As interest in recycling wine industry waste products (such as grape marc) is steadily rising, there is a need to gain an understanding of the chemical and biological systems at work in the waste products. One important aspect of this is evaluating any residual agrochemicals present. This poster describes a new method developed to analyse common viticultural agrochemicals in grape marc.

**Extraction**

- Modified QuEChERS technique used for extraction
- Extraction in centrifuge tubes with acetonitrile, quick and easy
- Rehydration of sample required due to low moisture content. Only 3 g of marc needed
- Specialised dSPE extraction tubes used to remove excess colour compounds
- Further contaminants removed by filtering final extract

**Analysis**

- Quantitative LCMS/MS based analysis
- Analysis of 64 agrochemical residues in grape marc
- Detection of residues at 0.05 mg/kg for most compounds
- Assay covers both currently registered and recently deregistered compounds
- Easy identification due to unique ion fragmentation (Figure 2)
- Iprodione most commonly identified compound with d5-Atrazine used as an internal standard for quantification.

This method was employed in a survey of 122 grape marc samples, and provided key information on the retention of agrochemical residues within this wine industry waste product. The method could provide valuable information to producers wishing to sell their marc for use in other areas such as feed supplements for livestock. Analysis of grape marc for agrochemical residues is offered by AWRI Commercial Services.