NUTS

How it's made... Almond butter

152 almonds, one jar: to turn them into a creamy spread, it all comes down to the right roasting, the right consistency and plenty of experience.

By **Theresa Kalmer**



Thescent of roasted almonds hangs over the Clasen-Bio site in Schwarzenbek, near Hamburg. It is reminiscent of a funfair – but instead of ending up in bags, the nuts are processed here into a creamy paste across 4,500 square metres of production space.

Before the aroma of roasting can develop, however, the nuts must first pass through quality control. Around 500 metres from the actual production area, staff receive the raw materials and inspect them. Among other things, they check the appearance and size of the almonds. They also carry out random checks for mycotoxins – substances produced by mould.

Clasen Bio starts the process as early as possible: the company samples around 80 per cent of the raw materials it purchases itself before shipment and has them tested externally in a laboratory. Only after the analysis has been carried out does the company release the goods for transport. This increases the likelihood that the quality will be as required when the nuts arrive in Schwarzenbek.

This monitoring is also important because farmers harvest almonds only once a year. How long ago the harvest took place can make a difference. If, for example, a batch harvested in October arrives in May, a closer look is needed, explains Martin Schult, managing director of Clasen Bio.

Alarm in the hygiene airlock

From the raw materials inspection, the process moves on to production – through a secure airlock. Martin Schult places his finger on the sensor, the door opens

1

An employee checks the delivered almonds for appearance and size and carries out random tests for mycotoxins.

2

Two roasting machines roast the almonds depending on their size and harvest time for 20 to 30 minutes at 150 to 170 degrees Celsius.

3

Blades chop the roasted almonds, whilst sieves determine the size of the pieces. For almond butter, this is between two and five millimetres.

Photos: Christian Geisler



net. But if it remains open for a moment too long, an alarm sounds. As an IFS Food-certified company, Clasen Bio must not only adhere to high hygiene standards but also protect production from unauthorised access and potential external hazards. Before proceeding into the production area, hand hygiene is a must: special lamps, similar to those used in children's dental hygiene, reveal whether staff have lathered their hands thoroughly enough.

It all comes down to the degree of roasting

In the production area, two loudly humming roasting machines take over the next step. Together, they roast five to six tonnes of nuts per hour. How long the nuts remain in the roaster and at what temperature depends, amongst other things, on their size and the time of harvest. Almonds, for example, are roasted for 20 to 30 minutes at 150 to 170 degrees Celsius.

This requires experience: even the youngest roaster on the team has been on the job for ten years. New staff need around half a year to learn how to operate the machines. This is because fixed guidelines alone are not enough to achieve the correct degree of roasting. "It's rare for a nut to turn out exactly as it should on its first roasting," says Schult. If roasted for too long, the nuts can become too dark and their flavour changes. The correct degree of roasting is therefore crucial for the final flavour of the almond paste.

4

In the double-walled kettle, rotating blades process the almond pieces into a creamy paste. Temperature, duration and the desired consistency all play a key role in this process.

5

The machine fills each jar with 180 grams of almond butter, checks them for metal contaminants, weighs them and then seals them with a lid.

6

Finally, the machine applies booklet labels to the jars, which contain additional information and recipe ideas. A QR code on the lid links to the online shop.

Chopped up, finely ground

Before a machine grinds the roasted nuts, the staff pass through another hygiene checkpoint. Grinding increases the surface area of the almonds, which the risk of microbiological contamination increases. The hygiene requirements in this production area are correspondingly strict.

"In the past, there was only one item in procurement that was difficult. Today, there are 10 to 20."

Thomas Bönsch, CEO of Clasen Bio

Within eight minutes, the machine crushes around 50 kilograms of nuts. Blades chop them up, whilst sieves determine the size of the pieces. Different sieves are used depending on the intended purpose. The

The almond pieces are two to five millimetres in size. This makes the subsequent grinding process easier, as whole almonds would require more energy for this.

The pieces are then fed into a double-walled kettle. Rotating blades and a scraper keep the mixture in motion. Gradually, this creates the creamy consistency that characterises the almond butter. How long the machine takes to process the mixture depends, amongst other things, on the desired consistency. On average, the machine runs for around 20 minutes. The company adjusts the temperature, time and viscosity to meet specific customer requirements. Staff also check whether the paste has reached the right consistency using the so-called 'spoon test': 'If it runs smoothly off the spoon, it's good,' says a production worker. The company also checks the viscosity of roughly one in every three batches.

