emamectin benzoate status under the same Directive is "pending".

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IUFRO2009 国际松萎蔫病研讨会学术论文摘要选登

灰葡萄孢菌液中活性物质的提取及其对松材线虫的诱引研究

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摘要：分别以灭菌的淡水细砂和琼脂平板为基质，研究了不同真菌对松材线虫移行的影响，并从灰葡萄孢发酵液中逐级分离提取各种组分，以滤纸片法分析其中对松材线虫移行起作用的物质。结果表明：病木对松材线虫的诱引力较强，经高压灭菌后诱引能力虽有所下降，但下降不大，说明在病木中对松材线虫起诱引作用的物质并没有因高压灭菌而完全丧失，这与"吸引物质为挥发性物质"的推测相矛盾；但松树皮对松材线虫并没有什么明显的吸引作用，而灰葡萄孢对松材线虫的诱引力一直比较稳定。松材线虫对不同真菌的选择性强弱依次为：灰葡萄孢、盘多毛、酵母、空白(CK)，证明灰葡萄孢是其中对松材线虫最具吸引力的真菌。灰葡萄孢菌液经葡萄糖凝胶 LH-20 柱层析分离后的生测结果说明，灰葡萄孢菌液的活性物质主要存在于胞外有机相(乙酸乙酯相)中，可能是醇溶性化合物。但随着混合物的逐步分离，对松材线虫的吸引力和稳定性逐渐降低，证明对松材线虫的吸引活性是灰葡萄孢菌液的胞外有机相中几种物质协同作用的结果。

关键词：松材线虫；灰葡萄孢菌；活性物质；诱引能力

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Extraction of active components from the fungus *Botrytis cinerea* and their attraction to the pinewood nematode *Bursaphelenchus xylophilus*

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We studied a new way to determine the effect of different factors on *Bursaphelenchus. xylophilus* migration behavior using sterile sand tray and agar surface as migration matrixes. We also separated different extracts from the fungus *Botrytis cinerea* culture medium and used a filter paper method to determine the effects of the extracts on *B. xylophilus* activity. The results showed that pine wilt-affected wood has a strong attraction effect on *B. xylophilus*. The results differed from the presumption that the attractant is a volatile substance. The inducing force of *B. cinerea* toward *B. xylophilus* is stable while the pine skin lixivium has no obvious inducing effect. As well, *B. xylophilus* was obviously attracted to different fungi (*B. cinerea* > *Pestalotia* > *Microzyme* > control), i. e. the attraction to *B. cinerea* is greatest. This difference increases as exposure time increases and also as the concentration of metabolic products increase. Also, agar concentration significantly influenced migration behavior with the attractiveness to *B. xylophilus* increasing as the agar concentration decreases. The studies made to determine the nature of the attractants showed that the relative attractiveness of the different *B. cinerea* extracts to *B. xylophilus* differed according to the separation method used. Also, the active substances mainly existed in the extracellular organic phase (ethyl acetate phase) suggesting that they might be ethanol soluble compounds. With increased separation the attraction efficiency decreased. Based on the results, we conclude that the inducing activity depends upon the synergistic action of these extracts.

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