

CONYZA SCABRIDA HERBA

Definition

Conyza Scabrada Herba consists of the fresh or dried leaves and smaller stems of *Conyza scabrada* DC (Asteraceae).

Synonyms

Conyza ivifolia (L.) Less.

Baccharis ivaefolia L.

Vernacular names

oondbos, bakbos, paddabos (A)

Description

Macroscopical¹



figure 1 – Live plant

Shrub to 1.2 metres high with pubescent stems; **leaves** borne on slender petioles up to 10mm long, up to 60 × 20mm, elliptic to lanceolate, 3-nerved from the base, margins sharply serrate, glabrous to pubescent; **flowers** borne in capitula less than 8mm in diameter, arranged in compact terminal compound corymbs; outer ray florets female, inner disc forests hermaphrodite; **fruit** a compressed achene 1mm long; **pappus** of whitish scabrid bristles.

¹ Hilliard, O.M. (1977). Compositae in Natal: 86. University of Natal Press, Pietermaritzburg.



Figure 2 – line drawing

Microscopical

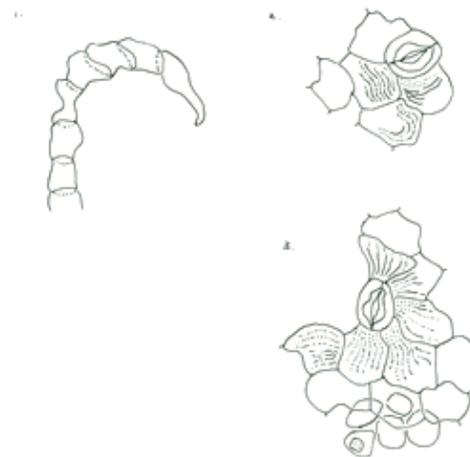


Figure 3 – microscopical features

Characteristic features are: the thin-walled multicellular clothing hairs of the leaf surface and margins, up to 240 microns long, often with one cell collapsed, the apical cell tapering sharply (1); the anomocytic stomata of both leaf surfaces (2); the epidermal cells of the leaf lamina with striated cuticle, staining red with Sudan IV; the scattered

glandular hairs of the leaf and stem, having a unicellular stalk and multicellular head with yellow-brown contents; the crystalloid bodies in the subepidermal layers of the leaf lamina, staining with Sudan IV (3).

Crude drug

Collected as required or found in the marketplace as bundles comprising leaves and smaller twigs, often with flowers and fruit. Foliage soft and pleasantly aromatic.

Geographical distribution

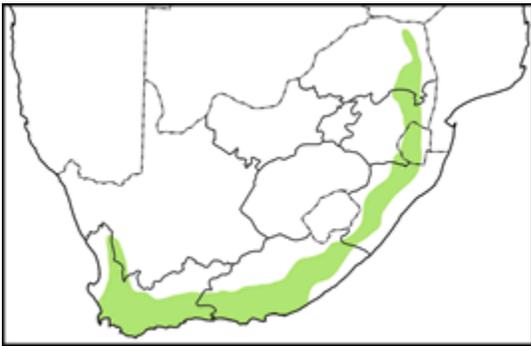


Figure 4 – distribution map

Moist habitats e.g. streamsides and forest margins of the Western and Eastern Cape Province, KwaZulu-Natal, Free State Province, Mpumalanga, Lesotho and Swaziland.

Quality standards

Identity tests

Thin layer chromatography on silica gel using as solvent a mixture of toluene:diethyl ether:1.75M acetic acid (1:1:1). Reference compound cineole (0,1% in chloroform). Method according to Appendix 2a.

R_f values of major compounds: 0,26 (mustard yellow); 0,39 (indigo blue); 0,44 (grey-blue); 0,53 (indigo); 0,73 (lilac); cineole: 0,88 (blue-purple)

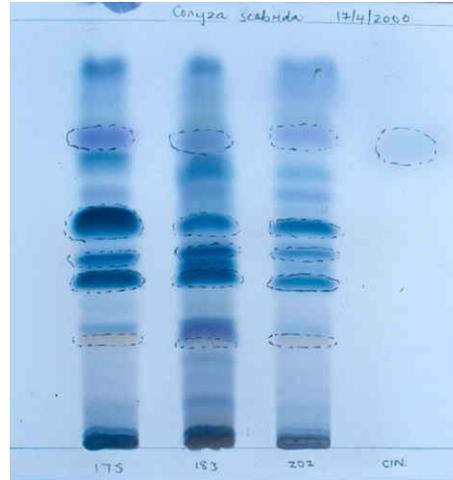


Figure 5 – TLC plate.

HPLC on C₁₈ column, method according to Appendix 2b.

