



Forensic Chemistry Section

Fire Debris Simple Headspace Extraction Method

1. Scope

This document details the method for extracting evidence for the analysis of alcohols, light oxygenated compounds and very light compounds.

2. Safety

- 2.1 Fire debris will be processed in the laboratory fume hood. The sash will be lowered as low as practicable when handling the evidence.
- 2.2 The examiner will not sniff or smell the evidence.
- 2.3 Disposable laboratory coats and 6 mil or thicker nitrile gloves will be worn when processing the evidence.

3. Method

- 3.1 A new sterile syringe will be used with each sample.
- 3.2 If the evidence is in a metal can or glass jar:
 - 3.2.1 A new clean septum will be used for each sample.
 - 3.2.2 An auxiliary lid will be used rather than puncturing the evidence container lid.
- 3.3 If the evidence is in a heat seal bag:
 - 3.3.1 The syringe will be inserted through a corner of the bag.
 - 3.3.2 The bag will be re-sealed immediately.
- 3.4 The syringe and container will be heated together.
- 3.5 The sample will generally be heated at 70C for 1 hour. Times may vary from 15-60 minutes.
- 3.6 The examiner will process an air blank prior to processing an evidence sample. The air blank will consist of 0.5 ml of air drawn into the heated syringe and manually injected on the instrument.
- 3.7 The examiner will withdraw 0.5 ml of headspace from the container for analysis using a manual injection.