

COMPONENTS:			ORIGINAL MEASUREMENTS:						
(1) Trisodium phosphate; Na_3PO_4 ; [7601-54-9]			Schroeder, W.C.; Berk, A.A.; Gabriel, A.						
(2) Sodium hydroxide; NaOH; [1310-73-2]			J. Am. Chem. Soc. <u>1937</u> , 59, 1783-90.						
(3) Disodium sulfate; Na_2SO_4 ; [7757-82-6]									
(4) Water, H_2O , [7732-18-5]									
VARIABLES:			PREPARED BY:						
Composition and temperature.			J. Eysseltová						
EXPERIMENTAL VALUES:									
Composition of saturated solutions in the Na_2SO_4 - Na_3PO_4 -NaOH- H_2O system.									
NaOH				Na_3PO_4		Na_2SO_4		H_2O	
w^a	mass% ^b	mol/kg ^b	w^a	mass% ^b	mol/kg ^b	w^a	mass% ^b	mol/kg ^b	mass% ^b
temp. = 150°C									
7.8	5.59	1.95	3.0	2.15	0.18	28.7	20.57	2.02	71.68
7.9	5.55	1.98	6.0	4.22	0.36	28.4	19.96	2.00	70.27
8.0	5.53	2.00	8.6	5.94	0.52	28.1	19.42	1.98	69.11
7.6	5.07	1.90	14.7	9.80	0.90	27.7	18.45	1.95	66.67
19.1	13.84	4.78	2.9	2.10	0.18	16.0	11.59	1.13	72.46
19.8	13.98	4.95	5.9	4.17	0.36	15.9	11.29	1.12	70.62
19.5	13.53	4.88	8.7	6.04	0.53	15.9	11.03	1.12	69.40
19.8	13.39	4.95	12.2	8.25	0.74	15.9	10.75	1.12	67.61
temp. = 250°C									
8.1	5.50	2.02	1.5	1.02	0.09	37.7	25.59	2.65	67.89
8.0	5.33	2.00	3.0	2.00	0.18	39.1	26.05	2.75	66.62
8.1	5.36	2.02	3.7	2.45	0.22	39.3	26.01	2.77	66.18
7.9	5.22	1.98	3.8	2.51	0.23	39.5	26.12	2.78	66.14
8.1	5.35	2.02	3.8	2.51	0.23	39.4	26.04	2.77	66.09
8.2	5.60	2.05	4.0	2.73	0.24	34.1	23.31	2.40	68.35
8.4	6.14	2.10	3.5	2.56	0.21	25.0	18.26	1.76	73.05
8.4	6.47	2.10	3.4	2.62	0.21	18.0	13.87	1.27	77.04
8.4	6.84	2.10	3.3	2.69	0.20	11.0	8.96	0.77	81.50
(continued next page)									
AUXILIARY INFORMATION									
METHOD/APPARATUS/PROCEDURE:					SOURCE AND PURITY OF MATERIALS:				
A high temperature bomb was used. The samples were withdrawn at the operating temperature. The time allowed for equilibration is not given. Phosphate determinations were made colorimetrically using aminonaphtholsulfonic acid (1). Hydroxide content was determined by titration to the methyl red end point (2 equivalents/mol of phosphate present were deducted). Sulfate was determined gravimetrically as BaSO_4 .					Merck chemically pure $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$ was used. The actual phosphate content of this material was determined by analysis but the results are not reported. If necessary, the dodecahydrate was dried at 120°C to give approximately the monohydrate, or it was recrystallized at 250°C to give the anhydrous salt. No other information is given.				
					ESTIMATED ERROR:				
					The error in the phosphate determination is less than 1%. No other details are given.				
					REFERENCES:				
					1. Fiske, C.H.; Subbarow, J.T. <i>J. Biol. Chem.</i> <u>1925</u> , 66, 375.				

