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ChemMatters (ISSN 0736-4687) is published four times per year (Oct/Nov, Dec/Jan, Feb/March, and April/May) by the American Chemical Society at 1155 16th St., NW, Washington, DC 20036-4800. Periodicals postage paid at Washington, DC, and additional mailing offices. POSTMASTER: Send address changes to *ChemMatters* Magazine, ACS Office of Society Services, 1155 16th St., NW, Washington, DC 20036. Subscription to *ChemMatters* is a membership benefit of the American Association of Chemistry Teachers (AACT). More information at: www.teachchemistry.org.

Subscriber Information

Prices in the United States, Canada, and Mexico: \$16 per subscription. For more information, please contact ACS Member Services, P.O. Box 182426, Columbus, OH 43218-2426; tel.: 1-800-333-9511; fax: 1-614-447-3671. Information is also available online at: www.acs.org/chemmatters.

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American Chemical Society
Canadian GST Reg. No. 125751347
Printed in the USA



Infographic Contest Winner



Are you someone who agrees with the idea that “everything’s better with bacon”? This month’s winning infographic by *Morgan Fritze and Annette Mikolajczyk* from *Maine East High School in Park Ridge, Ill.*, shows the chemistry behind why some of us find bacon such a tasty addition to our lives. Learn about the compounds and reactions that come together to result in “bacon-y” goodness!

WHY BACON SMELLS SO GOOD

Bacon is a popular flavor used in products such as:
gum, lip balm, and even soda!



Why is bacon an attractive product?

It's the mesmerizing SMELL!



The high temperature of the pan leads to browning and contributes to the breakdown of fats, both of which produce odorants

1

MAILLARD REACTION



+



=



The Maillard Reaction involves the reaction of amino acids and carbohydrates at high temperatures. This is what allows the browning of food to take place.

In bacon, the molecules formed from the Maillard reaction combine with molecules from the breakdown of fat to produce the distinctive aroma.

MAILLARD REACTION + BREAKDOWN OF FAT = INCREDIBLE AROMA

2

AROMA COMPOUNDS

There are approximately **150 AROMA COMPOUNDS** that give bacon its famous smell.

Aroma compounds are substances that can vaporize and, when combined, give off specific scents.

2/3
of the AROMA COMPOUNDS are Hydrocarbons & Aldehydes

Hydrocarbons are hydrogen and carbon atoms chained together in various ways.

Aldehydes contain a -CHO aldehyde group.

NITROGEN-CONTAINING COMPOUNDS

It is also probable that the wondrous smell of bacon is due to its various nitrogen compounds.

These compounds are called pyridines and pyrazines.

Pyridines contribute to the “meaty” aroma in bacon. When combined with other aroma compounds, they help produce the smell of “bacon-y” goodness.

PYRIDINES & PYRAZINES + HYDROCARBONS & ALDEHYDES = BACON-Y GOODNESS



SOURCES

www.youtube.com/watch?v=2P_0HGrgWxw
www.compoundchem.com/2014/16/why-does-bacon-smell-so-good-the-aroma-of-bacon

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