Impact of wine manufacturing practice on the occurrence of fining agents with allergenic potential.

Proteinogenic wine fining agents are hidden allergens and could present a risk for consumers with allergies. Therefore, the European Parliament adopted Directive 2003/89/EC amending Directive 2000/13/EC to declare ingredients, contaminations and processing aids that are known to trigger allergic reactions. The Amendment Regulation (EU) 1266/2010 excluded the labelling of wines which are processed with hen's egg and products thereof until 30 June 2012 to get more scientific findings. After 1 July 2012 wine fining agents have to be declared if above 0.25 mg l(-1) (Regulation (EU) 579/2012 in conjunction with article 120 g of Regulation (EU) 1234/2007). The Organisation International de la Vigne et du Vin (OIV) advises this limit of detection (LOD) for potential allergenic residues of proteins. Wine fining agents are processing aids and according to the wine producer's knowledge will be removed after coagulation by filtration or other production steps. Due to lack of scientific data, residues of fining agents in the final product could not be excluded. In this risk assessment, highly sensitive ELISA methods for ovalbumin of known origin for wine have been developed. The objective was to investigate the presence of allergen residues in wine after certain technological treatments were applied.
to remove the wine fining agents. For all developed ELISA methods the LODs are in the low µg l(-1) range between 5 and 10 µg l(-1) fining agent, whereas the LOQ varies between 5 and 80 µg l(-1) fining agent. The results of the investigation of well-known wines and fining agents demonstrate that white wines fined with white or ovalbumin from hen’s egg could retain allergens. The use of certain technological procedures during wine processing leads to different results. In white wine, bentonite or sheet filtration followed by sterile filtration lead to wines containing no detectable amounts of ovalbumin. In red wine, especially the final sterile filtration removes the fining agents.