

**Pheromone Search of 942 Monterey County Lepidoptera Species**  
Potentially Affected Non-Target Species / LBAM Eradication Plan  
10-6-07

**Search summary:**

I recently researched the pheromone of 942 Monterey County moth species. 863 of the Species of 413 Genus that is (92%) of the moths, the pheromone compounds are unknown. 67 Species of 48 Genus do not share the pheromone compounds found in OLR-F & LBAM-F. 14 of the 942 species share some of the pheromone compounds found in OLR-F & LBAM-F. In 3 of the 14 species, their primary pheromone compound is the identical primary pheromone compound found in OLR-F & LBAM-F.

Wide spread aerial spraying may cause irreparable harm to non-target species including humans, the extent of which is unknown. Non-spraying methods such as sticky traps would greatly reduce the potential harm to non-target species and the environment.

According to CDFA and the manufacturer (proponents), the OLR-F is specific to the *Omnivorous leafroller*. The proponents claim the OLR-F spray is expected to have a 80% efficacy rate against the LBA moth. By the proponents own admission, the OLR-F spray is affecting non-target species, such as the LBA moth. Additionally, there are many Lepidoptera that share the same primary attractant pheromone as the LBAM and *Omnivorous leafroller*. Therefore many Lepidoptera share the same primary attractant pheromone that is in OLR-F & LBAM-F spray. I suspect non-target species who share the E11-14Ac as their primary pheromone compound are in danger of mating disruption.

**Chemical compounds in CheckMate pheromone spray:** 14 non-target moth species confirmed in Monterey County share Checkmate pheromone compounds in their attractant pheromone.  
LBAM-F & OLR-F : E11-14Ac primary compound of attractant pheromone found in 8 species  
Z11-14Ac compound of attractant pheromone found in 6 species  
E9E11-14Ac compound found in 2 species

**Active ingredients LBAM-F & OLR-F: (primary pheromone compound E11-14Ac)**

**CheckMate© LBAM-F**

active ingredients:

(E)-11-Tetradecen-1-yl Acetate ..... 16.90% = Tetradecenyl acetate E11-14Ac  
(E,E)-9,11-Tetradecadien-1-yl Acetate..... 0.71% = Tetradecadienyl acetate E9E11-14Ac  
Other ingredients:.....82.39%

**CheckMate© OLR-F**

active ingredients:

(E)-11-Tetradecen-1-yl acetate ..... 20.6 % = Tetradecenyl acetate E11-14Ac  
(Z)-11-Tetradecen-1-yl acetate .....3.19 % = Tetradecenyl acetate Z11-14Ac  
Other ingredients:.....76.24%

**Information sources used in research:**

942 moths in Monterey County: [http://bscit.berkeley.edu/eme/Browse\\_Calmoth\\_Counties.html](http://bscit.berkeley.edu/eme/Browse_Calmoth_Counties.html)  
Pheromone database: <http://www.pherobase.com/>  
Pheromone database: <http://www.nysaes.cornell.edu/pheronet/speciesindex.html>