INTRODUCTION

INTRODUCTION

Larval mosquito control continues to be an important method of diminshing the incidence of mosquito- borne diseases and nuisance of biting adult mosquito population. The recent emphasis upon objectionable pesticide residues in the environment has prompted considerable thought and research in an effort to control these noxious pests without endangering non-target organisms in a given ecosystem.

Much interest has developed in the use of slow, controlled-release polymeric formulations of larvicides. Slow-release polymers are used as a new tool for mosquito larval control during entire season with a single application. Indeed, it might even be possible to obtain control during two or more seasons after using heavy dosage.

The advantages of this technology include: lower labor costs for application since less frequent applications are required, better localization of application, greater safety in handing and application, and the possibility of preflood application.

Controlled-release formulations have been used for control of mosquito larvae in different parts of the world (Whitlaw and Evans 1968, Lawason et al., 1973, Evans et al., 1975, Keenan 1978, Saleh et al., 1981, Saleh et al., 1985).

Trialkyltin compounds showed to be good agent to be used as mosquito larvicides (Cardarelli, 1978 and Sherman and Jackson, 1980). Bis-n-tributyltin oxide (TBTO) and tributyltin fluoride

(TBTF) were reported to be the most common used compounds. They are non-persistent in the biosphere, degrading through a series of daughter compounds to non-toxic stannic oxide. Morever, they have short half-lives 15.4 and 6.7 days, respectively in water (Mazaev et al., 1976).

The present study aimed at the preparation, biological evaluation of the efficacy of two copolymer formulations of the organotin compound TBTO as larvicides for the mosquito Culex pipiens. And hitopathological examinations of the 3rd instar larvae which were subjected to the action of the TBTI-MMA copolymer formulation, to discover the site of action of larvicide on Culex pipiens larvae.