

EU approves alternative smoking process

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For three years, the Clean Smoke Coalition drummed for the EU to classify Clean Smoke as "good manufacturing practice". Picture © Pixabay / wasi1370

Michael Spahn is way ahead of the EU organic regulation. For 15 years, the organic butcher has been smoking meat and sausage using an environmentally and product-friendly process that the EU had not officially approved for organic food until the end of 2021. Spahn only needs a shot glass-sized amount of a liquid instead of wood and fire. "That's enough to smoke 40 to 50 kilograms of pork sausage," says the master butcher. The process, which Spahn has so far only been allowed to use on the basis of a special permit, is called "Clean Smoke". Untreated sawdust is burned and the resulting smoke is purified with the help of drinking water and filters. Michael Spahn converts the so-called

"primary smoke condensate" that remains at the end back into smoke in his smoking chamber and blows it onto meat and sausage – just like traditional smoking. The process is considered particularly product- and environmentally friendly because the smoke is not only freed from ash and tar by the washing and filtering process, but also for the most part from carcinogenic "polycyclic aromatic hydrocarbons" (PAHs).

Clean Smoke differs from liquid smoke processes used more frequently in the past, which are not permitted under the EU eco-regulation. The main difference is that with Clean Smoke, meat and fish products are not sprayed with or soaked in liquid smoke. Instead, the regenerated smoke is used in a conventional smoking chamber, which not only provides the typical smoky flavor, but also other characteristics sought with a smoking process, such as a longer shelf life.

"The Clean Smoke process is not about applying a smoke flavor, but about a smoking process in a smoking chamber," says Jürgen Michalzik, responsible for communications at the Clean Smoke Coalition (CSC), explaining the key difference from conventional liquid smoke. The CSC, which describes itself as "the food industry's trade association for innovative and sustainable smoking techniques" and is backed by food manufacturers and retailers as well as scientists, among others, therefore refers to Clean Smoke as "smoking with pre-cleaned primary smoke."

Organic industry relies primarily on glowing combustion

For three years, the CSC drummed in Brussels for the EU to recognize this difference, to classify Clean Smoke as "good manufacturing practice" within the meaning of the EU Organic Regulation, and thus to put it on an equal footing with traditional smoking. It was supported in this by the German Federal Ministry of Food and Agriculture, which had submitted a corresponding entry at EU level.

Michael Spahn is pleased that his smoking method has finally also received the blessing from Brussels. "Clean Smoke is much healthier than the use of smoulder smoke," says the master butcher. Smoking with smoulder smoke is one of the traditional methods permitted by the EU organic regulation. Martin Rombach, managing director of the organic inspection body Prüfgesellschaft ökologischer Landbau, estimates that this method is used in the majority of organic food smoking.

It is scientifically confirmed that smoulder smoke contains higher concentrations of PAHs than smoke produced from smoke condensates. However, this difference is in the microgram range. "Regardless of the process used, you would have to do a lot wrong in smoking to exceed the permissible contaminant level on food," says Professor Ralf Lautenschläger, who teaches and conducts research on meat technology at the Institute of Life Science Technologies at the Ostwestfalen-Lippe University of Applied Sciences.

Clean Smoke promises more safety and cleanliness

The real advantages of Clean Smoke lie in the safety and cleanliness of the process. The transformation of fire smoke into pre-cleaned primary smoke condensate takes place in special facilities operated by the U.S. company Red Arrow, which sells its

products in Germany through its Bremen-based subsidiary and CSC member Red Arrow Handels-GmbH.

According to CSC, the specialized production of primary smoke condensate increases efficiency in the production and use of wood as a resource. At the same time, the process produces only half as much carbon dioxide in use as friction smoke, which is also used for organic food, and six times less than smoulder smoke, the CSC calculates. Another advantage is that farms, like Michael Spahn's, no longer have to handle fire, which makes smoking safer. Plus, the absence of tar and ash makes cleaning the smokehouse less of a chore. In addition, the absence of tar and ash makes cleaning the smokehouse less of a chore. "With glow and rub smoke, the chamber is already dark after one smoking pass," says Spahn. With Clean Smoke, he says, it takes longer. To be sure, he also has to clean with special smoke resin remover, Spahn says. However, he needs much less of it than is the case with conventional smokehouses.

In Germany, Clean Smoke is currently used for about ten percent of smoked foods, says Jürgen Michalzik. In Sweden, almost every manufacturer smokes with it. With the approval for organic food, he and his coalition hope for a Europe-wide boost for the process. The first manufacturers are already in the starting blocks. According to BioHandel information, the first "clean" smoked meat products will be available in organic specialty stores starting in March.

Will Clean Smoke become the new standard for organic?

"The Clean Smoke process fits perfectly with the goals of the Green Deal," says Hans-Joachim Kunkel, founder and managing director of "Die Räucherei." The company in Klein Meckelsen, Lower Saxony, has been smoking with pre-cleaned smoke since 1997 and says it was the first fish processor in Germany to use the process.

For years, Kunkel has been striving to also be able to offer his fish specialties smoked with Clean Smoke as organic goods with the corresponding certification. In doing so, he also has his sights set on the specialist natural food trade. Following the green light from Brussels for Clean Smoke, he is now in discussions with retailers to find out where there is demand, says Kunkel. "I hope when the Biofach in July takes place, we'll have the first products, for which we'll then also find partners in the organic specialist trade." Biofino, a processor of organic poultry, also wants to smoke with Clean Smoke soon.

"We assume that in the medium term all smoking organic farms and organic processors will choose the 'better' Clean Smoke process," says Jürgen Michalzik. But until that point is reached, some educational work is needed. As head of the Clean Smoke Organic Educational Campaign, Michalzik is currently working on a campaign for the newly approved process to inform the meat industry, retailers and, later, consumers about Clean Smoke. "The starting point for this campaign will be organic producers and organic processors, who are now acting as ethical and actual drivers of quality and innovation for the entire food industry," Michalzik says.

Organic growers' associations still hesitant – with one exception

The major organic growers' associations have so far reacted differently to Clean Smoke: At Demeter, those responsible have not yet addressed the issue. Demeter press spokeswoman Susanne Kiebler told BioHandel that this will only happen when producers who want to use Clean Smoke apply for approval. "So far, no Demeter member has expressed interest in using the process." Naturland regards Clean Smoke "in principle positively", says their press officer Markus Fadl. Currently, they are examining "to change the guideline accordingly". And Bioland states: "The new Clean Smoke process is currently still being evaluated in the Bioland association and discussed at a technical level."

Biokreis is already one step ahead. "We want to include the process in our guidelines and also explicitly name it as a permissible processing method for meat and meat products," Biokreis press spokeswoman Stephanie Lehmann tells BioHandel. In the meeting of the members in March they will make a vote if they take up Clean Smoke into the federation regulation. That is also due to Michael Spahn. He is a member of Biokreis and made a lot of promotion for the permission of Clean Smoke.

The organic food trade, meanwhile, has to prepare for another test seal on its fish, meat and tofu production. To ensure that consumers not only learn about Clean Smoke, but also recognize "cleanly" smoked products as such in the store, the CSC is issuing a label. Processors who want to use it must be a member of the coalition and sign a brand licensing agreement. "The CSC controls the use and marketing of the label," says CSC President Uwe Vogel. In addition, he said, the association supports communication on its website and with marketing materials. There are no licensing fees, Vogel said.

Further information on Clean Smoke can be found [here](#).