

HOW TWO BORON COMPOUNDS DIFFERENTIALLY AFFECT THE INDIVIDUAL INTAKE OF TOXIC BAITS IN *LINEPITHEMA HUMILE*

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The Argentine ant is a major household pest worldwide and efforts to control it usually involve the use of slow acting insecticides contained in baits, composed of either liquid sugar solutions or solid protein particles. A common toxicant used in commercial baits has been boron, either as borax (sodium borate) or boric acid. These compounds could affect the consumption of bait solutions resulting in rejection of the bait. Most studies performed in this topic evaluate groups of ants; here we analyse the individual ingestion behaviour and survival of two boron baits for *Linepithema humile* to detect which compound generate a higher rejection for this species. We used high toxicant concentrations and low sucrose concentrations (5% w/w) to offer unappetizing baits where differences in rejection would be accentuated. We compared a control sucrose solution with a borax solution and boric acid solution (each at 5% w/vol). Our results showed that there is a clear difference in intake of boric acid solutions compared to borate solutions. Ingestion times, volumes and rates, and acceptance were similar for the control sucrose solution and the boric acid solution, but all three were significantly lower for sucrose solutions containing sodium borate. Mortality was positively related to amount of boron ingested. These results suggest that boric acid baits would be more effective than borax baits for household control of *L. humile*.

Key Words Argentine ant, control, ingestion, boric acid