Chemical Threat Mitigation

● Compact CWA/TIC Detector: Bruker **µRAID***plus*

Innovation with Integrity

Choose Innovation – Choose Bruker

Bruker is recognised as the leading authority on the use of detection and identification technologies to mitigate the threat from the accidental or deliberate release of toxic gases, explosives and radioactive materials that could kill or injure civilians and military personnel.

We offer the world's most comprehensive range of threat detection and identification solutions and can help you to assess how these can be best employed to protect people, property and military assets.

We develop, manufacture and supply technology worldwide for a range of customers and end users that need to protect people and property. These include, but are not limited to, national armies who need to protect their troops, as well as governments, commercial enterprises and multi-national corporations who need to protect their employees and clients from the ever-increasing threat from terrorism.

Bruker is strongly committed to meeting its customers' needs by continuing to revolutionise the design, manufacture and distribution of detection tools based on our core technologies; by providing solutions that are regarded as the 'Gold Standard' by threat mitigation experts.

µRAID*plus* - Your CWA/TIC Detector

µRAID*plus* is a light-weight battery-operated detection and identification device that responds to both chemical warfare agents (CWA) and toxic industrial chemicals (TIC). µRAID*plus* uses IMS (Ion Mobility Spectrometry), which has been proven over time to offer the greatest sensitivity to vapour-borne threats and is configured as a compact field-deployable package. The IMS technology embedded in µRAID*plus* combines with proprietary Bruker interference rejection algorithms to permit users to take full advantage of the instruments capability and sensitivity with reduced false alarms. The primary algorithms in µRAID*plus* are modelled on the same rules that helped make the Bruker RAID-M 100 the "Gold Standard" of lightweight chemical detectors.

Designed for optimal usability in remote locations, µRAID*plus* impresses with its minimal logistics requirements. Superior availability is ensured because its consumables can be exchanged by its operator and there is no need for calibration at any time. Significantly, there is no need to exchange consumables when CWA or TIC is detected, and all consumables are delivered in sealed foil packages for extended shelf life.

µRAID*plus* runs from primary or rechargeable AA batteries, and several other power options are offered. Its compact size allows it be operated as either a hand-held survey device, or it can be body-worn using the supplied pouch. This standard capability leaves the user's hands free for other tasks. A full colour display provides essential information to the operator, including threat identification, relative concentration and GHS hazard pictograms. For covert missions, stealth modes and night vision modes are available from the menu.

Why specify µRAID*plus*?

- Meets MIL-STD-810-G
  Robust and rugged. Designed to survive
- IMS detection technology
  For superior sensitivity - the de-facto standard
- Bruker interference rejection algorithms
  Gives you confidence in the measurement
- Five independent libraries
  Customise to your deployment requirements
- Screening Mode
  Uses all your installed libraries sequentially
- No calibration - ever!
  Factory calibrated, no field calibration is required
- Reduced ownership costs
  Consumables changed at operator level; no RTB
- Battery powered
  Uses AA cells or extended run time batteries
- External power options
  90-264 volt AC or 10-32 volt DC
- Sensor overload protection
  Backflush mode aids system recovery

The Compact CWA/TIC Detector

COST EFFECTIVE AND EASY TO MAINTAIN

µRAID*plus*, our lowest-cost CWA/TIC detector, is a go-anywhere device. Compact and lightweight, it is easy to get this sensitive detector to the point of deployment. In the role of a personal protection device, it can be worn on the body in the supplied pouch, leaving its user's hands free to operate other equipment. Removed from the uniform, µRAID*plus* has a dual role in screening and survey duties, especially post-decontamination testing. This product is also frequently deployed for examining suspect areas such as vehicles, vehicle tyres, illicit weapon facilities and illicit laboratories.

