

Appendix G: BW Agent Lab Identification

Disease	Agent	Gold Standard	Antigen Detection	Immunoassays			
				IgG	IgM	PCR	Animal
Aflatoxin	Aflatoxins	Mass spectrometry	X				
Anthrax	<i>Bacillus anthracis</i>	FA/Std. Microbiology	X	X	X	X	X
Brucellosis	<i>Brucella sp.</i>	FA/Std. Microbiology	X	X	X	X	X
Cholera	<i>Vibrio cholerae</i>	Std. Microbiology/serology	X(toxin)	X	X	X	
Glanders	<i>B. mallei</i>	Std. Microbiology		X	X	X	
	<i>B. pseudomallei</i>	Std. Microbiology		X	X	X	
Plague	<i>Yersinia pestis</i>	FA/Std. Microbiology	X	X	X	X	X
Tularemia	<i>F. tularensis</i>	FA/Std. Microbiology	X	X	X	X	X
Q Fever	<i>C. burnetii</i>	FA/eggs or cell Cx/serology	X	X	X	X	X
Smallpox	Orthopox Viruses	Virus isolation/ FA/neutralization	X	X		X	X
Venezuelan Equine Encephalitis	Arboviruses (incl. alphaviruses)	Virus isolation/FA, neutralization	X	X	X	X	X
Viral Hemorrhagic Fevers	Filoviruses	Virus isolation/neutralization	X	X	X	X	X
	Hantaviruses	Virus isolation/ FA/neutralization	X	X	X	X	X
Botulism	Bot Toxins (A-G)/ <i>C. botulinum</i>	Mouse neutralization/ standard microbiology	X			*	X
Saxitoxin	Saxitoxin	Bioassay			(neutralizing antibodies)	X	
Shigellosis	<i>Shigella sp.</i>	Std. Microbiology	X			X	
Staph Enterotoxin B	SEB Toxin	ELISA	X	X		*	X
Ricin	Ricin Toxin	ELISA	X	X	X	X	X
T-2 Mycotoxins	T-2 Mycotoxins	Mass spectrometry	X				
Tetrodotoxin	Tetrodotoxins	Bioassay	X		(neutralizing antibodies)		X
	<i>C. perfringens</i> / toxins	Std. Micro./ELISA (alpha & enterotoxin)	X	X		X	

* Toxin gene detected – only works if cellular debris including genes present as contaminant. Purified toxin does not contain detectable genes

ELISA - enzyme-linked immunosorbent assays

FA - indirect or direct immunofluorescence assays

Std. Micro./serology - standard microbiological techniques available, including electron microscopy

Not all assays are available in field laboratories.