

Coriander seed oil

Botanical Source

Synonyms

IUPAC Name

CAS Reference 8008-52-4

E Number

Food Legislation

Council of Europe (CoE)	
Number	Comment
154	Listed by the Council of Europe as acceptable for use in food.

US Food and Drug Administration	
Number	Comment
182.20	Approved by the US FDA. FDA 21 CFR 182.20

Joint FAO/WHO Expert Committee on Food Additives (JECFA)		
Number	ADI	Comment
-	-	-

FEMA	
FEMA No.	Comment
2334	Generally recognised as safe as a flavour ingredient:GRAS List Number 3

Natural Occurrence and Use in Food
Found in coriander; used in baked goods, condiments.

Estimated Intake from Food and Drink	
Daily Intake mg/kg/day	FEMA Possible Average Daily Intake mg
0.049	16.64

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Tobacco Product Related Chemical and Biological Studies for Ingredients Added in a Mixture

Smoke Chemistry		
Published Source	Level Tested %	Comment
BAT	0.06800	At maximum application level this ingredient is not associated with significant increases in levels of Hoffmann analytes in smoke.
Philip Morris	0.00150	An overall assessment of the data suggests that this ingredient did not add to the toxicity of smoke.

Ames Activity		
Published Source	Level Tested %	Comment
BAT	0.06800	Within the sensitivity and specificity of the system the Ames activity of the cigarette smoke condensate was not increased by the addition of the ingredient.
Philip Morris	0.00150	Within the sensitivity and specificity of the system the Ames activity of the cigarette smoke was not increased by the addition of the ingredient.

Micronucleus		
Published Source	Level Tested %	Comment
BAT	0.06800	Within the sensitivity of the in vitro micronucleus assay the activity of the cigarette smoke condensate was not increased by the addition of the ingredient.

Neutral Red		
Published Source	Level Tested %	Comment
BAT	0.06800	Within the sensitivity of the test system the in vitro cytotoxicity of the cigarette smoke condensate was not increased by the addition of the ingredient.
Philip Morris	0.00150	Within the sensitivity of the test system the in vitro cytotoxicity of the cigarette smoke was not increased by the addition of the ingredient.

Inhalation		
Published Source	Level Tested %	Comment
BAT	0.06800	The results indicate that the addition of the ingredient had no discernible effect on the inhalation toxicity of mainstream smoke.
Philip Morris	0.00150	The data indicate that the addition of the ingredient, when added with one of three groups, did not increase the inhalation toxicity of the smoke.

Mouse Skin Painting		
Published Source	Level Tested %	Comment

References
Baker RR, Pereira da Silva JR, Smith G. The effect of tobacco ingredients on smoke chemistry. Part I: Flavourings and additives. Food Chem Toxicol. 2004; 42 Suppl:S3-37.
Baker RR, Pereira da Silva JR, Smith G. The effect of tobacco ingredients on smoke chemistry. Part II: casing ingredients. Food Chem Toxicol. 2004; 42 Suppl:S39-52.
Baker RR, Massey ED, Smith G. An overview of the effects of tobacco ingredients on smoke chemistry and toxicity. Food Chem Toxicol. 2004; 42 Suppl:S53-83.
Carmines EL. Evaluation of the potential effects of ingredients added to cigarettes. Part 1: cigarette design, testing approach, and review of results. Food Chem Toxicol. 2002; 40(1): 77-91.
Rustemeier K, Stabbert R, Haussmann HJ, Roemer E, Carmines EL. Evaluation of the potential effects of ingredients added to cigarettes. Part 2: chemical composition of mainstream smoke. Food Chem Toxicol. 2002; 40(1): 93-104.
Roemer E, Tewes FJ, Meisgen TJ, Veltel DJ, Carmines EL. Evaluation of the potential effects of ingredients added to cigarettes. Part 3: in vitro genotoxicity and cytotoxicity. Food Chem Toxicol. 2002; 40(1): 105-111.
Vanscheeuwijck PM, Teredesai A, Terpstra PM, Verbeeck J, Kuhl P, Gerstenberg B, Gebel S, Carmines EL. Evaluation of the potential effects of ingredients added to cigarettes. Part 4: subchronic inhalation toxicity. Food Chem Toxicol. 2002; 40(1): 113-131.

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Tobacco Product Related Chemical and Biological Studies for Ingredients Tested Singly

References
Baker RR, Bishop LJ. The pyrolysis of non-volatile tobacco ingredients using a system that simulates cigarette combustion conditions. J. Anal. Appl. Pyrolysis 2005, 74, 145-170.

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Toxicological Data on the Unburnt Ingredient

Safety assessment of coriander (*Coriandrum sativum* L.) essential oil as a food ingredient.

Coriander essential oil is used as a flavor ingredient, but it also has a long history as a traditional medicine. It is obtained by steam distillation of the dried fully ripe fruits (seeds) of *Coriandrum sativum* L. The oil is a colorless or pale yellow liquid with a characteristic odor and mild, sweet, warm and aromatic flavor; linalool is the major constituent (approximately 70%). Based on the results of a 28 day oral gavage study in rats, a NOEL for coriander oil is approximately 160 mg/kg/day. In a developmental toxicity study, the maternal NOAEL of coriander oil was 250 mg/kg/day and the developmental NOAEL was 500 mg/kg/day. Coriander oil is not clastogenic, but results of mutagenicity studies for the spice and some extracts are mixed; linalool is non-mutagenic. Coriander oil has broad-spectrum, antimicrobial activity. Coriander oil is irritating to rabbits, but not humans; it is not a sensitizer, although the whole spice may be. Based on the history of consumption of coriander oil without reported adverse effects, lack of its toxicity in limited studies and lack of toxicity of its major constituent, linalool, the use of coriander oil as an added food ingredient is considered safe at present levels of use (Burdock & Carabin).

References

Burdock & Carabin. Safety assessment of coriander (*Coriandrum sativum* L.) essential oil as a food ingredient. *Food Chem Toxicol.* (2009), 47(1), 22-34.