**Introduction**

- Chenin lends itself to the production of top quality wines.
- The aroma of Chenin is complex, **BUT** unlike other cultivars, its comprehensive aroma fingerprint is virtually unknown.
- However, the determination of aroma compounds is challenging (>1000 volatiles in wines) and necessitates the use of advanced, high resolution analytical techniques.

**Aroma analysis of Chenin**

- Top 10 Chenin blanc awarded wines of 2016 were analysed.
- Results revealed the presence of esters (fruity, sweet), ketones (cooked fruit, spicy), aldehydes (woody, caramel), terpenes (rose-like), alcohols (mineral-like), thiols (tropical), amongst other.
- Marked differences in terms of the aroma between these 10 Chenins were observed.

**The tools**

- The technique allowed for resolving major and minor aroma compounds (**Fig 2 and 3**).
- Example of compounds detected in trace amounts are shown in **Fig 3** below:

- Furfural, decanal and nonanal were amongst the tentatively identified compounds responsible for woody aroma of some of Chenins.

**Conclusion**

- From this work it is clear, that in order to unravel the true complexity of Chenin aroma, routine GCMS is not sufficient and high resolution techniques are indispensable.

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**Fig 1.** GC×GC 3D surface plot depicting some of the major volatiles of one of the top 10 Chenins analysed.

**Fig 2.** GC×GC-HRTOFMS instrument used for analysis.

**Fig 3.** Contour plot of Chenins analysed revealing trace level aroma compounds.

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