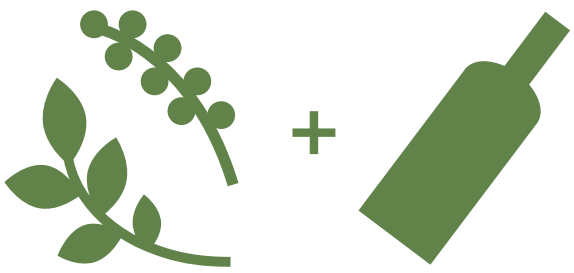
The Chemistry of Gin

COMPOUND INTEREST

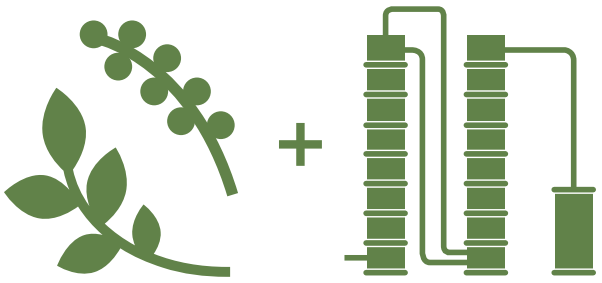


COMPOUND GIN

In compound gins, the botanical ingredients are added to a spirit without any redistillation.

POT-DISTILLED GIN

Neutral spirit is distilled, botanical ingredients are soaked in it, and it is then redistilled.

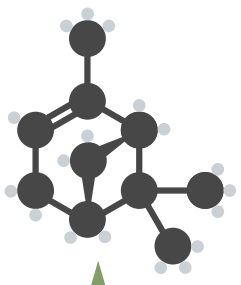


COLUMN-DISTILLED GIN

Column distillation creates a highly concentrated spirit, which is then redistilled with botanicals.

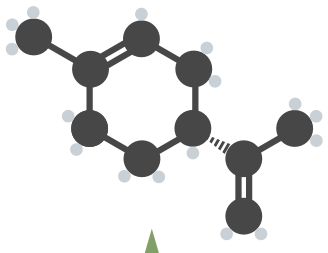
Gin comes in a number of different varieties, with widely varying chemical compositions. This stems from the different botanical ingredients that can be included. All gins must be primarily flavoured by juniper berries, but many other ingredients, including coriander, dry citrus peel, almonds, and nutmeg, can also be incorporated.

Juniper berry compounds



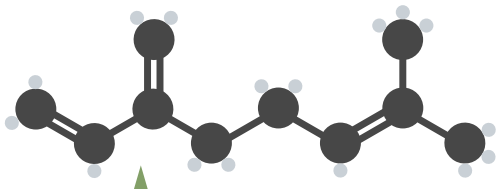
α-pinene

Aroma: woody, piney



Limonene

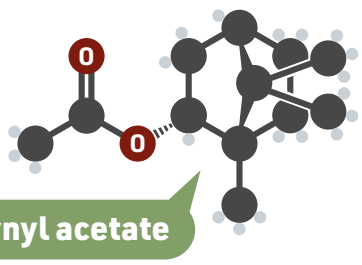
Aroma: sweet, citrus



β-myrcene

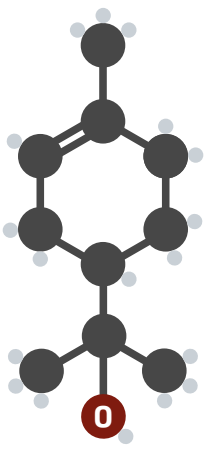
Aroma: woody, herbaceous

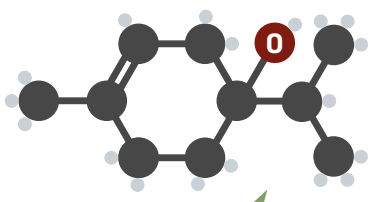
Many different terpene compounds are found in gins, a large number from the juniper berries used. Some, such as limonene, are also present in other botanical ingredients used in gin's manufacture. Other members of the terpene family of compounds that have been detected in gin include p-cymene, sabinene, and β-pinene.



Bornyl acetate

Aroma: woody, camphoreous





1,4-terpineol

Aroma: pine

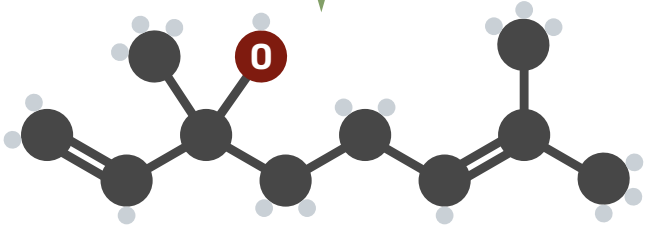
α-terpineol

Aroma: woody, spicy

Juniper berries also contribute oxygenated monoterpenes to the gin, with α-terpineol one of their main volatile compounds. As well as these, sesquiterpenes, which include cadinene & caryophyllene, are also present.

Coriander compounds

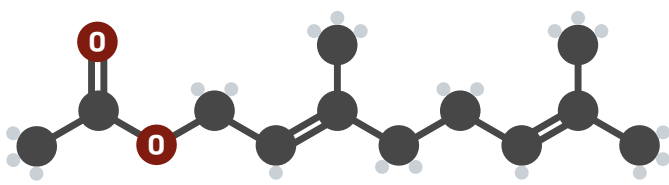
Linalool



Aroma: floral, slightly spicy

Coriander seeds are commonly used along with juniper berries in the manufacture of gin. Linalool is the major compound in their essential oil, and one of the most abundant volatile compounds in gins where coriander is used. Geranyl acetate is another coriander compound found in gins.

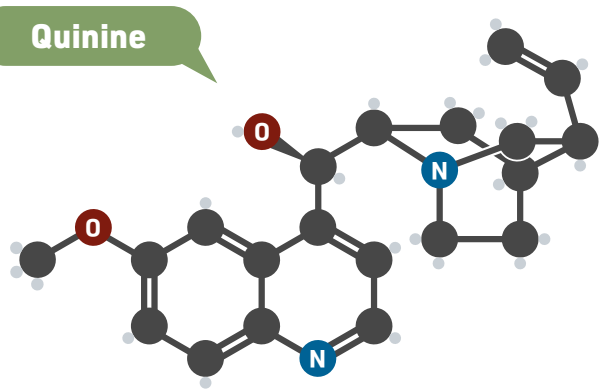
Geranyl acetate



Aroma: floral, rosy

Tonic water

Quinine



The bitter flavour of tonic water comes from quinine, which was originally added for medicinal reasons rather than those of flavour. It was added to water to act as an anti-malarial compound, and gin and tonic originated in India, where members of the British colonies would mix medicinal tonic water with gin to make it more palatable.

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