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# ROAST COFFEE

Coffee tree berries, called coffee cherries, contain two beans which have little smell. Roasting these green coffee beans produces hundreds of compounds including furfurylthiol (or 2-methanefuranethiol), an extremely strong-smelling volatile thiol which is also associated with the empyreumatic family (see aroma and sheet n° 7), responsible for the aroma typically associated with coffee roasting. It has also been identified in cooked foodstuffs such as meat juices and grilled meat.

With regard to barrel-aged wine, it was not until the early 2000s that research managed to identify the key component of this roast coffee aroma and its origins; it comes from furfural, a compound released into the wine by the wood.

For white wine, the transformation of furfural into furfurylthiol results from yeast activity during alcoholic fermentation* in barrel. For red wine, it is produced mainly during barrel ageing and bottle ageing, and also partly during malolactic fermentation (MLF) in barrel, which has led some winemakers to do MLF in new oak. The appearance of roast coffee aromas due to the presence of furfurylthiol is mainly encouraged by ageing in new barrels and oenological methods that aim to limit the oxygenation of the wine, namely regular topping up of the barrels and limited racking without exposure to oxygen.

Major sensory changes accompany the transformation of furfural into furfurylthiol. Furfural is present in wine at levels beneath its detection threshold, leaving no olfactive trace in terms of smell or taste. Conversely, furfurylthiol has an extremely low detection threshold; its smell is quite pronounced and the merest hint can enhance the bouquet of a wine.

* see glossary