COMPONENTS:						ORIGINAL MEASUREMENTS:			
(1) Trisodium phosphate; Na ₃ PO ₄ ; [7601-54-9]						Schroeder, W.C.; Berk, A.A.; Gabriel, A. J. Am. Chem. Soc. <u>1937</u> , 59, 1783-90.			
(2) Sodium hydroxide, NaOH; [1310-73-2]									
(3) Disodium sulfate; Na ₂ SO ₄ ; [7757-82-6]									
(4) Water, H ₂ O; [7732-18-5]									
EXPERIMENTAL VALUES cont'd:									
Composition of saturated solutions in the Na ₂ SO ₄ -Na ₃ PO ₄ -NaOH-H ₂ O system.									
NaOH			Na ₃ PO ₄			Na ₂ SO ₄			H ₂ O
w ^a	mass% ^b	mol/kg ^b	w ^a	mass% ^b	mol/kg ^b	w ^a	mass% ^b	mol/kg ^b	mass% ^b
temp. = 250°C									
8.3	7.31	2.08	2.7	2.38	0.16	2.6	2.29	0.18	88.03
8.4	7.40	2.10	4.9	4.32	0.30	0.2	0.18	0.01	88.10
20.0	12.86	5.00	2.7	1.74	0.16	32.8	21.09	2.31	64.31
19.8	12.74	4.95	2.8	1.80	0.17	32.8	21.11	2.31	64.35
20.0	12.93	5.00	2.9	1.87	0.18	31.8	20.56	2.24	64.64
20.6	13.79	5.15	2.7	1.81	0.16	26.1 ^c	17.47	1.84	66.93
20.5	14.52	5.12	2.7	1.91	0.16	18.0	12.75	1.27	70.82
20.7	15.40	5.17	2.7	2.01	0.16	11.0 ^c	8.17	0.78	74.40
20.6	15.98	5.15	2.7	2.09	0.16	5.6 ^c	4.34	0.39	77.58
temp. = 350°C									
8.0	6.17	2.00	0.6	0.46	0.04	21.0 ^c	16.20	1.48	77.16
8.0	6.17	2.00	0.6	0.46	0.04	21.0 ^c	16.20	1.48	77.16
8.0	6.23	2.00	0.4	0.31	0.02	20.0 ^c	15.58	1.41	77.88
8.0	6.55	2.00	0.4	0.33	0.02	13.8 ^c	11.29	0.97	81.83
8.0	7.02	2.00	0.3	0.26	0.02	5.7 ^c	5.00	0.40	87.72
8.4	7.46	2.10	0.3	0.27	0.02	3.9	3.46	0.27	88.81
8.0	7.26	2.00	0.3	0.27	0.02	1.9 ^c	1.72	0.13	90.74
21.0	11.85	5.25	1.9	1.07	0.12	54.3 ^c	30.64	3.82	56.43
21.0	11.73	5.25	2.6	1.45	0.16	55.4 ^c	30.95	3.90	55.86
21.0	11.71	5.25	2.7	1.50	0.16	56.6 ^c	31.01	3.91	55.77
21.0	11.84	5.25	3.1	1.75	0.19	53.3 ^c	30.04	3.75	56.37
21.3	12.52	5.33	2.2	1.29	0.13	46.6 ^c	27.40	3.28	58.79
21.0	13.60	5.25	1.8	1.16	0.11	31.6 ^c	20.47	2.22	64.77
21.0	14.72	5.25	1.4	0.98	0.08	20.3 ^c	14.22	1.43	70.08
21.0	15.61	5.25	1.2	0.89	0.07	12.3 ^c	9.14	0.86	74.35
21.0	16.63	5.25	1.0	0.79	0.06	4.3 ^c	3.40	0.30	79.18
21.0	17.06	5.25	1.4	1.14	0.08	0.7	0.57	0.05	81.23
^a This concentration is expressed as g/100g H ₂ O.									
^b These values were calculated by the compiler.									
^c These values were calculated by the authors from the initial concentrations.									

