

OSAC RESEARCH NEEDS ASSESSMENT FORM



Title of research need:

Describe the need:

A number of publicly funded studies have been conducted that investigate the impacts of ventilation on fire patterns in compartments. Some of these studies are related to fire investigation, but many have other purposes. This provides the opportunity to make small modifications to publicly funded compartment fire research that would benefit fire investigation applications. To the extent that making the fire test site available to the fire investigation researchers increases costs to conduct a test, these costs should be included in the original funding vehicle.

Keyword(s):

Submitting subcommittee(s): **Date Approved:**

(If SAC review identifies additional subcommittees, add them to the box above.)

Background Information:

1. Does this research need address a gap(s) in a current or planned standard? (ex.: Field identification system for on scene opioid detection and confirmation)

2. Are you aware of any ongoing research that may address this research need that has not yet been published (e.g., research presented in conference proceedings, studies that you or a colleague have participated in but have yet to be published)?

3. Key bibliographic references relating to this research need: (ex.: Toll, L., Standifer, K. M., Massotte, D., eds. (2019). Current Topics in Opioid Research. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-88963-180-3)

4. Review the annual operational/research needs published by the National Institute of Justice (NIJ) at <https://nij.ojp.gov/topics/articles/forensic-science-research-and-development-technology-working-group-operational#latest>? Is your research need identified by NIJ?

5. In what ways would the research results improve current laboratory capabilities?

This research need is targeted to improve current fire investigation field work rather than laboratory analyses. This research will serve to better inform fire investigators as to how to approach the interpretation of fire patterns as well as the training they receive in this area. In addition to a comprehensive report, a series of training materials would also be important to the understanding of how ventilation (or the lack thereof) affects fire patterns. Full scale fire tests are very expensive and should be fully exploited for all of the knowledge that can be gained from them.

6. In what ways would the research results improve understanding of the scientific basis for the subcommittee(s)?

See Number 5.

7. In what ways would the research results improve services to the criminal justice system?

This research will help the fire investigation community to apply a more systematic approach to fire pattern analysis. This more systematic approach will improve expert opinions and testimony relating to fire pattern analysis. Further, if this approach is followed, more full-scale fire test results will be available to fire investigation researchers, with only an incremental increase in costs.

8. Status assessment (I, II, III, or IV):

I

	Major gap in current knowledge	Minor gap in current knowledge
No or limited current research is being conducted	I	III
Existing current research is being conducted	II	IV

This research need has been identified by one or more subcommittees of OSAC and is being provided as an informational resource to the community.