

BOTANICAL SOURCES USED IN FOOD AS FLAVOURINGS

HELIOTROPIUM EUROPAEUM L.



Heliotropium Europaeum L.

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Per l'introduzione alla rubrica,
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"For the introduction to this section
please see our issue of May 2002"

SYS NAME:	Heliotropium europaeum L.			
CE No :	226			
STEINMETZ No :	546			
FEMA:				
ORDER:	Tubiflorae			
FAMILY:	Labiatae			
NAME:	E: Heliotrope	F: Heliotrope	D: Heliotrop	I: Erba porraia
SYNONYMS:				
PARTS USED:	Leaves			
IMPORTANT CONSTITUENTS:	<p>pyrrolizidine alkaloid: europine, europine-n-oxide, heleurine, heleurine-n-oxide, heliotridine, heliotrine, iso-heliotrine, heliotrine-n-dihydropyrrolizino-methyl-dimer, heliotrine-n-oxide, acethyl-lasiocarpine, lasiocarpine-n-oxide, supinine, quercetin. The total pyrrolizidine alkaloid content was 117 ppm, containing 30.4 ppm heliotrine and 18.2 ppm lasiocarpine (1-7).</p>			
ACTIVE PRINCIPLES:	pyrrolizidine alkaloid (under evaluation)			
OTHER CONSTITUENTS OF TOXICOLOGICAL CONCERN:				
PRODUCTS IN WHICH USED:	No data found			
LEVEL OF USE:	No data found			
PREPARATION:	No data found			
MAIN TOXICOLOGICAL DATA:	the ingestion of pyrrolizidine alkaloids (PAs) in foods and medicinal herbs results in acute and chronic effects in man, affecting mainly the liver. Data from experimental studies indicate that PAs represents a potential cause of cancer in man (8).			
DATA NEEDED:				
MAIN REFERENCES:	1. Aust. J.Chem.7,227,1954; 2. Aust. J. Chem. 22,1655,1969; 3. Tetrahedron Lett. 1969, 3603,1969; 4. Aust. J. Chem.28, 2319,1975; 5. Aust. J. Chem.11, 211, 1949; 6. Aust. Vet. J. 57, 396, 1981; 7. Farm. Glas., 55, 171, 1999; 8. Toxicology and Clinical Pharmacology of Herbal Products, M.J. Cupp, 2000.			



Heliotropium Europaeum L.

CLASSIFICATION AND LIMITS:

Leaves **Category 6**

Category 6: Plants, animals and other organisms, and parts of these or products thereof, and preparations derived therefrom, which are considered to be unfit for human consumption in any amount.

All preparations derived from each part of a source species have generally been given a group classification, but it must be stressed that this classification applies only to the preparations listed on each datasheet. Other preparations may have different compositions and these would have to be evaluated separately before being included in the existing classification. Source materials and preparations classified in categories 1 and 2, from food and non-food sources respectively, are considered to be fully acceptable, and no limits are required on their use.

Those in categories 3 and 4 are also fully acceptable, provided that their use does not result in unacceptably high intakes of "active principles" or other chemical components". Where flavouring source materials and preparations in categories 3 and 4 contain an "active principle", a maximum limit has been recommended for the level of the "active principle" in foodstuffs in which the flavourings are used. The setting of such limits does not necessarily imply that the use of a particular flavouring source material or preparation must be restricted, since the amounts added to food may not be high enough to exceed the limit. Other source materials and preparations in categories 3 and 4 may contain "other constituents of toxicological concern" for which maximum limits in foodstuffs as consumed have been set on the basis of existing toxicological data or with reference to a TDI.

Category 5 contains source materials which have not been fully evaluated due to a lack of data, but which have been categorised as temporarily acceptable on the basis of the available information. In some cases there is insufficient information on the composition of the source material or its flavouring preparations, while in others it has not been possible to assess the significance of particular components which are known to occur.

Source materials placed in category 6 are considered to be unsuitable for use as sources of food flavourings due to the presence of particularly toxic substances. Natural flavouring source materials whose evaluation has been postponed since there is no evidence that they are currently in use in Europe have not been categorised.

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: Heliotropium Europaeum L., Heliotrope, chemical composition, toxicity data