

How are gummy sweets shaped?

From the sweeties.net wiki

Gummy sweets come in bears, worms, bottles, rings and hundreds of other shapes. There are two main ways to give them those shapes: in starch, the classic method, or in solid moulds, a newer one.

Designing a shape

At Haribo, every new gummy figure begins as an idea sketched by hand, which is then made into a plaster prototype. That model becomes the stamp that shapes the sweets: see [why are gummy bears shaped like bears?](#)

Shaping in starch

The classic method uses a machine called a starch mogul, invented around 1899 and in common use within the next two decades. It is used to make gummy bears and jelly beans:

1. **Fill the trays.** Trays are filled with cornstarch.
2. **Stamp the shapes.** Stamps of the sweet are pressed into the starch from above, leaving rows of hollows.
3. **Deposit.** The hot gummy mixture is poured into the hollows.
4. **Set.** The trays go to drying rooms, where the gummies have time to set.
5. **Tip out.** The set gummies are tipped out, the starch is cleaned off them, and the starch is recycled for the next batch.
6. **Finish.** Haribo gives its gummies a thin wax film, which gives them a sheen and stops them sticking together.

The starch holds the shape while the gummy sets, and it lets makers use mixtures that are much runnier than other moulding methods allow. Wheat, rice or maize starch is used, because potato starch tends to clump as it dries: see [what is starch moulding?](#) and [how do jelly sweets set?](#)

Why gummy bears have flat backs

A starch mould is a hollow pressed into a flat surface, filled from above. That means the top of every sweet is open while it sets, and a starch mogul can make only two dimensional shapes with a flat side. Look at the back of a gummy bear and you will see it.

Shaping without starch

Newer lines skip the starch altogether. In starch free depositing, the gummy mixture is poured straight into moulds made of metal, silicone or plastic. The machinery maker Baker Perkins says these systems can make full three dimensional shapes, from completely round balls to whole raspberries, strawberries and pears, animals and cartoon characters. They avoid the long drying time and the starch handling, and Baker Perkins says validating them to the standards of medicine regulators is straightforward.

The moulds matter. Metal moulds give a better surface finish, cope with more intricate designs and cool the sweets faster, and the gummies are pushed out with air. From silicone moulds they have to be popped out by bending the mould, so they need to be much firmer. Gelatine, pectin and carrageenan recipes can all be deposited this way, which opens the method up to vegetarian and vegan sweets.

The same shape, many sweets

Jelly babies and wine gums are shaped in starch in the same basic way: see [how are jelly babies made?](#) and [how are gummy bears made?](#)

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