

COMPONENTS: 1. Sodium trihydrogen diselenite; $\text{NaH}_3(\text{SeO}_3)_2$; [14013-56-0] 2. Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Janitzki, J. <i>Z. Anorg. Allgem. Chem.</i> <u>1932</u> , 205, 49-75.																														
VARIABLES: Temperature: 266 - 361 K	PREPARED BY: Mary R. Masson																														
EXPERIMENTAL VALUES: <table border="1" data-bbox="368 483 987 806"> <thead> <tr> <th>$t/^\circ\text{C}$</th> <th>$\text{NaH}_3(\text{SeO}_3)_2$ mass %</th> <th>$\text{NaH}_3(\text{SeO}_3)_2^a$ mol/kg</th> </tr> </thead> <tbody> <tr><td>- 6.9</td><td>37.12</td><td>2.109</td></tr> <tr><td>+ 0.7</td><td>41.50</td><td>2.534</td></tr> <tr><td>+13.5</td><td>48.83</td><td>3.409</td></tr> <tr><td>+22.8</td><td>53.42</td><td>4.097</td></tr> <tr><td>+32.0</td><td>58.17</td><td>4.968</td></tr> <tr><td>+51.3</td><td>67.42</td><td>7.392</td></tr> <tr><td>+69.6</td><td>75.88</td><td>11.238</td></tr> <tr><td>+79.2</td><td>80.93</td><td>15.160</td></tr> <tr><td>+88.0</td><td>83.95</td><td>18.685</td></tr> </tbody> </table> <p data-bbox="131 846 644 887">^a Molalities calculated by the compiler.</p>		$t/^\circ\text{C}$	$\text{NaH}_3(\text{SeO}_3)_2$ mass %	$\text{NaH}_3(\text{SeO}_3)_2^a$ mol/kg	- 6.9	37.12	2.109	+ 0.7	41.50	2.534	+13.5	48.83	3.409	+22.8	53.42	4.097	+32.0	58.17	4.968	+51.3	67.42	7.392	+69.6	75.88	11.238	+79.2	80.93	15.160	+88.0	83.95	18.685
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METHOD APPARATUS/PROCEDURE: 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, in order to test for attainment of equilibrium. The time required varied between 2 and 3 hr. The solutions were analysed for SeO_2 by the method of Norris and Fay (1).	SOURCE AND PURITY OF MATERIALS: ESTIMATED ERROR: Temperature: $-20 - 0^\circ\text{C} \pm 0.2^\circ\text{C}$, $0 - 60^\circ\text{C} \pm 0.1^\circ\text{C}$, $60 - 110^\circ\text{C} \pm 0.3^\circ\text{C}$ REFERENCES: 1. Norris, J.F.; Fay, H. <i>Amer. Chem. J.</i> <u>1896</u> , 18, 703; <u>1900</u> , 23, 119.																														

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VARIABLES: Temperature: 264 - 273 K Composition	PREPARED BY: Mary R. Masson																																													
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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: Sodium trihydrogen diselenite was prepared from selenious acid and sodium hydroxide. ESTIMATED ERROR: Temperature reproducibility 0.5% REFERENCES: 1. Ostwald, W.; Luther, R. <i>Hand- und Hilfsbuch zur Ausföhrung physikochemischer Messungen</i> , 5th Ed., Akademische Verlag., Leipzig, <u>1931</u> .																																													