

BIOFACH2022

into organic



CleanSmoke
Coalition

Product- and environment friendly: New Smoking Process for Organic Products

Nürnberg, BioFach 2022

Agenda



CleanSmoke Smoking Process



Developments since 2019



CleanSmoke Organic Campaign



Benefits of the CleanSmoke Smoking Process

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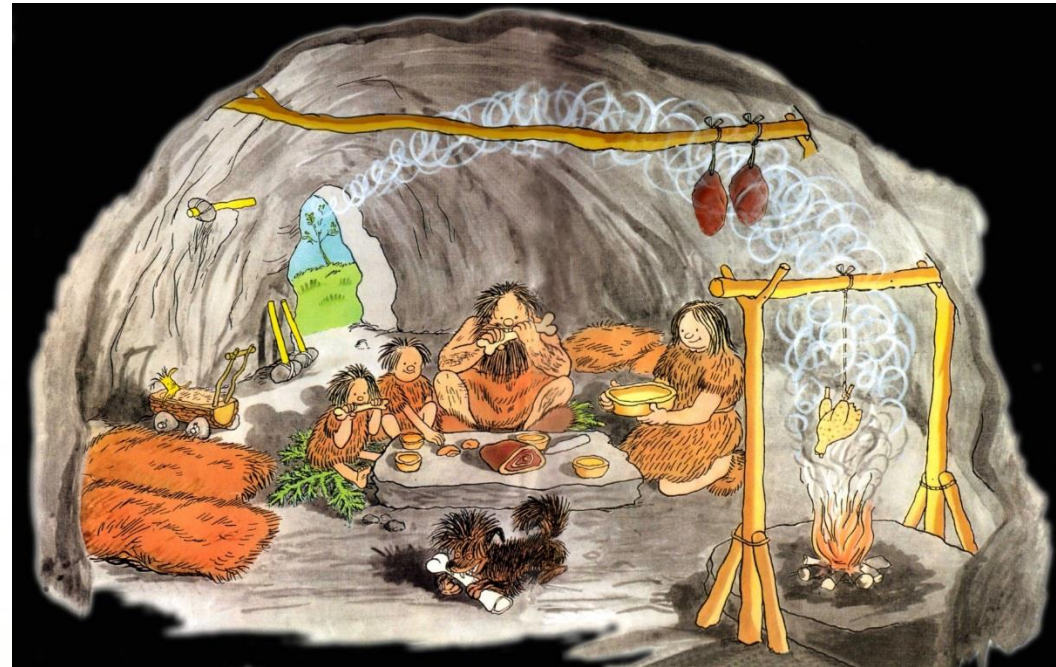
The CleanSmoke smoking process

Nürnberg, BioFach 2019

CleanSmoke smoking process

5 good reasons to smoke food

- ✓ taste
- ✓ odour
- ✓ colour
- ✓ texture
- ✓ shelf life



CleanSmoke smoking process

Effect of the smoke components

- smoke flavour (phenols)
 - taste
 - odour
- smoke colour (carbonyls)
- texture (carbonyls, acids)
- shelf life
 - microbial (acids, phenols)
 - antioxidativ (phenols)

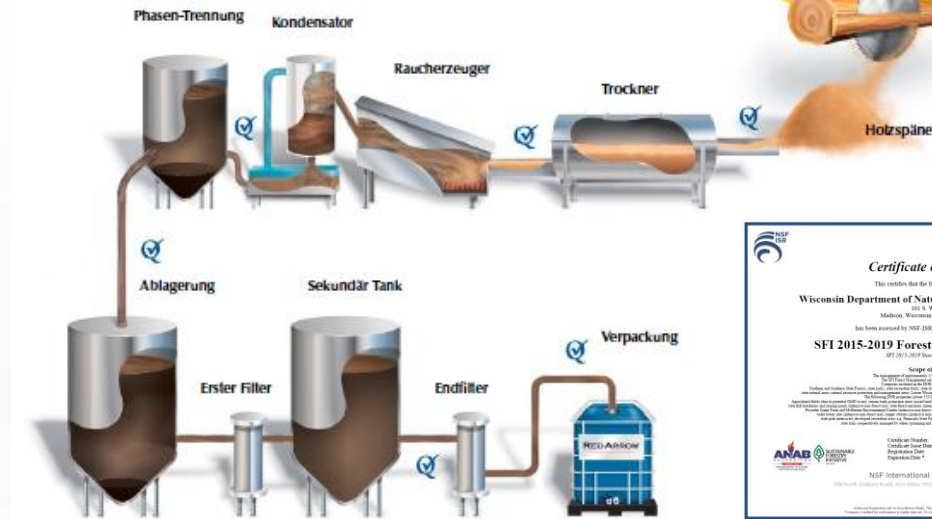


Ash, tar and gases from combustion don't contribute to the smoking result.

