



Fig. 3 Phase diagram for monobromoacetic acid at elevated pressures.

5. THERMODYNAMIC PROPERTIES FROM HIGH-PRESSURE DATA

5.1. Dichloroacetic Acid

The temperature-pressure coefficients and molar heats and entropies of fusion calculated at three different temperatures and pressures for the equilibrium between liquid and solid dichloroacetic acid are given in table 6. No values were calculated from the data at 45°C because of the large amounts of impurity present during these experiments. The heat of fusion calculated from the high-pressure data is in good agreement with the more precise value of 2950 ± 30 cal/mole at the triple point (13.39°C) determined calorimetrically [1] on another portion of the same sample of acid. The values reported previously [18,19] for the heat of fusion (1830 cal/mole) and melting point (10.8°C) are significantly different.