

P52: INFLUENCE OF SULPHUR DIOXIDE AND/OR ASCORBIC ACID ON THE ANTIOXIDANT ACTIVITY OF RESINATED WINE MODELS AND THEIR OXIDATIVE STABILITY UNDER ACCELERATED CONDITIONS

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The impact of sulphur dioxide and/or ascorbic acid on the antioxidant activity of resinated wine models containing (+)-catechin and chlorogenic acid was examined using models containing different levels of the above constituents as well as constituents extracted from the Pinus Halepensis resin. The composition was selected in terms of an experimental design approach (Taguchi method). The antioxidant activity of the prepared models was examined employing the Folin-Ciocalteu assay and the scavenging of the DPPH radical. Selected models were stored under accelerated oxidation conditions (11 days, dark, 55°C, 33 % headspace) and evaluated for the changes in antioxidant activity and the possible formation of brown pigments (A_{420}). The results indicated that the resin's constituents did not contribute to the antioxidant activity of the models. Antagonistic phenomena among the constituents were observed which were more pronounced in the case of the DPPH assay. Models using a single typical sulfur dioxide concentration (35 mg/L) with (100, 150 and 200 mg/L) or without ascorbic acid were stored under accelerated oxidation conditions. On the basis of Folin-Ciocalteu assay after the end of the storage the activity was always higher than that of the control (1.08-1.4 fold). Examination with the DPPH assay showed that the activity after storage was higher than that of the control only when ascorbic acid was added at 200 mg/L. Under the experimental conditions employed formation of brown pigments remained low.