COMPONENTS:				ORIGINAL MEASUREMENTS:			
(1) Trisodium phosphate; Na_3PO_4 ; [7601-54-9]				Kobe, K.A.; Leipper, A.			
(2) Disodium carbonate; Na_2CO_3 ; [497-19-8]				Ind. Eng. Chem. <u>1940</u> , 32, 198-203.			
(3) Sodium hydroxide; NaOH; [1310-73-2]							
(4) Water; H_2O , [7732-18-5]							
VARIABLES:				PREPARED BY:			
Temperature, ratio of $\text{Na}_3\text{PO}_4/\text{Na}_2\text{CO}_3$ at a fixed ratio of $\text{Na}_3\text{PO}_4/\text{NaOH} = 7/1$.				J. Eysseltová			
EXPERIMENTAL VALUES:							
Composition of saturated solutions in the $\text{Na}_3\text{PO}_4 \cdot 1/7\text{NaOH} - \text{Na}_2\text{CO}_3 - \text{H}_2\text{O}$ system. ^d							
$t/^\circ\text{C}$	concn of $\text{Na}_3\text{PO}_4 \cdot 1/7\text{NaOH}$			concn of Na_2CO_3			solid phase ^d
	g/kg ^b	mass % ^c	mol/kg ^c	g/kg ^b	mass % ^c	mol/kg ^c	
-2.48	1.8	1.68	0.10	5.5	5.12	0.52	A + B
-2.10	0.0	0.0	0.0	6.1	5.75	0.58	B
-1.21	4.2	4.03	0.27	0.0	0.0	0.0	A
0	4.58	4.38	0.27	0.00	0.00	0.00	A
	2.58	2.37	0.15	6.43	5.90	0.61	A + B
	0.00	0.00	0.00	6.93	6.48	6.65	B
25	11.9	10.63	0.70	0.00	0.00	0.00	A
	10.7	9.36	0.63	3.60	3.15	0.34	"
	9.30	8.00	0.55	6.96	5.99	0.66	"
	8.05	6.65	0.47	13.0	10.74	1.23	"
	7.01	5.54	0.41	19.4	15.35	1.83	"
	5.79	4.33	0.34	28.0	20.93	2.64	A + B
	3.44	2.61	0.20	28.5	21.60	2.69	B
	0.00	0.00	0.00	29.4	22.72	2.77	"
40	20.8	17.22	1.22	0.00	0.00	0.00	A
	15.1	11.60	0.89	15.1	11.60	1.42	"
	11.6	7.91	0.68	35.0	23.87	3.30	"
	11.1	7.20	0.65	43.1	27.95	4.07	A + C
	0.0	0.0	0.0	49.2	32.98	4.64	C
(continued next page)							
AUXILIARY INFORMATION							
METHOD/APPARATUS/PROCEDURE:				SOURCE AND PURITY OF MATERIALS:			
The isothermal method was used. Samples were withdrawn through a coarse filter paper into a weighed 10 ml pipet, weighed, diluted and analyzed acidimetrically (1). The cryohydric points of the system were found by adding the solid salts to ice and measuring the temperature with a Beckmann thermometer. When a constant minimum value was reached, samples were withdrawn and analyzed.				Baker's sodium phosphate was used. Analysis showed it had a constant composition of $\text{Na}_3\text{PO}_4 \cdot 1/7\text{NaOH}$. The Na_2CO_3 was Baker's anhydrous. For determinations at 0° and 25°C the decahydrate was prepared.			
				ESTIMATED ERROR: The temperature regulation was: 0 ± 0.05°C; 25 ± 0.05°C; 40 ± 0.1°C; 60 ± 0.1°C; 80 ± 0.3°C; 100 ± 0.3°C. No other details are given.			
				REFERENCES: 1. Smith, J.H. J. Soc. Chem. Ind. <u>1917</u> , 36, 415.			

COMPONENTS: (1) Trisodium phosphate; Na_3PO_4 ; [7601-54-9] (2) Disodium carbonate; Na_2CO_3 ; [497-19-8] (3) Sodium hydroxide; NaOH , [1310-73-2] (4) Water, H_2O , [7732-18-5]	ORIGINAL MEASUREMENTS: Kobe, K.A., Leipper, A. <i>Ind. Eng. Chem.</i> <u>1940</u> , <i>32</i> , 198-203.
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EXPERIMENTAL VALUES cont'd.

Composition of saturated solutions in the
 $\text{Na}_3\text{PO}_4 \cdot 1/7\text{NaOH} - \text{Na}_2\text{CO}_3 - \text{H}_2\text{O}$ system.^a

$t/^\circ\text{C}$	concn of $\text{Na}_3\text{PO}_4 \cdot 1/7\text{NaOH}$			concn of Na_2CO_3			solid phase ^d
	g/kg ^b	mass % ^c	mol/kg ^c	g/kg ^b	mass % ^c	mol/kg ^c	
60	41.8	29.48	2.46	0.0	0.0	0.0	A
	36.6	24.78	2.15	11.1	7.52	1.05	"
	31.0	20.06	1.82	23.5	15.21	2.22	"
	28.0	17.59	1.65	31.2	19.60	2.94	A + C
	11.4	7.53	0.67	40.0	26.42	3.77	C
	0.0	0.0	0.0	46.3	31.65	4.37	"
80	63.8	38.95	3.76	0.0	0.0	0.0	A
	52.3	30.35	3.08	20.0	11.61	1.89	A + C
	0.0	0.0	0.0	45.1	31.08	4.25	C
100	90.0	47.36	5.30	0.0	0.0	0.0	A
	88.0	44.24	5.18	10.9	5.48	1.03	A + C
	67.1	36.37	3.95	17.4	9.43	1.64	C
	62.1	34.35	3.66	18.7	10.34	1.76	"
	39.0	23.40	2.30	27.7	16.62	2.61	"
	23.0	14.54	1.35	35.2	22.25	3.32	"
	0.0	0.0	0.0	44.8	30.94	4.23	"

^a For more information on the phosphate component see the Critical Evaluation.

^b This is an obvious error. According to the compiler it should be g/100 g H_2O .

