COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Water; H_2O; [7732-18-5]	Roblin, R. O., Jr.; Williams, J. H.; Winnek, P. S.; English, J. P. *J. Am. Chem. Soc.* 1940, *62*, 2002-5.
VARIABLES:	**PREPARED BY:**
One temperature: 37°C	R. Piekos

EXPERIMENTAL VALUES:

Solubility of sulfaguanidine in water at 37°C is 190 mg/100 cm^3 solution (8.87×10^{-3} mol dm^{-3}, compiler).

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

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 The suspension was then agitated for 24 h in a thermostat at 37°C. A sample of the satd soln was withdrawn through a glass filter, dild, and analyzed by the Marshall method (1) using a General Electric recording spectrophotometer for comparing the colors developed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.

SOURCE AND PURITY OF MATERIALS:

Sulfaguanidine, mp 189-90°C (dec, cor) was prepd by the authors. Anal: %C 39.2 (calcd 39.3); %H 4.6 (4.7); %N 21.7 (22.4).

Purity of the water was not specified.

ESTIMATED ERROR:

Nothing specified.

REFERENCES:

1. Bratton, A. C.; Marshall, E. K., Jr. *J. Pharmacol.* 1939, *66*, 4.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Water; H_2O; [7732-18-5]	Sapozhnikova, N. V.; Postovskii, I. Ya. *Zh. Prikl. Khim.* 1944, *17*, 427-34.
VARIABLES: Temperature	PREPARED BY: R. Piekos

EXPERIMENTAL VALUES:

	Solubility	
t/°C	Weight%	10^2 mol kg^{-1} water[a]
20	0.760	3.58
37	0.196	.92
50	0.430	2.02
75	1.40	6.63
99	3.70	17.93

[a] Calculated by compiler.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Sulfaguanidine was dissolved in water to form a satd soln which was occasionally agitated in a glass vessel immersed in a thermostat. The equilibrium was usually attained after 1 h. Five- to 100-cm^3 samples of the satd soln were placed in Pt crucibles or dishes and evapd to dryness at temps lower than 110-115°C. The residue was dried to const wt at 105-110°C and weighed.

SOURCE AND PURITY OF MATERIALS:

Pure, recrystd sulfaguanidine was used. Its mp conformed to that reported in the literature.

Purity of the water was not specified.

ESTIMATED ERROR:

Soly: quite reliable results were obtained over the temp range 20-75°C. At higher temps the accuracy was poor due to evapn of water during sampling (authors).

Temp: ±0.05°C (authors).

REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Water; H_2O; [7732-18-5]	Becher, R.; Leya, S. *Experientia* 1946, *2*, 459-60.
VARIABLES: One temperature: 18-19°C	PREPARED BY: R. Piekos

EXPERIMENTAL VALUES:

Solubility of sulfaguanidine in water at room temperature (18-19°C) is 65 mg% (3.0×10^{-3} mol dm^{-3}).

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
After standing for more than two days the soln of sulfaguanidine in water was filtered and sulfaguanidine was assayed in the filtrate colorimetrically by the method of Druey and Oesterheld (1).	Nothing specified.
	ESTIMATED ERROR: Nothing specified.
	REFERENCES: 1. Druey, J.; Oesterheld, G. *Helv. Chim. Acta* 1942, *25*, 753.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Water; H_2O; [7732-18-5]	Gerencsér-Németh, M.; Horváth, M. *Gyógyszerészet* 1973, *17*, 417-21.
VARIABLES: One temperature: 20°C	**PREPARED BY:** R. Piekos

EXPERIMENTAL VALUES:

Solubility of sulfaguanidine in water at 20°C is 0.1111 g/100 g solution (5.191×10^{-3} mol kg^{-1} water, compiler).

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

A weighed escess of sulfaguanidine in water was shaken in a shaker at 120 rpm for 6 h. The soln was then filtered, the residue was washed with the filtrate and finally with a small amt of distd water, dried and weighed.

SOURCE AND PURITY OF MATERIALS:

Sulfaguanidine (source not specified) was dried at 100°C for 3 h or over conc H_2SO_4 for 72 h. Its mp was 187.5-8.8°C.

Distd water was used.

ESTIMATED ERROR:

Soly: precision ± 0.0047 g/100 g (2 detns) (compiler)

Temp; not specified.

REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0]	Becher, R.; Leya, S. *Experientia* 1946, *2*, 459-60.
(2) Sodium chloride; NaCl; [7647-14-5]	
(3) Water; H_2O; [7732-18-5]	
VARIABLES:	**PREPARED BY:**
One temperature: 18-19°C	R. Piekos

EXPERIMENTAL VALUES:

Solubility of sulfaguanidine in a 5% NaCl solution at room temperature (18-19°C) is 69 mg% (3.2×10^{-3} mol dm^{-3}, compiler).

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

After standing for more than two days the soln of sulfaguanidine was filtered and sulfaguanidine was assayed in the filtrate colorimetrically by the method of Druey and Oesterheld (1).

SOURCE AND PURITY OF MATERIALS:

Nothing specified.

ESTIMATED ERROR:

Nothing specified.

REFERENCES:

1. Druey, J.; Oesterheld, G. *Helv. Chim. Acta* 1942, *25*, 753.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Sodium chloride, NaCl; [7647-14-5] (3) Water; H_2O; [7732-18-5]	Avico, U.; Cavazutti, G.; di Francesco, R.; Signoretti Ciranni, E.; Zuccaro, P. *Farmaco, Ed. Pratica* 1975, *30(1)*, 40-6.
VARIABLES: Temperature	PREPARED BY: R. Piekos

EXPERIMENTAL VALUES:

t/°C	Solubility of amorphous sulfaguanidine in equimolal NaCl solutions	
	g/100 g water	10^3 mol kg^{-1} water[a]
25	0.71	3.3
35	0.84	3.9
40	0.93	4.3

[a] Calculated by compiler.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

A soln of sulfaguanidine-HCl was added to an NaOH soln contg stoichiometric quantity of the base to neutralize the HCl salt. The neutralization was carried out in a thermostat and the pH of the mixt was maintained close to that of a satd soln of sulfaguanidine in water. The procedure was repeated using various initial concns of the reagents to find the max concn of sulfaguanidine at which no pptn occurred.

SOURCE AND PURITY OF MATERIALS:

Source and purity of sulfaguanidine was not specified. The mp of crystalline sulfaguanidine was 190-3°C.

Purity of the water was not specified.

ESTIMATED ERROR:

Nothing specified.

REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Pectin; $(C_{13}H_{18}O_{12})_n$; [9000-69-5] (3) Water; H_2O; [7732-18-5]	Becher, R.; Leya, S., *Experientia* 1946, *2*, 459-60.
VARIABLES: One temperature: 18-19°C	PREPARED BY: R. Piekos

EXPERIMENTAL VALUES:

Solubility of sulfaguanidine in a 2.5% pectin solution ([pectin] = 6.8×10^{-2} mol kg^{-1}, compiler), of pH about 2.6, at room temperature (18-19°C) is 111 mg% (5.18×10^{-3} mol dm^{-3}, compiler).

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
The soln was allowed to stand for more than 2 days at room temp. The soln was then filtered, and sulfaguanidine assayed in the filtrate colorimetrically by the method of Druey and Oesterheld (1).	A high quality apple pectin was used: the rel viscosity of a 0.5% soln was 6.2, and for neutralization of 1 g of the pectin, 1.67 cm^3 of a 1 mol dm^{-3} NaOH soln was used. The source and purity of sulfaguanidine and water were not specified.
	ESTIMATED ERROR: Nothing specified.
	REFERENCES: 1. Druey, J.; Oesterheld, G., *Helv. Chim. Acta* 1942, *25*, 753.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Pectinic acid, sodium salt; $(C_{13}H_{17}NaO_{12})_n$; [9049-37-0] (3) Water; H_2O; [7732-18-5]	Becher, R.; Leya, S., *Experientia* 1946, *2*, 459-60.
VARIABLES: One temperature: 18-19°C	**PREPARED BY:** R. Piekos

EXPERIMENTAL VALUES:

Solubility of sulfaguanidine in a 2.6% neutral sodium pectinate solution ([sodium pectinate] = 6.7×10^{-2} mol kg^{-1} (n = 1), compiler) at room temperature (18-19°C) is 101 mg% (4.71×10^{-3} mol dm^{-3}, compiler).