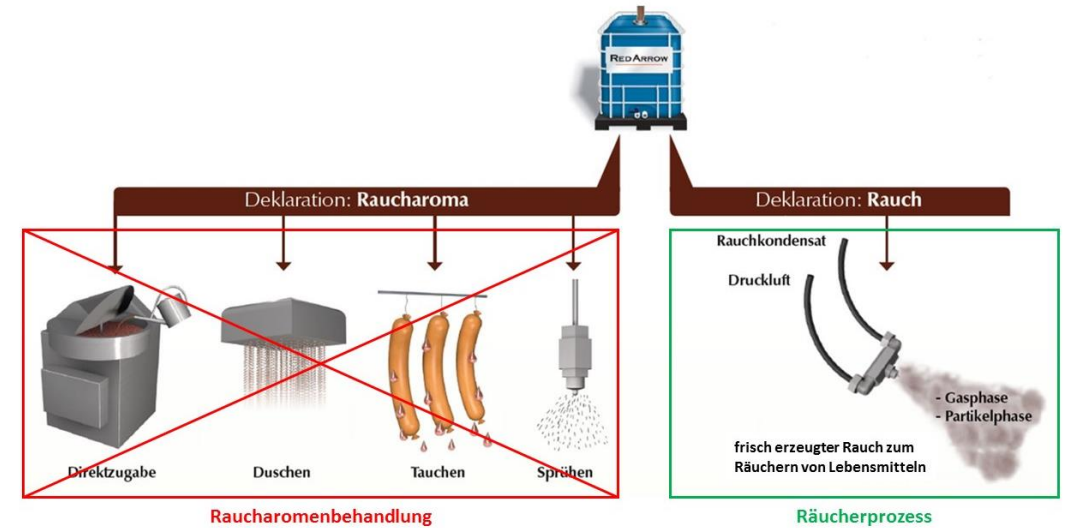
CleanSmoke smoking process production of pre-purified primary smoke products

Das Red Arrow Räucherverfahren

Der Prozess beginnt mit naturbelassenen Harthölzern aus bewirtschafteten Wäldern welche für die Bauindustrie geschlagen und gesägt werden. Die Holzspäne sind ein hochwertiges Nebenprodukt im Sägewerk.



WOOD – HEAT – WATER - FILTER



CleanSmoke smoking process

Production of primary smoke products

- ✓ Ingredients: fresh generated smoke from sawdust, water
- ✓ only 60 % demand of wood for the same smoke volume
- ✓ Charcoal and tar: 99,75 % converted into energy
- ✓ no waste water
- ✓ no smoke emissions
- ✓ gases from combustion purified with biofilter

CleanSmoke benefits

Smoking with purified smoke

- ✓ no ash
- ✓ no tar
- ✓ no gases from combustion



Smoking in enclosed smokehouses



What are key attributes of the CleanSmoke smoking process?

- ✓ real smoke (Definition Prof. Dr. Borrmann)
- ✓ smoke is transferred to food in a smoking process
- ✓ smoke transfer is comparable to the smoke transfer known from „conventional“ smoking methods: direct smoke (open fire kiln), combustion smoke, friction smoke, steam smoke
- ✓ clean as critical components have been removed in a purification process
- ✓ cleaner as it is less polluting for the entire environment:
Nature including man

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CleanSmoke Smoking Process: Developments since 2019

Nürnberg, BioFach 2022

Smoking with purified smoke

Recognition as smoking process

- Implementing regulation (EU) Nr. 1321/2013
- REFIT: EU Commission confirms smoking process
- FDM BREF – Best Available Technique
- Codex Alimentarius
- In Germany by the ALTS
(Arbeitskreis der auf dem Gebiet der Lebensmittelhygiene und der Lebensmittel tierischer Herkunft tätigen Sachverständigen)
- Statement of the BÖLW

