OSAC RESEARCH NEEDS ASSESSMENT FORM

Title of research need: Development of Reliable Surrogate Aids

Keyword(s): Canine training aids, narcotics, human remains, human scent, explosives

Submitting subcommittee(s): Dogs & Sensors  Date Approved: March 10, 2021

(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)

Research is needed to develop reliable surrogate training aids, particularly for human remains, as well as for live human scent, drugs and explosives. These surrogates would be used to compliment difficult to obtain and often controlled and hazardous materials that are currently used to train canines.

Ideally, these provide controlled delivery of chemicals to provide a range of operationally relevant concentrations of odor to maintain performance and to provide for a standard by which to assess calibration (i.e., working threshold). Currently the state of knowledge is insufficient and/or contraindicates the use of surrogate continuation training aids for initial training or certification.

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


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?

No

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

Matching key compounds/components of pseudo more closely to that of true target source. Provide a range of operationally relevant concentrations of odor to maintain performance and to provide for a standard by which to assess calibration.

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

The research would improve understanding of the subcommittee to be used in drafting standards related to training and certification.

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

The standards will result in improved detector canine operational performance as a result of an expected increase in more effective and efficient canine training. Validation and standardization of training aids utilized in canine training regimens.

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

<table>
<thead>
<tr>
<th>Major gap in current knowledge</th>
<th>Minor gap in current knowledge</th>
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<tbody>
<tr>
<td>No or limited current research is being conducted</td>
<td>I</td>
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<tr>
<td>Existing current research is being conducted</td>
<td>II</td>
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This research need has been identified by one or more subcommittees of OSAC and is being provided as an informational resource to the community.