

Book Review

Handbook of Metal Ligand Heats and Related Thermodynamic Quantities; by
JAMES T. CHRISTENSEN AND REED M. IZATT. Marcel Dekker, New York,
1970, 324 pp, \$ 14.50, £ 6 18.0

In these days when increasing amounts of chemical information are becoming available, any authors prepared to carry out a conscientious and critical appraisal of the literature deserves the grateful thanks of all chemists. This book represents such an undertaking. It is a comprehensive set of tables of enthalpies and entropies of reactions of metal ions and complexes with ligands, and the literature is surveyed up to mid-1969. The heat data have been obtained, usually by calorimetry but values from the temperature variation of formation constants are also included. The free energies of complex reactions are not tabulated if these have been measured at only one temperature; also excluded are the heats of ligand protonation. These omissions are regrettable, although perhaps understandable if the book was to remain a reasonable size (such information is available in other compilations although unfortunately these are somewhat dated).

A random check on some of the contents of the tables indicated that the compilation has been carefully carried out with a minimum of errors. In a task of this magnitude some minor criticisms are inevitable. Some metal-ligand systems have been omitted in which ΔH values have been obtained from kinetic parameters. The classification on the basis of empirical formulae of ligands (as for example in "Stability Constants") might have been a more effective and economical presentation rather than the alphabetical method adopted here. This would have also reduced the size of the indices which occupy a disproportionately large 120 pages. These are points of personal preference however, and do not detract from the value of a book which will be certain to be very useful to all coordination chemists interested in the interaction of metal ions with ligands in solution.

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