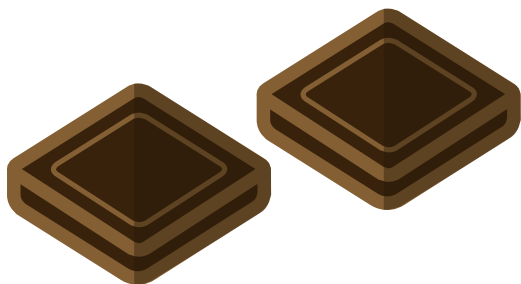
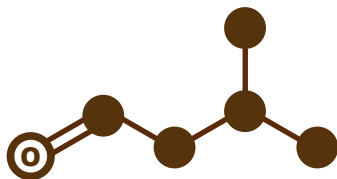


CHEMISTRY ADVENT 2017 1

THE SMELL OF CHOCOLATE

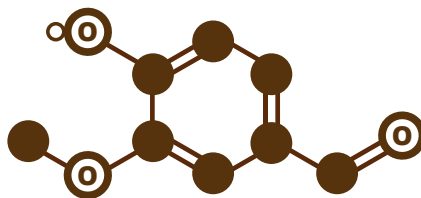


More than 600 chemical compounds have been identified in chocolate. However, a much smaller number of these actually contribute to its flavour and aroma. The structure of some of the chemicals that have been identified as important aroma contributors are shown below.



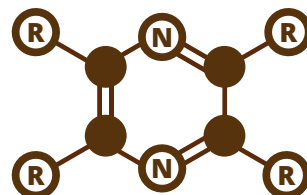
3-METHYLBUTANAL

Malty aroma; other aldehydes include 2-methylpropanal and 2-methylbutanal.



VANILLIN

Aroma of vanilla. Vanillin is not found in cocoa beans, but often added to chocolate products.



PYRAZINES

A number of pyrazines contribute nutty, cocoa, and earthy aromas.

● Carbon ○ Oxygen ○ Nitrogen ○ Rest of molecule (variable) ○ Hydrogen

Hydrogens on carbon atoms implied; each carbon has 4 bonds.



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