
Tableted Confections:

Formulation and Considerations

The business of tableted confections is growing; there are more and more companies seeking to get into this area, so a general review is in order.

Compressed candies were first made towards the end of the 19th century. The early tablet presses were single punch machines adapted from metal presses used for stamping and forging steel and other materials. Some enterprising soul discovered that sugar will bond when compressed and the business of making candy in this fashion was started.

Perhaps the greatest success story that grew out of this business is the story of Ed Noble, who was a car

card salesman. Ed sold advertising space in trolley cars and he walked into Dr. Crane's Candy Shop in Cleveland to sell Clarence Crane some advertising for his breath mints. It was 1912, and it was one of those "If you're so smart, why don't you do it yourself," stories. Ed Noble tried in vain to sell Clarence Crane the advertising, but Crane, instead, sold Noble the breath mint business and the equipment to make it. The rest is history and Ed Noble made a mint. This was the beginning of the LifeSaver Company.

The candy with the hole was made on Colton Rotary Tablet Presses at a rate of about 200 tablets a minute per machine. These machines were developed at the beginning of the century for the manufacture of pharmaceutical products. Dr. Crane had adapted them for making candy. As LifeSavers were spread around the world during WWI, interest in compressed candies grew and Rowntree of England copied the product in the early 1920s and built a substantial business as "Polo Mints." The compressed candy business was confined to the mint category until the introduction of Pez, which found its niche as a toy dispensing compressed sweets.

One of the reasons the manufacturing was limited was the expense required to produce a compressible

sugar granulation. Two major ingredient improvements changed all that: compressible dextrose and compressible sorbitol ushered in the era of high sour dextrose candies targeted at children and the sugar-free breath mint market. Today the market is composed primarily of sugar and sugar free breath mints, and dextrose sour fruit novelties.

The technology of tableting is unique in candy technology because virtually all other candy products focus on the control of crystallization: control of grain in hard candy, fondant in creams, bloom in chocolate. In tableting, control of crystallization doesn't enter the process. Instead, we start with crystalline material and grind it as fine as possible and then put it back together. Since we do not dissolve the product and grow fine crystals, the smoothness of the finished product depends on how fine a particle we started with. Everything else we do to make the product is aimed at one thing; getting it through the press.

With that as an introduction, let's take a look at this relationship between formulation and machine and what we must take in to consideration when producing compressed candies.

FORMULA CONSIDERATIONS

All tableted candies have the following categories of ingredients:

- tablet base/vehicle,
- binder,
- lubricant,
- flavor (including acidulant).

The optional ingredients include:

- color,
- active ingredient to produce an effect.

Tablet Bases/Vehicles

The tablet base is the material which forms the bulk of the tablet. It is the tableting characteristics of this material which largely determines the nature of the finished product. In pharmaceuticals this material is generally referred to as the vehicle or excipient. The purpose of the base is to carry the flavors and/or active



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