



# Fire Accelerant Analysis

**When the cause of a fire needs investigation, analysis of exhibits recovered from fire scenes for the presence of accelerants can be essential.**

With decades of experience in chemical analysis, SOCOTEC is perfectly placed to provide support to fire investigators, helping them to determine the accidental or deliberate cause of a fire. Our sophisticated analytical techniques detect the trace levels of accelerants of a fire.

SOCOTEC's forensic chemistry team has over 30 years of experience in the chain of custody of exhibits ensuring that the evidence collected and preserved by fire investigators is fully traceable from the site of the fire through to the final report. SOCOTEC also supplies the specialist collection kits required to preserve the evidence.

**SOCOTEC provides services to a broad range of clients including:**

- Insurance companies
- Loss adjusters
- Forensic fire investigators

Using our experience in exhibit traceability and chemical analysis, our chain of custody processes track the sample from the site of the fire to the SOCOTEC facility, through the laboratory analysis process to the final report.

On arrival all samples are logged into our secure facility and the chain of custody is checked to ensure sample integrity.

## FIRE ACCELERANT ANALYSIS

**We routinely analyse samples from a range of matrices including:**

- Solids
- Waters
- Liquid accelerants/fuels

For the more volatile accelerants, analysis is carried out by heating the samples in nylon bags and analysing the vapours by Gas Chromatography Mass Spectrometry (GC/MS). Comparisons of the resulting volatile signature are made to commercially available fuels, and our forensic scientists are experienced at examining pyrolysis products from articles which can give false positives. Comparisons can also be made with control accelerants recovered from the scene.

**Common accelerants compared are:**

- Petrol
- Paraffin
- White spirit
- Lighter fluid
- Turpentine
- Methylated spirit

Less volatile sources of fuels such as lubricating oils, vegetable or animal fats along with the heavier fractions of diesel can be examined by solvent extraction along with GC/MS and Fourier Transform Infrared Spectroscopy (FTIR) analysis.

**LOOKING FOR MORE  
INFORMATION ON FIRE  
ACCELERANT ANALYSIS?**

To discuss your requirements please  
call 0845 603 2112 or email [salesuk@socotec.com](mailto:salesuk@socotec.com)