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Advances in Fire Debris Analysis

Guest Editors:

Prof. Dr. Michael Sigman
National Center for Forensic Science, University of Central Florida, Orlando, FL, USA

Ms. Mary Williams
National Center for Forensic Science, University of Central Florida, Orlando, FL, USA

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Message from the Guest Editors

Dear Colleagues,

Several factors complicate the analysis of fire debris for the purposes of detecting and characterizing ignitable liquid residue. These factors include the complex nature of many ignitable liquids, evaporative changes to the liquid during the fire, potential biological degradation of the liquid, and the presence of background contributions from pyrolysis products. The chemical complexity of fire debris results in subjective forensic inferences reported as categorical statements that are not reflective of the evidentiary value. Current research is addressing many of these challenges associated with the chemical analysis of fire debris through improved chromatography and mass spectrometry. Research in the statistical analysis of complex data sets is improving data interpretation and communicating the evidentiary value of samples through the use of probabilistic statements. This Special Issue looks at these and other aspects of current research into the important and complex forensic science of fire debris analysis.

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Guest Editors

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Editor-in-Chief

Prof. Dr. Frank L. Dorman
Department of Chemistry, Dartmouth College, Hanover, NH 03755, USA

Message from the Editor-in-Chief

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Contact Us

Separations Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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separations@mdpi.com
𝕏@Sep_MDPI