Bruker Daltronic 'Security Relevant' Library notes

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The Bruker 'Security Relevant' RUO library, for use with **Bruker MALDI-TOF instruments** to identify risk level (RL) 3 bacterial agents, is now available **free of charge** upon request to Bruker Daltronics. Previously this database was available as an extra cost to customers.

This library may be obtained by contacting Angela Abraham at angela.abraham@bruker.com

We recommend that Bruker users acquire this library at their earliest convenience. This will improve in-house capability to detect bacteria which can not be easily ruled out as RL 3 agents, if inadvertently recovered in a containment level (CL) 2 laboratory setting. Spectra for RL3 bacteria are otherwise not included in Bruker's Biotyper database. The 'Security Relevant' library can be used in parallel to the usual Biotyper library to triage suspect bacteria in the following manner:

- Bacteria should be handled only in a biological safety cabinet (BSC) by staff wearing appropriate protective outwear
- Suspect bacteria should be prepared using the extraction method such as that described by Bruker (rather than the direct method), prior to MALDI-TOF testing[1]
- Suspect bacteria should be referred to a provincial reference centre or to the NML for definitive identification, if a certified BSC is not available for use or if index of suspicion for a RL3 agent remains high based on clinical presentation and MALDI-TOF result.

CL2 laboratories using the 'Security Relevant' library should be aware of following caveats:

MALDI-TOF can not definitively differentiate bacteria which are otherwise very close by other methods, such as by 16S rRNA gene sequencing. That would include species in the *Bacillus cereus* complex (*B. cereus, B. thuringiensis, B. weihenstephensis* and other species can not be differentiated from *B. anthracis*), species within the genus *Brucella,* and *Yersinia pestis* from *Y. pseudotuberculosis*[1]

1. Tracz, D.M., Antonation, K. S. and Corbett, C.R. 2016 J. Clin. Microbiol. 54: 764-767

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