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DISTRIBUTION OF IRIDOIDS IN *THEVETIA NERIIFOLIA*

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Key Word Index—*Thevetia neriifolia*; Apocynaceae; iridoids; theveside.

The presence of iridoids in *Thevetia neriifolia* has been known for some time, and recently Sticher [1] isolated and characterised theveside from the seeds of this plant. Since previous work on this plant appears to have been carried out on dried plant material, we have undertaken a TLC study with the primary object of determining the occurrence and distribution of these principles in fresh plant material. Where possible, we have also examined dried or decayed material for purposes of comparison. The pattern of occurrence and distribution is shown in Table 1.

From the results obtained from the leaves, it would appear that the faster running component (R_f, 0·8) (presumably theveside) is the primary compound, and this undergoes partial or total transformation to give rise to the other 2 components (R_f, 0·6 and 0·0)—particularly in the dried or decayed materials. It was of interest to note that yellow senescent leaves failed to give a blue reaction characteristic of theveside and certain other iridoids with mineral acids. However, the fact that chlorotic leaves from seedlings kept in the dark gave the reaction, shows that the iridoids are not affected by light, and that their absence in senescent leaves is due either to their complete destruction or their chromogenic groups having been blocked. The positive tests given be decayed fruits and flowers suggest that the iridoids are more stable in these organs.

Table 1.

Plant part	Iridoid components R_f 0·8	0·6	0·0
Leaves			
Fresh	+++	−	−
Dried	++	+	−
Fruit pulp			
Fresh	+++	+	(∓)
Decayed (dark brown)	−	++	(∓)
Flowers			
Fresh	+++	+	−
Decayed	−	+	−
Seeds, roots and stem			
Fresh	+++	+	(∓)
Dried	++	+	(∓)

EXPERIMENTAL

Materials. Fresh leaves, flowers, stems, roots, unripe fruit and seeds, were collected from healthy plants of *Thevetia neriifolia*. Fresh seeds were extracted from unripe fruits. Dried materials were obtained by drying the parts carefully in the laboratory; decayed materials were gathered from under the shrub. Yellowed senescent leaves were picked from shrubs and chlorotic leaves obtained from seedlings raised completely in the dark, or from normal seedlings kept in the dark until the leaves turned yellow.

Extraction and chromatography. The materials were extracted with EtOH (45%), and the extracts chromatographed on Si gel plates with MeOH–EtOAc (8:7). Components were visualised by spraying the plates with 2 N H_2SO_4 and heating the plates in an oven at about 100° until blue spots appeared.

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REFERENCE

1. Sticher, O. (1971) *Pharm. Acta Helv.* **40**, 156.