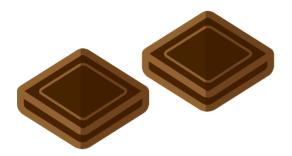
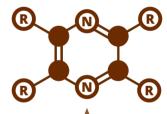
# **CHEMISTRY ADVENT 2015**

# 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

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

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

Carbon

## **VANILLIN**

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

**PYRAZINES** 

Oxygen Nitrogen



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





