Sample considerations for GC-MS

1. Sample considerations

- Label your sample vial with sample I.D.
- Samples should be prepared in the user's lab.
- Total sample volume can vary from 0.5 - 1.5 mL. If you have less sample volume than 0.3 mL, ask for assistance.
- Do not overfill the vials, fill each vial up to 90 % only.
- Use only the standard 2mL autosampler sample vials with a PTFE lined cap to minimize contamination and evaporation. A wrong sample vial could damage the autosampler management system.

2. Sample preparation

- A clean matrix presents a higher chance for a clean spectrum
- **You must filter your sample if it is cloudy or displays visible particulates. Use** a 0.45 µm or finer filter just prior to analysis.
- Choose the right filter for your sample:
    - Nylon: broad solvent compatibility, aqueous and organic materials
    - PTFE: ideal for HPLC, UHPLC sample preparation and excellent solvent resistance
    - PES (polyethersulfone): highest flow rates, ideal for ion chromatography, low protein binding for biological samples
    - PVDF (polyvinylidene): broad chemical compatibility, fast flow, low protein binding for biological samples; low UV absorbing extractables for HPLC and UHPLC.

3. Analyte considerations

- Typical concentration range is 1 to 100 ppm, or 1-10 mg/mL.
- Analytes should be volatile enough to pass through a GC column heated at 300° degrees C. Typically non polar compounds up to MW of 500 or polar compounds up to MW of 300 will make it through (benzoic acid, cholesterol, C30 alkane)

4. Solvents

Samples should be submitted in high volatility solvents such as DCM, hexane, ether, isooctane, cyclohexane etc.

Samples should not contain: non-volatile salts, metals or polymers.