## Aroma Chemistry THE AROMA OF FRYING BACON



Approximate number of volatile organic compounds detected in the analysis of fried bacon's aroma. They were mainly hydrocarbons, aldehydes, ketones and alcohols. Nitrogen-containing compounds such as pyridines & pyrazines, and oxygen-containing furans were also present. Not all of them necessarily contribute to the aroma, but some are significant.

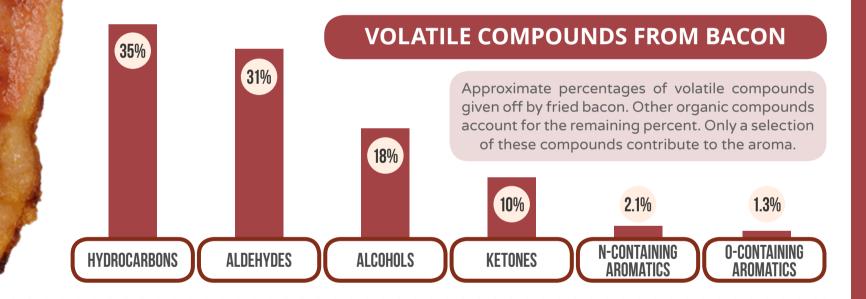
When heated, sugars in bacon react with amino acids. These reactions are known collectively as the **Maillard Reaction**. This, along with the **thermal breakdown of fats**, leads to the production of the compounds that cause cooking bacon's aroma.

**AMINO GROUP** 



SUGAR (GLUCOSE)

React to form a number of products, which can themselves react further to form many different compounds, impacting flavour and aroma.



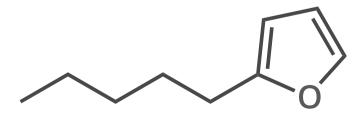


Nitrogen containing aromatic compounds such as pyridines & pyrazines have a differing odour independently, but their presence in combination with other compounds is likely to be a major contributor to the characteristic odour of bacon.

## 2,5-DIMETHYLPYRAZINE 2-ETHYL-3,5-DIMETHYLPYRAZINE

## **OTHER COMPOUNDS**

Compounds such as furans and pyridines, which have already been isolated as causing meaty aromas in other meats, are also present in bacon, and also contribute to its smell.



**2-PENTYLFURAN** 



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