to provide further chemical evidence by converting them into the corresponding stabler biflavones. The present study deals with the confirmation of the structure of semecarpus biflavanone B (II).

\[ \text{R} = R_1 = R_2 = R_4 = \text{OH}, R_3 = \text{H} \\
\text{II. } R = R_1 = R_2 = R_3 = \text{OH}, R_4 = \text{H} \\
\text{III. } R_2 = \text{OH}, R_1 = R_2 = R_4 = \text{H} \]

**CONFIRMATION OF THE STRUCTURE OF SEMECARPUS BIFLAVANONE B**


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AND

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Three new semecarpus biflavones, A (I), B (II), and C (III) were reported from the ether soluble fraction of the methanolic extract of the defatted nut shells of *Semecarpus anacardium* Linn. by Row *et al.*

Biflavanone B [tetrahydrobenzoflavone, (IV)] and tetrahydrrobustiflavone (V) were isolated from the nut shells of the same plant. The structures of the three biflavones (I), (II) and (III) were ascribed based mainly on spectral data. Hence it is proposed

Adopting the procedure of Row *et al.*\(^1\), the yellow biflavonoid mixture (400 mg) was reisolated and dehydrogenated with iodine (6.0 g) and *potassium* acetate (3.5 g) in acetic acid\(^2\) (76 ml) at reflux temperature for 3 hours to give the biflavone mixture which also showed a single spot like the parent compound. The dehydrogenated product (240 mg) was methylated with dimethyl sulfinylc hloride (1 ml), *potassium* carbonate (3.0 g) in dry acetone (76 ml) under reflux for several hours till the product gave a negative ferric reaction. The reaction product showed a number of trailing spots on TLC. It was chromatographed over a small column of silica gel (finer than 200 mesh) and eluted with benzene : chloroform mixture and chloroform. The chloroform eluate afforded a single component (compound A) which was crystallized from chloroform : methanol mixture as needles, \(C_{36}H_{50}O_{19}\).
(Found: C, 69.39; H, 4.94; OCH₃, 29.79; C₈H₁₀O₈ requires C, 69.45; H, 4.86; and OCH₃, 29.95%), M⁺ 622, m.p. 174–75°, ω₀ = 73–2°, yield: 50 mg. v (nujol): 2830 (OCH₃), 1600 (flavone carbonyl) and 1660 and 1590 (aromatic) cm⁻¹.

The benzene–chloroform mixture (1:1) eluate gave a complex mixture (more than six spots) which could not be separated into its individual components.

Compound A exhibited an orange-red color with Mg HCl and a negative test with sodium borohydride and HCl indicating its flavone character. It was found to be identical with that of (−) amentoflavone hexamethyl ether⁴ (V) (m.p., I.R., ¹H NMR and Mass). This identification unambiguously proves the structure of semecarpus biflavone B (II) and the nature of C–C linkage as assigned by Row et al.³.

One of the authors (S. S. N. M.) wishes to express his grateful thanks to U.G.C. and C.S.I.R. for financial assistance.

November 3, 1980.


A NEW OCCURRENCE OF PYRRHOTITE AND PENTLANDITE IN THE MINERAL CEMENT OF TERTIARY GRAVELS NEAR PATHERGHARA, SINGHBHUM, BIHAR

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EXAMINATION of tertiary gravels (22°33'–86°25") under reflected light reveals the occurrence of pyrrhotite (FeNi)S associated with a small amount of pentlandite (NiS).

Pyrrhotite occurs in the form of rims around the grain boundaries of quartz and feldspar. Rims are complete and broken too. Thickness of these rims is erratic and varies from 0.1 to 0.66 mm in diameter. Individually the grains are of 0.01 mm diameter.

Pentlandite is seen closely associated with pyrrhotite as flames and dots. Rounded to oval shaped grains of pentlandite have been observed irregularly dusted through 0001 metal planes of pyrrhotite which are present for the most part in considerable excess. It is interesting to note that a large number of pentlandite grains have been enriched along quartz and pyrrhotite boundaries (Fig. 1). This texture might have resulted from the diffusion of nickel rich pyrrhotite at low temperature⁵.

According to Dunn and Dey⁶, the gravel beds were believed to have been derived from the local Archean rocks. In the light of field, petrographical and trace element examinations of certain neighboring rocks of the area, the author suggests that epidiorite which contains about 45–425 pp.m nickel associated with Dhanji quartzite might have been a specific source of gravels as of today.

Detailed chemical and X-ray analyses are in progress.

Author expresses his grateful thanks to Prof. S. H. Rauwl, Head, Department of Geology, A.M.U., Aligarh, and Messrs. Hindustan Copper Ltd., especially to Dr. C. P. D. Singh, Geologist, Masabani Copper Mines, Singhbhum, Bihar.

December 3, 1980.