LEYSERA GNAPHALODES HERBA

Definition

Leysera Gnaphalodes Herba consists of the fresh or dried leaves and stems of Leysera gnaphalodes (L.) L. (Asteraceae).

Synonyms

Asteropterus dinteri Rothm.
A. gnaphalodes (L.) Rothm.
A. gracilis Rothm.
A. incanus Rothm.
Callisia gnaphalodes L.
Leysera incana Thunb.
L. tenuifolia Salisb.

Vernacular names

Teringtee, hungertee, geelblommetjie, skilpadteebossie (A)

Description

Macroscopical

Low spreading shrublet to 400mm; leaves alternate, entire, threadlike, up to 20 mm long, covered with fine silvery hairs; flowers (Sept-Nov) yellow, borne in solitary heads up to 25mm in diameter, on slender wiry peduncles at the ends of branches; disc florets bisexual, ray florets female; inflorescence subtended by several rows of dry involucral bracts; pappus bristles plumose.

Microscopical

Characteristic features are:

The numerous glandular hairs of leaf and stem, visible as shiny stalked glands under low magnification, with biseriate stalks up to 600µ long and uni- to multicellular heads up to 150µ in diameter, filled with yellow brown contents (1); the abundant unicellular

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clothing hairs; the absence of calcium oxalate; the elongated cells of the bract margin with striated cuticle (3); the occasional yellow-brown pollen grains ±75µ in diameter (2); the epidermal cells of the tubular floret corolla with sinuous walls (4); the cells of the leaf epidermis, with sinuous walls and anomocytic stomata (5).

Crude drug

Gathered fresh as required or available in the marketplace as bundles of softly hairy aromatic grey leafy twigs, with occasional flowers.

Geographical distribution

Sandy and stony flats and slopes of the Western Cape Province northwards into southern Namibia and eastwards as far as Uniondale.

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. (figure 5) Rf values of major compounds: 0.37 (grey-green); 0.40 (purple-grey); 0.45 (purple); 0.60 (mauve); 0.80 (pale green); cineole marker: 0.79 (blue-purple)

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

Major compounds:
Methanol extract:
Retention times (mins): 10.33; 13.11; 16.5; 19.90

Ethanol (70%) soluble extractive value:
not less than 22.0% (range: 21.95-28.11%)

Purity tests

Assay
Not yet available

Major chemical constituents
The roots of *Leysera gnaphalodes* contain triterpenes and benzofuran derivatives\(^2\) while the aerial parts have yielded, in addition to triterpenes e.g. oleanolic acid, diterpenes as well as labdane and kaurene derivatives.\(^3\) (figure 7) Microchemical tests in our laboratories indicated the presence of alkaloids and tannins but not of saponins nor of cardiac or cyanogenic glycosides.

**Dosage forms**

An aqueous infusion is taken orally.

**Medicinal uses**

The use of this herb is directed almost exclusively to the treatment of respiratory problems e.g. asthma, bronchitis, tuberculosis and influenza. It was at one time considered by the medical profession at the Cape to be very effective for this purpose and preparations were commonly dispensed by apothecaries.\(^4\) In the Montagu district it is used also for stomach ailments.\(^5\)

**Pharmacology/bioactivity**

There appears to be little published information available at present. Preliminary *in vitro* assays did not suggest antimicrobial activity of aqueous extracts against *Pseudomonas aeruginosa, Staphylococcus aureus, Mycobacterium smegmatis* or *Candida albicans*, in the concentrations used in our laboratories.

**Contraindications**

None known

**Adverse reactions**

None recorded

**Precautions**

No special precautions

**Dosage**

To be determined

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\(^4\) GR 19

\(^5\) GR 20