TRANS- AND *CIS*-RESVERATROL IN RED WINES PRODUCED FROM AUTOCHTHONOUS GRAPE VARIETIES

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Abstract

Over the last few years is shown a great interest in autochthonous ('native') wine grape varieties amongst the research and wine communities. This has been due, in part, to their generally greater resistance against fungal and virus attacks and, particularly in synthesis of resveratrol. Chemically, resveratrol is a substance of a polyphenolic character from the group of phytoalexins-3,5,4'-trihydroxystilbene and exist in *cis* and *trans* isomer forms. Grapes of *Vitis vinifera* and especially red wine represent its main source in human diet. The average concentration in red wines of world provenience fluctuates between 1.0 and 3.0 mg/l. *trans*-, *cis*- and total resveratrol content, quantified as aglycone of resveratrol, has been determined in 25 mono varietal red wines from autochthonous grape varieties (Shesh i zi, Serin i zi, Debin e zeze, Vlosh) and international grape varieties (Merlot and Cabernet Sauvignon). Resveratrol was determined by HPLC method with UV-Vis detection after direct injection of wine samples. As expected, red wines from autochthonous grape varieties appeared to contain relatively high levels of resveratrol (from 0.3 to 6.8 mg/l) and *trans*/*cis* ratio ranged from 0.04 to 3.1, excess of *cis*-resveratrol to *trans*-isomer was typical for red wine growing in southeast region of Albania, where vineyards are exposed to higher environmental stress as low temperature and UV radiation.

Keywords: *red wine, autochthonous, trans-resveratrol, HPLC.*