^c These values were calculated by the compiler on the assumption given in footnote b.

^d The solid phases are: A = Na_3PO_4 (the NaOH and H_2O content are not specified);
 B = $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$, C = $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$.

COMPONENTS:		ORIGINAL MEASUREMENTS:					
(1) Trisodium phosphate; Na_3PO_4 , [7601-54-9]		Abduragimova, R.A.; Rza-Zade, P.F.;					
(2) Sodium aluminate; NaAlO_2 ; [1302-42-7]		Abduragimov, A.A.					
(3) Sodium vanadate; NaVO_3 ; [13718-23-8]		<i>Dokl. Akad. Nauk Azerb. SSR</i> 1971, 27, 41-5.					
(4) Sodium hydroxide; NaOH ; [1310-73-2]							
(5) Water; H_2O ; [7732-18-5]							
VARIABLES:		PREPARED BY:					
Composition at 25°C and one ratio of $\text{NaAlO}_2/\text{NaOH} = 1$.		J. Eysseltová					
EXPERIMENTAL VALUES:							
Composition of saturated solutions in the $(\text{NaAlO}_2 + \text{NaOH})\text{-NaVO}_3\text{-Na}_3\text{PO}_4\text{-H}_2\text{O}$ system at 25°C.							
$\text{NaAlO}_2 + \text{NaOH}$		NaVO_3		Na_3PO_4		H_2O	solid phase ^a
mass%	mol/kg ^b	mass%	mol/kg ^b	mass%	mol/kg ^b	mass% ^b	
----	----	17.42	1.73	----	----	82.58	A
----	----	----	----	12.30	0.85	87.70	B
----	----	12.05	1.19	5.21	0.38	82.74	B + C
----	----	17.00	1.72	1.92	0.14	81.08	A + C
32.64	4.09	1.99	0.25	----	----	65.37	A + D
29.60	3.45	----	----	0.66	0.06	69.74	B + E
42.17	6.00	0.22	0.03	----	----	57.61	D
40.77	5.69	0.49	0.07	----	----	58.74	"
46.48	7.16	----	----	0.26	0.03	53.26	D + E
42.11	6.00	----	----	0.36	0.04	57.53	"
40.09	5.54	0.29	0.04	0.26	0.03	59.36	"
34.27	4.32	0.44	0.06	0.18	0.02	65.11	"
30.13	3.58	0.59	0.07	0.21	0.02	69.07	"
----	----	12.49	1.23	4.35	0.32	83.16	C
----	----	16.01	1.59	1.31	0.10	82.68	"
----	----	1.00	0.09	9.03	0.61	89.97	B
----	----	4.43	0.40	5.41	0.36	90.16	"
----	----	10.82	1.05	4.40	0.32	84.78	"
1.98	0.20	13.61	1.35	1.49	0.11	82.92	A + C + F
21.36	2.27	1.18	0.12	0.19	0.01	77.27	A + F
15.44	1.55	2.40	0.24	0.26	0.02	81.90	"
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AUXILIARY INFORMATION							
METHOD/APPARATUS/PROCEDURE:				SOURCE AND PURITY OF MATERIALS:			
The isothermal method was used with metallic vessels having mechanical stirrers. The time for equilibration was 155 hours. Saturated solutions were sampled by filtration and analyzed for Na_2O , Al_2O_3 , V_2O_5 and P_2O_5 by volumetric, gravimetric, photo-colorimetric and nephelometric methods. The composition of the solid phase was determined by Schreinemakers' method.				No information is given.			
				ESTIMATED ERROR:			
				Nothing is stated.			
REFERENCES:							