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
The soln was allowed to stand for more than two days at room temp. The soln was then filtered, and sulfaguanidine assayed in the filtrate colorimetrically by the method of Druey and Oesterheld (1).	Nothing specified.
	ESTIMATED ERROR: Nothing specified.
	REFERENCES: 1. Druey, J.; Oesterheld, G., *Helv. Chim. Acta* 1942, *25*, 753.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Ethanol; C_2H_6O; [64-17-5] (3) Water; H_2O; [7732-18-5]	Sapozhnikova, N. V.; Postovskii, I. Ya. *Zh. Prikl. Khim.* 1944, *17*, 427-34.
VARIABLES:	PREPARED BY:
Concentration of ethanol	R. Piekos

EXPERIMENTAL VALUES:

Concentration of ethanol	Solubility at 75°C	
Weight%	Weight%	mol kg^{-1} solvent[a]
0	1.40	0.0663
19.2	2.67	0.128
57.6	4.43	0.216
76.4	5.56	0.275
86	4.80	0.235
96	3.53	0.171

[a] Calculated by compiler.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Sulfaguanidine was dissolved in EtOH-water mixtures to form satd solns which were occasionally agitated in glass vessels immersed in a thermostat. The equilibrium was usually attained after 1 h. Five- to 100-cm^3 samples of the satd soln were placed in Pt crucibles or dishes and evapd to dryness at temps lower than 110-115°C. The residue was dried to const at 105-110°C and weighed.

SOURCE AND PURITY OF MATERIALS:

Pure, recrystd sulfaguanidine was used. Its mp conformed with that reported in the literature.

The purity of ethanol and water was not specified.

ESTIMATED ERROR:

Soly: quite reliable results were obtained (authors).

Temp: ±0.05°C (authors).

REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Ethanol; C_2H_6O; [64-17-5] (3) 1,2,3-Propanetriol; $C_3H_8O_3$; [56-81-5] (4) Water; H_2O; [7732-18-5]	Dolique, R.; Foucault, J. *Trav. soc. pharm. Montpellier* 1952, *12*, 145-53.
VARIABLES: One temperature: 26-28°C	PREPARED BY: R. Piekos

EXPERIMENTAL VALUES:

Solubility of sulfaguanidine in a mixture of 1,2,3-propanetriol and 95° ethanol (2:1 by wt) at 26-28°C is 4% (0.2 mol kg^{-1} solvent, compiler).

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
The sulfaguanidine content was detd by diazotization of the amine group in a cold acidified 0.1N KNO_2 soln. An excess of KNO_2 was detected by using iodinated starch.	Nothing specified.
	ESTIMATED ERROR: Nothing specified.
	REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)-:(sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Ethanol; C_2H_6O; [64-17-5] (3) 1,2,3-Propanetriol; $C_3H_8O_3$; [56-81-5] (4) Urea; CH_4N_2O; [57-13-6] (5) Water; H_2O; [7732-18-5]	Dolique, R.; Foucault, J. *Trav. soc. pharm. Montpellier* 1952, *12*, 145-53.
VARIABLES: One temperature: 26-28°C	PREPARED BY: R. Piekos

EXPERIMENTAL VALUES:

Solubility of sulfaguanidine at 26-28°C in a saturated solution of urea in a mixture of 1,2,3-propanetriol and 95° ethanol (2:1 by wt), containing 54.5g of urea per 100 g of the mixture, is 5.77% (0.286 mol kg^{-1} solvent, compiler).

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
The sulfaguanidine content was detd by diazotization of the amine group in a cold acidified 0.1N KNO_2 soln. An excess of KNO_2 was detected by using iodinated starch.	Nothing specified.
	ESTIMATED ERROR: Nothing specified.
	REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine) $C_7H_{10}N_4O_2S$; [57-67-0] (2) D-Glucose; $C_6H_{12}O_6$; [50-99-7] (3) Water; H_2O; [7732-18-5]	Becher, R.; Leya, S. *Experientia* 1946, *2*, 459-60.
VARIABLES: One temperature: 18-19°C	**PREPARED BY:** R. Piekos

EXPERIMENTAL VALUES:

Solubility of sulfaguanidine in a 10% D-glucose solution at room temperature (18-19°C) is 70 mg% (3.3×10^{-3} mol dm^{-3}, compiler).

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

After standing for more than two days the soln of sulfaguanidine was filtered and the sulfonamide was assayed in the filtrate colorimetrically by the method of Druey and Oesterheld (1).

SOURCE AND PURITY OF MATERIALS:

Nothing specified.

ESTIMATED ERROR:

Nothing specified.

REFERENCES:

1. Druey, J.; Oesterheld, G. *Helv. Chim. Acta* 1942, *25*, 753.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) Sorbitan monooleate, polyoxyethylene derivatives (Tween 80);[9005-65-6] (3) Water; H_2O; [7732-18-5]	Gerencsér-Németh, M.; Horváth, M. *Gyógyszerészet* 1973, *17*, 417-21.
VARIABLES: Concentration of Tween 80	PREPARED BY: R. Piekos

EXPERIMENTAL VALUES:

Concentration of Tween 80	Solubility at 20°C	
Weight%	g/100 g soln[a]	10^3 mol kg^{-1} soln[b]
1	0.1131	5.279
	0.1137	5.307
3	0.1449	6.763
	0.1471	6.866
5	0.1636	7.636
	0.1633	7.622
8	0.2078	9.699
	0.2090	9.755

[a] Numerical values supplied by the authors.

