

**OR-16****Isolation and Identification of Active Compounds From *Piper Sarmentosum* Against Several Storage Pests**

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Biopesticide has become more important in stored pest management, since the use of synthetic insecticide may cause hazardous to human and environment. The idea of using plant extracts and their potential to control insects is not new; eucalyptus leaves have been used in Brazil to protect grain bulks by placing them in layers between the grains Malaysia has a wealth of plant species with wide range of bioactive compounds such as alkaloids and phenolics. *Piper sarmentosum* (Piperaceae) is widely distributed in Malaysia and often used as food flavoring agents, traditional medicines and pest control agents. *Sitophilus oryzae*, *Rhizopertha dominica* and *Plodia interpunctella* (Insecta: Lepidoptera: Pyralidae) are considered as main pests of stored dry food and can cause more than 30% loss. In this study methanol, hexane and dichloromethane extract of *P. sarmentosum* were tested against the above mentioned insects. Hexane extracts was the most active causing 100% mortality to *S. oryzae* at the range of 1mg/ml followed by methanol extracts with 96% mortality. Bioassay guided study of the hexane extract gave two active compounds which are phenolics; sarmentomine and 2,4,5-Trimethoxy-1-propenylbenzene. Both exhibited high toxicity on all pests. 2,4,5-Trimethoxy-1-propenylbenzene had LC<sub>95</sub> of 32 µg/ml on *S. oryzae* and 78 to 101 µg/ml on *R. dominica* and *P. interpunctella* very similar to sarmentomine. Sarmentosine is a new compound with a molecular formula of Structures of both compounds was established by spectroscopic methods namely 1D and 2D NMR, MS, UV and IR.

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