

PW10 The Autumn Gum Moth sex pheromone – an elusive blend of alkatrienes

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A C21 alkatriene was identified by GC-MS as a crucial component of AGM sex pheromone

The Autumn Gum Moth (*Mnesampela privata*) can cause major damage to Eucalypt plantation forests across Australia. (3Z,6Z,9Z)-3,6,9-nonadecatriene had been identified [1] as a major pheromone component. However, this compound produced very poor catches in field tests. The gland contents were revisited by detailed GC-MS analysis, and putative (3Z,6Z,9Z)-3,6,9-heneicosatriene was found at levels averaging 30 times less than the C19 alkatriene. The identity of the C21 alkatriene was confirmed by synthesis. Field testing gave dramatically enhanced catches of males using 2% to 6% of C21 alkatriene in pheromone baited traps.

[1] M.J.Steinbauer, F. Östrand, T.E. Bellas, A. Nilsson, F. Andersson, E. Hedenström, M.J. Lacey, F.P. Schiestl, Chemoecology 2004, 14:217–223.