COMPONENTS:		ORIGINAL MEASUREMENTS:					
(1) Trisodium phosphate; Na_3PO_4 ; [7601-54-9]		Abduragimova, R.A.; Rza-Zade, P.F.;					
(2) Sodium aluminate; NaAlO_2 ; [1302-42-7]		Abduragimov, A.A.					
(3) Sodium vanadate; NaVO_3 ; [13718-23-8]		<i>Dokl. Akad. Nauk Azerb. SSR</i> 1971, 27, 41-5.					
(4) Sodium hydroxide; NaOH ; [1310-73-2]							
(5) Water; H_2O ; [7732-18-5]							
EXPERIMENTAL VALUES cont'd:							
Composition of saturated solutions in the ($\text{NaAlO}_2 + \text{NaOH}$)- NaVO_3 - Na_3PO_4 - H_2O system at 25°C.							
$\text{NaAlO}_2 + \text{NaOH}$		NaVO_3		Na_3PO_4		H_2O	solid phase ^a
mass%	mol/kg ^b	mass%	mol/kg ^b	mass%	mol/kg ^b	mass% ^b	
0.84	0.08	9.20	0.88	4.16	0.29	85.80	B + F
0.29	0.02	0.19	0.02	7.34	0.48	92.18	"
23.18	2.51	0.83	0.09	0.27	0.02	75.72	E + F + B
19.93	2.06	0.61	0.06	0.22	0.02	79.24	B + F
13.04	1.24	0.14	0.01	0.41	0.03	86.41	"
1.81	0.17	10.61	1.01	1.09	0.08	86.49	C + F
1.01	0.09	8.25	0.77	2.60	0.18	88.14	"
0.93	0.09	7.00	0.65	4.09	0.28	87.98	B + C
0.63	0.06	1.51	0.09	5.49	0.36	92.37	"
^a The solid phases are: A = $\text{NaVO}_3 \cdot 2\text{H}_2\text{O}$; B = $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$; C = $4\text{Na}_2\text{O} \cdot \text{P}_2\text{O}_5 \cdot \text{V}_2\text{O}_5 \cdot 30\text{H}_2\text{O}$; D = $\text{Al}_2\text{O}_3 \cdot 2\text{Na}_2\text{O} \cdot 10\text{H}_2\text{O}$; E = $\text{Al}_2\text{O}_3 \cdot 2.5\text{Na}_2\text{O} \cdot 14\text{H}_2\text{O}$; F = $3\text{Al}_2\text{O}_3 \cdot 4\text{Na}_2\text{O} \cdot \text{P}_2\text{O}_5 \cdot 15\text{H}_2\text{O}$.							
^b These values were calculated by the compiler.							

COMPONENTS: (1) Trisodium phosphate; Na_3PO_4 ; [7601-54-9] (2) Sodium aluminate; NaAlO_2 ; [1302-42-7] (3) Sodium hydroxide; NaOH ; [1310-73-2] (4) Disodium sulfate; Na_2SO_4 ; [7757-82-6] (5) Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Abduragimova, R.A.; Rza-Zade, P.F.; Abduragimov, A.A. Dokl. Akad. Nauk Azerb. SSR 1971, 27, 41-5.
VARIABLES: Composition at 25°C and one ratio of $\text{NaAlO}_2/\text{NaOH} = 1$.	PREPARED BY: J. Eysseltová

EXPERIMENTAL VALUES:

Composition of saturated solutions in the
 $\text{NaAlO}_2\text{-NaOH-Na}_2\text{SO}_4\text{-Na}_3\text{PO}_4\text{-H}_2\text{O}$ system at 25°C.

$\text{NaAlO}_2 + \text{NaOH}$		Na_2SO_4		Na_3PO_4		H_2O	solid _a phase
mass%	mol/kg ^b	mass%	mol/kg ^b	mass%	mol/kg ^b	mass% ^b	
----	----	21.90	1.97	----	----	78.10	A
----	----	----	----	12.30	0.85	87.70	B
21.15	2.43	7.46	0.74	----	----	71.39	A + C
----	----	20.75	1.89	2.10	0.16	77.15	B + D
50.13	8.29	0.29	0.04	----	----	49.58	C
47.72	7.54	0.39	0.05	----	----	51.89	"
46.48	7.15	----	----	0.25	0.03	53.27	E
42.11	6.00	----	----	0.36	0.04	57.53	"
----	----	19.41	1.73	1.78	0.14	78.81	B
----	----	16.01	1.37	1.79	0.13	82.20	"
----	----	8.29	0.67	4.42	0.31	87.29	"
----	----	1.51	0.12	11.22	0.78	87.27	"
1.85	0.18	12.34	1.02	0.81	0.06	85.00	A + B + F
32.16	3.96	0.92	0.10	0.38	0.03	66.54	C + E + F
0.74	0.07	0.39	0.03	7.86	0.52	91.01	B + F
28.34	3.33	1.65	0.17	0.28	0.02	69.73	A + C + F
26.23	2.98	1.28	0.12	0.30	0.02	72.19	B + E + F
46.00	7.08	0.44	0.06	0.26	0.03	53.30	E + C
42.62	6.20	0.63	0.08	0.43	0.05	56.32	"
37.92	5.14	1.01	0.12	0.55	0.06	60.52	"

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AUXILIARY INFORMATION**METHOD/APPARATUS/PROCEDURE:**

The isothermal method was used with metallic vessels having a mechanical stirrer. The time for equilibration was 155 hours. Saturated solutions were sampled by filtration and analyzed for Na_2O , Al_2O_3 , and P_2O_5 by volumetric, gravimetric, photocolometric and nephelometric methods. The composition of the solid phases was determined by Schreinemakers' method.

SOURCE AND PURITY OF MATERIALS:

No details are given.

