5. Y. YUKAWA and S. ITO, "Spectral Atlas of Terpenes and Related Compounds", Hirokawa, Tokyo, 1973.
6. E. STENHAGEN, S. ABRAHAMSSON and F. W. MCLAFFERTY, "Registry of Mass Spectral Data", Wiley, New York, 1974.
7. A. A. SWIGAR and R. M. SILVERSTEIN, "Monoterpenes", Aldrich Chemical Co., Wisconsin, 1981.
8. A. T. BOTTINI, V. DEV, D. J. GARFAGNOLI, C. S. MATHELA, A. B. MELKANI, A. A. MILLER and N. S. STURM, *Phytochemistry*, 1986, **25**, 207.

Fatty Acid Composition of *Fleurya interrupta* and *Ajuga macrosperma*

B. DINDA*, G. CHEL, A. DAS, M. PORIA
and
S. DEBNATH
Department of Chemistry, Tripura University, Agartala- 799 004

Manuscript received 19 August 1988, revised 17 January 1990, accepted 22 January 1990

As a part of our programme to explore the harbal drugs, we reported[1] the presence of a good number of amino acids from two endemic herbs of Tripura, *Fleurya interrupta* Gaudich (*Urticaceae*) and *Ajuga macrosperma* Wall (*Labiatae*). Now we report the fatty acid composition of these plants.

The ground aerial parts (150 g) of the young plant of *F. interrupta* were extracted with petrol (b.p. 60 – 80°) by percolation method and the crude petrol extract was column chromatographed through silica gel to get an oil (0.9 g). The oil was saponified and the fatty acid mixture (0.4 g) was recovered in the usual manner, esterified with diazomethane and the resulting Me-esters were purified by passing through a silica gel column and analysed by glc technique. The components were identified[2] by comparing their retention times with those of the authentic samples in both 10% DEGS and 10% PEGA columns. The relative percentage abundances of the component fatty acids as calculated from the recorded peak areas of their Me-esters were as follows: 14 : 0 (8.22), 14 : 1 (5.61), 14 : 2 (5.16), 16 : 0 (24.5), 16 : 1 (3.82), 18 : 0 (5.13), 18 : 1 (9.55), 18 : 2 (2.5), 20 : 0 (1.75), 22 : 5 (3.2) and others unidentified (30.56%). The presence of unsaturated fatty acids was also confirmed by catalytic hydrogenation of a part of Me-ester mixture with 10% Pd – C followed by glc analysis of the hydrogenated product.

The plant *A. macrosperma* (300 g) was worked up in a similar manner, and the component fatty acids along with their relative percentage abundance determined were as follows: 12 : 0 (0.29), 12 : 1 (0.38), 14 : 0 (0.98), 14 : 2 (6.12), 16 : 0 (7.34), 16 : 1 (13.71), 16 : 2 (11.42), 18 : 0 (11.97), 18 : 1 (7.48), 18 : 2 (6.75), 18 : 3 (5.39), 20 : 1 (7.83), 20 : 2 (9.83), 22 : 0 (0.97), 22 : 1 (0.91) and others unidentified (8.63%).

The presence of unsaturated fatty acids was also confirmed in a similar manner as before.

Acknowledgement

The authors thank R.S.I.C., Bose Institute, Calcutta, for glc analysis and one of the authors (G.C.) thanks D.S.T., Govt. of Tripura, for financial assistance. Thanks are also due to U.G.C., New Delhi, for financial assistance.

References

1. B. DINDA, G. CHEL and A. DAS *J. Indian Chem. Soc.*, 1988, **65**, 227 ; B DINDA, S. DEBNATH and M. PORIA, *J. Indian Chem. Soc.*, 1988, **65**, 146.
2. W. W. CHRISTIE, "Lipid Analysis", 2nd ed., Pergamon, New York, 1982, pp. 63-92 ; B. DINDA and M K. SAHA, *J. Indian Chem. Soc.*, 1988, **65**, 144.

Fatty Acid Composition of Minor Seed Oils

M. TARIQ SAEED, A. RAUF**, M. K. PASHA
and
S. M. OSMAN*
Section of Oils and Fats, Department of Chemistry, Aligarh Muslim University, Aligarh-202 002

Manuscript received 11 December 1989, accepted 22 January 1990

In continuation[1] of our screening programme of the seed oils, a study of six seed oils belonging to *Acrocarpus fraxinifolius, Casuarina equisetifolia, Legerstroemia therolli, Prospis juliflora, Boerhaavia defusa* and *Dyospyros cardifolia* are reported and fatty acid composition of these oil-seeds are determined by glc.

The ground seeds were extracted with light petroleum ether (b p. 40 – 60°) in a Soxhlet to afford the oil. Analytical values of seed oils were determined according to the procedures recommended by the AOCS[2] (Table 1). All the oils and their esters showed no conjugation or *trans*-unsaturation or any other functional groups in uv and ir studies. The quantitative examination of methyl esters was undertaken by glc. Identification of each acid was made by comparing its retention time with those of the standard samples of fatty acid methyl esters (Sigma and groundnut oil methyl esters).

The seed oil of *A. fraxinifolius* contains high percentage of oleic acid (76.3%). *C. equisetifolia* contains an unusual amount (78.5%) of essential fatty acid, i e. linoleic acid. The seed oil compositional data indicate that the oils of *L. therolli* and *P. juliflora* contain palmitic acid in amount of 23.5 and 27.1%, respectively.

**Applied Sciences Section, University Polytechnic, A.M.U., Aligarh-202 002.