

# OSAC RESEARCH NEEDS ASSESSMENT FORM



**Title of research need:**

**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)

The concept of “blind” verification is not new, and some laboratories have undertaken steps to implement some form of verification that incorporates the concept of a blind verification. However, most of these attempts at a blind verification are not truly blind since doing so is cost and time prohibitive. We feel it would be of interest to study the following concepts around the overall topic of Blind Verifications: ----Is there a difference in blind verification vs. unblind verification (or a “second read”) results? ----Could technology, such as comparison algorithms and virtual comparisons be used in a blind verification analysis scheme? ----To what extent does a verification need to be “blind” and if so, what are practical methods for setting this up?

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)?

Unknown

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)

N/A

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?

Yes, “Evaluation of the effectiveness of varied types of review and/or verification of casework, testimony, and investigative leads”.

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

There is always a balance to be found between casework output vs. error mitigation. The subcommittee recognizes mistakes can and do occur, however it our hope this research will help laboratories as well as the subcommittee make well informed decisions on whether blind verifications are required for the firearms and toolmark discipline.

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

In better understanding to what extent blind verifications do or do not improve the overall reliability of firearm and toolmark comparison outcomes, the subcommittee will be in a better position for recommending and writing standards with regards to casework documentation and verification.

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

If blind verifications are shown to significantly improve the outcomes of toolmark comparisons, then the criminal justice system will be improved with lower error rates as a result of a requirement for blind verifications. If blind verifications are shown to have no significant effect on error mitigation, then crime laboratory case output will be higher since time will not be wasted on an unnecessary quality control measure.

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.*