VOLATILE AROMA CONSTITUENTS OF CINNAMON FRUIT (CINNAMONUM ZEYLANICUM) BY COMBINED GC/MS ANALYSIS

G.S. Jayatilleke, A.L. Jayawardena, A.M. Mubarak,
U.M. Senanayake, P.A. Paranagama*, S. Wimalasena*
Ceylon Inst. of Scientific & Industrial Research, Colombo 7.
*Dept. of Chemistry, University of Kelaniya.

The volatile aroma constituents of cinnamon fruit has not been previously studied. Volatile components of the cinnamon fruits were obtained by the steam distillation with the use of two types of apparatus described by Shipton and Whitfield[1] and Likens and Nickerson[2]. The solvents used were hexane and isopentane. The extracts were analysed by capillary GC and GC/MS and 47 constituents were identified. The volatile oil contained sesquiterpene hydrocarbons (67%), sesquiterpene alcohols (17%) and phenyl propanoides (1%).

Among the sesquiterpenes δ-cadinene and γ-cadinene (36%) and cadinol (7.7%) were found to be the major compounds. Therefore the major volatile constituent of cinnamon fruit was different from that of root, leaf and bark where major compounds were camphor (50%), eugenol (75%) and cinnamaldehyde (65%) respectively.

The authors wish to thank NARESA for the grant (RG/87/C/05).
This is a part of M.Phil degree work of P.A. Paranagama.

References: 1. Shipton J. and Whitfield F.B. (1966) Chem. Ind 25, 1038.
2. Likens S.T. and Nickerson G.B. (1964) Proc. Am. Soc. Brew. Chem. 5.