



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)



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UNIT-IV CONFECTIONERY PRODUCTS

Manufacture methods of high boiled sweets: Ingredients -. prevention of recrystallization and stickiness

Hard Boiled Candies

Boiled sweets or high boiling are originally made by boiling a sugar solution with cream of tartar over coke fires to about 150-155°C. The cream of tartar inverts some of the sugar and the resulting mass, comprising of a mixture of sucrose, dextrose and fructose at about 97% solids. They are usually coloured, flavoured and set to a transparent glassy product. However, the coke fires are now replaced by steam and processing is done in vacuum pans (635-760 mm Hg) for improved heat efficiency. The sugar from high vacuum cookers is a viscous plastic mass. The plastic mass is usually shaped, cooled and wrapped in moisture-proof packs as rapidly as possible, preferably while still hot. The resultant candies have very low residual moisture usually in the range of 1-2%. Candies based on invert sugar are very hygroscopic and readily develops stickiness on exposure to the atmosphere. Hence, glucose syrup is often included in the formulation to avoid stickiness. Sugar/glucose syrup or sugar/glucose syrup/invert sugar combinations are widely used in confectionery. The ratio of sugar to glucose for making hard boiled candies range from 30% sugar and 70% glucose (1S:3G) to 50:50 mixtures (1S:1G) (Fig. 38.1). The process of making boiled candies can be summarized as follows:

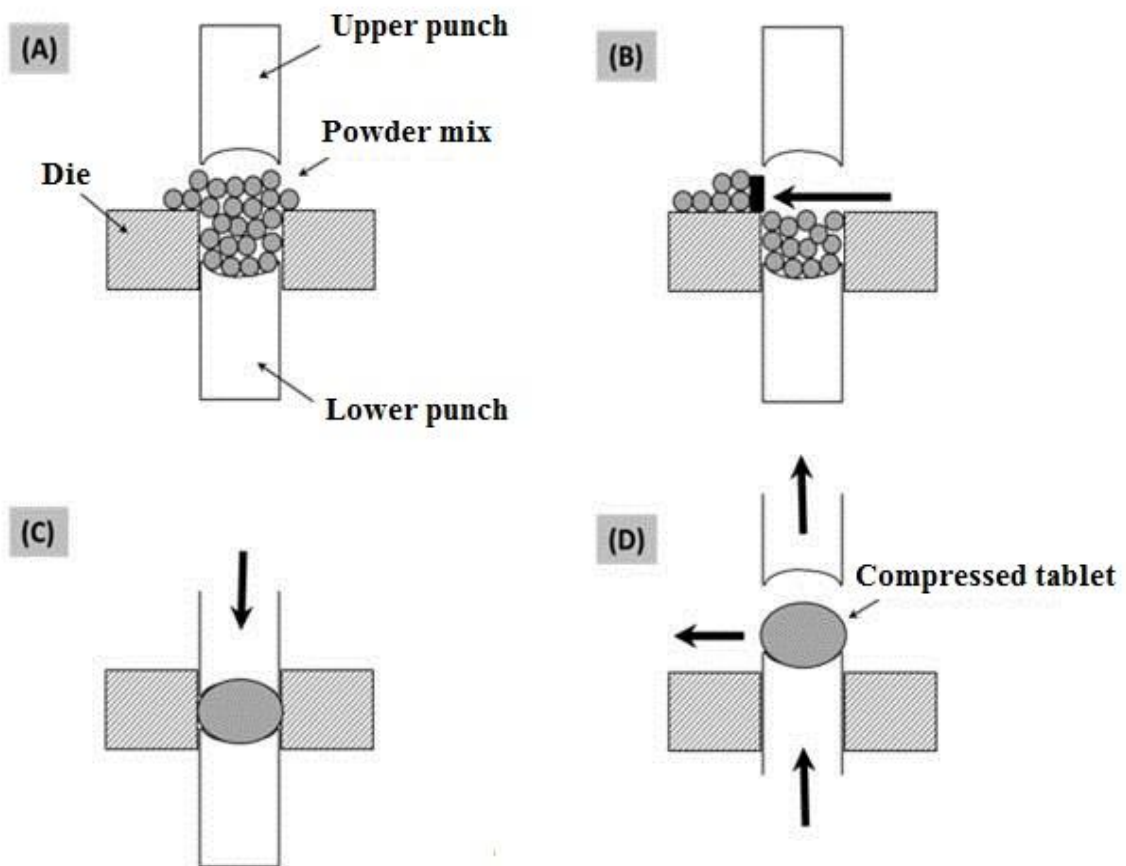
- a. Dissolving the sugar
- b. Boiling the sugar and glucose syrup under vacuum to the final solids concentration
- c. Cooling the boiled mass
- d. Adding flavour, colour and any acid
- e. Shaping the product
- f. Wrapping

Brittle

Brittle is essentially a type of hard candy to which nuts like peanuts are very commonly added. The nuts are added to the hot syrup and the mixture is poured out in a very thin layer and then stretched to make it as thin as possible. Baking soda (sodium bicarbonate) is sometimes added to produce a light texture. The resulting candy is hard and snaps easily, hence the term brittle.

Compressed Tablets

Candies produced by application of high pressure processing are called compressed tablets or pressed candies. It involves use of punches and dies to provide desired shape. For tablet sweets, icing sugar and dextrose are normally used as a base, with gelatin, gum acacia or gum guar as binding materials. Stearic acid and its salts are normally used as lubricants. The amount of binding agent and lubricant used in compounding the formulation influences the physical properties of the tablet. There are two methods of producing compressed tablets: slugging and wet granulation. In *slugging*, the powder mix is treated with a lubricant before precompression into large granules. For *wet granulation*, sufficient binder solution is added to the dry ingredients to make a malleable paste. The paste is then forced through a wide meshed sieve and dried in an oven at 32-65°C. The dried mixture is treated with a lubricant and flavour and sent for pressing. Pressing is carried out in continuous machines which operate at high speed. The tablets can be formed either in single or multiple die actions in which the lower and upper dies are brought together under pressure.



Operation of a slugging tablet press