



Sample preparation for UOW Low and High Resolution

Mass Spectral Service

For MS analysis, samples must be prepared as follows:

FOR LOW RES SAMPLES (Walk-up instruments = “do it yourself” analysis)

- The compound must be dissolved in a solvent where it is **FULLY** soluble (methanol or acetonitrile preferably) - **use HPLC grades (or higher purity) solvents only.**
- If needed Dichloromethane or Chloroform can be added (up to 50% of solvent volume) – Solvents need to be HPLC grade as well!
- Solution must be **FREE** of precipitate and “fluff” (floating particles such as lint)
- For **ESI-MS** the compound must be prepared at a concentration of **0.01mg/mL** (=10µg/ml) – which can be obtained by a 1:100 dilution from a 1 mg/mL solution.
- For **EI-MS** use a concentration of **1 mg/mL** solution in HPLC grade solvent
- Prepare a volume of about 500 µL - 1 ml.

FOR HIGH RES SAMPLES (submission for analysis by staff)

- The compound must be dissolved in a solvent where it is **FULLY** soluble (methanol or acetonitrile preferably) - **use HPLC grade (or higher purity) solvents only.**
- If needed Dichloromethane or Chloroform can be added (up to 50% of solvent volume) – Solvents need to be HPLC grade as well!
- Solution must be **FREE** of precipitate and “fluff” (floating particles such as lint)
- For **ESI-MS** the compound concentration used for low res analysis on the walk up instrument must be diluted by 100 (or 1000) times using HPLC-grade or higher solvent(s).
- For **ASAP-MS** (EI equivalent) provide a 100-times (or 1000-times) dilute solution from that used for low res (walk-up) EI analysis; use only HPLC grade or higher solvent(s).
- For each of these two samples prepare a volume of about 500 µL - 1 ml.

In all cases

- Sample must be placed in a **SCREW CAP** vial.
- **Attach both samples to the HRMS submission form: low res concentration AND the 100-fold or 1000-fold dilution. Clearly label each vial.**
- For high resolution analysis: a High resolution submission form must be filled **IN DETAIL** (all fields required) **for EACH submitted sample.**
- The low res spectra **SHOWING** the ion(s) of interest *must be* stapled to the HRMS form.
- Both samples must be taped and clearly labelled on the HRMS submission form.
- Don't forget to indicate the compound's molecular formula and all required info on the form
- Select only **ONE** ionisation mode: low res analysis will tell you if + or – is best for your compound. Staff are also available for consultation; just ask us ☺

To ensure an efficient service please adhere to the above rules
– *especially concentration and solvent purity* –
otherwise we will ask that users reprepare/resubmit their samples.