From bruschetta to pistachio

For nut butters containing additional ingredients, these are now also added to the kettle. Clasen Bio has been producing nut butters for seven to eight years. Initially, the company focused primarily on pure nut butters such as almond butter, as well as sweet-and-savoury varieties. The range now also includes savoury creations, such as bruschetta spreads. Clasen Bio develops the recipes in-house

Sourcing under changing conditions

Clasen Bio sources almost all its almonds from Spain – but climate change is making cultivation more difficult. To be able to respond to fluctuating availability, the company relies on several suppliers. In addition, certain raw materials, such as peanuts, are to be grown increasingly in Germany to reduce transport distances and CO_2 emissions. Customs duties and challenges in shipping have also made business more difficult, says Thomas Bönsch: whereas in the past only one item was difficult to source, today there are 10 to 20. But that's all part of the job: "For outsiders, it's stressful; for us, it's the icing on the cake."

Product development. Yet only a fraction of the ideas ultimately find their way onto retailers' shelves: according to Thomas Bönsch, also managing director of Clasen Bio, perhaps two out of every 100 recipes make it through. Just how quickly the company can respond to trends was demonstrated by the pistachio butter, which was brought to market within five days following the hype surrounding Dubai chocolate.



100 per cent nuts: there are 152 almonds in a 180-gram jar.

Once the spread is ready, the filling process begins. First, the machine turns the empty jars upside down and blows them out thoroughly with air to remove any potential contaminants. It then fills each one with exactly 180



"It's rare for a nut to turn out exactly as it should on the first roast."

Martin Schult, CEO of Clasen Bio

grams of almond butter – the production line manages 30 to 40 jars per minute.

From jar to shelf

After filling, the jars pass through a metal detector and a weight check before the machine seals them with pre-warmed lids. The warming is necessary because Clasen Bio does not use plasticisers in the lids. As a result, the plastic used is initially harder and must be warmed so that it moulds sufficiently to the jar and seals it reliably.

As well as the small jars, Clasen Bio also fills one- and ten-kilogramme containers by hand – for bakeries, for example, or as samples. Finally, the machine labels the jars. The fold-out booklet provides further information and recipe ideas; a QR code on the lid links directly to the online shop.

By the time the product reaches the shelves, the aroma of roasting has long since faded. What remains is a product whose quality depends on experience, quality controls and increasingly stringent sourcing. ■

Interview

Thomas Bönsch, Managing Director of Clasen Bio

“We have apologised to our retailers”

The past few years have been turbulent for Clasen Bio. In 2023, you took the company back into your own hands following your time at the brand and retail group Social Chain. What state was the brand in?

We took the brand back with an annual turnover of one million euros – down from 18 million originally.



Thomas Bönsch wants to re-establish the Clasen Bio brand more firmly in the retail sector.

How did this sharp decline come about?

We had expanded the brand at Kaufland to between 15 and 16 million euros in turnover and 120 products by 2020. Then Kaufland decided to focus more heavily on its own-brand products. We knew this was coming at least three years in advance and could have taken part in the tenders. However, we made a conscious decision to take a break in order to focus on our own brand.

Then, in 2020, we joined Social Chain. Why?

Koro had approached us at the time because the company didn’t have its own production facilities. We wanted to manufacture for the group and, in return, receive support with the shop and social media marketing. In practice, however, it didn’t work out as hoped.

What went wrong?

I was used to making decisions quickly on my own. In a set-up like that, the decision-making processes became more drawn out. After three years, we still hadn’t produced anything for Koro, and we were also going round in circles when it came to social media. Basically, the collaboration was fair, but the structure just didn’t work for us. On top of that, we handed over our entire sales operation at one point and consequently lost a lot of turnover in-store.

What were the consequences of that?

There were retailers who had five metres of shelf space dedicated to Clasen Bio and not a single bag on it. That’s a slap in the face. The retailer isn’t making any money from it; they’re losing it. And that’s a responsibility we as an industry must face up to.

How did you rebuild your relationships with retailers?

We had to prove ourselves to the retailers all over again. For head buyers and regional buyers, a good result is more important than anything else. At the same time, the retail sector expects us to strengthen the brand.

We personally apologised and asked for another chance. Many even rang us themselves and said things had gone better when we were still in charge of the brand.

Today, Clasen generates around 60 million euros from private-label products, whilst the brand itself accounts for around six million. Why do you still want to strengthen the brand?

We have a large-scale production operation and need to utilise these capacities to the full. Our own-brand products are therefore an important part of our business. Back when it was a public limited company, much of the focus was on turnover. Today, as

Where do you want Clasen Bio to be with the brand in five years’ time?

I’d be delighted if we’d regained the roughly 4,000 Rewe and Edeka stores we’d lost. That would be a great target, but time is running out.

What have you learnt from the past few years?

We need to make decisions more quickly, even if they’re unpleasant. And we shouldn’t have handed over 100 per cent control to a strategic partner so quickly. Perhaps we were young and naive back then. But we made the decision, and only we can take responsibility for it.

The interview was conducted by **Theresa Kalmer.**

Photos: Christian Geisler