Supplemental data

DEVELOPMENT OF AN INDIRECT ENZYME IMMUNOASSAY FOR THE DETERMINATION OF THIABENDAZOLE IN WHITE AND RED WINES

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Chemical structure of thiabendazole

Figure S1. Chemical structures of thiabendazole (A) and thiabendazole derivative used for the preparation of immunogen and BSA-thiabendazole conjugate (B).

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Immunoassay schematic

Figure S2. Schematic representation of indirect enzyme immunoassay for thiabendazole determination: (a) thiabendazole-BSA conjugate is immobilized on microtitration wells; (b) a mixture of monoclonal antibody against thiabendazole with the standard solution or the sample is added to each well; (c) excess of reagents is removed by washing; (d) anti-thiabendazole antibody bound onto the immobilized thiabendazole-BSA conjugate reacts with goat anti-mouse IgG antibody-HRP conjugate followed by addition of chromogenic HRP substrate (H₂O₂/ABTS).

Optimization of BSA-thiabendazole conjugate and anti-thiabendazole antibody concentration

Figure S3. Antibody titration curves obtained using BSA-thiabendazole conjugate concentrations of 50 ($\square$), 100 ($\circ$), 200 ($\triangle$), 500 ng mL⁻¹ (∇) for coating. Each point is the mean value of 4 replicates $\pm$ SD.

Correlation with LC/MS-MS

Figure S4. Correlation of values determined for wine samples fortified with thiabendazole using the ELISA method developed with those determined by the LC/MS-MS method. The linear regression equation is $y = 1.033(\pm 0.010)x - 0.71(\pm 1.14)$, indicating good agreement of results obtained with the two methods.