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(P4) Influence of different activated carbons on Ochratoxin A decrease in wines

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The presence of mycotoxins in foodstuff is a matter of concern for food safety. Wines can also be contaminated with these toxicants. Several authors have demonstrated the presence of mycotoxins in wine, especially ochratoxin A (OTA) [1]. As these toxicants can never be completely removed from the food chain, many countries have defined levels in food in order to attend health concerns. The maximum acceptable level of OTA in wines is 2.0 µg/kg according to the Commission regulation No. 1881/2006 [2]. Although, higher levels of OTA have been detected in several wine samples.

In order to reduce OTA to safer levels, several oenological products can be used in wine; including activated carbons, as shown in previous experiments. Regarding this, the aim of present study was to evaluate the effectiveness of several activated carbons for reducing the amount of OTA present in white and red wines as well as to evaluate their effect on wines physicochemical characteristics.

Wine samples were artificially supplemented with OTA at a final concentration of 10.0 µg/L. The different activated carbons were applied at the concentration recommended by the manufacturer in order to evaluate their efficiency in reducing OTA levels. A mixture composed by gelatine, bentonite and activated carbon reduced 80% of OTA concentration in white

wine. The same mixture was however less efficient in red wine, achieving only a reduction of 55%. Thereafter, the effect of activated carbon was evaluated in a red wine, achieving reductions of 66%. Considering these results more assays are being performed with other commercial activated carbons, in order to evaluate their efficiency. These results may provide valuable information for winemakers. Knowing the effect of commercial activated carbons they may choose most appropriate products to remove OTA, thus enhancing wine safety and quality.

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