

1. INTRODUCTION

In recent years, the use of synthetic pesticides in plant protection programs around the world has resulted in environment disturbances for their persistence toxic residues, toxic effect on non target organisms, and the development of insect resistance to insecticide.

With respect to safety, the popular perception that natural compounds are more benign than synthetic compounds (**Ames *et al.*, 1990**). The usefulness of phytochemicals as control tools is a function of economics, which in turn is a function of the alternative chemical and non-chemical methods for pests management.

Specific phytochemicals may be expensive to purify or synthesize chemically (**Blackburn, *et al.*, 1996**). The use of crude phytochemical extract instead of a purified or synthetic compounds may result in beneficial effects beyond were pest control and thus may convey additional economic benefit. Crude extracts also have the potential for synergism or antagonism among individual components (**Chitwood, 2002**).

Certain plant parts and extracts possess pesticidal properties. These plants have yielded a broad spectrum of active compounds toward different pests including, Polythienyls, isothio-cyanates, glucosinolates, cyanogenic, literpenoids quassinoids, steroids, triterpenoids, simple and complex phenolics, tannins, alkaloid, saponin and several other classes (**Chitwood, 2002**).

Several researchers are attempting to develop phytochemical-based strategies for pest control. Compounds involved in plant pest interaction include repellent, attractants, hatching stimulatants or inhibitors and toxicants. These interactions have greater attention because of the growth of the discipline of allelochemistry .

Different organs of some plants contain volatile odoriferous substances that affect the olfactory since and are responsible for the fragrance. Volatile oils constitute the most principles odorous found in various plants parts. Because they evaporate when exposed to air at ordinary temperature, they are called volatile oils, etherial oils or essential oils. The last term is applied since volatile oils represent the essence of the active constituents of such plants. **(Balbaa, et al., 1981).**

The present study was conducted to evaluate the biological effect of the botanical extracts and volatile oils from the two plant species (*Cymbopogon citratus* and *Lantana camara*) on the wood borer (*Sinoxylon sudanicum*) and to determine,

- The chemical composition of the fatty acids, unsaponifiable matter, volatile oils and phytochemical screening and the active components.
- Mortality percentages of *Sinoxylon sudanicumn* adults due to the application of the extracts.
- Lethal concentration toxicity (LCn) after seven days of treatment with the extracts .
- Lethal time toxicity (LTn) after seven days of treatment with different extracts concentration.