

# **Contribution to the study of semiochemical slow release formulations**

## **Development of flash chromatographic methods**

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# Introduction

**Semiochemicals** = communication signals between species  
(pheromones, kairomones, allomones, synomones)

## Aphids tritrophic system



Host plant  
(*Vicia fabae* L.)



Phytophagous  
insect : aphids

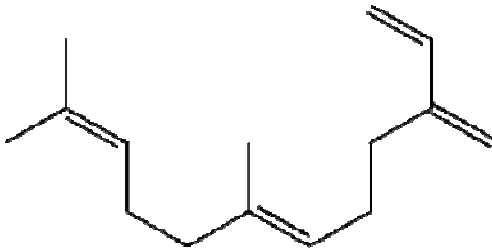


Predator : *Episyrrhus  
balteatus* De Geer



Parasitoid : *Aphidius  
ervi* Haliday

### E-β-farnesene



**Alarm pheromone**

## Aggregation of Harmonia axyridis



Larva of Asian  
lady beetle

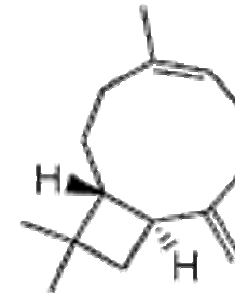


Adult eating  
aphids



Aggregated  
colony

### β-caryophyllene

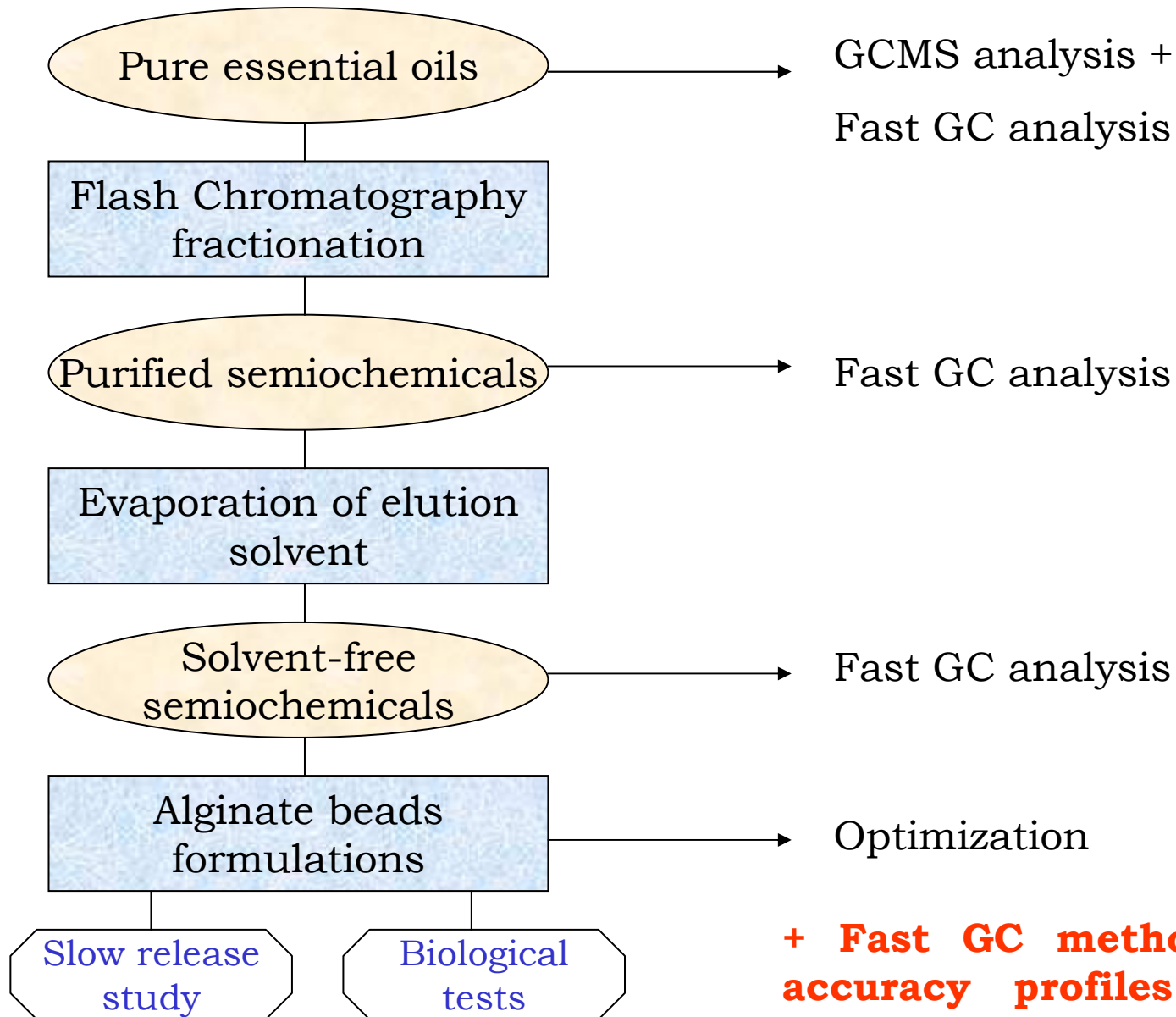


**Aggregation pheromone**

## Goals of the research

- Isolation of semiochemicals from essential oils
- Formulations of compounds to attract predators and/or parasitoids of aphids on infested fields
- ➔ Chemical ecology supported by analytical chemistry methodologies

## Steps



**+ Fast GC method validation by accuracy profiles and analytical performance estimation**

For more details, please see the  
poster...