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**Título artículo:** Antifeedant activity of guayule resin and its compounds against the agricultural pest *Labidostomis lusitanica*

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**RESUMEN:** The economic sustainability of guayule (*Parthenium argentatum* A. Gray) cultivation will largely depend on its profitability, which drives strategies for the integral utilization of its biomass. Because guayule resin has been proposed as a broad-spectrum biopesticide, the aim of the present study was to test and compare its bioactivity against the agricultural pest *Labidostomis lusitanica* (Coleoptera: Chrysomelidae) Germar, with essential oils (EOs) from thyme (*Thymus vulgaris* L.), savory (*Satureja montana* L.), and oregano (*Origanum vulgare* L.). Repellency, oviposition and feeding inhibition activity were measured using free choice assays under controlled conditions, and minimal inhibitory concentrations of guayule resin fractions and isolated compounds were determined. Finally, guayule resin was tested under simulated field conditions. Results showed that the solvent used to dissolve and apply the resin had a great impact on its performance. Guayule crude resin was more active than tested EOs, particularly as an antifeedant. However, its activity did not seem to be concentration dependent, and was effective within a narrow range. In contrast to low molecular weight rubber (LMWR), which acted as attractant, the refined resin was repellent. Nevertheless, the two different enriched resin fractions, with sesquiterpene bioactive compounds acted as attractants and feeding stimulants, as well as the isolated compounds. In the semi-field trial, crude guayule resin again showed repellency and feeding deterrence, with no mortality, overall suggesting that while guayule resin is active against *L. lusitanica*, the compounds responsible for this activity are likely not the sesquiterpenes

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