. <u>1942</u> , 64,2464-8
-		
VARIABLES:		PREPARED BY:
Temperature		R. Piekos
-		
EXPERIMENTAL VALUES:		
t/ ^o C	g/100 g :	soln mol kg ⁻¹ (compiler)
	· · · · · · · · · · · · · · · · · · ·	
23.0	1.14	0.0662
24.0	1.21	0.0703
26.0	1.34	0.0778
28.0	\ [*]	.018 0.0859 <u>+0</u> .001
28.0	1.49 3	0.0865)
33.0	1.89	0.110
35.5	2.19	0.127
37.0	2.37	0.138
37.0	2.36 ^a (± 0)	.031 0.137 $> \pm 0.002$
37.0	2.35 ^a	0.136
37.0	2.34 ^b	0.136
39.0	2.58	0.150
42.0	3.01	0.175
46.0	3.70	0.215
50.0	4.58 ^b	0.266
a _{Equilibrium} approached from b	elow	
	elow.	
^b Duration less than 12 hours.		
	AUXILIARY	INFORMATION
METHOD/APPARATUS/PROCEDURE:		SOURCE AND PURITY OF MATERIALS:
An excess of solid was rotated	with water	Metanilamide, m.p. 142.1°C, was prepd. by
usually overnight. Equilibriu	m was ap-	the authors. Titrn with nitrite indicated
proached from above. Sampling	was accom-	the compd to be 100.0+0.3% pure. Elemen-
Plished by forcing the soln th	rough a	tal analysis and mixed m.p. detns con-
filter into a pycnometer. From the pyc-		firmed this value. Purity of the water
nometer the contents were flushed into a		was not specified.
volumetric flask. Duplicate a	liquots were	
acidified, iced below 15°C and		
with 0.04 mol dm^{-3} NaNO ₂ to first blue on		ESTIMATED ERROR:
starch - iodide paper.		Temp: $\pm 0.02^{\circ}C$ (authors) Soly: ± 0.01 g/100g soln or $\pm 0.012 \times 10^{-3}$
		in mole fraction. The values of 2
		varied from ± 0.018 to $\pm 0.031/100$ g soln
		REFERENCES :

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 COMPONENTS: (1) Benzenesulfonamide, 3-amino- (metanila-mide); C₆H₈N₂O₂S; [98-18-0] (2) Phosphoric acid, disodium salt; Na₂HPO₄; [7558-94-4] (3) Phosphoric acid, monopotassium salt; KH₂PO₄; [7778-77-0] (4) Water; H₂O; [7732-18-5] 	ORIGINAL MEASUREMENTS: Kienle, R. H.; Sayward, J. M. <i>J. Am. Chem. Soc.</i> <u>1942</u> , 64, 2464-8.
VARIABLES: One temperature: 37.0 ⁰ C; one pH: 6.9	PREPARED BY: R. Piekos
EXPERIMENTAL VALUES: Solubility of metanilamide in a buffer solution 1/15 M Na ₂ HPO ₄ with 44.8 cm ³ of 1/15 M KH ₂ PO ₄ dissociation constants 0.03 ^a) at 37.0°C is 2.1 compiler). aNot specified for which reactions were the difference of the specified for	(pH 6.9, ionic strength calculated from 30 g/100 cm ³ solution (0.134 mol dm ⁻³ ,
compiler.	
AUXILIARY	INFORMATION
METHOD/APPARATUS/PROCEDURE: An excess of metanilamide was rotated with the buffer soln usually overnight. Equili- brium was approached from above. Sampling was accomplished by forcing the soln through a filter into a pycnometer. From the pyc- nometer the contents were flushed into a volumetric flask. Duplicate aliquots were acidified, iced below 15°C and titrated with a 0.04 mol dm ⁻³ NaNO ₂ soln to first blue on a starch - iodide paper.	SOURCE AND PURITY OF MATERIALS: Metanilamide, mp 142.1°C, was prepd by the authors. Titrn with nitrite indicated that the compd was 100.0±3% pure. Elemental analysis and mixed mp detns confirmed this value. Source and purity of the remaining materials was not specified. ESTIMATED ERROR: Soly: ±0.01 g/100 g soln or ±0.012 x 10 ⁻³ in mole fraction (authors). Temp: ±0.02°C (authors). REFERENCES:

