

Mating Disruption/SIR

Codling Moth (*Cydia pomonella*) in Apples and Pears

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Recently registered CheckMate CM dispensers containing a nominal amount of 180 mg of codlemone, the sex pheromone of the codling moth, were randomly sampled from commercial fields in California, Oregon and Washington during the 1995 crop production season. Primary objectives of this sampling program included quantification of codlemone release under spring and summer weather conditions; validation of the analytical methods used based on precision and accuracy parameters for both extraction and gas chromatographic procedures; and determination of measurable degradation of the active ingredient, as a result of isomerization and/or polymerization inside the dispenser. Degradation of codlemone in the CheckMate dispenser was observed and reported by other laboratories, thus Consep requested reference standards of its isomers and conducted a study to examine our method's adequacy for determining the level of isomerization over time. This study was important because the CheckMate dispenser is formulated with additives required to improve codlemone release under cool weather conditions and, in the absence of knowledge of these specific ingredients, some analytical data may erroneously suggest that there are isomers other than the active ingredient present. Results of these studies showed that codlemone was released from the CheckMate dispenser at *circa* 2.5 to 5.0 mg/day, depending on prevailing temperatures; that the analytical method used to quantify release was acceptable; that isomerization was within acceptable limits; and that no detectable polymerization had occurred inside the dispenser.