

A Creative Approach to Candy Making

Don Mercer
Associate Professor, Department of Food Science
University of Guelph

Most of us seem to take for granted the wide variety of shapes of the candies tempting us from their places on the grocery store shelves. We never give a second thought to the creativity involved in producing them.

Those of you who have made candies at home are probably familiar with the different molds that are available. These plastic or rubber forms allow you to make special shapes for various holidays and special occasions. Each shape requires a different mold, so your inventory can soon mount up if you are into candy-making in a serious way.

Now, picture commercial candy makers who produce huge quantities of product on a continuous basis throughout the year. If they used individual molds, metal trays would be required for strength in place of more fragile materials that are suitable for in-home use. Their cost alone would be prohibitive. Handling and storage would add another level of expense and complexity.

Rather than having hundreds or thousands of trays for dozens of occasions, commercial candy-makers use a simple but rather elegant approach.

Starch molding is the basis for this method. Dry, powdered corn starch is placed in rectangular metal trays and levelled to the top edge. The trays of starch, which take the place of the molds, are placed on a conveyor belt which carries them through the process.

The most important part of the process is the stamping plate needed to obtain the shape of the candies. A set of desired shapes is secured to a metal backing plate. These shapes can be easily changed depending upon the desired theme of the candies. In this way, only one set of forms is required in each case. While thousands of trays for the starch may be needed, they can be used for all production needs, thereby streamlining the overall process.

The stamping plate is attached to a hydraulic press in the production line. As the trays go through the process, the stamping plate pushes down on the starch. This leaves the indentations necessary to form the candies in the compacted starch.

At the next step in the process, small nozzles fill each indentation with a jelly-like syrup or other liquid. A series of nozzles can be used if multiple layered colours are desired in the same candy, or if a variety of colours are to be filled in the same tray.

The trays are then placed in tempering chambers where temperature and humidity are controlled while the candies solidify or gel.

After a suitable time period, the contents of the trays are dumped into a screening process to separate the formed candies from the starch powder. The recovered starch is sifted to remove any lumps and then goes back to the start of the process where it is filled into empty trays that will go through the system again.

The candies pass through a series of cleaning operations to remove the residual starch. Gel-based candies are often given a spray coating of an edible oil or wax to make them shine and prevent them from sticking together in the package.

From personal experience, I can attest to the fact that although starch molding is an interesting approach to candy-making, it can be extremely messy. Don't be surprised to find a layer of white dust covering things in your work area if you decide to give this method a try.



Candies are frequently made using starch forming molds.