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COMPONENTS:	ORIGINAL MEASUREMENTS:		
(1) Benzenesulfonamide, 3-amino- (metanila- mide); C ₆ H ₈ N ₂ O ₂ S; [98-18-0]			
(2) Hydrochloric acid; HC1; [7647-40-7]	J. Am. Chem. Soc. <u>1942</u> , 64, 2464-8.		
(3) Potassium chloride; KC1; [7447-40-7]			
(4) Water; H ₂ 0; [7732-18-5]			
VARIABLES:	PREPARED BY:		
One temperature, one pH	R. Piekos		
EXPERIMENTAL VALUES:	· · · · · · · · · · · · · · · · · · ·		
Solubility of metanilamide in a solution prepared by mixing together 25 cm ³ of 0.2 M KCl with 42.5 cm ³ 0.2 M HCl and diluting up to 100 cm ³ with water (pH 1.2, ionic strength calculated from dissociation constants 0.12^{a}) at 37.0° C is 4.48 g/100 cm ³ solution (0.260 mol dm ⁻³ - compiler).			
^a Not specified for which reactions were the dissociation constants calculated - compiler.			
AUXILIARY	INFORMATION		
METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:		
LINOD/AFFARATUS/FROCEDORE:	SOURCE AND PURITY OF MATERIALS:		
An excess of solid was rotated with water	Metanilamide, m.p. 142.1°C, was prepd by		
usually overnight. Equilibrium was	the authors. Titrn with nitrite indicated		
approached from above. Sampling was accom-	that the compd was 100.0+0.3% pure.		
plished by forcing the soln through a filter			
into a pycnometer. From the pycnometer	confirmed this value. Source and purity		
the contents were flushed into a volumetric	of the remaining materials was not		
flask. Duplicate aliquots were acidified,	specified.		
iced below 15°C and titrated with 0.04 mol			
dm^{-3} NaNO ₂ to first blue on starch -	ESTIMATED ERROR:		
iodide paper.	Temp: <u>+</u> 0.02 ⁰ C (authors)		
1	Soly: accuracy +0.01 g/100 g soln		
	(authors)		
	REFERENCES:		

COMPONENTS: (1) Benzenesulfonamide, 3-amino- (metanil -	ORIGINAL MEASUREMENTS:
 Benzenesulfonamide, 3-amino- (metanil - amide); C₆H₈N₂O₂S; [98-18-0] 	Kienle, R. H.; Sayward, J. M.
(2) Boric acid; H ₃ BO ₃ ; [10043-35-3]	J. Am. Chem. Soc. <u>1942</u> , 64, 2464-8.
(3) Potassium chloride; KC1; [7447-40-7]	
(4) Sodium hydroxide; NaOH; [1310-73-2]	
(5) Water; H ₂ 0; [7732-18-5]	
VARIABLES:	PREPARED BY:
pH; ionic strength	R. Piekos
EXPERIMENTAL VALUES:	
	Solubility at 37.0 ⁰ C
pH Ionic	
of borate buffer strength ^a	$g/100 \text{ cm}^3$ solution $10^2 \text{ mol dm}^{-3^b}$
9.4 ^c 0.08	2.61 15.2
9.7 ^d 0.09	2.60 15.1
^a Calculated from dissociation constants (read	tions not specified)
	cions not specified).
^b Calculated by compiler.	
^c Obtained by mixing together 50 cm ³ of a 0.1	M solution in both H ₂ BO ₂ and KC1 with
32.1 cm ³ of 0.1 M NaOH and diluting with wat	$\begin{array}{c} 3 \\ \text{s} $
^d Obtained by mixing together 50 cm ³ of a 0.1	M solution in both H ₃ BO ₃ and KCI with
38.75 cm ³ of 0.1 M NaOH and diluting with wa	ter up to 100 cm ⁻ .
	INFORMATION
METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
An excess of metanilamide was rotated with	Metanilamide, mp 142.1 ⁰ C, was prepd by
the buffer soln usually overnight. Equili-	the authors. Titrn with nitrite indicated
brium was approached from above. Sampling	that the compd was 100.01 <u>+</u> 0.3% pure.
was accomplished by forcing the soln through	Elemental analysis and mixed mp detns con-
a filter into a pycnometer. From the pyc-	firmed this value. Source and purity of
nometer the contents were flushed into a	the remaining materials was not specified.
volumetric flask. Duplicate aliquots were	
acidified, iced below 15°C and titrated with	
a 0.04 mol dm $^{-3}$ NaNO ₂ soln to first blue on	ESTIMATED ERROR:
a starch - iodide paper.	Soly: ± 0.01 g/100 g soln or $\pm 0.012 \times 10^{-3}$
a starten itvilde paper.	in mole fraction (authors). Temp: $\pm 0.02^{\circ}$ C
	(authors). REFERENCES:

