Licorice Manufacturing

Even though the process of licorice making is simple and scientific, both batch and continuous processes can lead to a variety of quality defects if the process is uncontrolled.

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Licorice has a long history. The earliest documentation of its use dates back to 1700 BC in Greek mythology where the goddess Istar used the sweet roots to calm the Hedammu serpent. Since then, there have been many references to the use of licorice as a medicine for ailments such as jaundice, heart problems, stomach complaints, tuberculosis, asthma, coughs and thirst. It became an important ingredient in ancient Chinese medicine.

What started as a medicine ended up as a candy over 100 years ago. The traditional formula consisted of wheat flour, molasses, licorice extract and anise oil. With changing demographics and regulatory requirements, U.S. licorice consumption has changed. Traditional licorice made with licorice extract is now made with fruit flavor and is more popular. Licorice production can either be a batch or a continuous operation. The quality of licorice starts with the ingredients purchased.

INGREDIENTS

A significant ingredient affecting quality is wheat. If it is subjected to enzyme damage, this can result in a mushy product. This variation can be translated to different cooking times needed, but in a manufacturing setting changing temperature during the day on a continuous basis will be impossible and reduces production efficiency. Replacing molasses with sugar and corn syrup will yield a neutral or lighter-color end product and is ideal for fruit-flavored licorice. To reduce costs, using corn syrup instead of sucrose has improved shelf life. Using concentrated fruit juices can help to make a *healthy* claim. Cornstarch can be added to control variability.

Sugar is available in various forms: purified, brown sugar, dark-flavored treacle or molasses. Adding 2 to 4 percent of high-DE corn syrup produces a softer and more moist product. Adding vegetable fat (palm kernel oil) increases the candy extrusion properties. Fat is added at 2 to 3 percent. Glycerol monostearate (GMS) or polyoxyethylene sorbitan monostearate (POE) added to fat at 0.2 to 0.3 percent improves chewing properties. Adding gelatin at 0.2 to 0.4 percent will act as a binder and improves moisture retention. Clarity of gelatin is not important and less expensive grades are equally functional. Flavorings such as black licorice can be added at 3 percent of total cooked-batch weight. Anise oil can be added at 0.03 percent and salt at 0.1 percent.

The process at American Licorice is batch ➤

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