AROMA CHEMISTRY

THE AROMA OF FRYING BACON

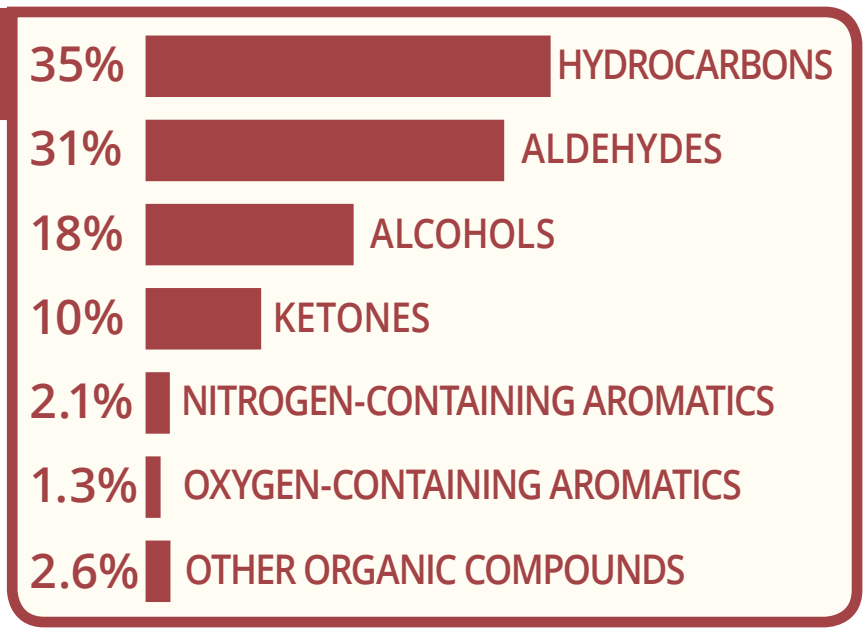
WHY DOES BACON SMELL SO GOOD?

150

The approximate number of volatile organic compounds detected in the analysis of the aroma of fried bacon. These were mainly hydrocarbons, aldehydes, ketones and alcohols, but nitrogen-containing compounds such as pyridines and pyrazines, and oxygen-containing furans were also present.

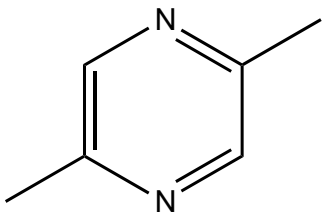
WHEN HEATED, SUGARS IN BACON REACT WITH AMINO ACIDS, KNOWN AS THE **MAILLARD REACTION**. THIS, ALONG WITH **THERMAL BREAKDOWN OF FATS**, LEADS TO THE PRODUCTION OF THE COMPOUNDS THAT IN TURN CAUSE COOKING BACON'S AROMA. THESE COMPOUNDS CAN BE DETECTED USING **GAS CHROMATOGRAPHY** COMBINED WITH **MASS SPECTROMETRY.**

VOLATILES

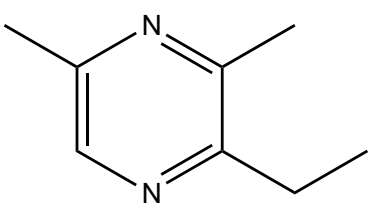


NITROGEN-CONTAINING COMPOUNDS

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.

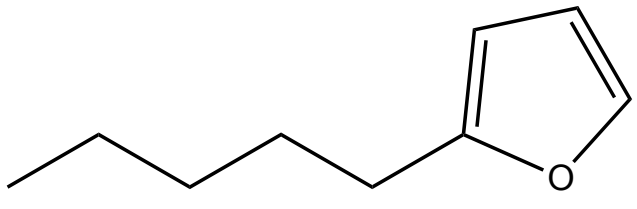


2,5-DIMETHYL PYRAZINE



2-ETHYL-3,5-DIMETHYL PYRAZINE

OTHER COMPOUNDS



2-PENTYLFURAN

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.

SOURCE: 'A STUDY OF THE AROMA OF BACON & FRIED PORK LOIN', M. TIMÓN ET AL, 2004, J SCI FOOD AGRIC 84:825-831