
Starch Drying and Dry Rooms

Anthony Habib
Favorite Brands International

Bob Bianca has 18 years experience in research and development, quality assurance, technical service and other positions of increasing responsibilities in the chocolate and confectionery industry with Ward-Johnston, Bakers Chocolate and Coconut, Wilbur Chocolate, Merckens/Nabisco and Kraft Food Ingredients.

Bob has been elected as councilor-at-large for the National AACT and holds a confectionery patent. Currently he is the director of corporate technology for Favorite Brands International.



Presented by Robert Bianca

The importance of properly conditioned moulding starch cannot be underestimated. From allowing the mouldboard to make and leave sharp impressions of the shapes that the mogul will inject candy into, to the essential role it plays during the curing process, moulding starch with the correct levels of moisture and oil content is critical to making first rate confections. Much has been written about the proper level of mineral oil in moulding starch. This part of the paper will focus on maintaining the proper level of moisture in moulding starch.

MOISTURE CONTENT

For most starch moulded confections, the moisture content of the starch should be in the range of 5.5 to 7.0 percent. Although there are some marshmallow type products that require starch moisture as low as 5.0 percent, most gummies, jellies, jujubes and other specialty items will work best if the moisture is kept in the 5.5 to 7.0 percent range. If the moisture level drops below 5.5 percent, the starch loses some of its

ability to hold the shape of the moulds because it becomes too dry and crumbly. In addition, because of the lower amount of moisture present, it becomes more dusty and thus a potential explosion hazard. If the moisture level rises above 7.0 percent, the starch becomes less effective as a curing aid for the candy. Because the starch can only hold onto so much moisture, the more that is present at the time the slurry is cast into it, the less it will be able to absorb from the candy during the curing cycle. In fact, if the moisture level of the starch is too high, and the casting solids of the slurry are too low, the excess moisture from both sides will react in a way that will cause some of the moulding starch to adhere to the surface of the finished confection.

STARCH CONDITIONING

To avoid these types of problems, manufacturers will install starch conditioning equipment to maintain in-process specifications for starch moisture at casting. Typically, a starch conditioning system includes both drying and cooling components, in addition to a presifter that will remove most tailings and other impurities prior to the conditioning process. The suppliers of starch conditioning equipment have various ways to reach the goal of delivering properly conditioned starch back to the moguls.

The more effective layouts convey all of the starch separated from the candy during the demoulding process at the mogul to a presifter. At this stage, the starch passes through a very fine screen which collects the tailings that may break off from the candy during demoulding. This protects the drying equipment from being gummed up by melted candy as the starch passes through the hot area of the starch drying process. It also protects the product that will be cast into this starch after

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