

COMPONENTS:

- (1) 2,4-Dichlorophenol; $C_6H_4Cl_2O$;
[120-83-2]
- (2) Water; H_2O ; [7732-18-5]

EVALUATOR:

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CRITICAL EVALUATION:

The solubility of 2,4-dichlorophenol in water was determined many decades ago by Mosso (1). While the measurements may be subject to question because of their age and obscurity, the reported melting point strongly indicates that the "m-dichlorophenol" does refer to 1,2-dichlorophenol. Undoubtedly, the experimental procedure was based upon a classical gravimetric analysis. Because of the lack of other data, the value recommended here must be classified as doubtful.

The following solubility value for 2,4-dichlorophenol in water is based solely upon the work reported by Mosso.

T/K	$10^2 \text{ mol}(1)/\text{dm}^3$	g(1)/kg	$10^4 x(1)$
293.15	2.7	4.5	4.9

REFERENCES

1. Mosso, U. *Jahresber. Fortschr. Chem.* 1887, 1800.

COMPONENTS: (1) 2,4-Dichlorophenol; $C_6H_4Cl_2O$; [120-83-2] (2) Water; H_2O ; [7732-18-5]	ORIGINAL MEASUREMENTS: Mosso, U. <i>Jahresber. Fortschr. Chem.</i> <u>1887</u> , 1800.								
VARIABLES: One temperature	PREPARED BY: A. Vesala								
EXPERIMENTAL VALUES: <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding-right: 20px;">$t/^\circ C$</th> <th style="text-align: left; padding-right: 20px;">$g(1)/kg(2)$ ^a</th> <th style="text-align: left; padding-right: 20px;">$10^2 mol(1)/kg$ ^b</th> <th style="text-align: left;">$10^4 x(1)$ ^b</th> </tr> </thead> <tbody> <tr> <td style="padding-right: 20px;">20</td> <td style="padding-right: 20px;">4.47-4.66</td> <td style="padding-right: 20px;">2.730-2.845</td> <td>4.938-5.148</td> </tr> </tbody> </table> a. Reported. b. Calculated by F. W. Getzen.		$t/^\circ C$	$g(1)/kg(2)$ ^a	$10^2 mol(1)/kg$ ^b	$10^4 x(1)$ ^b	20	4.47-4.66	2.730-2.845	4.938-5.148
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20	4.47-4.66	2.730-2.845	4.938-5.148						
AUXILIARY INFORMATION									
METHOD/APPARATUS/PROCEDURE: Experimental methods were not described.	SOURCE AND PURITY OF MATERIALS: $C_6H_4Cl_2O$: Synthesized from dry chlorine and phenol, distilled and re-crystallized from benzene, reported melting point 43 - 44°C. H_2O : Source and purity not specified. ESTIMATED ERROR: REFERENCES:								