[b] Calculated by compiler.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
An excess of sulfaguanidine in an aq Tween 80 soln was shaken in a lab shaker at 120 rpm for 6 h. The soln was then filtered, the residue was washed first with the filtrate and finally with a small amt of water, dried and weighed.	Sulfaguanidine (source not specified) was dried at 100°C for 3 h or over conc H_2SO_4 for 72 h. Its mp was 187.5-8.8°C. Source and purity of Tween 80 was not specified. Distd water was used.
	ESTIMATED ERROR: Nothing specified.
	REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0] (2) 2-Propanol; C_3H_8O; [67-63-0]	Burlage, H. M. *J. Am. Pharm. Assoc., Sci. Ed.* 1948, *37*, 345.
VARIABLES: One temperature: 25°C	PREPARED BY: R. Piekos

EXPERIMENTAL VALUES:

Solubility of sulfaguanidine in 2-propanol at 25°C is 0.1770 g/100 cm^3 solution (8.262×10^{-3} mol dm^{-3}, compiler).

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Satd solns of sulfaguanidine 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 desiccator (1).	The sulfaguanidine was manufd by Squibb and was of the U.S.P. purity. The source and purity of 2-propanol was not specified.
	ESTIMATED ERROR: Nothing specified.
	REFERENCES: 1. Burlage, H. M. *J. Am. Pharm. Assoc., Sci. Ed.* 1947, *36(1)*, 16.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Benzenesulfonamide, 4-amino-N-(amino-iminomethyl)- (sulfaguanidine); $C_7H_{10}N_4O_2S$; [57-67-0]	Gutierrez, F. H.
(2) 2-Propanone (acetone); C_3H_6O; [67-64-1]	*Anales fis. quim. (Madrid)* 1945, *41*, 537-60.
VARIABLES:	PREPARED BY:
Temperature	R. Piekos

EXPERIMENTAL VALUES:

t/°C	G[a]	E[b]	X_g/l[c]	mol/l[d] acetone	mmol/mol acetone	1:X_g[e]	1 + X_{cc}[f]
0	1.548	1.524	12.610	58.8	4.2	64.60	79.30
5	1.574	1.539	12.730	59.4	4.3	63.53	78.55
10	1.622	1.596	13.025	60.7	4.4	62.89	76.75
15	1.679	1.651	13.383	62.4	4.5	59.56	74.74
20	1.728	1.700	13.672	63.8	4.7	57.87	73.15
25	2.013	1.973	15.806	73.8	5.4	49.73	63.25
30	2.215	2.177	17.261	80.6	6.0	45.15	57.94
35	2.584	2.519	19.982	93.3	7.0	38.70	50.05
40	2.929	2.846	22.847	104.9	7.9	35.14	44.48
45	3.199	3.099	24.357	113.7	8.7	31.26	41.05
50	3.549	3.427	26.813	125.1	9.6	28.18	37.29

[a] $G = \frac{p\ 100}{P - p}$, where p and P are the weights of solute and solution, resp.

[b] $E = \frac{G\ 100}{B + 100}$; [c] g/l acetone; [d] should be mmol/l acetone (compiler);

[e] g of acetone require to dissolve 1 g of solute; [f] volume (cm^3) of acetone required to dissolve 1 g of solute.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

A special all-glass app was constructed enabling the prepn of satd solns, agitation by bubbling a stream of acetone-satd N, filtration, and distn off the solvent without contact with air. Two exchangeable dissoln vessels of 15 and 8 cm^3 working capacity were used depending on the soly of solute. The app was immersed in a thermostat. The vols of acetone used were 15 or 5 cm^3, and the equilibration time was 2-2.5 h. The satd solns were filtered, weighed, the solvent was distd off, the residues were dried at 105°C, weighed, and examd for the presence of solvated acetone.

SOURCE AND PURITY OF MATERIALS:

The source of the materials was not specified. Pure, anhyd acetone was used. The absence of impurities and water was confirmed by procedures of the German Pharmacopeia VI and Spanish Pharmacopeia VIII.

The purity of sulfaguanidine was not specified.

ESTIMATED ERROR:

Soly: measurements were repeated until 2 values not differing in the second decimal were obtained (author).

Temp: ±0.1°C (author).

REFERENCES: