

Appendix M-2

Negative data can NOT be reported for these insects by using any one of the following lures: A) Alpha-pinene, B) Ultra-high release ethanol (UHR EtOH), C) Combination of Ultra-high release ethanol and alpha-pinene (UHR EtOH + alpha-pinene), or D) EBB/Ips lure.

<u>Species</u>	<u>Notes</u>	<u>Lures That Will Attract Pest Species</u>
<i>Agrilus biguttatus</i> (Oak splendor beetle)	Response to these attractants not known.	
<i>Agrilus planipennis</i> (Emerald ash borer)	Does not respond to these attractants.	A Manuka oil lure with a 50 mg/day release rate. USDA-APHIS-PPQ-EAB 2008 Emerald Ash Borer Survey Guidelines
<i>Anoplophora chinensis</i> (Synonym: <i>Anoplophora malasiaca</i>)	Does not respond to these attractants.	Three other combinations are listed in Pherobase for <i>A. malasiaca</i> .
<i>Anoplophora glabripennis</i> (Asian longhorned beetle)	Does not respond to these attractants.	
<i>Callidiellum rufipenne</i> (Lesser Japanese cedar longhorned beetle)	Does not respond to these attractants.	
<i>Chlorophorus annularis</i> (Tiger bamboo longhorned beetle)	Response to these attractants not known.	
<i>Chlorophorus strobilicola</i> (Slender-banded pine cone longhorn beetle)	Response to these attractants not known.	
<i>Dendroctonus micans</i>	Does not respond to alpha-pinene alone.	5S7S-conophthorin and E-conophthorin (Zhang et al., 2002)
<i>Hesperophanes campestris</i> (Chinese longhorned beetle)	Response to these attractants not known.	
<i>Monocamus saltuarius</i>	Response to these attractants not known.	
<i>Monochamus sutor</i>	Response to these attractants not known.	

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<i>Platypus quercivorus</i> (Oak ambrosia beetle)	Does not respond to these attractants.	Quercivorol (Nakashima et al., 2005)
<i>Scolytus intricatus</i>	Response to these attractants not known.	1. 5S7S-conophthorin (Zhang et al., 2002) 2. Multi-chemical combination (Vrkocova et al., 2000)
<i>Sirex noctilio</i>	Requires a different blend of pinenes.	70% alpha-pinene, 30% beta-pinene (L. Bunce, personal communication, 2008)
<i>Tetropium castaneum</i>	Requires additional components.	Spruce blend* and EtOH (Sweeney et al., 2006). EtOH alone is not attractive
<i>Tetropium fuscum</i> (Brown spruce longhorned beetle)	Does not respond to these attractants.	1. Spruce blend* and EtOH (more attractive than spruce blend alone) (Sweeney et al., 2006) 2. Spruce blend* (Sweeney, J. et al., 2006) EtOH alone is not attractive.
<i>Tomicus minor</i> (Lesser pine shoot beetle)	Response to these attractants not known.	1. Lineatin (Martikainen, 2001) 2. Trans-verbenol (Lanne et al., 1987) 3. Alpha-terpineol, Cis-carveol, and Trans-carveol (Kangas et al., 1970)
<i>Urocerus gigas</i>	Response to these attractants not known.	
<i>Xylotrechus spp.</i>	In Pherobase, three exotic species were listed with their corresponding lures (see next three species).	
<i>Xylotrechus chinensis</i>	Response to these attractants not known.	1. 2,3-octandiol, 2-hydroxyl-8-3Kt, 3-hydroxyl-8-3Kt (Kuwahara, 1987) 2. 2S3S-octanediol, 2S-hydroxyl-8-3Kt (Iwabuchi, 1987)
<i>Xylotrechus pyrrhoderus</i>	Response to these attractants not known.	2S3S-octanediol, 2S-hydroxyl-8-3Kt (Iwabuchi, 1986; Iwabuchi, 1985; Sakai, 1984)
<i>Xylotrechus quadripes</i>	Response to these attractants not known.	1. 2-hydroxyl-8-3Kt (Jayarama, 1998) 2. 2S-hydroxyl-8-3Kt, 10-2Kt3Kt (Rhains, 2001)

*Spruce blend = racemic alpha-pinene, (-)-beta-pinene, (+)-3-carene, (+)-limonene, and alpha-terpinolene.