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 γ-terpinene, p-cymene, α-pinene, β-pinene and other substances such as thymol and carvacol.

The seeds of the *Carum copticum* have several therapeutic effects including diuretic, antivomiting, analgesic, antiasthma and antidyspnea effects. 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 grippe in children. In diarrhoea, either roasted seeds are taken or a watery extract is made from them and given as a draught.

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. Levamisole and ivermectin were used as reference standard. The extract was dissolved in 1 % DMSO.

The free living roundworm *Rhabditis pseudoeolongata* (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*

<table>
<thead>
<tr>
<th>Tested material</th>
<th>Conc. (µg/mL)</th>
<th>ED₅₀ (µg/mL)</th>
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</thead>
<tbody>
<tr>
<td><em>Carum copticum</em></td>
<td>10, 50, 100, 200</td>
<td>93.6 (67.7-135.3)</td>
</tr>
<tr>
<td>Levamisole*</td>
<td>1, 2, 4, 8</td>
<td>3.9 (2.8-5.2)</td>
</tr>
<tr>
<td>Ivermectin*</td>
<td>0.5, 1, 2, 4</td>
<td>2.7 (2.1-3.2)</td>
</tr>
</tbody>
</table>

*All determination were done in triplicate; *Reference standards.

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**REFERENCES**


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