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<pre>COMPONENTS: (1) Benzenesulfonamide, 3-amino- (metanil- amide); C₆H₈N₂O₂S; [98-18-0] (2) Phosphoric acid, disodium salt; Na₂HPO₄; [7558-94-4] (3) 1,2,3-Propanetricarboxylic acid, 2- hydroxy- (citric acid); C₆H₈O₇; [77-92-9] (4) Water; H₂O; [7732-18-5] VARIABLES: One temperature: 37.0°C: one pH: 4.2 EXPERIMENTAL VALUES: Solubility of metanilamide in a solution pre 0.2 M Na₂HPO₄ with 58.6 cm³ of 0.1 M citric from dissociation constants 0.84^a) at 37.0°C dm⁻³, compiler). ^aNot specified for which reactions were the compiler.</pre>	ORIGINAL MEASUREMENTS: Kienle, R. H.; Sayward, J. M. J. Am. Chem. Soc. <u>1942</u> , 64, 2464-8. PREPARED BY: R. Piekos epared by mixing together 41.4 cm ³ of acid (pH 4.2, ionic strength calculated 2 is 2.26 g/100 cm ³ solution (0.131 mol
AUXILIARY	INFORMATION
METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS;
An excess of metanilamide was rotated with the buffer soln usually overnight. Equili- brium was approached from above. Sampling was accomplished by forcing the soln through a filter into a pycnometer. From the pyc- nometer the contents were flushed into a Volumetric flask. Duplicate aliquots were acidified, iced below 15°C and	Metanilamide, mp 142.1 ⁰ C was prepd by the authors. Titrn with nitrite indicated that the compd was 100.0 <u>+</u> 0.3% pure. Elemental

2	
 COMPONENTS: Benzenesulfonamide, 3-amino- (metanilamide); C₆H₈N₂O₂S; [98-18-0] 1,2-Benzenedicarboxylic acid, monopotassium salt; C₈H₅KO₄; [877-24-7] Hydrochloric acid; HC1; [7647-01-0] Water; H₂O; [7732-18-5] VARIABLES: One temperature: 37.0°C; one pH: 2.2 	ORIGINAL MEASUREMENTS: Kienle, R. H.; Sayward, J. M. J. Am. Chem. Soc. <u>1942</u> , 64,2464-8. PREPARED BY: R. Piekos
EXPERIMENTAL VALUES: Solubility of metanilamide in a buffer solut 0.1 M monopotassium 1,2-benzenedicarboxylate up to 100 cm ³ with water (pH 2.2, ionic stre constants 0.06 ^a) at 37.0°C is 3.07 g/100 cm ³	with 49.5 cm ³ of 0.1 M HCl and diluting ngth calculated from dissociation
^a Not specified for which reactions were the compiler.	dissociation constants calculated -
AUXILIARY	INFORMATION
METHOD/APPARATUS/PROCEDURE: An excess of metanilamide was rotated with the buffer soln usually overnight. Equili- brium was approached from above. Sampling was accomplished by forcing the soln through a filter into a pycnometer. From the pycnometer the contents were flushed into a volumetric flask. Duplicate aliquots were acidified, iced below 15°C and titrated with a 0.04 mol dm ⁻³ NaNO ₂ soln to first blue on a starch - iodide paper.	SOURCE AND PURITY OF MATERIALS: Metanilamide, mp 142.1°C was prepd by the authors. Titrn with nitrite indicated that the compd was 100.0 <u>+</u> 0.3%