BAT – Smoking of meat

- BAT 29. The BAT implemented for emission reduction of organic compounds in the air by the smoking of meat consist of the application of one or the combination of the following techniques

| Technique | | Description |
|-----------|-----------------------|---|
| a) | Adsorption | Organic compounds are eliminated from the exhaust stream by filter (in general activated carbon). [Problem: disposed filters end up in landfill] |
| b) | Thermal oxidation | Organic compounds are burned with energy (in general natural gas). [Problem: environment impact by the consumption of energy] |
| c) | Wet scrubber | Organic compounds are combined with an alkaline solution. [Problem: water pollution from the discharge of wet scrubber solution] |
| d) | Use of purified smoke | Smoke from purified primary smoke condensates is used for smoking the product in smokehouse. [no organic compounds that need to be disposed] |

BAT-associated emission value for implemented TVOC-emissions in the air by a smokehouse

| Parameter | Unit | BAT- associated emission value |
|-----------|--------------------|--------------------------------|
| TVOC | Mg/Nm ³ | 3 - 50 (1) (2) |

(1) The lower end of this range generally is reached by adsorption or thermal oxidation.

(2) The BAT-associated emission value does not apply if the emitting TVOC-load is less than 500 g/h.

CleanSmoke assessment

Comparability of the smoking results

*Prof. Dr. Lautenschläger
(TU OWL, Lemgo)
assessment for BMEL*

- Comparison of friction smoke and CleanSmoke
- Wiener sausages in natural casing
Pfefferbeisser in natural casing
- Analytical composition
- Microbiological stability
- Sensory Evaluation
consumer panel, DLG-panel, expert panel

CONCLUSION

The CleanSmoke smoking process in comparison to conventional smoking processes is producing comparable smoking results for the finished products regarding taste, odour, colour, texture and shelf life.

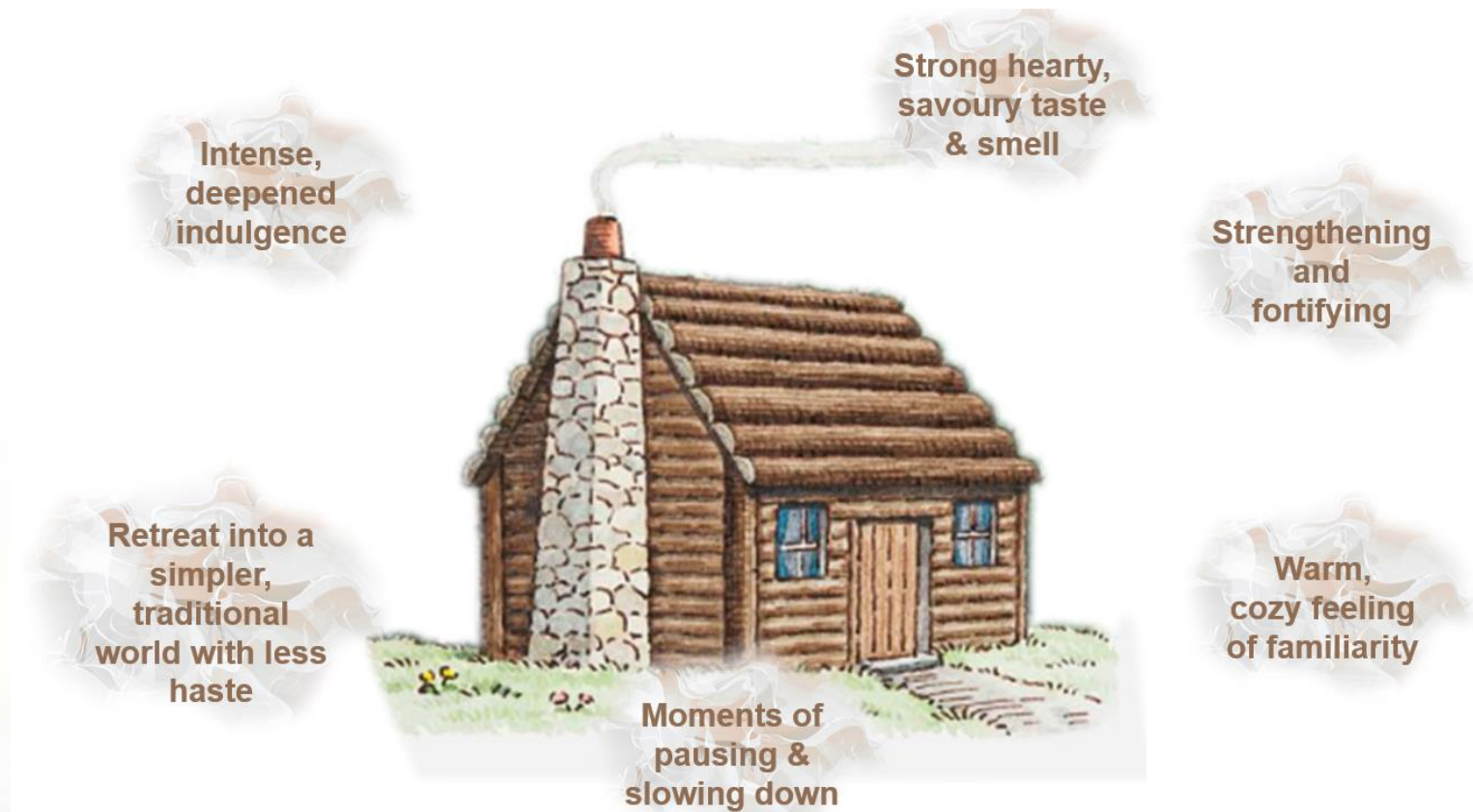
*Prof. Dr. Lautenschläger (TU OWL, Lemgo)
Assessment for the BMEL 2021*



