



2种拟青霉代谢产物对烟蚜乙酰胆碱酯酶和羧酸酯酶的影响

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Impacts of metabolites from *Paecilomyces farinosou* and *P. fumosoroseus* on acetylcholinesterase and carboxylesterase of tobacco aphides

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全文: PDF (675 KB) HTML (KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 以粉拟青霉菌的sw03032菌株和玫烟色拟青霉菌的sw03085为研究对象,比较其代谢产物的杀蚜虫活性和对烟蚜乙酰胆碱酯酶和羧酸酯酶活性的影响.结果表明2种真菌发酵液含有能毒杀蚜虫的毒素物质.且毒素粗提物浓度越大,杀蚜活性越强.经玫烟色拟青霉菌不同浓度毒素粗提液处理的蚜虫乙酰胆碱酯酶比活力分别比对照(CK2)降低了70.4%~29.8%.不同浓度玫烟色拟青霉毒素粗提液处理12h后,蚜虫羧酸酯酶比活力分别比对照(CK2)降低79.5%~44.4%.用不同浓度粉拟青霉毒素粗提液处理烟蚜12h后,乙酰胆碱酯酶和羧酸酯酶活性分别降低了38%~18.6%和51.6%~59.5%.玫烟色拟青霉菌的sw03085菌株代谢产物对烟蚜的伤害活性明显较粉拟青霉菌sw03032菌株代谢产物高.

关键词: 粉拟青霉 玫烟色拟青霉 毒素 乙酰胆碱酯酶 羧酸酯酶

Abstract: Two isolates,sw03032 (*Paecilomyces farinosus*) and sw03085(*P. fumosoroseus*),were cultured in SDB media.The metabolites were extracted to study the pesticidal activities and impacts on acetylcholinesterase and carboxylesterase.The results indicated the two isolates could produce active compounds to poison tobacco aphides and reduce activities of the two important enzymes.Compared with CK2,in 12h,activities of acetylcholinesterase and carboxylesterase treated with different concentration crude toxins from sw03085 could reduce to 70.4%-29.8% and 79.5%-44.4% respectively.Treated with different concentration crude toxins from sw03032,activities of acetylcholinesterase and carboxylesterase could reduce to 38%-18.6% and 51.6%-59.5% respectively.Poisonous roles of the toxins from sw03085(*P. fumosoroseus*) to tobacco aphides were evidently higher than the toxins from sw03032 (*P. farinosou*).

Key words: *Paecilomyces farinosou* *P. fumosoroseus* toxins acetylcholinesterase carboxylesterase

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