QUALITY (ANTIOXIDANT CAPACITY, TRANS-RESVERATROL, COLOR) AND SAFETY (OCHRATOXIN) IN RED WINE OF ARGENTINE AND PARANÁ STATE, BRAZIL

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ABSTRACT

Moderate consumption of wine is recommended due to benefic effect on health, with emphasis on resveratrol. The safety of wine productiveness chain should be ensured by avoiding contamination of ochratoxin A (OTA) producing Aspergillus spp. The Argentinean wine produced with Vitis vinifera, as well as Paraná wine produced with Vitis labrusca- Bordeaux were evaluated concerning OTA contamination by High Performance Liquid Chromatography (HPLC, Limit of detection - LD =0.05 ng mL⁻¹ and Limit of quantification - LQ= 0.07 ng mL⁻¹), in parallel to quality characteristic targeted on antioxidant capacity, trans-resveratrol and chromatic parameter (L*, C* e hº) were analyzed by Principal Component Analysis (PCA). Only one sample (0.12 ±0.01 ng mL⁻¹) showed OTA contamination, with levels below the limit established by Brazilian legislation and European Community (2 ng mL⁻¹), when a total of 60 wines were analyzed. The Bordeaux wine showed antioxidant capacity level ranging from 2.79±0.00 to 8.21±0.18 mmol L⁻¹, while the same profile analysis in V. vinifera wine ranged from 6.63±0.39 to 9.18±0.06 mmol L⁻¹. The trans-resveratrol was detected in 57 out of 60 samples, which ranged from non-detectable to 16.4±0.04 mg L⁻¹ level (HPLC-PDA, LD=0.01 mg L⁻¹ and LQ=0.03 mg L⁻¹). The Cabernet sauvignon wine samples (1.48 mg L⁻¹) showed lower trans-resveratrol level than Bordeaux wine (3.33 mg L⁻¹). And strong relationship between trans-resveratrol and hº parameter was observed by PCA. The South-American wines showed interesting profile concerning level of antioxidants in detriment to lower OTA contamination, which can provide benefit effect to human health.

Key words: Bordeaux wine, Vitis vinifera, antioxidant, ochratoxin

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