Smoking with purified smoke

Rheingold Consumer Study

rheingold
institute



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Smoking with purified smoke

Rheingold Consumer Study

Conclusion

- Very important for consumers' acceptance of Clean Smoke is furthermore the **reassurance that Clean Smoke products have**
 - **No loss in flavour**
 - **No loss in shelf life**

compared to traditionally smoked products.

- **Respondents expect food retail to offer these products**
 - From a respondents' perspective there is **no difference with regard to classic food retail and organic specialist food retail**: they expect it from both.
 - In the first step the **organic trade customers** should be key target group as they are actually **more critical and need less persuasive efforts**, already **willing to pay more for better and safer quality**.

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Smoking with purified smoke Entrenchment in the EU-Organic-Regulation

Submission of a dossier by the BMEL (Federal Ministry of Food and Agriculture) to the attention of EU EGTOP and the EU commission for the admission of the CleanSmoke smoking process into the implementing regulation of the EU-Organic-Regulation.

Clarification for national legislators and boards of control in the EU that the CleanSmoke smoking process may be used for the processing of smoked organic food.

CleanSmoke Coalition

Smoking in the EU-Organic-Regulation



CHAPTER 3

Processed products

Article 26

Rules for the production of processed feed and food

1. Additives, processing aids and other substances and ingredients used for processing food or feed and **any processing practice applied, such as smoking, shall respect the principles of good manufacturing practice.**

CleanSmoke Organic Campaign

Lighthouse for the entire food industry



- ✓ Organic is the new „lead currency“ in the food industry
- ✓ Strategic leverage effect for the necessary transformations
- ✓ EU Green Deal with sustainable-ecologic demand to all market actors – from Farm to Fork
- ✓ National support by the BMEL and the BÖLW
- ✓ Europe-wide support by NGOs and IFOAM Europe
- ✓ CleanSmoke Educational Organic Campaign in the European Organic key markets/Organic expos/NGOs in Spain, Italy, France and the Netherlands, informative contacts in Denmark, Scandinavia, Poland and Switzerland

CleanSmoke Organic Campaign

Organic exhibitions and international cooperations

natexpo

BIO
BEURS
De biologische vakbeurs

sana

**organic
food
IBERIA**

**eco
living
IBERIA**

IFOAM
ORGANICS EUROPE

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Information on www.cleansmoke-information.eu

Information

Official Journal of the European Union



DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMANT AND OF THE COUNCIL
of 24 November 2010
on industrial emissions (integrated pollution prevention and control)
(Recast)

BEST AVAILABLE TECHNIQUE (BAT)

Summary: CleanSmoke recommended by the European Joint Research Center as best available technique (BAT) for avoiding and reducing industrial emissions

[more >](#)



The ecological advantages

At a glance: CleanSmoke smoking compared to combustion and friction smoke

[more >](#)

Clean Smoke. Clean Taste.

The CleanSmoke Coalition makes smoking future-proof

CleanSmoke information in other languages

Here you will find the CleanSmoke Flyer in English, Spanish, French, Italian, Polish and German. You can use the navigation to switch between German and English for all texts.

