

# SWGDOG SC7 – RESEARCH & TECHNOLOGY

## APPENDIX 7.2 – RECOMMENDED PARAMETERS TO BE CONSIDERED IN A SCIENTIFIC STUDY (checklist with space to fill in data)

### Purpose of study:

- Define hypothesis and assumptions:

### Study Design Considerations:

- Researchers should be familiar with best practices delineated in relevant SWGDOG guidelines.
- When possible establish/integrate baseline information regarding performance.
- Use appropriate controls (examples: distractors, blanks, verified odor detection/non-detection).
- Use appropriate control groups.
- Appropriate use of statistics.
  - General validity of results (e.g., individual and regional influences).
- Use of sample test material not used in maintenance training (see SC2 document).
- Prevent participants from discussing or observing experiments.
- Control for order effects (examples: Latin Square design, exclusive test areas,).
- Testing should normally not be done in areas where detection teams have recently been trained (see SC2 document).
- Appropriate use of single and double blind testing.
- Incorporate tests for observer reliability, accuracy, experience, inter-observer agreement, and/or video recording. When possible use some orthogonal method to validate test materials.
- Verify no target odors present in testing area prior to conducting experiments using non-participating certified team(s).

### Aspects to be considered in conducting a test or experiments when working with teams:

- Design and conclusions of study must be considered within the context of the mission parameters of the canine teams confirmed through training records.
  - Testing that is outside the context of the training and deployment history should be clearly stated.
- Baseline information should include:
  - Target odors.
  - Quantity of target and concealment method.
  - Set time.
  - Environmental parameters (e.g., temperature, humidity, terrain).
  - Typical search location and duration.
  - Number of finds per unit of a search time.
  - Dog parameters:
    - Health/Fitness.
    - Age.

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- Gender.
- Breed.
- Years in service.
- Certification Details:
  - Certifying organization
  - Initial certification date
- Handler experience including number of deployments or searches conducted.
- Maintenance training/proficiency testing schedule
- Use of distractors in training.
- Use of blank runs in training.
- Reinforcement schedule.
- Experience with double-blind testing.
- Experience in working areas where other dogs have worked.
- Typical search method (on or off lead, directed search).