

## VARIATIONS IN THE COMPOSITION OF OIL IN CITRONELLA STRAINS

**E. E. Iruthayathan, H. M. W. Herath and  
R. O. B. Wijsekera**

Commercial Ceylon oil of Citronella is distilled mainly from lenabatu type (*Cymbopogon nardus*) but there are areas where Mahapengiri (*Cymbopogon winterianus*) and lenabatu are grown in mixtures and the oil from these plantations enters the oil of commerce. Eleven different strains of Mahapengiri and lenabatu were found in citronella plantations of Sri Lanka.

Compositions of oil extracted from these different strains showed differences with regard to thirty one constituents. The constituents of leaf oil and flower oil varied widely in their percentages and the difference were highly prominent in the content of monoterpene alcohols, phenolics and in some of the terpene hydrocarbons. In the flower oil magnitude of differences in the percentage of constituents between the strains was less compared to that of leaf oil, The percentages monoterpene hydrocarbon compounds of flower oil were lower than those of leaf oil while the monoterpene alcohols except citronellal had higher percentages. Methyl iso eugenol was higher in the flower oil than in the leaf oil in seven strains while it was low in one strain.

The correlation studies showed the relationship between the contents of total terpene hydrocarbons monoterpene alcohols, camphene-bornane compounds phenolics and total acetylisables. Correlation values explained the influence of production of one particular group of compounds over the others.

The variability in the contents of different constituents of oil among the strains was in accord with their genetic differences.