[more >](#)



Eco-innovation

When business meets the environment

Smoking in a closed circuit

Video documentation and Layman Report on the CleanSmoke smoking process from Red Arrow Handels GmbH

[more >](#)



The CleanSmoke Explanatory Video

"Only the best of smoke" explained in less than 3 minutes.

[more >](#)

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CleanSmoke make smoking future-proof

For people and nature. For safe organic food.
Lecture at the world's leading trade fair BioFach 2019 by Uwe Vogel, President of the CleanSmoke Coalition

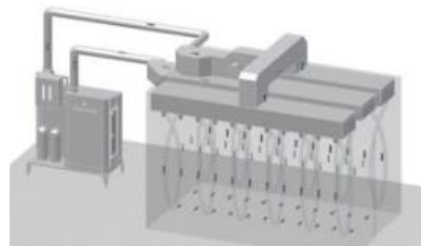
[more >](#)

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Experts on www.cleansmoke-information.eu

Experts



Good Manufacturing Practice

Although the product and environmentally friendly smoking process with pre-purified smoke in a closed circle complies with the "Good Manufacturing Practice" required by the EU organic regulation, it is not approved for organic products at state level.

[more >](#)



Smoke Technologies Fact Sheets

We have been smoking meat and fish for around 9000 years to make them more durable and tasty. A comparative overview of technical parameters and environmental pollution of different smoking processes used today

[more >](#)



Expert assessment of CleanSmoke

For Professor Dr. Stephan Borrmann, Director and Scientific Member at the Max Planck Institute for Chemistry and aerosol researcher, CleanSmoke is definitely smoke.

[more >](#)



Smoking Methods for Meat Products – Impact on Quality and Safety

Article by Prof. Dr. Achim Stiebing, former head on meat technology at Technical University of Ostwestfalen-Lippe and DLG Vice President

[more >](#)

CleanSmoke Organic Campaign

Testimonials on www.cleansmoke-information.eu

Waldgourmet

Das junge auf heimisches Wildfleisch spezialisierte Start-up setzt mit CleanSmoke auf produkt- und umweltfreundliches Räuchern.

[weiterlesen...](#)



Die Fischmanufaktur produziert mit klassisch handwerklichem Können zeitgemäße Produkte mit hohem Qualitäts- und Convenience-Faktor.

[weiterlesen...](#)



Mehr als 100 Bauern haben sich zusammengeschlossen, um ihre biologisch aufgezogenen Tiere gemeinschaftlich zu vermarkten, sie sind Bioland, Naturland oder Biokreis angeschlossen.

[weiterlesen...](#)



Die Bio-Metzgerei Packlhof beliefert nicht nur den großen Bio-Markt der Eigentümerfamilie sondern ist der exklusive Fleisch-Lieferant für 130 Alnatura-Biomärkte in ganz Deutschland.



CleanSmoke Organic Campaign - Räucherprozess

Europe-wide approval and national recognition

 Ref. Ares(2021)6627098 - 27/10/2021



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR AGRICULTURE AND RURAL DEVELOPMENT

Directorate B. Quality, Research & Innovation, Outreach
The Director

Brussels
BD/sf/agri.ddg1.b.4(2021)6582629

Dear Mr Michalzik,

I would like to thank you for your email of 13 July 2021 (ref. Ares(2021)4538310) addressed to Ms Panichi and Mr Delanghe, and the e-mail of 30 September 2021 (ref. Ares (2021) 5964611) you have addressed to Commissioner Wojciechowski who asked me to reply on his behalf.

In your correspondence you enquire about the outcome of the EGTOP evaluation of CleanSmoke. As you know, the final EGTOP report “Food VII - Feed V”¹ was published on our public website. Unfortunately, EGTOP’s advice on CleanSmoke as a product is not conclusive. According to EGTOP, when CleanSmoke is to be considered as a product, the expert group was not able to advise whether it is in accordance with the objectives and principles of organic production as laid down in organic Regulation (EU) No 848/2018².

However, if CleanSmoke would be considered as a process and not as a product, EGTOP experts suggest in their report that it may not require a specific authorisation for use in organic production - as smoking is one of the processing practices that are allowed under the organic Regulation insofar as they comply with the principles of Good Manufacturing Practices³.

This would mean that no action from the Commission services would be needed under the organic Regulation for CleanSmoke to be used in organic production as a smoking process, provided that this is compliant with the horizontal legislation and that CleanSmoke is indeed used as a process.


