

## Border Security Technology Consortium (BSTC)

Since its inception in 1951, Rigaku has built upon experience to develop innovative solutions and is credited with hundreds of major innovations. The Rigaku group of companies are world leaders in the development of scientific instrumentation used for a variety of applications.

Founded in 2011 in response to a growing need for more rugged and technologically advanced mobile and handheld spectroscopic analyzers, Rigaku Analytical Devices is a leading innovator of solutions for use in the protection of public health and safety, recycle and reuse of metal-based products and components, and aid in the advancement of scientific and academic study.

The company is based in the United States in Wilmington, Massachusetts just outside of Boston. Rigaku Analytical Devices' products are manufactured at this 1395 sq. metre state-of-art ISO 9001:2015 certified facility.

Rigaku Analytical Devices has a great deal of organizational experience in performing solutions for rapid detection and identification of solid and liquid narcotics, explosives, chemical warfare agents (CWAs), toxic industrial chemical and material threats (TICs/TIMs), and metal alloys used in critical aerospace and defense applications. Several members of the engineering and product development teams joined Rigaku Analytical Devices after spending critical roles developing products for manufacturers of the equipment currently used by law enforcement, customs and border protection, first responders, military and others.

Rigaku Analytical Devices' products are based on two optical techniques, Raman and Laser-Induced Breakdown Spectroscopy or LIBS. As the first company to successfully develop and deploy ruggedized 1064nm based handheld Raman and LIBS, our next generation systems expand analysis capabilities and allow users to bring the laboratory to the field. Designed and tested to meet MIL-STD-1472G Human Factor Efficiency standards, our analyzers are simple to operate by users of varying skill levels.

Our line of handheld and portable spectrometers consist of the following solutions:

**Progeny ResQ 1064nm handheld Raman:** providing rapid chemical detection with easy-to-interpret and actionable results, ResQ overcomes sample induced interference issues known to prevent timely and accurate analysis, while additional onboard features expand analysis capabilities. With an onboard and easily expandable database containing almost 13,000 narcotics, explosives, precursors, chemical warfare agents (CWAs), toxic industrial chemical and material threats (TICs/TIMs), this device allows response teams to quickly identify (in under a minute) and communicate potential threats, so they may better ensure safety of the public, response teams and the environment. *Received an R&D 100 award in 2015 for one of the best new technologies in the Analytical/Test Category.*

**Progeny 1064nm handheld Raman:** developed for use in highly regulated industries including pharmaceutical manufacturing, Progeny was developed to be customizable for seamless integration into any workflow process. With the push towards 100% inspection and lean manufacturing, companies are looking for efficient ways to reduce costs and risks while ensuring product quality and compliance with regulatory requirements. Ideal for incoming raw material identification, finished product verification/authentication and anti-counterfeit efforts, the device streamlines processes and identifies a wider variety of materials in comparison to other handheld and portable technologies.

### **KT-100 handheld LIBS:**

Verification of alloy grades and composition are imperative steps in ensuring metal-based product quality and efficacy. Incorrect alloy identification can have disastrous consequences. KT-100 provides superior identification of light alloying elements in metal and alloy applications. Elements such as beryllium (Be), magnesium (Mg), and aluminum (Al) can now be accurately identified in seconds.

Designed to overcome analysis limitations experienced with other handheld metals identification, KT-100 is rugged, small, light and has a tilt touch-screen display. *Received an R&D 100 award in 2016 for one of the best new technologies in the Analytical/Test Category.*

For more information on Rigaku Analytical Devices' handheld analyzers, please visit [www.Rigaku.com/handhelds](http://www.Rigaku.com/handhelds) or contact us today at [handhelds@rigaku.com](mailto:handhelds@rigaku.com)