

COMPONENTS: 1. Calcium sulfite; CaSO_3 ; [10257-55-3] 2. Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Farnell, R.G.W. <i>J. Soc. Chem. Ind. London, Trans. Commun.</i> <u>1925</u> , 44, 530.
VARIABLES: One temperature: 303 K	PREPARED BY: B. Engelen, H.D. Lutz
EXPERIMENTAL VALUES: <p>The author reports the solubility of $\text{CaSO}_3 \cdot 2\text{H}_2\text{O}$ [10035-03-7] in water at 30°C. The pH value of the solution was 10.</p> <p style="text-align: center;">Composition of saturated solution $24 \text{ mg CaSO}_3/\text{dm}^3$ $= 2.0 \times 10^{-4} \text{ mol dm}^{-3}$ (compilers)</p>	
AUXILIARY INFORMATION	
METHOD APPARATUS/PROCEDURE: A solution of calcium sulfite was stirred over solid calcium sulfite for 20 hr in a thermostatically controlled vessel. The solution was analysed for CaO, SO_2 , and pH. CaO was determined manganometrically after precipitation as calcium oxalate. Total SO_2 was determined iodometrically. The determination was performed in duplicate.	SOURCE AND PURITY OF MATERIALS: Calcium sulfite was prepared by adding calcium hydroxide to a sulfurous acid solution. ESTIMATED ERROR: REFERENCES:

<p>COMPONENTS:</p> <p>1. Calcium sulfite; CaSO_3; [10257-55-3]</p> <p>2. Water; H_2O; [7732-18-5]</p>	<p>ORIGINAL MEASUREMENTS:</p> <p>Rodin, I.V.; Margulis, E.V.</p> <p><i>Zh. Neorg. Khim.</i> <u>1983</u>, 28, 258; <i>Russ. J. Inorg. Chem. (Eng. Transl.)</i> <u>1983</u>, 28, 144.</p>															
<p>VARIABLES:</p> <p>Four temperatures: 293 - 363 K</p>	<p>PREPARED BY:</p> <p>B. Engelen</p>															
<p>EXPERIMENTAL VALUES:</p> <p>Solubilities of calcium sulfite in water at different temperatures are reported.</p> <table border="1" data-bbox="362 544 927 715"> <thead> <tr> <th>t/°C</th> <th>CaSO_3 10⁴ mass %</th> <th>10³m/mol kg⁻¹a</th> </tr> </thead> <tbody> <tr> <td>20</td> <td>185.5</td> <td>1.544</td> </tr> <tr> <td>50</td> <td>246.3</td> <td>2.051</td> </tr> <tr> <td>70</td> <td>297.8</td> <td>2.479</td> </tr> <tr> <td>90</td> <td>355.4</td> <td>2.959</td> </tr> </tbody> </table> <p>a Calculated by the compiler.</p>		t/°C	CaSO_3 10 ⁴ mass %	10 ³ m/mol kg ⁻¹ a	20	185.5	1.544	50	246.3	2.051	70	297.8	2.479	90	355.4	2.959
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<p>METHOD APPARATUS/PROCEDURE:</p> <p>Saturation method. Equilibrium was established by stirring the saturated solutions in thermostatically controlled glass tubes. Equilibrium was tested for analytically - 4 hr was reported to be sufficient. Calcium was determined gravimetrically.</p>	<p>SOURCE AND PURITY OF MATERIALS:</p> <p>Calcium sulfite, claimed to be $\text{CaSO}_3 \cdot 1.5\text{H}_2\text{O}$ [96247-22-2], was obtained by precipitation from CaSO_4 solutions with Na_2SO_3 (1).</p> <p>ESTIMATED ERROR:</p> <p>Not given.</p> <p>REFERENCES:</p> <p>1. Margulis, E.V.; Grishankina, N.S. <i>Zh. Neorg. Khim.</i> <u>1963</u>, 8, 2638.</p>															