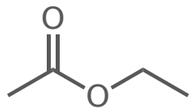
Cocktail Chemistry: The chemistry of a mojito

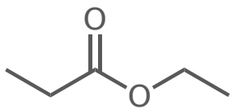
compound interest

Rum

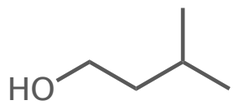
As well as containing ethanol, rum contains a range of compounds which contribute to its flavour. It contains a higher concentration of esters than other alcoholic spirits; these esters include ethyl acetate (pear drop aroma) and ethyl propanoate (caramel/fruity aroma). Other alcohols, such as isoamyl alcohol (malty aroma) also add to the aroma and flavour of rum.



Ethyl acetate

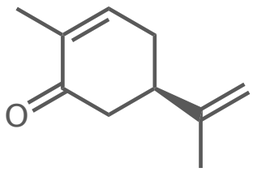


Ethyl propanoate

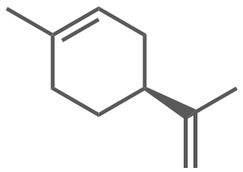


Isoamyl alcohol

Mint



(R)(−)-carvone

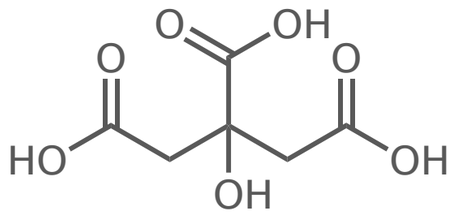


(S)(−)-limonene

The main flavour component of garden mint is an isomer of carvone, which gives it its distinctive minty smell. It also contains limonene – not the more common isomer which is found in citrus fruits, but the less common isomer which has a piny, turpentine-like aroma. Unlike peppermint, spearmint contains very little menthol.

Lime

Citric acid

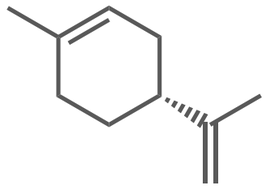


Limes have a higher acidity and lower sugar content than lemons. The main acid they contain is citric acid. They also contain (R)-(+)-limonene, which has a citrus aroma.

pH 1.8–2.0

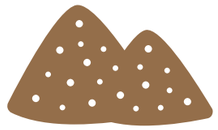
VS

pH 2.2–2.5

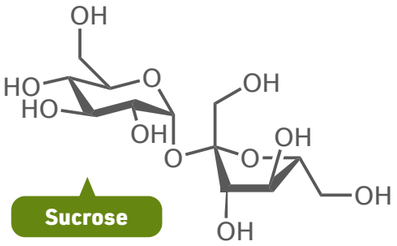


(R)(+)-limonene

Brown sugar



UP TO 10% MOLASSES BY WEIGHT



Sucrose

Brown sugar is brown due to the presence of molasses. The caramelisation of glucose and fructose, the sugars that make up sucrose, produces brown polymers.