Major compounds:

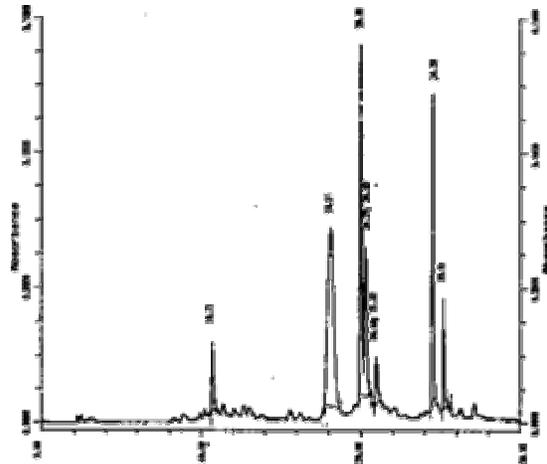


Figure 6 a – MeOH HPLC spectrum

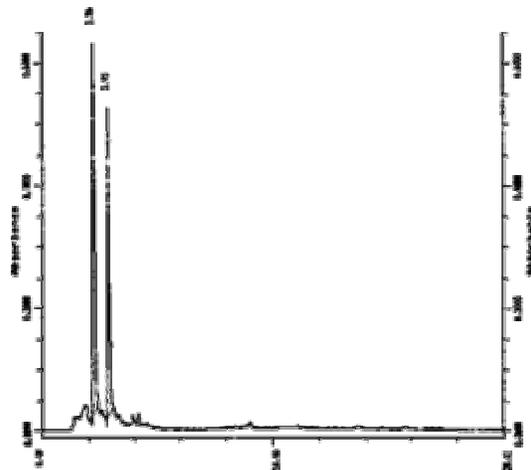


Figure 6 b – DCM HPLC spectrum

Methanol extract: (figure 6a)
Retention times (mins): 18.16; 20.00; 20.55;
24.54; 25.21

DCM extract: (figure 6b)
Retention times (mins): 2.26; 2.91

Ethanol (70%) soluble extractive value: not
less than 41.2% (range: 41.2-43.5%)

Purity tests

Assay

Not yet available

Major chemical constituents

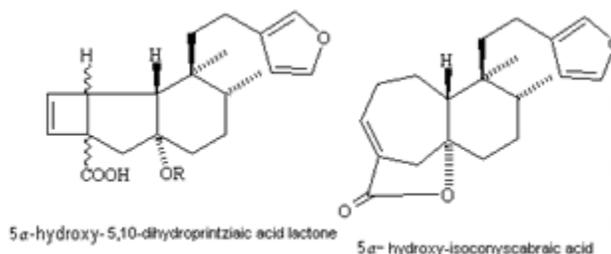


Figure 7 – chemical constituents

Microchemical tests in our laboratories indicated the presence in this species of cardiac glycosides, saponins and tannins but not alkaloids, cyanogens or anthraquinone derivatives. A number of diterpene acids: conyscabraic acid, hautriwaic acid, nidoresedaic acid, printziaic acid and derivatives of these (figure 7) have been identified in the aerial parts of *Conyza scabrida*².

Dosage forms

Used mainly in the form of an aqueous infusion, taken internally. The leaves may be made into a poultice with vinegar and applied locally.

Medicinal uses

This herb is used as an external application to treat sores and inflammation and taken internally for the relief of fever and diarrhoea.

Pharmacology/bioactivity

Little is known of the pharmacology of this species. No *in vitro* antimicrobial activity against *Pseudomonas aeruginosa*, *Candida albicans*, *Staphylococcus aureus* or *Mycobacterium smegmatis* was observed in disc assays of aqueous extracts conducted in our laboratories.

Contraindications

None known.

Adverse reactions

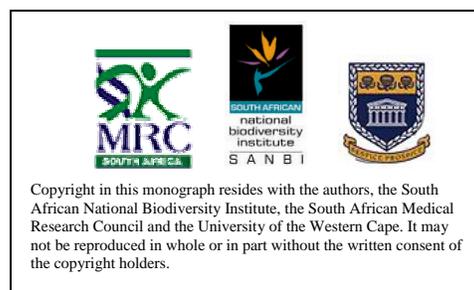
None reported.

Precautions

No special precautions.

Dosage

Eight tablespoonsful (± 20 g) of dried powdered herb is infused until cold in one litre (± 6 teacupfuls) of boiling water. The mixture is strained and taken in half teacupful (90ml) doses three times daily.



² Bohlmann, F., Grenz, M., Wegner, P. and Jakupovic, J. (1983). Clerodendran derivatives and novel diterpenes from *Conyza scabrida* DC. *Liebig's Annals of Chemistry* **11**: 2008-2020.