

PHENOLIC COMPOUNDS OF WINE

OBJECTIVES

- Classification and biosynthesis of phenolic compounds
- Determination factors of the concentration of phenolic compounds
- Effect in wine quality
- Contribution in organoleptic characteristics

BIOSYNTHESIS OF PHENOLIC COMPOUNDS

- The biosynthesis starts with shikimate pathway
- PAL it is the most important enzyme on the biosynthesis of phenolic compounds
- The focalization of PAL activity depends on two factors:

	Poc fèrtil	Fèrtil	Poca disponibilitat	Molta disponibilitat
Rendiment (kg/sepa)	7 ± 1	10 ± 1	2,2	3,4
Sucres(°Brix)	20 ± 1	18 ± 1	% Etanol	12,2
Antocians(mg/Kg)	1167 ± 59	908 ± 109	Antocians(g/L)	429
Tanins (mg/Kg)	2054 ± 313	1358 ± 306	Tanins (g/L)	202,69
				2,13

ASTRINGENCY...

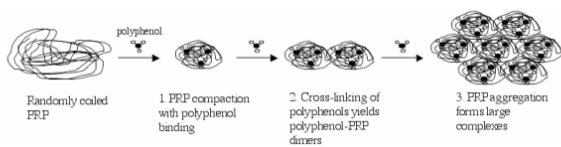
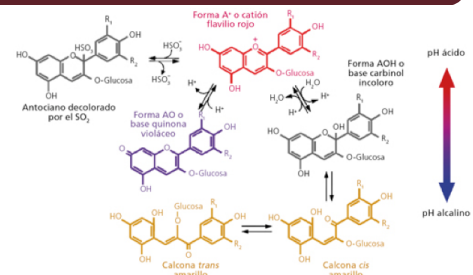


Figure 2 Proposed mechanism for FRP-polyphenol binding and subsequent protein aggregation and complex formation. Adapted from Jöbstl et al. (2004).

- The main phenolic compounds are tannins
- Depends on the part of the grape tannins come from
- How less polymerized less astringency

COLOR...



- The main phenolic compounds are flavonoids (Anthocyanins)
- Depends on the ph
- Varies with ages of wines

CONCLUSIONS

- Wine quality is closely related with the concentration of phenolic compounds
- Phenolic compounds affect on organoleptic characteristics of wine
- Phenolic concentration depends on a lot of extern factors