



**Homeland
Security**

Science and Technology

U.S. Department of Homeland Security



System Assessment and Validation for Emergency Responders

The U.S. Department of Homeland Security (DHS) established the System Assessment and Validation for Emergency Responders (SAVER) Program to assist emergency responders making procurement decisions.

Located within the Science and Technology Directorate (S&T) of DHS, the SAVER Program conducts objective assessments and validations on commercial equipment and systems, and provides those results along with other relevant equipment information to the emergency response community in an operationally useful form. SAVER provides information on equipment that falls within the categories listed in the DHS Authorized Equipment List (AEL). The SAVER Program mission includes:

- Conducting impartial, practitioner-relevant, operationally oriented assessments and validations of emergency responder equipment;
- Providing information that enables decision makers and responders to better select, procure, use, and maintain emergency responder equipment.

Information provided by the SAVER Program will be shared nationally with the responder community, providing a life- and cost-saving asset to DHS, as well as to federal, state, and local responders.

The SAVER Program is supported by a network of technical agents who perform assessment and validation activities. Further, SAVER focuses primarily on two main questions for the emergency responder community: "What equipment is available?" and "How does it perform?"

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<https://www.rkb.us/saver>

Highlight

Colorimetric Tube and Chip Chemical Detection Kit

Colorimetric tube technology provides an accepted and proven means of measuring toxic gases and vapors. For many years the methodology has been used to sample for specific gases in a specific area, such as an industrial setting hazardous leak. Colorimetric tubes are sealed glass tubes, generally about 4 inches long and about ¼ inch in diameter (depending on the manufacturer). An associated colorimetric tube technology is a chip measurement system (CMS) analyzer. The CMS combines substance specific measuring chips with an electronic analyzer. The measuring chips have small tubes or capillaries which are filled with a reagent system for the designated chemical.

As a SAVER Program Technical Agent, the Center for Domestic Preparedness (CDP) conducted an assessment of colorimetric tube and chip kits. Prior to the assessment, the CDP held a focus group to determine evaluation criteria by which to measure colorimetric tube and chip kit effectiveness, the scenario used in testing, and the products to be tested. The results may be found in the *Focus Group Recommendations on Colorimetric Tube and Chip Kits* report.

In addition, the CDP authored the *Market Survey Report on Colorimetric Tube and Chip Kits* to provide information regarding commercial currently colorimetric tubes and chip kits available to the responder community.

All reports in the series, including the *Assessment Report on Colorimetric Tube and Chip Kits* will be placed on the SAVER Web site (<https://www.rkb.us/SAVER>), as they become available. Reports on other technologies being assessed in the SAVER Program can also be found on the Web site.



Colorimetric Tube and Chip Kits