



FIGURE 29.7

The 14 Bravais lattices. These 14 unit cells generate all the possible three-dimensional crystal lattices. The lattices are organized into columns, where P refers to a primitive unit cell (one lattice point per unit cell), I refers to a body-centered unit cell, C refers to an end-centered unit cell, F refers to a face-centered unit cell, and R refers to a rhombohedral unit cell. The 14 Bravais lattices are organized into seven classes (triclinic, monoclinic, orthorhombic, tetragonal, hexagonal, trigonal, and cubic) by the general geometric features of the lengths of the three sides of the parallelepiped and the angles between the **a**, **b**, and **c** axes of the unit cells.