COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-, monohydrate (sulfanilamide monohydrate); $C_6H_8N_2O_2S \cdot H_2O$; [20203-81-0] (2) Water; H_2O; [7732-18-5]	Sekiguchi, K.; Tsuda, Y.; Kanke, M. *Chem. Pharm. Bull.* 1975, *23*.
VARIABLES: Temperature	**PREPARED BY:** R. Piekos

EXPERIMENTAL VALUES:

$t/^oC$	Solubility	
	g/100 g solution[a]	10^2 mol kg^{-1} water[a,b]
15	0.386	2.03
20	0.520	3.04
25	0.726	4.25
30	0.970	5.69
35	1.291[c]	7.80
40	1.709[c]	10.10
45	2.237	13.29
50	2.897[c]	17.33

[a]Based on anhydrous sulfanilamide.

[b]Calculated by compiler.

[c]Figure obtained by extrapolation of the experimental solubility above and below the transition temperature.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

A sufficient amt of sample powder was placed in 50 g of distd water in a dissoln measurement cell and stirred at 600 rpm. At appropriate time intervals samples were taken by glass syringes until the concn attained equilibrium. The sample solns were immediately filtered through a 0.45 μ membrane filter. The filtrate was weighed and dild for spectrophotometric assay at 225 nm on a Hitachi-139 UV spectrophotometer.

SOURCE AND PURITY OF MATERIALS:

The sulfanilamide monohydrate was isolated by cooling the warm satd aq soln of sulfanilamide rapidly and maintaining it below 15°C. The hydrate was characterized by instrumental methods.

Distilled water was used.

ESTIMATED ERROR:

Nothing specified.

REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-, monohydrate (sulfanilamide monohydrate); $C_6H_8N_2O_2S \cdot H_2O$ [20203-81-0] (2) Hydrochloric acid; HCl; [7647-01-0] (3) Water; H_2O; [7732-18-5]	Burger, A. *Pharm. Ind.* 1973, *35*, 626-33.
VARIABLES: One temperature; 20.0°C	**PREPARED BY:** R. Piekos

EXPERIMENTAL VALUES:

Saturation solubility, C_s^a, of sulfanilamide monohydrate in 0.1 N hydrochloric acid (pH 1.79) at 20.0°C is 2006 mg/100 ml solution (117 mmol/liter based on anhydrous sulfanilamide).

$^aC_s = [HA] + [A^-]$, where [HA] is the molar concentration of the dissolved, undissociated molecules of sulfanilamide and $[A^-]$ is the concentration of the dissolved anion of sulfanilamide.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Sulfanilamide was assayed spectrophotometrically at 258.5 nm using a Zeiss PMQ II spectrophotometer and a 1/15 M phosphate buffer of pH 7.00 ($E^{1\%}_{1\ cm}$ = 945)	Sulfanilamide monohydrate was obtained by vacuum evapn of a sulfanilamide (source and purity not specified) soln at 40°C and cooling the crystals to 20°C at normal pressure. Source and purity of the remaining materials was not specified.
	ESTIMATED ERROR: Soly: not specified. Temp: ±0.1°C (author).
	REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-, monohydrate (sulfanilamide monohydrate) $C_6H_8N_2O_2S \cdot H_2O$ [20203-81-0] (2) Sodium hydroxide; NaOH; [1310-73-2] (3) Water; H_2O; [7732-18-5]	Burger, A. *Pharm. Ind.* 1973, *35*, 626-33.
VARIABLES: pH	**PREPARED BY:** R. Piekos

EXPERIMENTAL VALUES:

Concn of NaOH soln	pH	Saturation solubility, C_s[a], at 20.0°C	
		mmol/liter[b]	mg/100 ml solution[b]
0.1 N	11.23	128.4	2212
0.1 N	11.23	129.0	2222
approx. 0.25 N	11.37	178.2	3069

[a] $C_s = [HA] + [A^-]$, where [HA] is the molar concentration of the dissolved, undissociated molecules of sulfanilamide and $[A^-]$ is the concentration of the dissolved anion of sulfanilamide.

[b] Based on anhydrous sulfanilamide.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Sulfanilamide was assayed spectrophotometrically at 258.5 nm using a Zeiss PMQ II spectrophotometer, in 1/15M phosphate buffer of pH 7.00 ($E^{1\%}_{1\ cm}$ = 945).

SOURCE AND PURITY OF MATERIALS:

Sulfanilamide monohydrate was obtained by vacuum evapn of a sulfanilamide (source and purity not specified) soln at 40°C and cooling the crystals to 20°C at normal pressure.

Source and purity of the remaining materials was not specified.

ESTIMATED ERROR:

Soly and pH: not specified.

Temp: ±0.1°C (author).

REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-, monohydrate (sulfanilamide monohydrate); $C_6H_8N_2O_2S \cdot H_2O$; [20203-81-0] (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]	Burger, A. *Pharm. Ind.* 1973, *35*, 626-33.
VARIABLES: pH	**PREPARED BY:** R. Piekos

EXPERIMENTAL VALUES:

Concn of the phosphate buffer (1)	pH	Satn solubility[a] in phosphate buffer at 20.0°C	
		mol/liter soln[b]	mg/100 ml soln[b]
1/15 M	5.50	26.6	458
0.05 M	6.88	26.9	464

[a]Saturation solubility is the sum of the concentrations of the dissolved, undissociated molecules of sulfanilamide and of its dissolved anion, expressed in mol dm^{-3}.

[b]Based on anhydrous sulfanilamide.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Sulfanilamide was assayed spectrophotometrically at 258.5 nm using a Zeiss PMQ II spectrophotometer, in 1/15M phosphate buffer of pH 7.00 ($E^{1\%}_{1\ cm}$ = 945).

SOURCE AND PURITY OF MATERIALS:

Sulfanilamide monohydrate was obtained by vacuum evapn of a sulfanilamide (source and purity not specified) soln at 40°C and cooling the crystals to 20°C at normal pressure.

Source and purity of the remaining materials was not specified.

ESTIMATED ERROR:

Soly and pH: not specified.

Temp: ±0.1°C (author).

REFERENCES:

1. Küster, F. W.; Thiel, A.; Fischbeck, K. *Logarithmische Rechentafeln, 100. Aufl., Walter de Gruyter, Berlin,* 1969.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-, monohydrate (sulfanilamide monohydrate); $C_6H_8N_2O_2S \cdot H_2O$; [20203-81-0] (2) Boric acid, trisodium salt; Na_3BO_3; [14312-40-4] (3) Hydrochloric acid; HCl; [7647-01-0] (4) Water; H_2O; [7732-18-5]	Burger, A. *Pharm. Ind.* 1973, *35*, 626-33.
VARIABLES: One temperature: 20.0°C; one pH: 8.50	**PREPARED BY:** R. Piekos

EXPERIMENTAL VALUES:

Saturation solubility, C_s[a], of sulfanilamide monohydrate in a borate buffer (1) of pH 8.50 at 20.0°C is 482 mg/100 ml solution or 28.0 mmol/liter based on anhydrous sulfanilamide.

[a] $C_s = [HA] + [A^-]$, where HA is the molar concentration of the dissolved, undissociated molecules of sulfanilamide and $[A^-]$ is the concentration of the dissolved anion of sulfanilamide.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Sulfanilamide was assayed spectrophotometrically at 258.5 nm using a Zeiss PMQ II spectrophotometer.

SOURCE AND PURITY OF MATERIALS:

Sulfanilamide monohydrate was obtained by vacuum evapn of a sulfanilamide (source and purity not specified) soln at 40°C and cooling the crystals to 20°C at normal pressure.

Source and purity of the remaining materials was not specified.

ESTIMATED ERROR:

Soly: not specified.

pH: not specified.

Temp: ±0.1°C (author).

REFERENCES:

1. Küster, F. W.; Thiel, A.; Fischbeck, K. *Logarithmische Rechentafeln, 100. Aufl., Walter de Gruyter, Berlin* 1969.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-, monohydrate (sulfanilamide monohydrate); $C_6H_8N_2O_2S \cdot H_2O$; [20203-81-0] (2) Hydrochloric acid; HCl; [7647-01-0] (3) 1,2,3-Propanetricarboxylic acid, disodium salt; $C_6H_7Na_2O_7$; [144-33-2] (4) Water; H_2O; [7732-18-5]	Burger, A. *Pharm. Ind.* 1973, *35*, 626-33.
VARIABLES: One temperature: 20.0°C	**PREPARED BY:** R. Piekos

EXPERIMENTAL VALUES:

Saturation solubility, C_s [a], of sulfanilamide monohydrate in the buffer solution of pH 3.85 at 20.0°C is 485 mg/100 ml solution (28.2 mmol/liter based on anhydrous sulfanilamide).

[a] $C_s = [HA] + [A^-]$, where [HA] is the molar concentration of the dissolved, undissociated molecules of sulfanilamide and $[A^-]$ is the concentration of the dissolved anion of sulfanilamide.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Sulfanilamide was assayed spectrophotometrically at 258.5 nm using a Zeiss PMQ II spectrophotometer.

SOURCE AND PURITY OF MATERIALS:

Sulfanilamide monohydrate was obtained by vacuum evapn of a sulfanilamide (source and purity not specified) soln at 40°C and cooling the crystals to 20°C at normal pressure.

Source and purity of the remaining materials was not specified.

ESTIMATED ERROR:

Soly and pH: not specified.

Temp: ±0.1°C (author).