RELIABLE PERFORMANCE

Superior availability is ensured with µRAID*plus* because its consumables can be exchanged by its operator. Significantly, there is no need to exchange consumables when CWA or TIC is detected, and there is no need for calibration at any time. Further, consumables are supplied in foil packs for long term storage without fear of contamination. All these features combine to offer greater availability and maximum up-time.

EXTENDED CAPABILITY

With the provision for up to five identification libraries included as standard, the capability of µRAID*plus* can be configured to meet the precise requirements of the mission. Three detection/identification libraries are supplied with every µRAID*plus*; the standard CWA library, the standard TIC library and a high efficiency CWA library. Additional libraries are available as options; please contact Bruker for more information.

The "pollution indicator", a feature unique to Bruker, allows the µRAID*plus* to monitor general atmospheric pollution, or substances other than those selected in the chosen libraries, and to trigger an on-screen alarm if an unknown substance is detected.

The utility of µRAID*plus* has been extended further by the provision of a new capability termed the screening mode. When a threat is identified but it is not clear whether it originates from CWA or TIC or other toxic substances, the screening mode can be engaged. This causes the µRAID*plus* to spool through all installed libraries to identify the threat. When a substance is found, µRAID*plus* identifies the library, the substance and the concentration; even without having to select a specific library!

µRAID*plus* at a Glance

PRODUCT OVERVIEW

Designed for optimal usability whenever it is deployed, the µRAID*plus* has minimal logistics requirements and superior availability is ensured as the product never needs calibrating. When consumables are replaced, they can be changed quickly and easily by the operator; in the field and without tools. Crucially, there is no need to exchange the consumables after an agent has been detected.

Up to five detection libraries can be installed in each µRAID*plus*, and each system is shipped with standard CWA, standard TIC and high sensitivity CWA. The remaining locations can be populated with optional libraries. When a substance is detected, its concentration is shown by a vertical bar display and the abbreviated name of that substance is displayed with a GHS symbol. When two or more substances are detected, those with the highest toxicity are shown. All measurements taken by µRAID*plus* are stored in an internal data logger which can be downloaded post-deployment. For detailed event analysis, IMS spectra can also be downloaded to a computer and reviewed using Bruker XIMS software.

µRAID*plus* is delivered with accessories to expand its operational flexibility. The supplied carrying pouch is compatible with in-service webbing and clothing and allows the system to be used as a body-worn personal detector; leaving the user's hands free for other tasks.

KEY FEATURES

- Compact, lightweight and easy-to-use
- Sensitive to low ppm/ppb levels
- Calibration-free operation
- Effective substance detection and identification
- Unmatched sensitivity in its class
- Multiple libraries supplied as standard
- Full colour display of detected substances
- Battery flexibility -primary and rechargeable cells
- Silent, stealth and night vision modes
- High altitude operation
- Low through-life costs

Full details of the Bruker µRAIDplus can be found in the Product Specification Sheet (PSS), a copy of which is available on request.

✉ **detection@bruker.com**

Global Resources – Local Focus

Bruker has support centres of technical expertise in every major area of the world providing sales, applications and engineering support for our complete product range. With more than 6,000 employees at 90 locations worldwide you can be confident that the support team fronts a uniquely integrated global resource. Research and development specialists, applications professionals and highly trained engineers in every field are dedicated to your investment in our equipment.

Superior Detector Performance

For highly sensitive detection, identification and quantification of chemical, biological, explosive and radiation threats. Superior performance and high reliability comes as standard.

Applications Support

Systems are configured to meet your needs and result from our detailed evaluation of your requirements.

Standards & Compliance

All our systems are manufactured in ISO9001 compliant factories; so you can be assured of superior quality and performance.

Software & Data Systems

Designed to industry standards on the Microsoft® platform, our software can be integrated with your security management software.

Training

User Training and User-Level Maintenance is part of our standard Scope of Supply. Our goal is simple; to minimise your cost of ownership.

Low Maintenance

All our systems are designed for extended maintenance periods and reduce the through-life-costs of your investment.

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