

Earlier, fatty acid compositions of *S. grandiflora*⁵ and *S. aegyptica*⁶ were determined by fractionation methods. It is found that the present observations are different from the previous one.

Acknowledgement

The authors are thankful to ICAR-USDA for providing financial assistance

References

1. "Official and Tentative Methods of American Oil Chemists' Society", 3rd. ed., Am. Oil Chem. Soc., Champaign, 1973.
2. R. GUPTA, R. RAUF, M. S. AHMAD, JR., F. AHMAD and S. M. OSMAN, *J. Oil Tech. Assoc. India*, 1983, **15**, 6
3. J. A. FIORITI and R. J. SIMS, *J. Chromatogr.*, 1968, **32**, 761
4. G. HALPHEN, *J. Pharm.*, 1897, **6**, 390; *J. Chem. Soc.*, 1898, **71**, 358.
5. R. D. TEWARI and S. P. GARG, *J. Proc. Oil Tech. Assoc. India*, 1954, **10**, 111.
6. M. O. FAROOQ, M. S. AHMAD and M. A. MALIK, *J. Sci. Food Agric.*, 1954, **5**, 498.

Fatty Acid Composition and Characteristics of *Cassia glauca* Seed Oil

A. K. DIXIT and H. P. TIWARI*

Department of Chemistry, University of Allahabad, Allahabad-211 002

Manuscript received 23 May 1990, accepted 26 July 1990

CASSIA glauca (N.O. Leguminosae) plant occur throughout India. No work has been reported so far on fixed oil from its seeds. Phytochemical screening of forest seed oils is a subject of intensive research to explore new alternative sources for conventional oils. It was therefore considered worthwhile to isolate the fixed oil from the seeds of *C. glauca* (collected locally) using glc technique.

Experimental

Cleaned and dried seeds (2 kg) were crushed and extracted exhaustively with light petroleum ether (b.p. 40–60°). Removal of the solvent yielded a yellowish oil with a faint odour, which was purified through animal charcoal and Fuller's earth. The oil was subjected to various qualitative tests, e.g. picric acid test¹ for epoxy group and Halphen test² for cyclopropane moiety. The characteristics of the purified oil determined according to standard AOCS³ methods are given in the Table 1. The mixed fatty acids were converted to their methyl esters⁴. Glc of the methyl esters was carried out on a CIC gas chromatograph equipped with flame ionisation detector using stainless steel column (3 mm x 2 m) packed with 20% DEGS on chromosorb and using

nitrogen as carrier gas. The injection port, columns and flame ionisation detector block were maintained at 260, 190 and 190° respectively. The methyl esters were identified⁵ by co-glc with authentic samples.

TABLE 1—CHARACTERISTICS AND FATTY ACID COMPOSITION OF THE OIL

| | |
|----------------------------|----------|
| Yield of oil (%) | 5 |
| Specific gravity (at 30°) | 0.916 |
| Refractive index (at 40°) | 1.468 |
| Moisture content (%) | 3.9 |
| Acid value | 1.8 |
| Saponification value | 192 |
| Unsaponifiable matter (%) | 4.12 |
| Iodine value (Wijs method) | 96.2 |
| Fatty acids (%) | |
| Palmitic | 30.354 3 |
| Stearic | 1.317 6 |
| Oleic | 23.497 9 |
| Linoleic | 42.916 9 |
| Linolenic | 1.627 1 |
| Arachidic | 0.286 2 |

Results and Discussion

The results gave no indication of conjugation or *trans*-unsaturation or any other functional groups in the oil. No epoxy function could be detected in it. The oil is of non-drying type and indicates its potential for edible use after due processing. However, the seeds cannot be a good source of oil to be exploited economically.

Acknowledgement

The authors are thankful to Dr. J. P. Pathak of H.B.T.I., Kanpur, for glc facilities.

References

1. J. A. FIORITI and J. R. SIMS, *J. Chromatogr.*, 1968, **32**, 761.
2. G. HALPHEN, *J. Pharm.*, 1897, **6**, 390; *J. Chem. Soc.*, 1898, 358.
3. "Official and Tentative Methods of American Oil Chemists Society", 1964.
4. A. CHALVARDGIAN, *Biochem. J.*, 1964, **90**, 518.
5. W. W. CHRISTIE, "Lipid Analysis", 2nd. ed., Pergamon, New York, 1982, pp. 63-92.

Synthesis of new 3-Substituted-*s*-triazolo-[3,4-*b*]-8-methylpyrazolo[3',4'-*e*](5*H*)-[1,3,4]thiadiazines

M. S. CHANDE* and B. M. KARNIK

Department of Chemistry, The Institute of Science, Bombay-400 032

Manuscript received 15 January 1990, revised 15 May 1990, accepted 3 July 1990

IN continuation of our studies on the synthesis of new *s*-triazolothiadiazines as potential anthelmintic agents^{1,2,3}, the hitherto unreported title compounds (3) have been prepared by the condensation of the corresponding 3-substituted-4-amino-5-mercapto-1,2,