GUIDELINES FOR ARSON ANALYSIS RESULTS:

ASTM procedures are used as a guid for flammable/combustible liquid identifications. Furthermore, all results should be based on the chemist's knowledge and experience and the case being examined. Results must be in agreement with the technical reviewer.

Light Petroleum Distillates (LPD): At least 4 major peaks in the C4 to C6 range. No major peak above C8. Petroleum distillate pattern comparable to that of known standards.

Gasoline: The m-ethyltoluene/pseudocumene 5-peak group must be present; this group occupies the range between C9 and C10. Higher peak groupings characteristic of gasoline, such as tetramethylbenzene and 1- and 2-methylnaphthalene, with cutoff between C12 and C13, should also be present. Hydrocarbon pattern comparable to that of known standards.

Medium Petroleum Distillates (MPD): Pattern starts between C8 and C10 and ends near C12, and contains at least 3 significant peaks between C8 and C12. Petroleum distillate pattern comparable to that of known standards.

Kerosene: Pattern starts above C8. At least 5 consecutive n-alkane peaks between C12 and C17 must be present. Petroleum distillate pattern comparable to that of known standards.

Heavy Petroleum Distillates (HPD): Pattern starts above C9. At least 5 consecutive n-alkane peaks between C17 and C22 must be present. Petroleum distillate pattern comparable to that of known standards.

Single compounds such as alcohols or toluene and isoparaffinic hydrocarbon mixtures may be identified by GC-MS identification of the components.

When possible, an unknown sample should be compared to a known standard flammable/ combustible liquid in order to confirm the classification. However, no classification system is likely to describe all possible accelerants. Other techniques, such as GC-MS and ion chromatograms, may be used to specifically identify "target" components of a flammable/ combustible liquid.