

Directly Compressible Chewing Gum Powder

A New Idea For Chewing Gum Manufacture

Douglas Fritz

Cafosa Gum

Chewing gum has always been a product that has limited manufacturers because it requires some different machinery than is customary in confections. Other limiting factors are the belief that chewing gums are sticky and difficult to handle and the use of gum base (an ingredient unknown to most confectionery manufacturers). Today, things are changing. We see many traditional candy and chocolate manufacturers moving into the gum business by acquiring chewing gum companies or by marketing products that are copacked by foreign chewing gum manufacturers. The idea of actually making chewing gum still seems to be a thing that is feared. Why is this?

Let's look at the typical process used in the manufacture of chewing gum. Following are starting materials:

- Fine granular sugar
- Dextrose
- Corn syrup
- Chewing gum base
- Softeners, glycerin, lecithin and the like
- Fruit acids
- Colors
- Flavors
- Intense sweeteners

Or in the case of sugarfree chewing gum:

- Polyol powders
- Maltitol syrup and/or sorbitol syrup
- Chewing gum base
- Softeners, glycerin, lecithin and the like

- Fruit acids
- Colors
- Flavors
- Intense sweeteners

For a batch process these materials need to be prepared. Granular sugar needs to be milled into powdered sugar, transported through a powder handling system, batch weighed and delivered. Chewing gum base may need to be softened or melted in ovens or in melters. Viscous materials like corn syrup or maltitol syrup need to be held in heat-controlled tanks and transported through heated pipes and metered into the process. All the smaller items need to be weighed and delivered to the mixing area.

After preparation, the ingredients need to be added to a strong-jacketed, double-sigma-design mixer in a precise sequence and timing to obtain the correct temperature, make a good chewing gum and get the texture for further processing (Figures 1 and 2).

Chewing gum processing requires specialized handling equipment, such as temperature- and speed-controlled extruders and complex rolling and scoring machines with elaborate dusting and dust control equipment (Figure 3). The manufacturing area needs to be temperature- and humidity-controlled and have elaborate dust control systems for worker safety.

After shaping on the rolling and scoring machine, the chewing gum needs to be

Fritz has 38 years' experience in the chewing gum industry. He has worked for Nabisco, Topps and Cafosa Gum. He is also a consultant and teacher in the industry.



Douglas Fritz