REFERENCES:

1. Küster, F. W.; Thiel, A.; Fischbeck, K. *Logarithmische Rechentafeln, 100. Aufl., Walter de Gruyter, Berlin* 1969.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-, monohydrate (sulfanilamide monohydrate) $C_6H_8N_2O_2S \cdot H_2O$; [20203-81-0] (2) Aminoacetic acid; $C_2H_5NO_2$; [56-40-6] (3) Hydrochloric acid; HCl; [7646-01-0] (4) Sodium chloride; NaCl; [7647-14-5] (5) Water; H_2O; [7732-18-5]	Burger, A. *Pharm. Ind.* 1973, *35*, 626-33.
VARIABLES: pH	**PREPARED BY:** R. Piekos

EXPERIMENTAL VALUES:

pH	Saturation solubility, C_s[a], in buffer solution (1) at 20°C	
	mmol liter^{-1}[b]	mg/100 ml solution[b]
2.00	82.9	1410
2.11	67.6	1164
2.22	59.6	1026
2.33	53.2	917
2.35	52.6	906
2.49	47.5	818
2.60	43.5	749
2.75	37.5	646
3.10	33.4	577

[a] $C_s = [HA] + [A^-]$, where [HA] is the molar concentration of the dissolved, undissociated molecules of sulfanilamide and $[A^-]$ is the concentration of the dissolved anion of sulfanilamide.

[b] Based on anhydrous sulfanilamide.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Sulfanilamide was assayed spectrophotometrically at 258.5 nm using a Zeiss PMQ II spectrophotometer.	Sulfanilamide monohydrate was obtained by vacuum evapn of a sulfanilamide (source and purity not specified) soln at 40°C and cooling the crystals to 20°C at normal pressure. Source and purity of the remaining materials was not specified.
	ESTIMATED ERROR: Soly and pH: not specified. Temp: ±0.1°C (author).
	REFERENCES: 1. Küster, F. W.; Thiel, A.; Fischbeck, K. *Logarithmische Rechentafeln, 100. Aufl., Walter de Gruyter, Berlin* 1969.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-, monohydrate (sulfanilamide monohydrate) $C_6H_8N_2O_2S \cdot H_2O$; [20203-81-0] (2) Aminoacetic acid; $C_2H_5NO_2$; [56-40-6] (3) Sodium chloride; NaCl; [7647-14-5] (4) Sodium hydroxide; NaOH; [1310-73-2] (5) Water; H_2O; [7732-18-5]	Burger, A. *Pharm. Ind.* 1973, *35*, 626-33.
VARIABLES: pH	PREPARED BY: R. Piekos

EXPERIMENTAL VALUES:

pH of buffer soln	Saturation solubility, C_s[a], at 20.0°C	
	mmol/liter[b]	mg/100 ml solution[b]
9.20	28.0	482
9.95	32.5	560
9.95 (sic!)	34.0	586
10.04	35.6	613
10.29	37.8	651
10.33	40.4	696
10.42	43.8	755
10.47	46.1	794
10.75	58.5	1007
10.84	72.3	1245
10.95	83.0	1429
11.15	113.5	1955

[a] $C_s = [HA] + [A^-]$, where [HA] is the molar concentration of the dissolved, undissociated molecules of sulfanilamide and $[A^-]$ is the concentration of the dissolved anion of sulfanilamide.

[b] Based on anhydrous sulfanilamide.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Sulfanilamide was assayed spectrophotometrically at 258.5 nm using a Zeiss PMQ II spectrophotometer.	Sulfanilamide monohydrate was obtained by vacuum evapn of a sulfanilamide (source and purity not specified) soln at 40°C and cooling the crystals to 20°C at normal pressure. Source and purity of the remaining materials was not specified.
	ESTIMATED ERROR: Soly and pH: not specified. Temp: ±0.1°C (author).
	REFERENCES: 1. Küster, F. W.; Thiel, A.; Fischbeck, K. *Logarithmische Rechentafeln, 100. Aufl., Walter de Gruyter, Berlin* 1969.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-, monohydrate (sulfanilamide monohydrate); $C_6H_8N_2O_2O_2S \cdot H_2O$; [20203-81-0] (2) Ethanol; C_2H_6O; [64-17-5] (3) Water; H_2O; [7732-18-5]	Burger, A. *Pharm. Ind.* 1973, *35*, 626-33.
VARIABLES:	PREPARED BY:
Concentration of ethanol	R. Piekos

EXPERIMENTAL VALUES:

Concentration of ethanol Volume %	Saturation solubility, C_s [a], at 20.0°C	
	mg/100 ml soln	10^2 mol dm^{-3} [b]
35	1441	7.576
30	1224	6.435
20	906	4.763
10	689	3.622
0	469	2.466

[a] $C_s = [HA] + [A^-]$, where [HA] is the molar concentration of the dissolved, undissociated molecules of sulfanilamide and $[A^-]$ is the concentration of the dissolved anion of sulfanilamide.

[b] Calculated by compiler.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Sulfanilamide was assayed spectrophotometrically at 258.5 nm using a Zeiss PMQ II spectrophotometer, in 1/15M phosphate buffer of pH 7.00 ($E^{1\%}_{1\ cm}$ = 945).	Sulfanilamide monohydrate was obtained by vacuum evapn of a sulfanilamide (source and purity not specified) soln at 40°C and cooling the crystals to 20°C at normal pressure. Source and purity of EtOH and water was not specified.
	ESTIMATED ERROR: Soly: not specified. Temp: ±0.1°C (author).
	REFERENCES: