

Supplementary Information

Physicochemical Properties and Field Evaluation of Monolithic Wax Formulations for the Controlled Release of a Forest Pest Pheromone

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Figure S1. Monolithic dispensers for 3-pentanol made of paraffin oil (60%) + paraffin mp 53-57 °C (40%) with 20% glass spheres (white color), 20% activated charcoal (black color) and 30% kaolin (grey color).



Figure S2. Monolithic dispensers for 3-pentanol made of paraffin oil (60%) + paraffin mp 53-57 °C (40%) with 20% activated charcoal (black color), 20% kaolin (grey color) and 20% molecular sieve (white and brown color).

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Figure S3. Monolithic dispensers for sulcatone made of paraffin oil (60%) + paraffin mp 53-57 °C (40%) with 10% kaolin (grey color) and with carnauba wax mixed with 20% kaolin (light beige color) and 30% kaolin (beige color).



Figure S4. Dispensers used in the field trials. Monolithic dispensers for sulcatone made of paraffin oil 70-80 °C with 30% kaolin (grey color). Dispensers for sulcatol and 3-pentanol made of carnauba wax mixed with 30% kaolin (beige color). A hook was inserted in the dispensers for their placement in the trees.



Figure S5. Monolithic dispensers used in the field trials for sulcatol, sulcatone and 3-pentanol placed in poplar trees.



Figure S6. Monolithic dispensers placed in the tree plantation in set of three one for each pheromone component and adjacent to each other, by pinning them on a small nail on the trees surface at 1.6 m above the ground. After field trials with the monolithic dispensers it is noticed a reduction in number of attacks assessed as mating galleries (MG) and active galleries (AG) with respect to control plots.



Figure S7. Mating galleries (MG) of *M. mutatus*. MG are galleries where a male initiated attack, lured a female, mating took place, and both male and female are extending the gallery inwards.



Figure S8. Active galleries (AG) of *M. mutatus*. AG are the entrance holes where a male initiated attack, lured a female, mating took place, females laid their eggs, offspring were produced, and feeding larvae expelled the sawdust outside.