

Polyphenols – bioactive compounds of Teran wine. Teran – the king of the red color

LEAD PARTNER – Agricultural Institute of Slovenia

- Grape anthocyanins impair dark red-blue color of Teran wines.
 - Grape proanthocyanidins (tannins, PAs) impair wine colour, bitterness, astringency, turbidity, wine body, and ageability .
 - Content and structural characteristics of PAs determine the quality of Teran wines.
- Refošk skin PAs are composed of catechin, epicatechin, epigallocatechin and galocatechin (prodelphinidins, %P) and a low proportion of galloylated units (%G).
 Refošk seed PAs are composed of catechin, epicatechin and high %G.

Extractable grape polyphenols:

- Separation of skins and seeds and extraction in wine-like medium
- Spectrophotometrical analyses of low and high molecular weight tannins and anthocyanins in extracts
- UHPLC-MS/MS analyses of structural characteristics of seed and skin extracts.



Total grape polyphenols:

- Separation of skins and seeds and extraction in organic solvents.
- Spectrophotometrical analyses of crude extracts.
- UHPLC-MS/MS analyses of structural characteristics of seed and skin crude extracts.

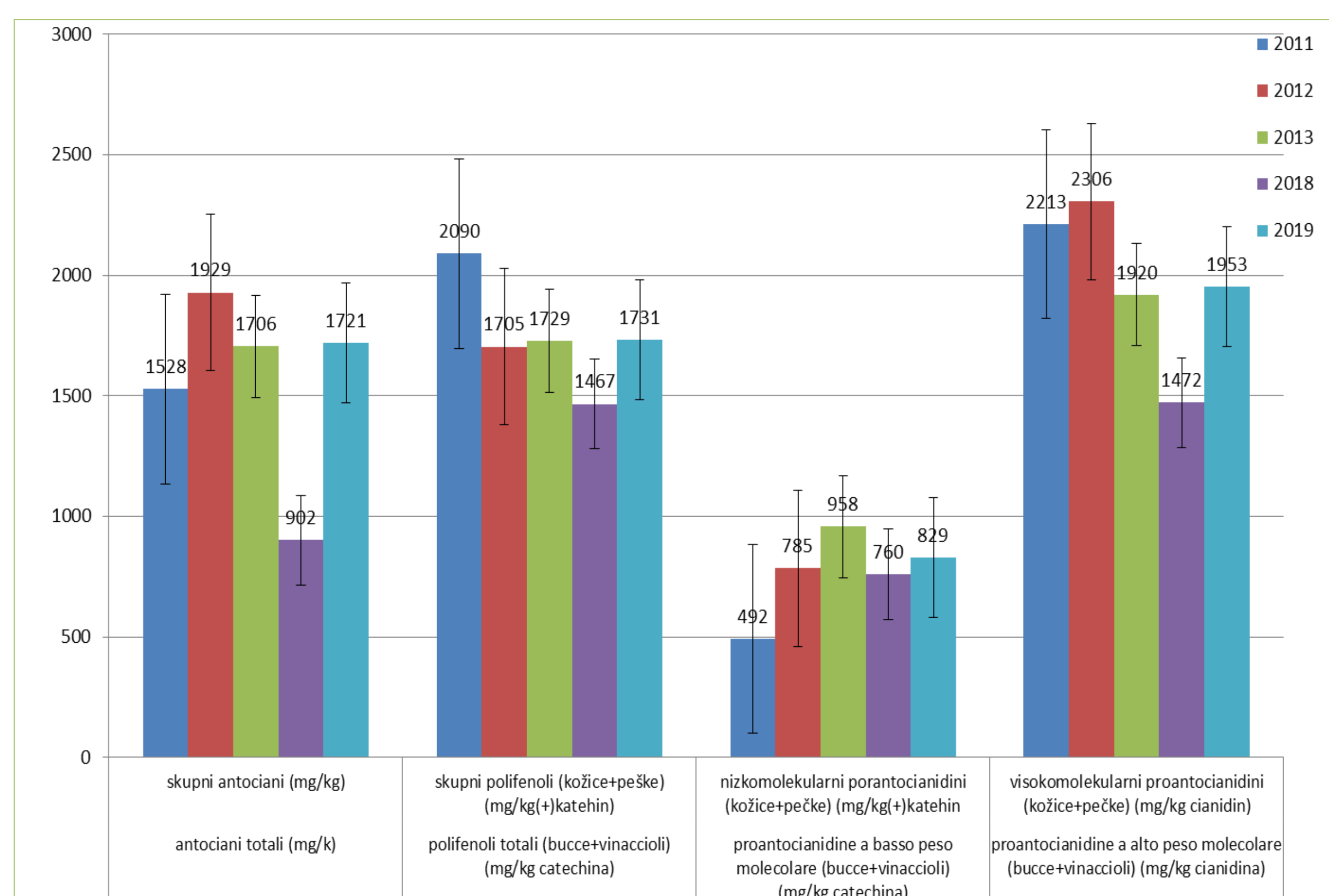


Fig. Content of extractable anthocyanins and proanthocyanidins in mg/kg of Refošk grape fresh weight (FW).

Skin total anthocyanins		
	mg/g berry FW	1,91
	mg/g dry skins DW	33,71
Skin total proanthocyanidins		
High molecular weight	HMWP (mg/g berry FW)	5,30
	HMWP (mg/g dry skins DW)	92,89
Low molecular weight	LMWP (mg/g berry FW)	1,98
	LMWP (mg/g dry skins DW)	34,20
	mDP	18
	% G	12
	% P	28
Seed total proanthocyanidins		
High molecular weight	HMWP (mg/g berry FW)	1,74
	HMWP (mg/g dry seeds DW)	125,72
	LMWP (mg/g berry FW)	1,23
Low molecular weight	LMWP (mg/g dry seeds DW)	79,97
	mDP	8
	% G	47

Results and perspectives

- Anthocyanin content in Teran wine is above-average and tannin content is on the average.
- Teran is consumed mostly as young, drinkable wine.
- The content of anthocyanins in young red wines is higher than in aged. Teran represents good source of anthocyanins in the diet.
- The high molecular weight tannin fraction could be extracted from seeds in postalcoholic maceration and improve the body and ageability of Teran wines.

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