Phenyl-2-propen-1-ol (3-)

Botanical Source

Synonyms Cinnamyl alcohol
CINNAMIC ALCOHOL

IUPAC Name

CAS Reference 104-54-1

E Number

Food Legislation

Council of Europe (CoE)	
Number	Comment
65	Listed by the Council of Europe as acceptable for use in food at up to 30 ppm.

US Food and Drug Administration	
Number	Comment
172.515	Approved by the US FDA. FDA 21 CFR 172.515

Joint FAO/WHO Expert Committee on Food Additives (JECFA)		
Number	ADI	Comment
647	-	No safety concern at current levels of intake when used as a flavouring agent.

FEMA	
FEMA No.	Comment
2294	-

Natural Occurrence and Use in Food
Found in blackberry, blueberry, cantaloupe, cranberry, guava, melon, raspberry, strawberry, watermelon; used in non-alcoholic beverages.

Estimated Intake from Food and Drink	
Daily Intake mg/kg/day	FEMA Possible Average Daily Intake mg
0.034	1.79

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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	0.00100	At maximum application level this ingredient is not associated with significant increases in levels of Hoffmann analytes in smoke.
Philip Morris	0.00030	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	0.00100	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	0.00030	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	0.00100	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	0.00100	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	0.00030	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	0.00100	The results indicate that the addition of the ingredient had no discernible effect on the inhalation toxicity of mainstream smoke.
Lorillard	0.00001	The results indicate that the addition of the ingredient had no discernible effect on the inhalation toxicity of mainstream smoke.
Philip Morris	0.00030	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
Lorillard	0.00001	None of the changes appeared to be substantial enough to conclude that the tumour promotion capacity of the condensate was discernibly different between condensate produced from cigarettes with the ingredient in comparison with condensate from cigarettes without the ingredient.

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.

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cigarettes. Part 4: subchronic inhalation toxicity. Food Chem Toxicol. 2002; 40(1): 113-131.

Gaworski CL, Dozier MM, Heck JD, Gerhart JM, Rajendran N, David RM. Brennecke LH, Morrissey R. Toxicologic evaluation of flavor ingredients added to cigarette tobacco: 13 week inhalation exposures in rats. Inhal. Toxicol. 1998; 10:357-381

Gaworski CL, Heck JD, Bennett MB, Wenk ML. Toxicologic evaluation of flavor ingredients added to cigarette tobacco: skin painting bioassay of cigarette smoke condensate in SENCAR mice. Toxicology. 1999; 139(1-2):1-17.

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Tobacco Product Related Chemical and Biological Studies for Ingredients Tested Singly

References
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Toxicological Data on the Unburnt Ingredient

[+ve, positive; -ve, negative; ?, equivocal
with, with metabolic activation; without, without metabolic activation]

In vitro

Test system	Test conditions	Endpoint	Activation status	Results	Reference
Chinese hamster ovary K1 cells.	Tested up to 33.3 µM. Cells examined for evidence of sister chromatid exchange.	Chromosome effects.	Without.	-ve	Sasaki et al. 1989
Mouse lymphoma L5178Y cells	Mouse lymphoma TK +/- assay. No further details given. (Only reported as an abstract, not possible to interpret independently.)	Mutation.	With and without metabolic activation.	+ve	Palmer, 1984
Salmonella typhimurium, strains TA98, TA100, TA1535, TA1537, TA1538; *Escherichia coli*, strain WP2 trp^-	Ames test. Tested up to 3 mg/plate. (3 mg/plate was cytotoxic, with and without S9.)	Mutation.	With and without S9.	-ve	Sekizawa & Shibamoto, 1982
Salmonella typhimurium, strain TA100	Ames test. No further details given. (Only tested in 1 strain - currently, testing in at least 4 strains is recommended.)	Mutation.	With and without S9. (limited assay)	-ve	Cited in Eder et al. 1982; Lutz et al. 1982

Escherichia coli, strain WP2 uvrA	Tested up to 4 mg/plate	Mutation.	Without.	-ve	Yoo, 1986
Bacillus subtilis, strains H17 (rec+) and M45 (rec-)	REC assay. Tested at 1 mg/disk.	DNA damage (indicative test).	Without.	+ve (weak effect)	Sekizawa & Shibamoto, 1982
Bacillus subtilis, strains H17 (rec+) and M45 (rec-)	REC assay. Tested at 10 µl/disk.	DNA damage (indicative test).	Without.	+ve (weak effect)	Yoo, 1986
Bacillus subtilis, strains H17 (rec+) and M45 (rec-)	REC assay. Tested at 21 µg/disk.	DNA damage (indicative test).	Without.	-ve	Oda et al. 1978

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