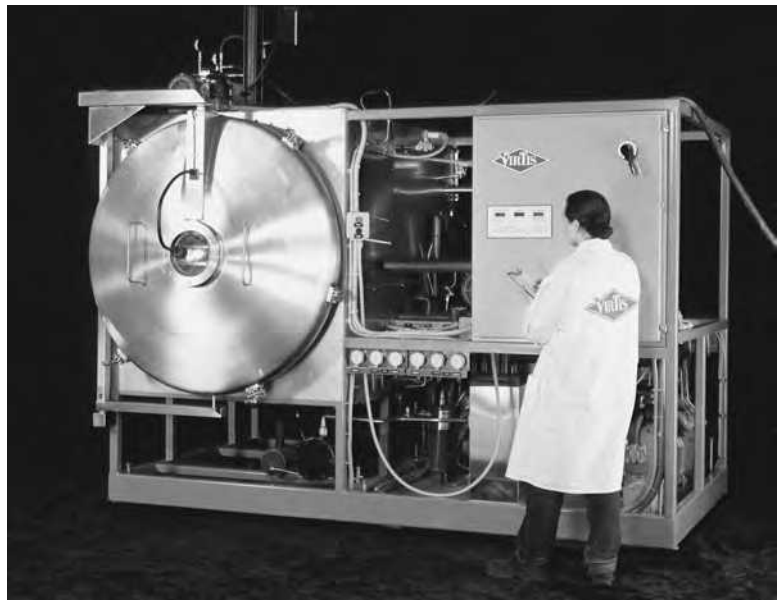

FIGURE 8.5 A large-scale lyophilizer. (Courtesy of Virtis.)

tablets are sometimes difficult to remove from the packaging, since they are soft and one should not press on the dosage unit to remove it but should peel off the material, exposing the tablet in its mold.

Claritin (loratadine) rapidly disintegrating tablets (Reditabs, Schering Corporation) contain 10 mg of micronized loratadine in a base containing citric acid, gelatin, mannitol, and mint flavor formed with the Zydis technology. It disintegrates within seconds after being placed on the tongue, with or without water. Claritin Reditabs have been shown to provide at least equivalent pharmacokinetic parameters to those of traditional tablets; in some cases, the Reditabs provided greater maximum concentration (C_{max}) and area under the curve values. Claritin Reditabs are blister-packaged tablets that should be stored in a dry place at 2°C to 25°C. They should be used within 6 months of opening the protective laminated foil pouch containing the blister cards; each foil pouch contains one blister card containing 10 individually sealed tablets (1). Other commercial products using this technology include the Maxalt-MLT (Merck), Zofran ODT (GlaxoSmithKline), Zyprexa Zydis (Eli Lilly) tablets, and Tylenol Meltaways Jr. (McNeil Consumer). It should be noted that the Clarinex Reditabs (desloratadine, Schering) use a different formulation principle, despite the same dosage form designation. The excipients consist of mannitol, microcrystalline cellulose, pregelatinized starch, sodium starch glycolate, magnesium stearate, butylated methacrylate copolymer, crospovidone, aspartame, citric acid, sodium bicarbonate, colloidal silicon dioxide, ferric oxide red, and tutti-frutti flavoring (2).

Compression

Another method of preparation is using standard tableting technology with a composition that will enhance fluid uptake and tablet disintegration and dissolution. For example, superdisintegrants incorporated with a small quantity of effervescent material will lead to intermediately fast disintegration. The tablets are compressed a little thinner than standard tablets to allow for a larger surface area exposed to the saliva in the mouth. Upon placement in the mouth, the disintegrant starts wicking water into the tablet. The effervescent materials start dissolving and aid in the breakup. This continues until the tablet has disintegrated.

An example product is the Dimetapp ND orally disintegrating tablet (nondrowsy allergy tablets; Wyeth Consumer Healthcare).