

Ochratoxin A and filamentous fungi evaluation in Grapes (*Vitis vinifera*) from Santa Catarina State, Southern Brazil

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The quality of wines has been evaluated traditionally according to its organoleptic properties. Recently, safety issues have been raised, such as pesticide residues and mycotoxins (e.g., ochratoxin A), with the introduction of new agricultural practices and the development of analytical methods with higher sensitivity. Ochratoxin A (OTA) is produced by some *Aspergillus* and *Penicillium* species and its contamination of wine is now a major safety issue.

The mycobiota and OTA in Southern Brazilian grapes were assessed. 30 samples of grapes, collected in 16 vineyards from the two most important wine sub-regions of the State of Santa Catarina, Brazil, were analysed for their micobiota and 9 were also analysed for OTA. The mycobiota was evaluated by plating 10 grapes from each sample in Dichloran Rose Bengal Chloranfenicol Agar and Sabouraud Dextrose Agar, supplemented with chloranfenicol. Czapeck Yeast Agar was used for the assessment of OTA production by black *Aspergillus* strains. OTA determination from grapes was by chromatography with immunoaffinity clean-up.

Cladosporium (found in 86.7% of plated berries), *Alternaria* (80.0%), *Botrytis* (70.0%), *Aspergillus* (66.7%), *Penicillium* (63.3%), *Aureobasidium* (30.0%), *Rhizopus* (16.7%), *Fusarium* (13.3%), *Epicoccum* (10.0%), and *Nigrospora* (6.7%) were the main fungi isolated from the grapes. 62 *Aspergillus* strains were isolated, of which 16 were black. All these black *Aspergillus* were from the *A. niger* aggregate and from which OTA was not detected. OTA was analysed in 9 samples, from which 6 were positive, at levels from 0.16 µg /Kg to 0.77 µg/Kg.

In conclusion, black *Aspergillus* strains were found in grapes, but, despite of not being able to produce detectable amounts of OTA, OTA was also found in some grape samples.

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