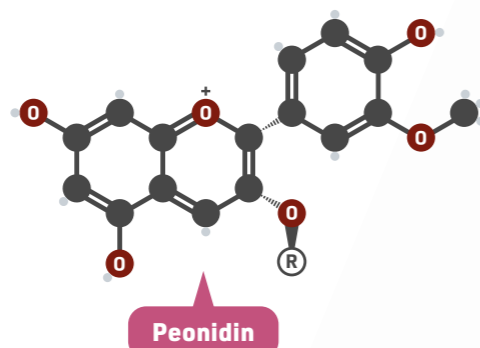
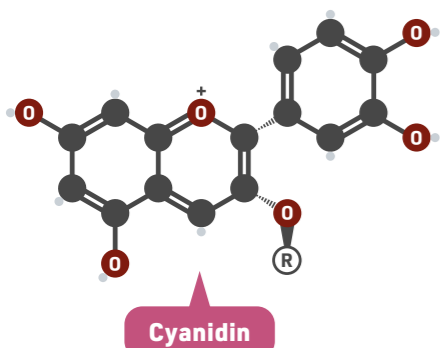


# Magnolia molecules: perfume and medicines

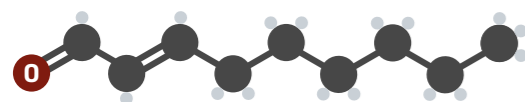
## Magnolia colour and aroma

The pink and purple hues of magnolia petals are caused by cyanidin and peonidin anthocyanin pigments.

KEY: ● Carbon ○ Oxygen ● Hydrogen (R) Sugar molecule(s) (variable)



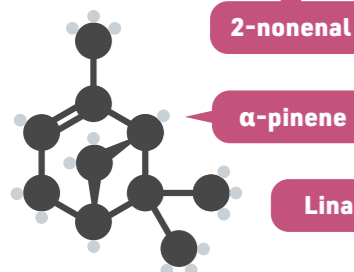
The aroma chemistry of magnolias varies by species. However, aldehydes are a common presence, including 2-nonenal, heptanal, and 2-octenal. Terpenes such as  $\alpha$ -pinene and linalool also contribute to aromas.



2-nonenal

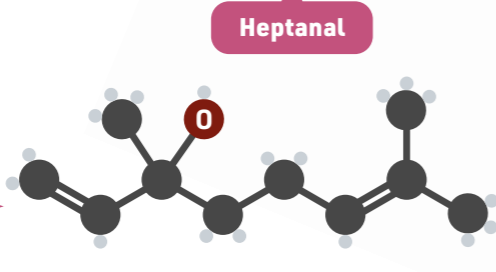


Heptanal



$\alpha$ -pinene

Linalool

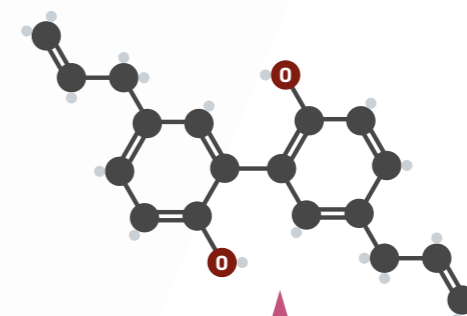


Magnolia essential oil finds uses in perfumes. Additionally, the petals of some magnolia species can be eaten.

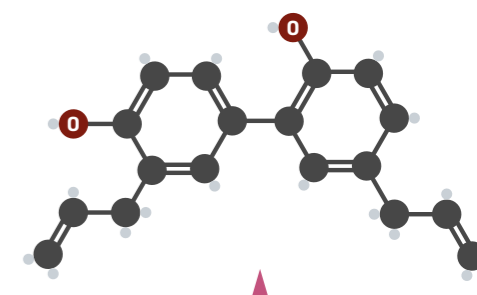


## Magnolia medicinal compounds

Magnolia bark contains a range of compounds with medicinal properties, leading to their use in traditional medicine. Magnolol and honokiol, isolated from root and stem bark, have anti-inflammatory, antioxidant, anti-cancer and neuroprotective properties.

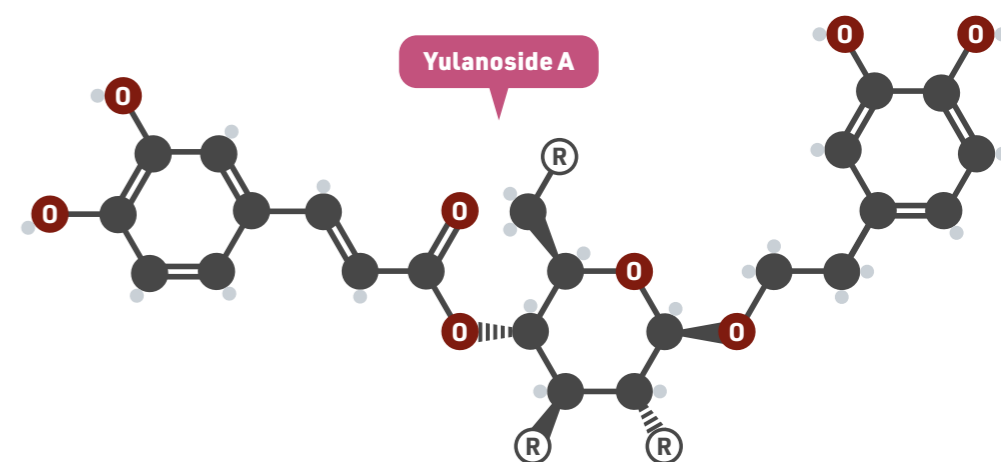


Magnolol



Honokiol

Magnolia bark also contains phenylethanoid glycosides, compounds with anti-inflammatory and anti-allergenic effects. Species in the subgenus Yulania contain phenylethanoid glycosides called yulanosides that are unique in nature.



Yulanoside A