

SUMMARY

Leaves and flowers of local madurutala plants (Ocimum spp, Family Labiateae) contain pleasant smelling essential oils. For a long time local people used this plant to ward off the mosquitos from the houses. Madurutala plants were correctly identified by the authorities in the Botany Department and compared with preserved specimen at the National Herbarium at Peradeniya.

Madurutala plants were collected from different ecological areas of Sri Lanka. They included Anuradhapura, Bentota, Galle, Girandurukotte, Embilipitiya, Hanguranketa, Rakwana, Kurunegala, Matale, Nattandiya and Veyangoda. As soon as the plant material was brought to the laboratory they were steam distilled and the volatile oils were collected.

The constituents were analysed by Gas Liquid Chromatographic method. Two distinct chemotypes were noted. They were O. canum rich in camphor and O.gratissimum rich in eugenol. Essential oils of both types had the array of same chemical in different proportions.

Studies on mosquito repellent properties showed that O. canum oil had about 96% repellency while O.gratissimum oil had 75% repellency. Similarly knock-down, inactivate and killing properties of two types of oils were,

<u>O. canum</u>	2.22	4.28	and	5.2 minutes
<u>O. gratissimum</u>	6.0	8.16		10.9 minutes

For practical use joss-sticks and cream were prepared incorporating 5% of each oil. These preparation were evaluated for mosquito ward off properties.