Effect of toasting on non-volatile and volatile vine-shoots low molecular weight phenolic compounds

R. Sánchez-Gómez, A. Zalacain, G.L. Alonso, M.R. Salinas *

Universidad de Castilla-La Mancha, E.T.S.I. Agrónomos y Montes, Cátedra de Química Agrícola, Avda. de España s/n, 02071 Albacete, Spain

ABSTRACT

Low molecular weight phenolic compounds (LMWPC), including non-volatile and volatile, of Airén and Moscatel vine-shoot cultivars waste submitted to different toasting conditions (light, 180°/15 min; medium, 180°/30 min; high 180°/45 min) were studied in order to exploit them with oenological purposes. The LMWPC differences were mainly due to the toasting times rather than vine-shoot variety. In non-volatile LMWPC fraction, flavonols and almost all phenolic acids decreased by toasting. The presence of trans-resveratrol has a special relevance at light toasting: 14 times more concentrated in Airén and 6 times in Moscatel vine-shoots, than their respective non-toasted samples. The volatile LMWPC showed a significant increment with toasting, being vanillin the one with the highest difference respect to non-toasted samples at high conditions: more than 15 times in Airén and 11 in Moscatel. Although toasting reduced some LMWPC, particular characteristics of these vine-shoots must be taken into account when considering its future use.

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