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Sommario/riassunto	X-ray emission spectrography (X-ray fluorescence) and the electron microprobe are two basic techniques for elemental chemical analysis. X-ray fluorescence instruments are now used routinely for the determination of all elements fluorine and heavier. The more efficient X-ray excitation by electrons used in the microprobe makes it feasible to work with all elements boron and heavier. Lithium and beryllium also can be detected in the microprobe although not as readily as the heavier elements. Fundamental to the successful use of these techniques is the proper application of X-ray emission line and absorption edge wavelength data, together with calculated values for the Bragg diffraction angles of the analyzing crystals. The trend is toward the analysis of specimens having increasing complex chemistry as well as toward utilization of X-ray emission line shifts (soft X-ray spectroscopy) to determine how elements are chemically bonded in a given specimen. These developments have created a need for reference tables in convenient form. This volume is the second edition of such tables. It provides a listing of all X-ray emission lines (160 * and shorter), incorporating some 3400 first order lines, absorption edges, and the calculated two-theta values for 23 commonly used analyzing crystals.