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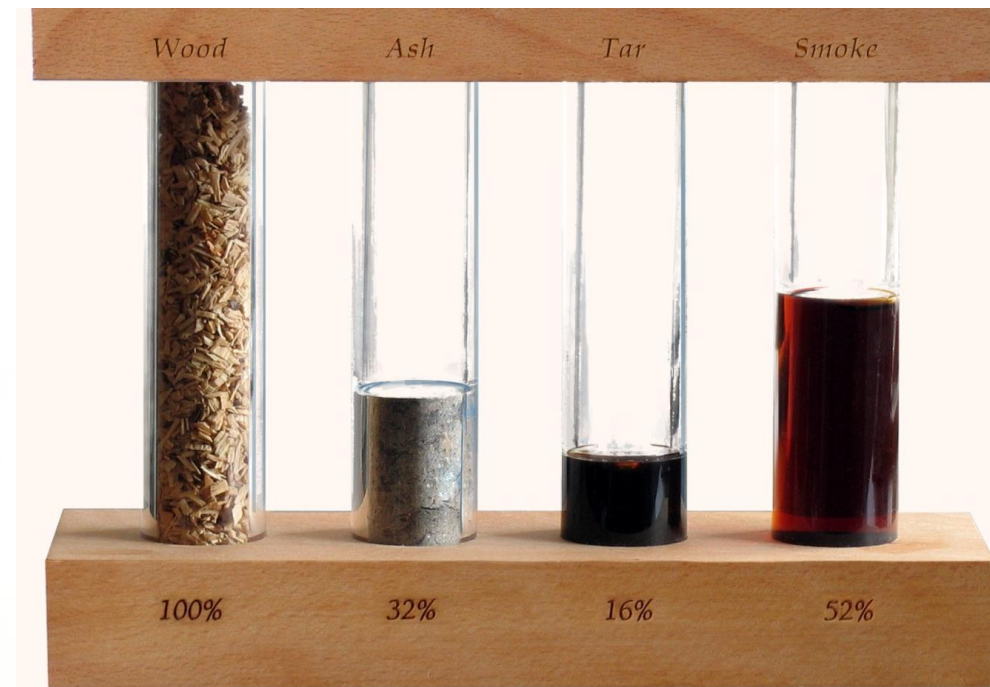
The benefits of the CleanSmoke smoking process

Nürnberg, BioFach 2022

CleanSmoke benefits with the production of primary smoke products

Purification of smoke:

- ✓ removal of ash (charcoal)
- ✓ removal of tar
- ✓ removal of PAH
- ✓ removal of gases from combustion



CleanSmoke benefits when smoking in an enclosed smokehouse

- ✓ no air emissions
- ✓ no air purification system
- ✓ lower demand for energy
- ✓ no explosion hazard
- ✓ no fire hazard



CleanSmoke benefits when smoking without tar and gases from combustion

- ✓ no PAH on food
- ✓ less 3-MCPD on food
- ✓ clean smokehouse
- ✓ clean smoking department
- ✓ healthier workmanship environment



CleanSmoke benefits Results LCA Report

Measured results of environmental influences

THE MOST IMPORTANT ENVIRONMENTAL BENEFITS FROM PRE-PURIFIED PRIMARY SMOKE PRODUCTS AT A GLANCE

| Indicators | Relative change* |
|--------------------|------------------|
| CO ₂ | - 83% |
| Exhaust emissions | -100% |
| Waste volume | -100% |
| Process water | -100% |
| Cleaning water | - 88% |
| Cleaning detergent | - 68% |

* Compared to combustion smoke

CleanSmoke benefits

Positive impact

Related to the market of smoked food the CleanSmoke-Technology has the potential of reducing:

- ✓ up to 90 percent water consumption
- ✓ 50 percent energy consumption
- ✓ 50 percent wood consumption
- ✓ 30 percent greenhouse gas emissions
- ✓ up to 80 percent chemicals consumption

Call for product and environment friendly behavior
to all organic producers and organic processors

**As well for the smoking of food
the organic branch should realise their leading role
for an ecological sustainable food industry
– before the conventional retail is making a mark
at the consumers with a better process.**

www.cleansmoke-information.eu



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Product- and environment friendly: New Smoking Process for Organic Products

Nürnberg, BioFach 2022

The first Organic Products smoked with CleanSmoke