ESTIMATED ERROR:

No information is given.

REFERENCES:

COMPONENTS:					ORIGINAL MEASUREMENTS:		
(1) Trisodium phosphate; Na_3PO_4 ; [7601-54-9]					Abduragimova, R.A.; Rza-Zade, P.F.; Abduragimov, A.A. <i>Dokl. Akad. Nauk Azerb. SSR</i> <u>1971</u> , 27, 41-5.		
(2) Sodium aluminate; NaAlO_2 ; [1302-42-7]							
(3) Sodium hydroxide; NaOH ; [1310-73-2]							
(4) Disodium sulfate; Na_2SO_4 ; [7757-82-6]							
(5) Water, H_2O ; [7732-18-5]							
EXPERIMENTAL VALUES cont'd:							
Composition of saturated solutions in the NaAlO_2 - NaOH - Na_2SO_4 - Na_3PO_4 - H_2O system at 25°C.							
$\text{NaAlO}_2 + \text{NaOH}$		Na_2SO_4		Na_3PO_4		H_2O	solid phase ^a
mass%	mol/kg ^b	mass%	mol/kg ^b	mass%	mol/kg ^b	mass% ^b	
30.23	3.64	1.31	0.14	0.46	0.04	68.00	E + C
28.42	3.35	1.61	0.16	0.39	0.03	69.58	"
28.00	3.27	1.45	0.14	0.28	0.02	70.27	A + F
22.94	2.54	2.81	0.27	0.29	0.02	73.96	"
26.07	2.97	1.36	0.13	0.54	0.04	72.03	B + E + F
26.10	2.95	1.21	0.12	0.19	0.02	72.50	"
22.00	2.38	1.61	0.15	0.64	0.05	75.75	B + F
18.06	1.84	1.09	0.10	0.58	0.04	80.27	"
2.42	0.20	0.01	0.00	0.81	0.05	96.76	"
0.65	0.06	2.46	0.18	2.06	0.13	94.83	"
^a The solid phases are: A = $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$; B = $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$; C = $\text{Al}_2\text{O}_3 \cdot 3\text{Na}_2\text{O} \cdot 7.5\text{H}_2\text{O}$; D = $\text{Al}_2(\text{SO}_4)_3 \cdot 10\text{H}_2\text{O}$; E = $\text{Al}_2\text{O}_3 \cdot 2.5\text{Na}_2\text{O} \cdot 14\text{H}_2\text{O}$; F = $3\text{Al}_2\text{O}_3 \cdot 4\text{Na}_2\text{O} \cdot \text{P}_2\text{O}_5 \cdot 15\text{H}_2\text{O}$. It should be noted that the "solid phase" column in the source paper contains a great number of typographic errors.							
^b The mol/kg H_2O values were calculated by the compiler.							

COMPONENTS: (1) Trisodium phosphate; Na_3PO_4 ; [7601-54-9] (2) Sodium vanadate; NaVO_3 ; [13718-23-8] (3) Disodium sulfate; Na_2SO_4 ; [7757-82-6] (4) Water; H_2O , [7732-18-5]	ORIGINAL MEASUREMENTS: Abduragimova, R.A.; Rza-Zade, P.F. <i>Issled. Obl. Neorg. Fiz. Khim.</i> <u>1971</u> , 191-5.
VARIABLES: Composition at 25°C.	PREPARED BY: J. Eysseltová

EXPERIMENTAL VALUES:

Composition of saturated solutions in the Na_3PO_4 - NaVO_3 - Na_2SO_4 - H_2O system at 25°C.

Na_3PO_4		NaVO_3		Na_2SO_4		solid phase ^c
mass% ^a	mol/kg ^b	mass% ^a	mol/kg ^b	mass% ^a	mol/kg ^b	
12.30	0.85	----	----	----	----	A
----	----	17.40	1.73	----	----	B
----	----	----	----	21.90	1.97	C
0.92	0.07	14.40	1.41	0.88	0.07	B + D
1.98	0.15	11.80	1.17	3.70	0.32	"
2.6	0.19	9.80	0.99	6.15	0.53	"
2.20	0.16	6.42	0.64	8.82	0.75	B + D + E
1.60	0.12	3.65	0.36	12.60	1.08	B + E
1.06	0.08	1.98	0.20	15.09	1.30	"
0.95	0.07	1.52	0.16	18.39	1.64	"
0.83	0.06	1.31	0.14	20.42	1.86	B + C + E
5.21	0.39	12.65	1.26	----	----	A + E
4.35	0.31	8.20	0.78	1.20	0.10	A + D
4.02	0.28	6.42	0.60	2.60	0.21	"
3.45	0.24	4.25	0.39	3.45	0.27	"
3.01	0.20	2.68	0.24	3.13	0.24	"
2.43	0.17	1.46	0.14	8.80	0.71	A + D + E
2.03	0.14	0.87	0.08	9.60	0.77	A + E
1.79	0.12	0.80	0.08	10.40	0.84	"
1.62	0.12	0.63	0.06	13.15	1.09	"
1.59	0.12	0.45	0.04	15.80	1.35	"
1.12	0.09	0.21	0.02	20.60	1.86	A + C + E

(continued next page)

AUXILIARY INFORMATION**METHOD/APPARATUS/PROCEDURE:**

The method of the third component was used. Equilibrium was checked by analysis. The alkali metal content was determined by using 0.5 mol dm^{-3} HCl. Sulfate was determined gravimetrically as BaSO_4 . P and V were determined photocolometrically.

SOURCE AND PURITY OF MATERIALS:

All the salts were of chemically pure grade and were recrystallized before being used.

ESTIMATED ERROR:

No information is given.

REFERENCES:

COMPONENTS:				ORIGINAL MEASUREMENTS:		
(1) Trisodium phosphate; Na_3PO_4 ; [7601-54-9]				Abduragimova, R.A.; Rza-Zade, P.F.		
(2) Sodium vanadate; NaVO_3 ; [13718-23-8]				Issled. Obl. Neorg. Fiz. Khim. 1971, 191-5.		
(3) Disodium sulfate; Na_2SO_4 ; [7757-82-6]						
(4) Water; H_2O ; [7732-18-5]						
EXPERIMENTAL VALUES Cont'd:						
Composition of saturated solutions in the Na_3PO_4 - NaVO_3 - Na_2SO_4 - H_2O system at 25°C.						
Na_3PO_4		NaVO_3		Na_2SO_4		solid ^c phase
mass% ^a	mol/kg ^b	mass% ^a	mol/kg ^b	mass% ^a	mol/kg ^b	
1.25	0.09	16.82	1.68	----	----	B + D
2.18	0.16	5.12	0.50	8.16	0.68	D + E
1.87	0.13	3.81	0.36	6.82	0.55	"
1.63	0.11	3.16	0.29	6.23	0.49	"
----	----	1.58	0.17	20.80	1.89	B + C
2.10	0.16	----	----	20.78	1.90	A + C
1.40	0.09	4.01	0.36	2.29	0.17	B
1.80	0.13	11.98	1.19	3.89	0.33	"
2.03	0.15	10.18	1.02	5.76	0.49	"
2.97	0.23	9.73	1.01	8.03	0.71	"
1.93	0.14	7.22	0.72	8.65	0.74	"
1.73	0.13	5.67	0.58	12.63	1.11	"
1.40	0.11	3.40	0.35	16.12	1.44	D
1.98	0.14	13.94	1.38	1.33	0.11	"
2.93	0.22	12.88	1.28	1.74	0.15	"
3.55	0.25	8.65	0.83	2.45	0.20	"
3.82	0.27	8.13	0.78	2.03	0.17	"
3.09	0.22	7.33	0.69	2.78	0.22	"
2.13	0.15	6.12	0.59	6.83	0.57	"
2.67	0.19	4.68	0.45	6.91	0.58	"
1.2	0.08	4.13	0.39	8.2	0.67	E
1.94	0.14	3.92	0.37	7.99	0.65	"
2.06	0.15	3.11	0.30	9.01	0.74	"
2.09	0.15	2.89	0.28	10.14	0.84	"
1.92	0.16	2.43	0.27	12.38	0.94	"
1.88	0.14	1.63	0.17	16.47	1.45	"
1.21	0.09	1.13	0.12	18.32	1.62	"
2.63	0.17	2.48	0.22	1.34	0.10	A
3.36	0.22	2.13	0.19	1.43	0.11	"
4.48	0.30	1.77	0.16	1.60	0.12	"
2.88	0.19	1.18	0.10	1.80	0.14	"
4.69	0.31	0.96	0.08	2.05	0.16	"
5.13	0.34	0.76	0.07	2.28	0.17	"
5.49	0.37	0.63	0.06	2.90	0.22	"
6.35	0.43	0.43	0.04	3.19	0.25	"
8.42	0.58	0.21	0.02	3.28	0.26	"
9.80	0.69	0.22	0.02	3.32	0.27	"
^a The compiler supposes this column to have this meaning. In the source paper nothing is specified.						
^b These values were calculated by the compiler on the assumption stated in footnote a.						
^c The solid phases are: A = $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$; B = $\text{NaVO}_3 \cdot 2\text{H}_2\text{O}$; C = $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$; D = $4\text{Na}_2\text{O} \cdot \text{P}_2\text{O}_5 \cdot \text{V}_2\text{O}_5 \cdot 30\text{H}_2\text{O}$; E = $4\text{Na}_2\text{O} \cdot \text{P}_2\text{O}_5 \cdot \text{V}_2\text{O}_5 \cdot 18\text{H}_2\text{O}$.						

