COMPONENTS:	ORIGINAL MEASUREMENTS:
1. Potassium pyroselenite; $K_2Se_2O_5$; [12529-99-6] 2. Water; H_2O; [7732-18-5]	Janitzki, J. *Z. Anorg. Allgem. Chem.* 1932, *205*, 49-75.
VARIABLES: Temperature: 252 - 376 K	**PREPARED BY:** Mary R. Masson

EXPERIMENTAL VALUES:

t/°C	$K_2Se_2O_5$	$K_2Se_2O_5$[a]	Solid[b]
	mass %	mol/kg	phase
-20.6	73.52	8.783	B
-10.5	74.29	9.141	B
+ 0.2	75.87	9.946	B
+12.8	77.21	10.717	B
18.9	78.18	11.340	B
20.6	78.50	11.550	B
23.0	78.70	11.688	B
25.2	79.31	12.126	B
27.9	79.63	12.366	B
30.6	80.04	12.685	B
20.8	79.01	11.907	A
24.0	79.18	12.030	A
24.8	79.15	12.009	A
27.2	79.21	12.052	A
29.4	79.23	12.067	A
31.7	79.41	12.200	A
39.8	79.99	12.646	A
50.4	80.39	12.968	A
59.8	81.69	14.113	A
65.4	81.55	13.982	A
69.6	82.42	14.831	A
72.6	82.18	14.588	A
90.8	83.72	16.268	A
102.8	84.47	17.206	A

[a] Molalities calculated by the compiler.

[b] Solid phases: A - $K_2Se_2O_5$, B - $KHSeO_3$

AUXILIARY INFORMATION

METHOD APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
For each temperature, a saturated solution was prepared by stirring the salt in water inside a stoppered 4-cm diameter test-tube. Small samples of solution were removed at intervals for analysis, in order to test for attainment of equilibrium. The time required varied between 3.33 and 114 hr. The solutions were analysed for SeO_2 by the method of Norris and Fay (1). The solid phases were identified by analysis.	
	ESTIMATED ERROR: Temperature: -20 - 0°C ±0.2°C, 0 - 60°C ±0.1°C, 60 - 110°C ±0.3°C.
	REFERENCES: 1. Norris, J.F.; Fay, H. *Amer. Chem. J.* 1896, *18*, 703; 1900, *23*, 119.

COMPONENTS:	ORIGINAL MEASUREMENTS:
1. Potassium pyroselenite; $K_2Se_2O_5$; [12529-99-6] 2. Water; H_2O; [7732-18-5]	Janickis, J.; Gutmanaite, H. *Z. Anorg. Allgem. Chem.* 1936, 225, 1-16.
VARIABLES:	PREPARED BY:
Temperature: 250 - 273 K Composition	Mary R. Masson

EXPERIMENTAL VALUES:

Composition of equilibrium solutions

t/°C	$K_2Se_2O_5$ mol/dm^3	$K_2Se_2O_5$ mass %	$K_2Se_2O_5$[a] mol/kg	$KHSeO_3$[a] mol/kg	Solid phase
- 0.166	0.02	0.630	0.0201	0.04015	ice
- 0.365	0.05	1.565	0.0503	0.1007	"
- 0.694	0.1	3.09	0.1009	0.2022	"
- 1.342	0.2	6.04	0.2033	0.4081	"
- 3.17	0.5	14.12	0.5202	1.050	"
- 6.285	1	25.55	1.086	2.215	"
-14.3	2	43.13	2.399	5.015	"
-22.7	2.67	52.55	3.504	7.48	"

[a] Molalities calculated by the compiler.

AUXILIARY INFORMATION

METHOD APPARATUS/PROCEDURE:

Freezing points of prepared solutions were measured by use of a Beckman-type apparatus (1). Determinations were repeated until the desired reproducibility was attained. Each reported value is the mean of at least three determinations.

SOURCE AND PURITY OF MATERIALS:

Potassium hydrogen selenite was prepared from selenious acid and potassium hydroxide.

ESTIMATED ERROR:

Temperature reproducibility 0.5%

REFERENCES:

1. Ostwald, W.; Luther, R. *Hand- und Hilfsbuch zur Ausfuhrung physikochemischer Messungen*, 5th Ed., Akademische Verlag., Leipzig, 1931.