Introduction

The emerging threats of mycotoxin contamination in our food, particularly ochratoxin A (OTA), have led to surveillance programs employing low-level screening methods in both industrial and government food safety laboratories. The persistent nature of this contaminant has led to its widespread occurrence in a variety of food products, including cereals, beer, and wine. Of particular interest to this investigation is the persistant nature of this contaminant has led to its inclusion in international regulations required by the European Union (EU) and the United States (US) to accommodate the tabless cartridges. New technology was developed for the determination of OTA in red wines (r² = 0.992). A second study was performed on 7 replicates of a fortified wine sample. The method repeatability (rSD%) was 7%.

Future work will include the feasibility in eliminating the evaporation step in this method. Feasibility of including beer matrices with these method parameters will also be evaluated.

Conclusions

A UPLC-MS/MS method based on application specific ISOLUTE Myco SPE cartridges for sample clean-up was developed for the determination of OTA in red wine samples at the low levels required by international regulations. Technology transfer for automation of this method was demonstrated.

Note: The RapidTrace® workstation required an inexpensivebufusion to accommodate the tableless cartridges.