CLIFFORTIA ODORATA HERBA

Definition

Cliffortia Odorata Herba consists of the fresh or dried overground parts of *Cliffortia odorata* L.f. (Rosaceae).

Synonyms

*Cliffortia alnifolia* Reichenb.
*Cliffortia odorata* L.f. var. *vera* Harv.

Vernacular names

wildewingerd, wildevyerank (A)

Description

Macroscopical

Scrambling shrub to 1.0 m; older stems glabrous, rust brown, younger stems tomentose, flushed pink; leaves alternate, stipulate, shortly petiolate, 30-60 mm × 20-50 mm, flat, simple, ovate, with serrate-crenate margin, faintly aromatic, glabrous dark green above, densely pubescent, grey-green on lower surface, leathery; male and female flowers small, inconspicuous, borne separately in dense fascicles in axils of leaves.

Microscopical

Characteristic features are: the numerous uniseriate, unicellular clothing hairs of leaf and stem, up to 2 mm in length; cells of upper epidermis irregularly polygonal (1), those of lower surface with sinuous walls (2); single palisade layer below upper

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epidermis; stomata anomocytic, on lower leaf surface only; prisms of calcium oxalate, ± 20m in length, in cells of the mesophyll, forming an incomplete crystal sheath surrounding the larger veins (3); star-shaped crystals of calcium oxalate, forming a layer in cells of the palisade layer and mesophyll (4); occasional pollen grains, golden-brown, spherical, ± 20m in diameter.

**Crude drug**

Used fresh, collected as needed, or available in the market place as bundles of air-dried material, comprising mainly leaves and occasional flowers. Texture leathery, odour pleasantly aromatic, colour dull green.

**Geographical distribution**

Widespread on damp mountain slopes of the Western and Eastern Cape Provinces, from Paarl to the Cape Peninsula and eastward to Port Elizabeth; also north to KwaZulu-Natal.

**Quality standards**

**Identity test**

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: 0.24 (blue mauve); 0.22 (blue); 0.53 (blue-green); 0.82 (sage green); cineole: 0.78 (lilac purple)

**Methanol extract** (figure 6)

Retention times (mins) of major compounds: 10.50; 19.62; 20.67

**Ethanol (70%) soluble extractive value**

Not less than 26% (range: 26.38-34.02%)

**Purity tests**

**Assay**

Not yet available
Major chemical constituents

Little is known of the secondary chemistry of this species. Preliminary microchemical tests indicated the presence of tannins, triterpenoid steroids and small amounts of saponins. Alkaloids, cyanogenic glycosides and quinones were not detected.

Dosage forms

An aqueous decoction or infusion of fresh or dried leaves and smaller stems is taken orally.

Medicinal uses

Taken orally to treat arthritis, internal haemorrhoids and urinary tract problems.

Pharmacology/bioactivity

Brine shrimp lethality assay:

Activity was suggested in tests (our laboratories) using a decoction of dried material at a concentration of 1000mg/ml.

Antibiotic activity assay

In vitro antimicrobial activity against Staphylococcus aureus was demonstrated by aqueous extracts prepared from dried leaf material, at a concentration of 10mg/ml. No activity against Pseudomonas aeruginosa, Candida albicans or Mycobacterium smegmatis was shown by any of the extracts used in preliminary assays. No other information is available regarding the bioactivity of this species.

Contraindications

None known.

Adverse reactions

None reported

Precautions

No special precautions.