le schede

ORIGANUM DICTAMNUS L.

Foto di F. Mearelli — *Origanum vulgare*

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Per l'introduzione alla rubrica, fare riferimento al fascicolo di maggio 2002

"For the introduction to this section please see our issue of May 2002"

SYS NAME:	Origanum dictamnus L.
CE No:	325
STEINMETZ No:	778
FEMA No:	
ORDER:	Tubiflorae
FAMILY:	Labiatae
NAME:	**E:** Dittany of Crete **F:** Dictame de Crete **D:** Diptamdosten **I:** Origano di Creta
SYNONYMS:	Amaracus dictamnus Benth.
PARTS USED:	Flowers, flower tips, leaves.
IMPORTANT CONSTITUENTS:	**Aerial part essential oil: carvacrol** (58.8-82.3%), a-pinene (0.18%), camphene (0.07%), b-pinene (0.05%), myrcene (0.25%), a-terpinene, limonene (0.10%), c-terpinene (4.45%), p-cimene (7.50%), terpinolene (0.09%), a-copaene (0.50%), carvacrol methyl ether (1.10%), caryophyllene, bisabolene (0.37%), c-cadinene (0.28%), calamene (0.36%), thymol (0.43%), **1,8-cineole** (0.39%), octan-3-ol (0.20%), oct-1-en-3-ol (0.48%), sabinene hydrate (0.57%), linalool (0.90%), **terpin-1-en-4-ol** (1.12%), borneol (1.72%), carvone (0.49%), anethole (0.06%), p-cumenol , caryophyllene oxide (0.76%), aesculin, apigenin, apigenin-7-o-b-D-glucoside, cariophyllene, p-cymil, eriodictyol, eriodictyol-7-o-b -D-glucoside, luteolin, luteolin-7-b-o-D-glucoside,orientin, iso-orientin, a-phellandrene, quercetin, a-triterpeneterpineol, URS-12-en-28-dic-acid-3-a-dihydroxy, ursolic acid I, ursolic acid II, uvaol, vicenin 2, vitexin, iso-vitexin (1-8).
ACTIVE PRINCIPLES:	1,8-cineole (III), terpinen-4-ol (under evaluation)
OTHER CONSTITUENTS OF TOXICOLOGICAL CONCERN:	carvacrol
PRODUCTS IN WHICH USED:	is widely used as a tea
LEVEL OF USE:	no data found
PREPARATION:	no data found

Origanum vulgare

MAIN TOXICOLOGICAL DATA:	**1,8-cineole**: provisional TDI 0.2 mg/kg. **Terpinen-4-ol:** kidney irritation by commercially available *Juniper* oil depend on the content of terpinen-4-ol (9). In another study two slightly different *Juniper* oil batches were tested in male Sprague-Dawley rats. Animals were dosed orally for 28 days with 100-333 and 1000 mg/kg bw/d (1st batch) and 100-300 and 900 mg/kg bw/d (2nd batch). Additionally, terpinene-4-ol, a known component of *Juniper* oil (10 mg%), was tested with the same experimental design at 400 mg/kg. Neither of the tested substances induced changes in function or morphology of the kidney at the tested doses (13). **Carvacrol** appears to be slowly absorbed from intestine in rabbit, since 22 hrs after adminitration of 1.5g some 30% was still in gastro-intestinal tract, about 25% of dose having been excreted in that time in urine (10). Carvacrol applied to intact shaved abdominal skin of mouse was not absorbed within 2 hrs (11). Carvacrol administered to male albino rats by gavage, at dose 1 mM/Kg was excreted mainly in the urine after 24 hrs. Large quantities of the compound were excreted unchanged or as its glucuronide and sulfate conjugates. Extensive oxidation, mainly at the methyl groups, also occurred, giving rise to derivatives of benzyl alcohol, 2-phenyl propanol and their corresponding carboxilic acids. Ring hydroxylation produced only a minor metabolite (12).
DATA NEEDED:	levels and preparation used: 28-day rat oral study on the preparation used.
MAIN REFERENCES:	1.Phytochemistry 25,539,1986; 2. Sci. Pharm. 54,49,1986; 3.Planta Med.Phytother.21,56,1987; 4.Planta med.Phytother.20,300,1986; 5.Trav. Soc. Pharm. Montpellier 19,172,1959; 6.Planta Med., 53, 107,1987; 7.Monatshefte fur Chemie 107,929,1976; 8. J. Agr. Food Chem., 44, 1202, 1996; 9. Pharmaz. Zeit. Wissensch., 138, 85, 1993; 10.Williams R.T.1959; 11. Arzneimittel-Forsch. 9, 516,1 959; 12. Pharmacology and Toxicology 61,98,1987; 13. Arzneimittel-Forschng, 47,855,1997.
CLASSIFICATION AND LIMITS:	flowers, flower tips, leaves. **Category 5:** plants, animals and other organisms, and parts of these or products thereof, and preparations derived therefrom, for which additional toxicological and/or chemical information is required. These could temporarily be acceptable provided that any limits set for the "active principles" or the "other chemical components" are not exceeded. **Carvacrol:** food: 5ppm beverages: 2 ppm candy, confectionery: 25 ppm
DATA BASES USED:	NAPRALERT (1988-2001), CHEMABS (1967-2001), BIOSIS (1973-2001), FSTA (1969-2001), TOXLINE (1969-2001), MEDLINE (1966-2001), PASCAL (1973-2001). *Key words: Origanum Dictamnus L., Dittany of Crete, chemical composition, toxicity data.*