

Developing a Fast, Inexpensive Method to Extract and Analyze Imidacloprid (Merit) Residue in Plant Tissue

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What question was addressed in this project?

Whether a method could be found that would give accurate residue results quickly and at a reduced cost from traditional HPLC analysis.

Why is this question important – how does it relate to EAB containment or management?

A cheap, rapid method to analyze chemical residue in treated trees is necessary in order to best assess efficacy of different treatments.

Briefly summarize how you collected data:

Leaf and phloem tissue samples were collected over time and from various ash tree insecticide treatments.

What do the preliminary results of your project indicate?

Our results demonstrate that a simple methanol extraction can be coupled with a commercially available ELISA kit to provide a suitable screening method for the quantitative determination of imidacloprid in the phloem or leaf tissue of ash and maple trees. In addition, as employed, the method does not require any extensive sample clean-up, leading to a considerable savings in time and cost.