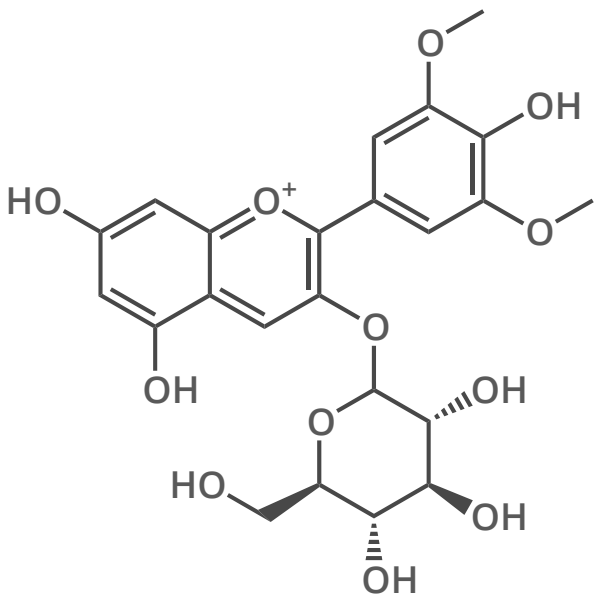
THE CHEMISTRY OF WINE

86%	12%	1%	0.4%	0.1%	0.5%
WATER	ETHANOL	GLYCEROL	ORGANIC ACIDS	TANNINS & PHENOLICS	OTHER COMPOUNDS

NOTE THAT THESE FIGURES ARE FOR AN AVERAGE COMPOSITION - EXACT PERCENTAGES WILL VARY DEPENDING ON THE PARTICULAR WINE

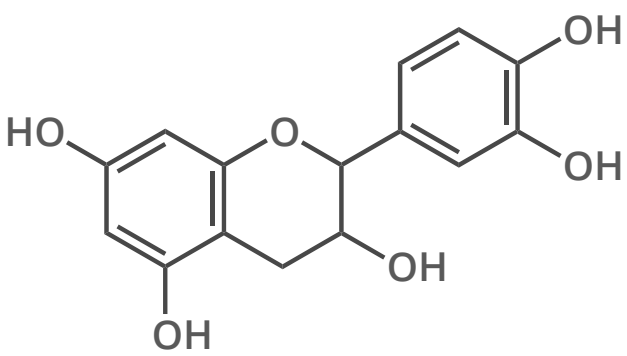
ANTHOCYANINS



MALVIDIN-3-GLUCOSIDE

Anthocyanins are found in the skin of grapes. As soon as the grapes are crushed, they can react with other chemicals in wine to produce polymeric pigments. Anthocyanins on their own are also coloured, but the colour varies depending on pH.

FLAVAN-3-OLS

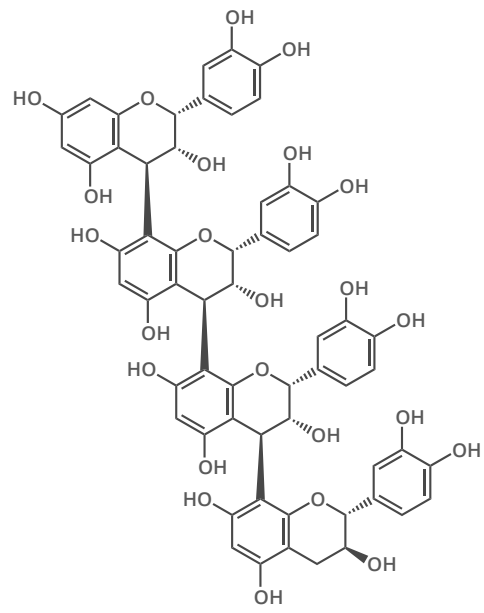


CATECHIN

Flavan-3-ols originate in the seeds of grapes, and are known for their bitterness. In red wine, the amount present can reach up to 800 milligrams per litre. 20 milligrams per litre is the amount required in order for a bitter taste to be imparted.

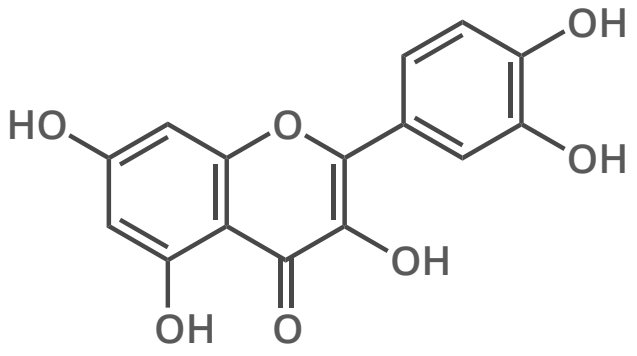
OVER 1000 DIFFERENT COMPOUNDS

TANNINS



Tannins are polymers of other chemicals within wine. Condensed tannins are polymers of flavan-3-ols, and give red wine its astringency, causing a dry feeling in the mouth after drinking. Changes in tannin structure over time are an important factor in wine aging.

FLAVONOLS



QUERCETIN

Flavonols can help enhance the colour of red wine, via a process called 'co-pigmentation'. These compounds have potential anti-oxidant and anti-carcinogenic effects; however, their concentration in red wine is likely too low to confer any significant health benefits.