COMPONENTS: (1) Trisodium phosphate; Na_3PO_4 ; [7601-54-9] (2) Disodium silicate; Na_2SiO_3 ; [6834-92-0] (3) Dipotassium silicate, K_2SiO_3 ; [10006-28-7] (4) Tripotassium phosphate; K_3PO_4 ; [7778-53-2] (5) Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Manvelyan, M.G.; Galstyan, V.D.; Sayamyan, E.A.; Gyunashyan, A.P.; Oganessian, E.B. <i>Arm. Khim. Zh.</i> <u>1973</u> , <i>26</i> , 632-7.																																																																						
VARIABLES: Composition at 20°C.	PREPARED BY: J. Eysseltová																																																																						
EXPERIMENTAL VALUES: Jänecke coordinates of the solutions coexisting with two or more solid phases in the system: Na^+ , $\text{K}^+ \text{SiO}_3^{2-}$, $\text{PO}_4^{3-} - \text{H}_2\text{O}$ at 20°C. <table border="1" data-bbox="251 572 979 970"> <thead> <tr> <th colspan="4">filtrate</th> <th>solid phases ^a</th> </tr> <tr> <th>Na^+</th> <th>K^+</th> <th>SiO_3^{2-}</th> <th>PO_4^{3-}</th> <th></th> </tr> </thead> <tbody> <tr> <td>100.0</td> <td></td> <td>75.45</td> <td>24.55</td> <td>A + F</td> </tr> <tr> <td>100.0</td> <td></td> <td>89.57</td> <td>10.43</td> <td>B + F</td> </tr> <tr> <td>74.25</td> <td>25.75</td> <td>93.56</td> <td>6.44</td> <td>B + C + F</td> </tr> <tr> <td>62.28</td> <td>37.72</td> <td>73.30</td> <td>27.70</td> <td>A + C + F</td> </tr> <tr> <td>36.46</td> <td>63.54</td> <td>22.38</td> <td>77.62</td> <td>A + C + E</td> </tr> <tr> <td>15.00</td> <td>85.00</td> <td>40.20</td> <td>59.20</td> <td>C + D + E</td> </tr> <tr> <td>41.40</td> <td>58.60</td> <td>-</td> <td>100.0</td> <td>A + E</td> </tr> <tr> <td>13.08</td> <td>86.92</td> <td>-</td> <td>100.0</td> <td>D + E</td> </tr> <tr> <td>93.80</td> <td>6.05</td> <td>95.02</td> <td>4.82</td> <td>A + B</td> </tr> <tr> <td>89.42</td> <td>10.50</td> <td>95.42</td> <td>4.59</td> <td>A + B</td> </tr> <tr> <td>37.88</td> <td>62.12</td> <td>31.08</td> <td>68.90</td> <td>A + C</td> </tr> <tr> <td>6.55</td> <td>93.45</td> <td>55.00</td> <td>45.00</td> <td>D</td> </tr> </tbody> </table> <p>^a The solid phases are: A = $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$; B = $\text{Na}_2\text{SiO}_3 \cdot 9\text{H}_2\text{O}$; C = $\text{Na}_3\text{PO}_4 \cdot 8\text{H}_2\text{O}$; D = $\text{K}_3\text{PO}_4 \cdot 7\text{H}_2\text{O}$; E = solid solutions formed by A and D; F = simultaneous crystallization of A and B.</p>		filtrate				solid phases ^a	Na^+	K^+	SiO_3^{2-}	PO_4^{3-}		100.0		75.45	24.55	A + F	100.0		89.57	10.43	B + F	74.25	25.75	93.56	6.44	B + C + F	62.28	37.72	73.30	27.70	A + C + F	36.46	63.54	22.38	77.62	A + C + E	15.00	85.00	40.20	59.20	C + D + E	41.40	58.60	-	100.0	A + E	13.08	86.92	-	100.0	D + E	93.80	6.05	95.02	4.82	A + B	89.42	10.50	95.42	4.59	A + B	37.88	62.12	31.08	68.90	A + C	6.55	93.45	55.00	45.00	D
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METHOD/APPARATUS/PROCEDURE: The only information given is that the method of invariant points was used.	SOURCE AND PURITY OF MATERIALS: No information is given. ESTIMATED ERROR: No information is given. REFERENCES:																																																																						