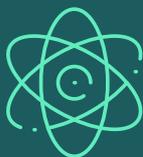


# Formulation science paves the way for new and improved products



Major consumer brand

**Sagentia Innovation's client identified a natural insecticide that is safe for humans and environmentally friendly. It is also chemically unstable, making it challenging to deliver in a format that provides long-lasting protection.**

## Expertise and domain knowledge

- Consumer
- Product development
- Data analysis
- Mathematical modelling
- Lab-based experimentation
- Formulation





### **The project story:**

We surveyed the academic literature and conducted a broad range of experiments to determine:

- the conditions under which the insecticide degrades
- the mechanism for the degradation and its kinetics
- possible formulations for reducing the rate of degradation
- This included developing analytical methods (for HPLC-UV, HPLC-MS, GC-EDS), data analysis methods and a mathematical model of delivery rates

### **Results: deliverables and outcomes**

- Rapid (four months) analysis of an issue that is key to a major new product
- Elucidation of the fundamental science which leads to specific formulation solutions and a faster means of improving related formulations