

Fast detection of biological threats

Military forces are faced with numerous threats around the world, including biological attacks. Eric Damiens, **Proengin's** marketing and sales director, explains how its MAB is designed to give an alarm by continuously monitoring the presence of bacteria in the air for long periods of time without human intervention.

Can you give us some background on Proengin, and what business is like currently?

Eric Damiens: Proengin was founded in 1972 and has been developing the flame spectrophotometry technology for the detection of chemical warfare agents on the field since 1986. Before then, it was a R&D type company, which gradually transformed itself into a product manufacturer. Proengin markets only the products that have been internally developed. Our MAB (a biological alarm monitor) has been selected by the French Army for use in its Deteccio programme. Thanks to all many our developments, the company's turnover has more than doubled since 2005 and 70% is from export markets.

How can MAB be adapted to military use?

Armed forces are facing the complexity of biological detection. This is why MAB has been designed to give an alarm by continuously monitoring the presence of bacteria in the air, over long periods of time without any human intervention.

How does the military benefit from using your biological alarm monitor?

Biological threat is very difficult for military forces to handle. Noiseless, odourless, invisible and with delayed effects, it is very difficult to take heavy protection measures without knowing what is going on. Detection is complex and requires a lot of human intervention. Soldiers on the field have much to do and think about; an instrument to save time detecting the presence of a biological threat can be a lifesaver. MAB allows the users to rely on an automatic system to do the first step of this process: alarm and sample-taking with no human intervention.

Equipment made by Proengin helps save the lives of troops in combat.



What are you doing differently from your competitors?

The flame spectrophotometry technology has many advantages in comparison with its competitors, which for the most part, use laser fluorescence. We know that our chemical detectors work flawlessly in all weather conditions.

A very low false alarm rate is also a big advantage of our technology. MAB biological detectors do not raise the alarm in presence of diesel vapours and are not hampered by dust or oil fog, which are often present on battlefields. MAB is more economical and has a longer lifecycle.

You have created a three-step biological detection system with Bertin Technologies. Can you tell us more about this?

The first step of the process, performed by the MAB, is to determine when it is the right moment to take a sample. As the identification techniques are usually expensive and time consuming, performing tests every hour or two is impossible to consider. MAB is an automatic assistant in the decision of taking an air sample. MAB is quickly repaid by requiring analysis only when necessary and not on a random basis. With the second step, particle or bacteria identification can be made only by biological analysis. Numerous techniques exist, from smart tickets to DNA analysis on the field or in laboratories, but they all have in common the necessity to have a liquid sample. This is where Bertin comes for the third step, with the Coriolis bio sampler also integrated into the French military's Deteccio programme.

How do you see the market changing in the next ten years?

The emergence of global terrorism has changed all governmental, and now private, approaches. In the coming years, we foresee that the need to protect civilian population and critical infrastructures will be at least as important as military requirements. So we need to adapt to cope with that evolution. We also have to work closely with new customers and teach them about our products as well as a threat largely unknown to the civilian world. ■

Further information

Proengin
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