We presented an innovative rapid method to detect allergens in wine. Thanks to the wide flexibility of the approach, this method can be potentially extended to larger panels of allergens and to the detection of mycotoxins, for instance ochratoxin.

The PRX System is composed of three different elements: a compact reader, a proprietary software and a custom disposable cartridge, which contains the biosensing surface.

**THE DEVICE**

The PRX System is designed to perform the detection of Lysozyme, Ovalbumin and Casein at the same time.

**RESULTS**

**LYSOZIME RESULTS**

Six blank wine samples were analysed. The mean relative signal is 100 ± 5.3%.

By subtracting 3 standard deviations, a cut off was set at 84.0% enabling to set the Limit of Detection (LOD) at 0.15 µg/ml.

The same samples were spiked at 0.25 µg/ml Lysozyme and all determinations were revealed as positive, thus the Limit of Quantification (LOQ) was set at 0.25 µg/ml.

With this value of LOQ, the sensitivity turned out to be 99.18%.

**OVALBUMIN RESULTS**

Six blank wine samples were analysed. The mean relative signal is 0.3 ± 2.2%.

By adding 3 standard deviations, a cut off was set at 6.8% enabling to set the Limit of Detection (LOD) at 0.10 µg/ml.

The same samples were spiked at 0.25 µg/ml Ovalbumin and all determinations were revealed as positive, thus the Limit of Quantification (LOQ) was set at 0.25 µg/ml.

With this value of LOQ, the sensitivity turned out to be 99.45%.

**CONCLUSIONS**

We presented an innovative rapid method to detect allergens in wine. Thanks to the wide flexibility of the approach, this method can be potentially extended to larger panels of allergens and to the detection of mycotoxins, for instance ochratoxin.