

**NOTE****Anthelmintic Activity of the Seeds of *Carum copticum***

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The ethanolic extract of the seeds of *Carum copticum* was evaluated for its anthelmintic efficacy *in vitro*. Graded doses of the extract (10, 50, 100, 200 µg/mL) showed significant anthelmintic activity, with their sensitivity when compared with the standard.

**Key Words:** *Carum copticum*, Anthelmintic.

*Carum copticum* Benth. (Umbelliferae) is a grassy, annual plant which grows in the east of India, Iran and Egypt with a white flower and small, brownish seeds. The seeds of this plant have an odour similar to thymol and its essential oil contain  $\gamma$ -terpinene, *p*-cymene,  $\alpha$ -pinene,  $\beta$ -pinene and other substances such as thymol and carvacol<sup>1</sup>.

The seeds of the *Carum copticum* have several therapeutic effects including diuretic, antiemetic, analgesic, antiasthma and antidyspnea effects<sup>2</sup>. They also have a therapeutic effect on some cutaneous, neural and urinary tract disorders. *Carum copticum* is, therefore, used in household remedies. A watery extract of this plant is widely used to relieve gripe in children. In diarrhoea, either roasted seeds are taken or a watery extract is made from them and given as a draught<sup>3</sup>.

Seeds of the *Carum copticum* were purchased from herbal store, Indore district. The seeds were identified by Dr. S. Vyas, Department of Botany, Holkar Science College, Indore. A voucher specimen is preserved in our laboratory for future reference.

The ethanolic extract was prepared by using soxhlet apparatus. Seeds (150 g) were extracted with 600 mL of 90 % ethanol. The extract was filtered, concentrated and dried in vacuum (yield 20 % w/w).

Anthelmintic activity (*in vitro*) by microwell plate assay<sup>4</sup>. Levamisole and ivermectin were used as reference standard. The extract was dissolved in 1 % DMSO.

The free living roundworm *Rhabditis pseudoelongata* (strain L. Lamy) was used for the anthelmintic screening. The worms were cultivated at 25°C in a moist atmosphere in darkness in a solid medium constituted of

autoclaved rabbit faeces. Three replicates were used for each concentration of ethanolic extract.

The ethanolic extract of the seeds of *Carum copticum* (10-200 µg/mL) exhibited potent anthelmintic activity (Table-1). This result may lend support for the traditional use of the plant as an anthelmintic.

TABLE-1  
ANTHELMINTIC ACTIVITY OF THE ETHANOLIC EXTRACT OF  
SEEDS OF *Carum copticum*<sup>a</sup>

Tested material	Conc. (µg/mL)	ED <sub>50</sub> (µg/mL)
<i>Carum copticum</i>	10, 50, 100, 200	93.6 (67.7-135.3)
Levamisole*	1, 2, 4, 8	3.9 (2.8-5.2)
Ivermectin*	0.5, 1, 2, 4	2.7 (2.1-3.2)

<sup>a</sup>All determination were done in triplicate; \*Reference standards.

#### ACKNOWLEDGEMENTS

The author is grateful to Head, School of Pharmacy for providing necessary facilities and to Department of Parasitology, T.H. Choitram Hospital and Research Center, Indore for providing worms for the evaluation.

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(Received: 9 June 2006;

Accepted: 4 May 2007)

AJC-5649