

What is pectin?

From the sweeties.net wiki

Pectin is a natural substance found in the cell walls of plants, where it helps to bind the cells together. Food makers use it as a gelling agent. It is what sets jam, and it is one of the main ingredients used to make jelly sweets without gelatine.

Where pectin comes from

Pectin was first isolated and described by Henri Braconnot in 1825, although cooks had relied on its setting power for jam and marmalade long before anyone knew what it was. Its name comes from an ancient Greek word meaning congealed or curdled.

Some fruits are much richer in it than others. Apples, pears, plums, quinces, gooseberries, guavas and citrus fruits contain large amounts, while cherries, grapes and strawberries contain less. That is why old jam recipes often mixed a fruit that sets badly with one that sets well. Citrus peel is the richest source of all, at about 30 per cent pectin.

How it is made

Most commercial pectin is made from leftovers of the juice industry. Dried citrus peel accounts for about 85 per cent of production, and apple pomace, the pulp left after pressing apples, for about 14 per cent. The peel or pulp is heated in acidified water to draw the pectin out. The liquid is filtered, the pectin is separated with alcohol, and it is washed and dried into a white to light brown powder.

Pectin has been made on a large scale for about a century. During the Industrial Revolution, makers of preserves bought dried apple pomace from apple juice producers and cooked it to extract the pectin. In the 1920s and 1930s factories were built to extract it commercially, first from apple pomace and later from citrus peel. It was first sold as a liquid, but now it is nearly always a dried powder, which is easier to store.

Pectin in sweets

In sweets, pectin is used to make jellies with a good structure, a clean bite and a good release of flavour. Only a little is needed: typical amounts are between 0.5 and 1 per cent, about the same as the pectin in fresh fruit.

There are two broad types. High methoxyl pectins need plenty of sugar and acidic conditions to set, which suits jam and traditional confectionery. Low methoxyl pectins set with the help of calcium and need less sugar, so they are used in lower sugar and sugar free products.

Because it comes from plants, pectin is one of the gelling agents used in place of gelatine to make gummy sweets suitable for vegetarians and vegans, along with starch and agar, which comes from seaweed: see [what sweets are gelatine free?](#) and [what is gelatine made from?](#)

Is it safe?

Anyone who eats fruit and vegetables already eats pectin. It is a soluble fibre: it is not digested in the small intestine but is broken down by bacteria in the large intestine. As a food additive it has the E number E440. The European Food Safety Authority looked at it again in 2017 and concluded that it poses no safety concern for the general population, and that there was no need to set a limit on how much people eat each day.

A wartime job

Pectin even played a part in the Second World War. Allied pilots carried escape maps printed on silk, but at first the inks ran and blurred the place names. Clayton Hutton, who devised the maps, mixed a little pectin into the ink, which stopped it running and kept even small features clear.

For more on the codes printed on sweet packets, see [what are E numbers in sweets?](#)

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