



**FIGURE 8.38** Rapidly dissolving/melting tablet. (Loratadine Orally Disintegrating Tablets-Dimetapp ND).

Typically, the active drugs include antiseptics, analgesics, decongestants, antitussives, and antibiotics. Some molded lozenges may also be called cough drops or pastilles.

Lozenges can be made by compression or molding. Compressed lozenges are made using a tablet machine and large, flat punches. The machine is operated at a high degree of compression to produce lozenges that are harder than ordinary tablets so that they dissolve or disintegrate slowly in the mouth. Medicinal substances that are heat stable may be molded into hard sugar candy lozenges by candy-making machines that process a warm, highly concentrated, flavored syrup as the base and form the lozenges by molding and drying.

Lozenges can be made using sugars such as sucrose and dextrose or can be “sugar-free” in a formulation generally based on sorbitol or mannitol. To slow the rate of dissolution, polyethylene glycols and hypromellose are sometimes added. Compressed lozenges are made with excipients that may include a filler, binder, sweetening agent, flavoring agent, and lubricant and are prepared similar to conventional tablets. They can also be prepared by formulating a paste, cutting or stamping and

drying. Also, they can be prepared by forcing dampened powders under low pressure into mold cavities, ejecting them, and allowing them to dry.

## Lollipops

Fentanyl Actiq (Cephalon) is a raspberry lollipop that is a sugar-based lozenge on a stick and contains fentanyl citrate. It has an off-white color, and the stick bears a large Rx mark. Actiq is the first product specifically designed to aid in controlling breakthrough pain in cancer patients. It is indicated only for the management of breakthrough cancer pain in patients with malignancies who are already taking and are tolerant to opioids. Breakthrough cancer pain occurs in about 50% of cancer pain patients and is a component of chronic cancer pain that is particularly difficult to treat because of its severity, rapid onset, and frequent unpredictability. The lollipop provides almost immediate relief as the drug starts being absorbed in the mouth and starts to work within minutes; its effects last for only about 15 minutes, but that is usually long enough to relieve the breakthrough pain. The concern about this product being accidentally used by children is addressed by special packaging that requires scissors to open (1).

## Pellets

Pellets are dosage forms that are composed of small, solid particles of uniform shape sometimes called beads. Typically, pellets are nearly spherical, but that is not a requirement. They may be administered orally or parenterally. They can be used to provide physical separation for chemically or physically incompatible materials, extended release of an active pharmaceutical ingredient (API), or delayed release to protect an acid-labile API from degradation in the stomach or to protect stomach tissues from irritation. Pellet dosage forms can be formulated as single or multiple entities. Oral pellets are usually placed within hard gelatin capsules for administration. The size range of the pellets is governed by the constraints of the volume of commonly used capsules (typically