EFFECTS OF ACTIVE MOLLUSCICIDAL AGENTS OF COMMON SPICES ON BIOCHEMICAL PARAMETERS IN THE OVOTESTIS OF *LYMNAEA ACUMINATA*

SANJAY SINGH, V. K. SINGH and D. K. SINGH*

Department of Zoology, DDU Gorakhpur University Gomkhpur-273 009, India

ABSTRACT

The effects of active molluscicidal components of *Zingiber officinale* (citral and [6]-gingerol, respectively) and *Trachyspermum ammi* (thymol) on total protein, free amino acids and nucleic acid levels, and phosphatase activities were studied in the ovotestis of *L. acuminata*. Sublethal exposure to these components caused significant alterations in these biochemical parameters. Maximum reduction in protein levels of ovotestis (35% of control) was observed in snails exposed for 96 hr to 80% of 24 hr LC50 of [6]-gingerol. Significant reduction in amino acid levels was observed in ovotestis of [6]-gingerol- and thymol-treated snails whereas a significant increase was observed in citral treated snails. Significant reduction in nucleic acid level and acid/alkaline phosphatase activity in ovotestis were observed in all three groups of treated snails. Withdrawal experiments showed that these changes were reversible.

ABSTRAK


Key words: Citral, [6]-gingerol, molluscicide, spices, thymol

REFERENCES


